



The Effect of Debt to Assets Ratio, Return on Assets, and Total Assets Turnover on Financial Distress

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ABSTRACT

This study aims to analyze the effect of Debt Assets Ratio, Return on Assets, and Total Assets Turnover on Financial Distress in property and real estate companies listed on the Indonesia Stock Exchange (IDX) for the period 2019-2022. The independent variables in this study are Debt Assets Ratio, Return on Assets, and Total Assets Turnover, while the dependent variable is Financial Distress which is measured using the Altman Z-Score. The data used are secondary data from property and real estate companies listed on the IDX and taken from the official website www.idx.co.id. This study uses a purposive sampling method by selecting 16 companies that meet the criteria as samples so that there are a total of 64 observation data. The analysis method used is multiple linear regression with the help of SPSS 26. The study results indicate that the Debt to Assets Ratio has a negative effect on Financial Distress, Return on Assets and Total Assets Turnover have no impact on Financial Distress.

ABSTRAK

Penelitian ini bertujuan untuk menganalisis pengaruh *Debt to Assets Ratio*, *Return on Assets*, *Total Assets Turnover* terhadap *Financial Distress* pada perusahaan properti dan real estat yang terdaftar di Bursa Efek Indonesia (BEI) periode 2019-2022. Variabel independen dalam penelitian ini adalah *Debt to Assets Ratio*, *Return on Assets*, *Total Assets Turnover*, sedangkan variabel dependen adalah *Financial Distress* yang diukur menggunakan *Altman Z-Score*. Data yang digunakan merupakan data sekunder dari perusahaan-perusahaan properti dan real estate yang terdaftar di BEI dan diambil melalui situs resmi www.idx.co.id. Penelitian ini menggunakan metode *purposive sampling* dengan memilih 16 perusahaan yang memenuhi kriteria sebagai sampel, sehingga total terdapat 64 data observasi. Metode analisis yang digunakan adalah regresi linear berganda dengan bantuan SPSS 26. Hasil penelitian menunjukkan bahwa *Debt to Assets Ratio* berpengaruh negatif terhadap *Financial Distress*, *Return on Assets* dan *Total Assets Turnover* tidak berpengaruh terhadap *Financial Distress*.

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INTRODUCTION

A company is an entity consisting of individuals with a common goal of making a profit. This profit not only reflects the company's ability to survive in the market but also increases investor confidence. However, in its operations, companies are often faced with financial instability influenced by internal decisions and external conditions such as global politics and economics. Changes in the world economy have a significant impact on company performance, driving fierce business competition demanding innovation and strengthening management. Unstable finances can cause difficulties in competing and increase the risk of bankruptcy if not anticipated properly. Therefore, financial distress



analysis is very important for companies because it allows early detection of deteriorating financial conditions, facilitates mitigation actions, and assists in strategic decision-making to avoid bankruptcy. According to Chairunesia & Bintara (2019), financial distress is a condition of financial decline before bankruptcy or liquidation, which can be identified through analysis of the balance sheet, profit and loss, and cash flow. The two extreme conditions of financial distress are short-term liquidity difficulties and the inability to pay off financial obligations.

To measure financial distress, one of the indicators used is the Altman Z-Score. This method was chosen because of its advantage in providing accurate predictions of the possibility of bankruptcy by combining several financial ratios in one score, facilitating analysis and interpretation. In this study, Debt to Assets Ratio (DAR), Return on Assets (ROA), and Total Assets Turnover (TATO) were selected as independent variables because each offers a unique perspective on a company's financial condition. DAR indicates the financial leverage and stability of the company (Kasmir, 2021), ROA measures the efficiency of asset use to generate profits (Hutabarat, 2021), and TATO assesses the company's effectiveness in using assets to generate revenue (Kasmir, 2021). Previous studies have shown inconsistent results regarding the effect of these ratios on financial distress, creating a research gap that needs to be explored further.

The selection of the property and real estate sector for this study is based on the fact that this sector often experiences significant fluctuations because it is very sensitive to changes in the economy, interest rates, and government regulations. Data from the Indonesia Stock Exchange shows that companies in this sector face higher financial distress challenges compared to other sectors in the 2019-2022 period, making it a relevant context for understanding the dynamics of these ratios on financial distress.

