
Financial Ratio Analysis in Predicting Financial Distress At Tourism Companies, Restaurants and Hotels Listed on the Indonesia Stock Exchange (IDX) 2021

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ABSTRACT

This study aims to determine and analyze liquidity, profitability, leverage, and operational cash flow on financial distress in tourism companies, restaurants, and hotels listed on the Indonesia Stock Exchange in 2021. By measuring the effect of liquidity, profitability, leverage, and operational cash flow on financial distress. Financial distress is measured using the X-Score. The method of analysis of this research uses the logistic regression analysis method. The results of this study indicate that liquidity harms financial distress, profitability harms financial distress, leverage has a positive effect on financial distress, and operational cash flow ratio does not affect financial distress.

Keywords : Financial ratios; Financial Distress; Leverage; Operational Cash Flow X-Score; Profitability

ABSTRAK

Penelitian ini bertujuan mengetahui dan menganalisis liquidity, profitability, leverage dan operational cash flow terhadap financial distress pada perusahaan pariwisata, restoran dan hotel yang terdaftar di Bursa Efek Indonesia tahun 2021. Dengan mengukur pengaruh liquidity, profitability, leverage dan operational cash flow terhadap financial distress. Financial distress diukur menggunakan X-Score. Metode analisis penelitian ini menggunakan metode analisis regresi logistik. Hasil penelitian ini menunjukkan bahwa liquidity berpengaruh negatif terhadap financial distress, profitability berpengaruh negatif terhadap financial distress, leverage berpengaruh positif terhadap financial distress, operational cash flow ratio tidak berpengaruh terhadap financial distress.

Kata Kunci : Rasio Keuangan; Rasio Arus Kas Operasional; Kesulitan Keuangan; Profitabilitas; Manfaat X-Score



INTRODUCTION

Research conducted Lestari, etal (2021) with the title "Financial Distress Analysis Using Altman (Z-Score), Springate (S-Score), Zmijewski (X-Score), and Grover (G-Score) Models in The Tourism, Hospitality and Restaurant Subsectors Listed on the Indonesia Stock Exchange Period 2015-2019" by comparing the four models used to detect bankruptcy, it results that the Springate model has the highest level of accuracy, namely 68.75%, then the second is the Grover model with an accuracy rate of 12.5%, the Altman model is 10% and the last Zmijewski model with an accuracy rate of 1.25%.

Another study conducted Anita, (2017) entitled "Analysis of Case Study Bankruptcy Predictions in Service Companies in the Restaurant, Hotel and Tourism Sub-Sector in 2011-2015" with a sample of 18 tourism service companies using the modified Altman model in 2011 produced predictions namely 1 company is categorized as bankrupt, 7 companies are categorized as gray area, and 10

The company is not categorized as bankrupt. In 2012 it produced predictions that there were no companies that went bankrupt, and 5 companies were categorized as gray areas. In 2013, predictions were made that 2 companies were categorized as bankrupt, 4 companies were categorized as gray areas, and 12 companies were categorized as non-bankrupt. In 2014, predictions were made that 3 companies were categorized as bankrupt, 4 companies were categorized as gray areas, and 11 companies were categorized as non-bankrupt. In 2015, predictions were made that 3 companies were categorized as bankrupt, 4 companies were in the gray area, and 11 companies were not categorized as bankrupt.

Research conducted Diakomihalis, (2012) entitled "The Accuracy of Altman's Models in Predicting Hotel Bankruptcy" using 3 Altman models as a bankruptcy detection tool resulted that the original Altman model had an accuracy rate of 88.2% in 2007, namely one year before bankruptcy, model A Altman has an accuracy rate of 83.33%, while the Altman B model has an accuracy rate of 80%.

Companies that have been evaluated and entered the bankruptcy category use the original Altman model, there are 40% of companies, while using the Altman A model, there are 44.5% of companies and Altman's B model detects 36.6% of companies that are in the bankrupt category.

Finacial Distress

According to Zulaecha & Mulvitasari, (2019), that is, a condition of financial distress or financial distress is a condition that starts with the chaotic financial management of a company, causing liquidity pressure which gets progressively heavier, then continues in a condition where the value of assets decreases so that it does not able to pay its various financial obligations.

Meanwhile, according to Rahayu & Sopian, (2017) financial distress is a broad concept consisting of several situations where a company faces financial difficulties, general terms to describe these situations are failure, default, bankruptcy and bankruptcy. If the company shows a weakened financial condition, it can cause stakeholders such as creditors and stakeholders to lose their trust. That way these stakeholders will withdraw to work with the company. If the company fails to find a way out, it is a sign that the company is in a state of financial distress and onthe verge of bankruptcy.

Liquidity

According to Carolina etal, (2017) company liquidity can be known from the balance sheet by comparing the amount of current assets with current liabilities and the

result of the comparison is called the current ratio. The reasons for the widespread use of the current ratio as a measure of liquidity include its ability to measure:

Ability to meet current obligations

The higher the amount (multiple) of current assets to current liabilities, the greater the confidence that these current liabilities will be paid.

Loss buffer

The bigger the buffer, the less the risk. The current ratio is the level of security available to cover the decline in the value of non-cash current assets when these assets are disposed of or liquidated.

Current fund proposal

The current ratio is a measure of the level of security against uncertainty and surprises in the company's cash flow. An example of uncertainty and surprise is a strike. Companies that have healthy liquidity, at least have a current ratio of 1 (one). This ensures that the company can fulfill all obligations financial or current debt by using its current assets, so as to avoid financial distress.

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Profitability

According to Mas'ud & Srengga, (2015) profitability is the final net result based on various policies and decisions, where this ratio is used as a measure of a company's ability to earn profits based on every rupiah of sales generated. Profitability is the level of success or failure of a company over a certain period of time.

Leverage

According to Carolina et al, (2017) leverage is defined as a company's ability to use fixed cost assets or funds to increase income (return) for company owners.

Operating Cash Flows

According to Carolina et al, (2017) cash flow from operating activities is an indicator that determines whether a company's operations can generate cash that can be used to pay off loans, maintain the company's operating capabilities, pay dividends, and make new investments without relying on external sources of funding.

X-Score

Mark E. Zmijewski conducted an expansion of the study of financial distress prediction in 1984 by adding the validity of financial ratios as a tool for detecting the financial failure of a company. Zmijewski conducted research by reviewing bankruptcy research from twenty years of previous research. According to Mark E. Zmijewski, (1984), this model criticizes the sampling method used by its predecessors. Zmijewski produced a model as in Formula 1

$$X = -4,336 - 4,513 X_1 + 5,679 X_2 - 0,004 X_3 \quad (1)$$

Where, X_1 = ROA (Net profit/Total assets; X_2 = Debt Ratio (Total debt/Total assets; and X_3 = Current Ratio (Current assets/Current liabilities) [E1] [L2]

After the results are obtained from calculations using the Zmijewski X-Score equation model, they will be matched with the assessment criteria or cut off points. $X < 0$ (Safe Zone, the company is in the safe zone and there is no possibility of financial difficulties or bankruptcy. $X > 0$ (Distress Zone), the company is experiencing financial difficulties and is likely to go bankrupt.

Liquidity

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X-Score

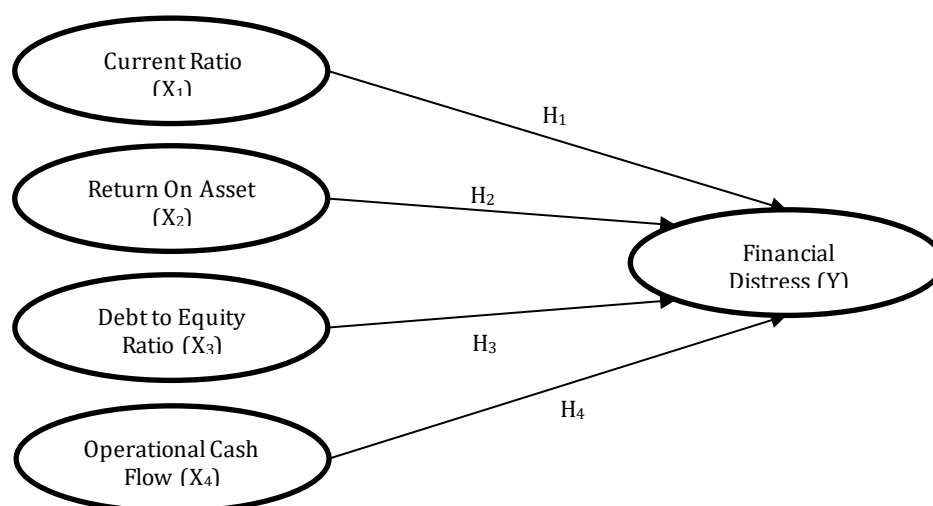
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$$X = -4,336 - 4,513 X_1 + 5,679 X_2 - 0,004 X_3 \quad (2)$$