Table 1: Financial Distress Ratio Value

Issuer	Year	Z" Score
PT Agung Podomoro Land Tbk (APLN)	2019	2,19
	2020	2,37
	2021	1,96
	2022	2,32
PT PP Properti Tbk (PPRO)	2019	1,38
	2020	1,22
	2021	2,11
	2022	1,75
PT Summarecon Agung TBK (SMRA)	2019	2,26
	2020	2,34
	2021	2,53
	2022	2,1
PT Urban Jakarta Propertindo Tbk (URBN)	2019	3,68
	2020	2,48
	2021	1,99
	2022	1,48

Source: www.idx.com, (processed by researchers)

Based on Table 1 of Z-Score data from 2019 to 2022, it can be seen that four issuers, namely PT Agung Podomoro Land Tbk (APLN), PT PP Properti Tbk (PPRO), PT Summarecon Agung Tbk



(SMRA), and PT Urban Jakarta Propertindo Tbk (URBN), are generally in the bankruptcy-prone zone with Z-Score values ranging from $1.1 < Z < 2.6$ (Altman et al., 2019). APLN showed score fluctuations but remained in the vulnerable zone. PPRO was also in the vulnerable zone throughout the period, although it experienced a slight increase in 2022. SMRA recorded an increase in its score in 2021, but fell again in 2022, remaining at risk. URBN, which was initially outside the vulnerable zone in 2019, experienced a significant decline in its Z-Score over four years, indicating an increased risk of bankruptcy. Overall, despite some improvements in scores, all four companies face significant financial risks, especially PPRO and URBN, which have seen their scores decline in recent years, which could worsen their financial condition and increase the likelihood of difficulties in meeting payment obligations.

The novelty of this study lies in the combination of three key financial ratios in one model to predict financial distress in the specific context of the property and real estate sector in Indonesia, using the Altman Z-Score for validation, and the study period covering the pandemic period which brought unique economic dynamics. Considering this background and the inconsistent results of previous studies, the researcher decided to conduct a study entitled *The Effect of Debt to Assets Ratio, Return on Assets, and Total Assets Turnover on Financial Distress (Empirical Study on Property and Real Estate Companies Listed on the Indonesia Stock Exchange for the Period 2019–2022)*.

LITERATURE REVIEW

Stewardship Theory

Stewardship Theory, first introduced by James H. Davis and Lex Donaldson in 1991 in a study entitled "Stewardship Theory: A Consensus About What We Know", is part of agency theory. This theory emphasizes that managers are not driven by personal interests but by the interests of the organization or institution and the desire to fulfill the principles. Rezaee et al. (2019) explain that stewardship theory emerged as a result of the influence of other disciplines such as psychology and sociology in the development of accounting science. According to this theory, the relationship between executives and principals in a company is built on common goals, with stewards trying to work with principals when there are differences of interest because they prioritize achieving common goals.

Chrisman (2019) explains that stewardship theory describes the relationship between company owners (principals) and company managers (agents). This theory emphasizes that managers appointed by the owner have a responsibility to act as "stewards" or good managers of the assets and interests of the owner, assuming that the actions taken by the manager will benefit the owner and ultimately, also benefit themselves. This study uses a dependent variable, namely financial distress, measured by the Altman Z' Score created by Altman in 1995 which is suitable for non-manufacturing companies (Altman et al., 2019). Financial distress refers to a decline in financial conditions that occurs before bankruptcy or liquidation, where the company is unable to generate sufficient income to pay its financial obligations (Hutabarat, 2021).

The Effect of Debt to Assets Ratio on Financial Distress

According to stewardship theory, managers act in the interests of the owners, but a high Debt to Assets Ratio (DAR), which is calculated by dividing total debt by the company's total assets (Kasmir, 2021), can indicate that the company is too dependent on debt to fund its operations. In the context of stewardship theory, if managers fail to manage this debt well, this can lead to financial distress because the company's ability to bear debt is limited. Thus, DAR has a positive impact on financial distress. This finding is supported by research conducted by Saraswati et al. (2020), Nikodemus & Oktasari



(2021), Wirdaningtyas et al. (2021) which states that Debt Assets Ratio has a positive effect on financial distress.