Where, X_1 = ROA (Net profit/Total assets); X_2 = Debt Ratio (Total debt/Total assets; X_3 = Current Ratio (current assets/current liabilities).

After the results are obtained from calculations using the Zmijewski X-Score equation model, they will be matched with the assessment criteria or cut off points. $X < 0$ (Safe Zone), the company is in the safe zone and there is no possibility of financial difficulties or bankruptcy. $X > 0$ (Distress Zone), the company is experiencing financial difficulties and is likely to go bankrupt, as shown in Figure 1.



Source: Generated from author's construct, 2023

Figure 1. Conceptual Framework

Based on Figure 1., in this study there are four ratios used in predicting financial distress, namely the ratio of liquidity, profitability, leverage and operational cash flow. Liquidity ratio analysis in this study uses *current ratio* to measure a company's ability to meet its short-term obligations as they fall due. Analysis of profitability ratios using *return on asset* to measure management performance in managing sources of funds effectively in order to generate profits. Analysis of profitability ratios in this study using *debt to equity* to measure a company's ability to meet its long-term obligations as they fall due. Ratio analysis *operating cash flow* used to measure the level of financial difficulty of a company that will affect the value of the company itself.

The research hypothesis for this study are as follows; H1: Liquidity has a negative effect on financial distress; H2: Profitability has a negative effect on financial distress; H3: Financial leverage has a positive effect on financial distress; H4: Operating cash flow has a negative effect on financial distress company.

RESEARCH METHOD

This research is a type of quantitative research with secondary data analysis. Quantitative research according to Uma Sekaran (2017) is a scientific method in which

data is in the form of numbers or numbers that can be processed and analyzed using mathematical calculations or statistics. Research using a quantitative approach emphasizes testing theories through measuring research variables using information or data in the form of numbers and then analyzing the data with statistical procedures (Iskandar, 2013). The population in this study includes all tourism companies, restaurants and hotels listed on the IDX in 2021. The sampling technique in this study was purposive sampling with the following criteria: Tourism companies, restaurants and hotels listed on the Indonesia Stock Exchange (IDX) in 2021. Tourism, restaurant and hotel companies issuing annual reports with quarterly reporting periods from quarter 1 to quarter 4 of 2021.

The type of data used in this research is secondary data. Secondary data is data collected in the form of documents or literature in the form of quarterly financial reports. Data obtained from <http://www.idx.co.id/> as well as the company's official website.

The dependent variable to be examined is financial distress. In this study the dependent variable is presented in the form of a dummy variable with a binomial size, namely a value of one (1) if the X-Score is positive and zero (0) if the X-Score is negative.

The liquidity ratio is a ratio that describes a company's ability to meet short-term obligations (debt) (Kasmir, 2010). Liquidity in this study uses the current ratio, with the formula:

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}} \quad (3)$$

The profitability ratio is the ratio to assess the company's ability to make a profit. This ratio also provides a measure of management effectiveness in a company (Kasmir, 2010). Profitability in this study uses ROA (Return on Assets) with the formula:

$$\text{ROA} = \frac{\text{Net Profit Laba bersih}}{\text{Total Assets}} \quad (4)$$

Financial leverage shows the company's ability to meet both short-term and long-term obligations (Sartono, 2001). Financial leverage in this study uses DER with the formula:

$$\text{DER} = \frac{\text{Total Debt}}{\text{Total Equity}} \quad (5)$$

Operating cash flow is an indicator that determines whether a company's operations can generate cash that can be used to pay off loans, maintain the company's operating capabilities, pay dividends, and make new investments without relying on outside funding sources (Carolina et al., 2017).

$$\text{Operating Cash Flow} = \frac{\text{Operating Cash flow}}{\text{Total Liabilities}} \quad (6)$$

Testing the hypothesis in this study using logistic regression according to Hosmer and Lemeshow (2000) in (Hendayana, 2013) Logistic Regression is a method of statistical analysis to describe the relationship between response variables (dependent variable) which have two or more categories with one or more explanatory variables. (independent variable) on a categorical or interval scale while according to Agresti (1996) in (Hendayana, 2013) Logistic Regression is a non-linear regression, used to explain the relationship between X and Y which is not linear, the distribution of Y is abnormal, the diversity of responses is not constant cannot be explained by ordinary linear regression models.

This study uses logistic regression to determine the predictive power of financial ratios and the most dominant financial ratios in determining whether a company will

experience financial distress or not. Logistic regression analysis is used because the dependent variable is dichotomous (correct and incorrect). The logistic regression equation model used in this study is as follows:

$$\ln \frac{P}{1-P} = \beta_0 + \beta \text{ LK} + \beta \text{ Profit} + \beta \text{ Leverage} + \beta \text{ AKO} + \varepsilon \quad (7)$$

Where, β_0 = constant; LK = Liquidity; Profit = Profitability; Leverage = Leverage; I = Operational Cash Flow; and ε = error standard.

RESULTS AND DISCUSSION

The results of data processing show descriptive statistics displayed in Table 1.

Table 1. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
CR	116	.06	7.37	1.5143	1.27707
ROA	116	-.30	.02	-.0421	.05539
DER	116	.05	4.41	1.0006	.93489
OCFR	116	-.51	.42	-.0444	.17975
Valid N (listwise)	116				

Source: Processed by researcher, 2023

In the Table 1., it is stated that the total sample (N) is 116. Current Ratio (CR) has a minimum value of 0.06 or 6% and a maximum value of 7.37 or 737% with an average value of 1.5143 or 151.43% and a standard deviation 1.27707. Return On Assets (ROA) has a minimum value of -0.30 or 30% and a maximum value of 0.02 or 2% with an average value of -0.0421 or 4.21% and a standard deviation of 0.05539. The Debt to Equity Ratio (DER) has a minimum value of 0.05 or 5% and a maximum of 4.41 or 441% with an average value of 1.0006 or 100.06% and a standard deviation of 0.93489. Operational Cash Flow Ratio (OCFR) has a minimum value of -0.51 or 51% and a maximum value of 0.42 or 42% with an average value of -0.0444 or 4.44% and a standard deviation of 0.17975

The results of Model Fit testing can be seen in the Table 2.

Table 2. Model Fit Test Result

Hosmer and Lemeshow Test			
Step	Chi-square	df	Sig.
1	1.657	8	.990

Source: Processed by researcher, 2023

Suitability test is needed to ensure that there are no weaknesses in the conclusions of the model obtained. A good regression model is the observational data with the data obtained from the prediction results that are not different.

From the Table 2., the Chi-square value is 1.657 and the significance value is more than 0.05, namely 0.990 where the logistic regression model is able to explain the data and there is no difference with the observed value. This means that the logistic regression model can be said to be an accepted model.

The results of Model Summary testing can be seen in the Table 3.

Table 3. Model Summary Result

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	40.762 ^a	.641	.858

Source: Processed by researcher, 2023

From the Table 3. it is known that the Nagelkerke R Square value is 0.858. This means that the independent variables Current Ratio (CR), Return on Assets (ROA), Debt To Equity Ratio (DER), and Operational Cash Flow Ratio (OCFR) are able to explain the Dependent variable Financial Distress of 85.8% and the remaining 14.2%, explained by other variables.

The results of Model Summary testing can be seen in the Table 4.