H₁: Debt to Assets Ratio has a positive effect on Financial Distress

The Effect of Return on Assets on Financial Distress

According to stewardship theory, managers should work to increase value for owners through efficient use of company assets. However, if the Return on Assets (ROA) is low, which is measured by dividing net income by total assets (Hutabarat, 2021), this indicates that the company is inefficient in generating profits from its assets. Low ROA can indicate management inefficiency in carrying out their duties as stewards, therefore ROA has a positive impact on financial distress, where the company is more likely to experience financial difficulties. This finding is supported by research conducted by Yudhistira (2019), Nikodemus & Oktasari (2021), Silvia & Yulistina (2022), Rukmana & Nurhayati (2023) which states that Return on Assets has a positive effect on financial distress.

H₂: Return on Assets has a positive effect on Financial Distress

The Effect of Total Assets Turnover on Financial Distress

According to stewardship theory, managers are expected to maximize the use of company assets for mutual benefit. Total Assets Turnover (TATO), which is calculated by dividing net sales by total assets (Kasmir, 2021), reflects this efficiency. If TATO is low, it indicates that managers fail to utilize assets to generate sales, which could be a sign that the company is not managed properly according to the principle of stewardship, so TATO has a positive impact on financial distress. This finding is supported by research conducted by Utami et al. (2023), Oktaviana et al. (2023) which states that Total Assets Turnover has a positive effect on financial distress.

H₃: Total Assets Turnover has a positive effect on Financial Distress

RESEARCH METHODOLOGY

The type of research conducted is causal research. Causal research is research that describes the causal relationship between the independent variables that influence and the dependent variables that are influenced (Sugiyono, 2022). In this study, the dependent variable is financial distress as measured by the Altman Z-score. Hutabarat (2021) defines financial distress as a stage of decline in financial conditions before bankruptcy or liquidation, where the company is unable to generate sufficient income to meet its financial obligations. The Z-score formula used in this study is a formula intended for non-manufacturing companies, which can be measured by the formula:

$$Z'' = 6.56X1 + 3.26X2 + 6.72X3 + 1.05X4$$

$X1 = (\text{Current Assets} - \text{Current Liabilities}) / \text{Total Assets}$

$X2 = \text{Retained Earnings} / \text{Total Assets}$

$X3 = \text{Earnings Before Interest and Taxes} / \text{Total Asset}$

$X4 = \text{Book Value of Equity} / \text{Book Value of Total Liabilities}$

The criteria for predicting financial distress using this formula are:

1. $Z < 1.1$, the company is in the distress zone.
2. $1.1 < Z < 2.6$, the company is in the moderate bankruptcy zone.
3. $Z > 2.6$, the company is in the safe zone.



In this study, the independent variables consist of financial ratios, namely Debt to Assets Ratio (X1), Return on Assets (X2), and Total Assets Turnover (X3).

a. Debt to Assets Ratio

According to Kasmir (2021), the Debt to Assets Ratio is a ratio that shows the percentage of funds obtained from debt, where "debt" includes all types of debt owned by the company, both short-term and long-term. The formula used to measure the Debt to Assets Ratio is:

$$\text{Debt to Assets Ratio} = \text{Total Debt} / \text{Total Assets}$$

b. Return on Assets

According Hutabarat (2021), Return on Assets is one of the profitability ratios used to measure the percentage of net profit generated by a company for every rupiah of its total assets. Return on Assets provides an overview of how efficient management is in managing the company's investments and is an indicator of the ability of capital invested in the form of assets to generate net profit. The formula used to measure Return on Assets is:

$$\text{Return on Assets} = \text{Net Income} / \text{Total Assets}$$

c. Total Assets Turnover

According to Kasmir (2021), Total Assets Turnover is the comparison between net sales and total assets, which measures the company's efficiency in generating sales from its assets. The formula used to measure Total Assets Turnover is:

$$\text{Total Assets Turnover} = \text{Net Sales} / \text{Total Assets}$$

The population in this study includes all property and real estate companies listed on the Indonesia Stock Exchange (IDX) during the period 2019-2022. The sampling method used is purposive sampling, where sample selection is based on consideration of certain characteristics that are relevant to the research objectives (Sugiyono, 2022). By considering the established criteria, 16 companies meet the requirements to be used as samples in this study. The sample was selected from a total of 66 property and real estate companies listed on the Indonesia Stock Exchange (IDX) during the period 2019 to 2022. With observations conducted for 4 years, 64 units of analysis were obtained. The data analysis method used is quantitative analysis, which describes data in the form of numbers and uses statistics in its calculations (Sugiyono, 2022). The data analysis techniques applied include descriptive statistical analysis, classical assumption tests, model suitability tests, and hypothesis tests. Statistical data processing is carried out using SPSS (Statistical Product and Service Solutions) software version 26.

RESULT AND DISCUSSION

Descriptive Statistics

Table 2: Descriptive Statistical Test Results

Variable	N	Minimum	Maximum	Mean	Std. Deviation
DAR	64	.07890	.63544	.3699119	.15602247
ROA	64	.00014	.19972	.0537764	.04376750
TATO	64	.00932	.86462	.2194421	.16222724
Z' Score	64	1.47616	16.06425	5.9776410	3.03628376



Variable	N	Minimum	Maximum	Mean	Std. Deviation
Valid N (listwise)	64				
DAR: Debt to Assets Ratio; ROA: Return on Assets; TATO: Total Assets Turnover					
Source: SPSS 26, processed data (2024)					

DAR (Debt to Assets Ratio) has a mean value of 0.3699110, indicating that on average, about 37% of the assets of the companies in the sample are funded by debt. The standard deviation of 0.1500247 indicates a moderate variation in the use of debt among these companies, with a minimum value of 0.07800 and a maximum of 0.65454. ROA (Return on Assets) shows a mean value of 0.0537764, meaning that the companies in the sample on average generate a profit of 5.38% of their total assets. With a standard deviation of 0.04376750, there is a variation in the efficiency of using assets to generate profits among companies, with a minimum value of 0.00014 and a maximum of 0.19972.

TATO (Total Assets Turnover) has an average of 0.2194421, indicating that the average company in the sample uses its assets to generate sales of 21.94% of total assets. The standard deviation of 0.16222774 indicates that there is a difference in the efficiency of the asset used to generate sales, with a minimum value of 0.00932 and a maximum of 0.86462. The average value (mean) of the Y variable is 5.9776410 which means $Z > 2.6$ which indicates a safe zone from financial distress, this means that the sample of companies studied did not experience financial distress, with a standard deviation of 3.03628376.

Coefficient of Determination

The coefficient of determination is used to evaluate how much the independent variable influences the dependent variable.

Table 3: R-Square result

R	R-Square	Adjusted R-Square	Std. Error of the Estimate
.836 ^a	.699	.683	.19427

Source: SPSS 26, processed data (2024)

Based on these results, the R-squared is 0.699 or 69.9%. This indicates that the independent variables explain about 69.9% of the variation in the dependent variable, while the remaining 30.1% of the variation is influenced by other factors outside the tested variable.

Model F Test

The F significance test aims to evaluate whether the independent variables jointly affect the dependent variable.

Table 4: F Significance result

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	5.160	3	1.720	45.569	.000 ^b
Residual	2.227	59	0.38		
Total	7.386	62			

Source: SPSS 26, processed data (2024)



From the results of simultaneous testing, the F value was obtained as 45.569, while the F table value was 2.75. This shows that the F-calculated value is greater than the F-table value, and the significance value is 0.000, or lower than 0.05. Therefore, it can be concluded that this research model is appropriate and can be used for further analysis. The conclusion also indicates that Debt Assets Ratio, Return on Assets, and Total Assets Turnover together affect the Financial Distress variable (Z'' Score).