Table 4. Omnibus Test Result

		Chi-square	df	Sig.
Step 1	Step	118.805	4	.000
	Block	118.805	4	.000
	Model	118.805	4	.000

Source: Processed by researcher, 2023

From the Table 4., it is known that the Nagelkerke R Square value is 0.858. This means that the independent variables Current Ratio (CR), Return on Assets (ROA), Debt To Equity Ratio (DER), and Operational Cash Flow Ratio (OCFR) are able to explain the dependent variable Financial Distress of 85.8% and the remaining 14.2%. explained by other variables.

The results of hypothesis testing can be seen in the Table 5.

Table 5. Logistic Regression Analysis Results

		B	S.E.	Wald	df	Sig.	Exp(B)
Step 1 ^a	CR	-1.867	.770	5.883	1	.015	.155
	ROA	-43.611	21.885	3.971	1	.046	.000
	DER	4.601	1.370	11.280	1	.001	99.546
	OCFR	.328	2.739	.014	1	.905	1.388
	Constant	.208	.822	.064	1	.801	1.231

Source: Processed by researcher, 2023

Based on the results of Table 5., the logistic regression analysis above, the regression equation is obtained as follows:

$$\text{Financial Distress} = 0,208 - 1,867\text{CR} - 43,611\text{ROA} + 4,601\text{DER} + 0,328\text{OCFR} \quad (8)$$

The Current Ratio coefficient value is -1.867 and a significance value is 0.015 < 0.05 thus Liquidity has a negative and significant effect on Financial Distress. The coefficient value of Return On Assets is -43.601 and a significance value of 0.046 < 0.05 thus Profitability has a negative and significant effect on Financial Distress. The Leverage coefficient value is 4.601 and a significance value of 0.001 < 0.05 thus Leverage has a positive and significant effect on Financial Distress. The coefficient value of the Operating Cash Flow Ratio is 0.328 and a significance value is 0.905 > 0.05, thus the Operational Cash Flow Ratio has no negative and insignificant effect on Financial Distress.

The effect of Liquidity on Financial Distress, from the hypothesis proposed that Liquidity has a negative effect. After being analyzed, the regression coefficient value is -1.867 with a significance value of $0.015 < 0.05$, so the proposed hypothesis is proven that leverage has a significant and negative effect on FD. The results of this study support the research of Mesak, D (2019) which states that Liquidity has a negative effect on FD.

Effect of Profitability on Financial Distress. From the hypothesis proposed that Profitability has a negative effect. After being analyzed, it is obtained that the regression coefficient is -1.867 with a significance value of $0.046 < 0.05$, so the proposed hypothesis is proven that Profitability has a negative and significant effect on FD. The results of this study support the research of Mesak, D (2019) which states that Profitability has a negative effect on FD.

Effect of Leverage on Financial Distress. From the hypothesis proposed that Leverage has a positive effect. After being analyzed, it is obtained that the regression coefficient value is 4.601 with a significance value of $0.001 < 0.05$, so the proposed hypothesis is proven that leverage has a positive and significant effect on FD. The results of this study support the research of Mesak, D (2019) which states that leverage has a positive effect on FD

Effect of Operation Cash Flow Ratio on Financial Distress. From the hypothesis proposed that OCFR has a negative effect. After being analyzed, the regression coefficient is 0.328 and the significance value is $0.905 > 0.05$, so the proposed hypothesis is not proven that OCFR has a negative effect on FD. The results of this study are in line with research conducted by Mesak, D (2019) which suggests that OCFR has no effect on predicting FD.

CONCLUSION

Liquidity as measured by the Current Ratio has a negative effect on financial distress in tourism companies, restaurants and hotels in 2021.

Profitability as measured by Return on Equity has a negative effect on financial distress in tourism companies, restaurants and hotels in 2021. Leverage as measured by Debt to Equity Ratio has a positive effect on financial distress in tourism companies, restaurants and hotels in 2021. Cash flow ratio operations do not affect financial distress in tourism, restaurant and hotel companies in 2021.

RECOMMENDATION

Companies experiencing financial distress make new policies to prevent financial distress from occurring which can lead to bankruptcy. This can be seen from the results of the analysis of financial ratios. Company management must pay attention to liquidity ratios, profitability ratios and leverage ratios. However, managers must pay more attention to the leverage ratio because it has a positive and significant effect that can cause a company to experience financial distress.

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