Table 5: t-Test Result

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.430	.070		6.122	.000
DAR	-.779	.072	-.847	-10.865	.000
ROA	-.014	.029	-.043	-.500	.619
TATO	.083	.053	.128	1.572	.121

DAR: Debt to Assets Ratio; ROA: Return on Assets; TATO: Total Assets Turnover

Source: SPSS 26, processed data (2024)

Debt to Assets Ratio shows a t-value of -10.865. Although the t-value is negative (-10.865), the value is much lower than the t-table of 1.66901 ($-10.865 < 1.66901$). However, the significance value is 0.000, less than 0.05. Therefore, the hypothesis is rejected. Thus, it can be concluded that partially, the Debt to Assets Ratio has a negative effect on Financial Distress. Return on Assets shows a result of -0.500. Although it has a negative direction, the t-value (-0.500) is smaller than the t-table of 1.66901 ($-0.500 < 1.66901$), with a significance of 0.619, which is greater than 0.05. Therefore, the hypothesis is rejected. Thus, it can be concluded that partially, Return on Assets does not affect Financial Distress. Total Assets Turnover shows a result of 1.572. Although it has a positive direction, the calculated t value of 1.572 is smaller than the t table of 1.66901 ($1.572 < 1.66901$), with a significance of 0.121, which is greater than 0.05. Therefore, the hypothesis is rejected. Thus, it can be concluded that partially, Total Assets Turnover does not affect Financial Distress.

The Effect of Debt to Assets Ratio on Financial Distress

The results of the hypothesis test show that the Debt to debt-to-assets ratio (DAR) has a negative effect on financial distress, with a t-value of -10.865 which is smaller than the t-table of 1.66901, and a significance of 0.000 which is lower than 0.05. The variable coefficient of -0.779 indicates a negative relationship between DAR and Altman Z-Score. Therefore, the first hypothesis (H1) which states that DAR has a positive effect on financial distress in property and real estate companies on the Indonesia Stock Exchange is rejected. Within the framework of Stewardship Theory, this finding suggests that responsible managers may use debt to fund assets to increase the company's value in the long term, so that a higher DAR may indicate an effective managerial strategy in avoiding financial distress. A decrease in DAR may also indicate management's success in reducing the proportion of debt relative to assets, but it does not always mean that the company will avoid financial distress, because wise management may see debt as a tool for sustainable growth.

The Effect of Return on Assets on Financial Distress

The results of the hypothesis test show that Return on Assets (ROA) does not affect financial distress, with a t-count of -0.500 smaller than the t-table of 1.66901 and a significance of 0.619 greater



than 0.05. Therefore, the second hypothesis (H2) which states that ROA has a negative effect on financial distress in property and real estate companies on the Indonesia Stock Exchange is rejected. In the context of Stewardship Theory, this finding suggests that managers may focus more on long-term strategies that are not always reflected in ROA fluctuations. Although ROA can be an indicator of operational efficiency, the results of the study indicate that changes in ROA do not directly affect the risk of financial distress. This may be because responsible managers prioritize long-term stability and growth over short-term profitability, so low or high ROA is not always the main determinant of whether a company will experience financial distress.

The Effect of Total Assets Turnover on Financial Distress

The results of the hypothesis test show that Total Assets Turnover (TATO) does not have a significant effect on financial distress, with a t-count of 1.572 which is smaller than the t-table of 1.66901, and a significance of 0.121 which is higher than 0.05. Therefore, the third hypothesis (H3) which states that TATO has a negative effect on financial distress in property and real estate companies on the Indonesia Stock Exchange is rejected. Within the framework of Stewardship Theory, this finding suggests that managers may prioritize strategies that focus not only on the efficiency of asset use but also on the sustainability and stability of the company. Fluctuations in TATO do not directly affect the risk of financial distress, as prudent management may prioritize asset management for long-term growth rather than daily operational efficiency. This suggests that low or high TATO levels are not the main determinant of whether a company will experience financial distress.

CONCLUSION

Based on the results of the discussion that has been done, it can be concluded that Debt to Assets Ratio (DAR) has a negative effect on Financial Distress. This means that companies with a higher debt-to-asset ratio tend to have a lower possibility of experiencing financial difficulties. On the other hand, Return on Assets (ROA) does not show any effect on Financial Distress, indicating that fluctuations in asset profitability do not affect the risk of a company experiencing financial difficulties. Likewise, with Total Assets Turnover (TATO), this variable also does not affect Financial Distress, indicating that the efficiency of asset use does not directly predict the possibility of a company experiencing financial difficulties. Thus, of the three variables analyzed, only DAR shows an effect on Financial Distress in the property and real estate company sector listed on the Indonesia Stock Exchange.

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