

# Analisis of Financial Distress Factors in Construction Companies Listed on the Indonesia Stock Exchange During the Covid-19 Pandemic

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**Abstract:** The economy is growing through the contribution of one of the sectors, namely the construction sector. The existence of the Covid-19 Pandemic has caused most businesses to experience pressure. According to the Central Statistics Agency, the performance of construction and building companies in 2020 decreased by -3.26%, with the spread of Covid-19, several infrastructure construction programs were temporarily suspended. The data used in the study is secondary data obtained from the Indonesia Stock Exchange in the form of annual financial statements to calculate financial ratios and the Altman Z-Score. Population in this study, namely construction and building sub-sector companies listed on the Indonesia Stock Exchange with sampling techniques using the purposive sampling method. The analysis model used in this study is multiple linear regression analysis. The results showed that statistically the return on equity had a positive and significant effect on financial distress. Current ratio has a statistically positive and significant effect on financial distress. The debt to equity ratio has a statistically positive but not significant effect on financial distress. Debt to asset ratio statistically has a negative and significant effect on financial distress. As well as the simultaneous influence of return on equity, current ratio, debt to equity ratio, and debt to asset ratio statistically have a significant effect on financial distress.

**Keywords:** Return on equity, Current ratio, Debt to equity ratio, Debt to asset ratio, Financial distress, Covid-19 Pandemic.

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## Introduction

The economy is growing through the contribution of one of the sectors, namely the construction sector where infrastructure development is very important to increase productivity (Resfitasari & Gumelar, 2021). Infrastructure development will lead to economic expansion, which is useful for improving circulation throughout the economy. The existence of the Covid-19 Pandemic has caused most businesses to experience pressure. No exception is a company that has gone public that has been listed on the Indonesia Stock Exchange in the construction sector. According to the Central Statistics Agency (2021) the performance of construction and building companies in 2020 decreased by -3.26% because the purchasing power of the community tends to decrease and with the spread of Covid-19, several infrastructure development programs are temporarily suspended. According to research conducted by Sari & Suryan (2021) the Covid-19 pandemic has greatly impacted the construction world, it is known that 78.9% of construction projects throughout 2020 experienced delays due to limited funding and the government imposed a PSBB (Large-Scale Social Restrictions) policy. The impact of the construction sector is interesting to discuss, considering that this sector includes a program to strengthen infrastructure designed from the National Medium-Term Development Plan (RPJMN) for 2020-2024. The infrastructure sector is one of the government's strategies in accelerating the equality and growth of the Indonesian economy.

According to Saadah & Salta (2021) companies that are unable to maintain financial performance stability to the point of causing losses in the period concerned will have the opportunity to bear the difficulties of financial distress. There are several conditions that cause financial distress including debt burdens and interest that are considered large, insufficient capital, and the loss experienced by the company (Saadah & Salta, 2021). The level of financial distress in a company can be predicted through the Altman Z-Score method, which aims to find a Z value to estimate the company's financial condition whether it is safe while being able to consider the company's performance to see opportunities in the future. Financial distress analysis is very important to be carried out so that stakeholders from both internal and external parties get information signals so that they

can make decisions (Harianti & Paramita, 2019). According to Erayanti (2019) one of the indicators that can be used in detecting the level of financial distress is through financial ratio analysis. With the aim of seeing a reflection of the company's financial ratio compared to the industry average and future prospects by looking at the company's strengths and weaknesses in order to improve the company's performance.

The sustainability of the company in facing the worst situation in the form of bankruptcy or liquidation, can be prevented through information obtained from the analysis of financial distress predictions used for internal parties as an early warning of the problems that will be caused so that company management and external parties who have needs can take antisemitic measures (Saadah & Salta, 2021). The Covid-19 pandemic caused a phenomenon where most construction and building companies were affected which resulted in the performance of the company experiencing a decline. To find out this incident, the author is interested in conducting research on the analysis of factors that have an influence on financial distress during the Covid-19 pandemic, especially in the construction and building sectors listed on the Indonesia Stock Exchange.

## Method

The type of research used is quantitative research with a descriptive statistical approach. The type of data source used is secondary data obtained from the official website of the Indonesia Stock Exchange in the form of the company's annual financial report, the population sampled in the study is the construction and building sub-sector companies on the Indonesia Stock Exchange. This study used purposive sampling techniques for data sampling so that the sample of this study amounted to 16 companies. Meanwhile, the object of the study is to find out the effect of the financial ratio to the company's financial distress. The data collection technique used is documentation. The data analysis used is multiple linear regression analysis, multiple linear regression tests are carried out to calculate the degree of influence of independent variables on dependent variables in regression models (Sugiono, 2016). This study used independent variables and dependent variables. The independent variables in this study are return on equity (ROE), current ratio (CR), debt to equity ratio (DER), and debt to asset ratio (DAR). The dependent variable in this study is Financial Distress (Z-Score). Data analysis techniques in the form of quantifiable data that have been collected then go through the data processing process. In this process, quantitative data is processed using Microsoft Office Excel software with the following stages: calculating the ratio of profitability, liquidity, and solvency and then calculating financial distress with the Altman Z-Score method, then processed through SPSS software by conducting classicity assumption tests such as: normality test, autocorrelation, Multicholnearity, Heteroskedasticity Test and hypothesis test such as: t test, f test and determination coefficient test.

## Result and Discussion

### 1. Classic Assumption Test

#### a. Normality Test

The normality test serves to find out whether the model used is normal or not. If the regression model has a sig value above 0.05, it can be said to be normally distributed. The test stage was carried out using non-parametric statistics with the Kolmogorov-Smirnov One Sample test method (Ghozali, 2016). The following are the results of the normality test:

Table 1 Normality Test Results

		Unstandardized Residual
N		32
Normal Parameters <sup>a,b</sup>	Mean	,0000000
	Std. Deviation	1,07781732
Most Extreme Differences	Absolute	,142
	Positive	,119
	Negative	-,142
Test Statistic		,142
symp Sig (2-tailed)		,097

Source : Data processed on IBM SPSS 25 (2022)

Table 1 shows the Sig value of return on equity, current ratio, debt to equity and debt to asset as a whole of 0.097. So that the conclusions obtained are in the form of normally distributed research data.

b. Autocorrelation Test

The autocorrelation test was performed to determine whether there was a correlation between the disturbing errors in the t-1 period in the linear regression model. The Run test works to determine whether there is an autocorrelation in the form of regression. If the sig result is greater by 5 percent or 0.05 it is flattened that there is no autocorrelation disorder in the regression form (Ghozali, 2016). The following are the results of the autocorrelation test:

Table 2 Autocorrelation Test Results

	Unstandardized Residual
Test Value <sup>a</sup>	,04828
Cases < Test Value	16
Cases >= Test Value	16
Total Cases	32
Number of Runs	12
Z	-1,617
Asymp Sig (2-tailed)	,106

Source : Data processed on IBM SPSS 25 (2022)

Table 2 shows a sig value of 0.106 so that it is greater than 0.05, meaning that there is no autocorrelation disorder to the research model.

c. Multicholinerity Test

To be able to determine the multicholinerity between independent variables using the reference vari-ance inflation factor (VIF) and tolerance value. If the VIF value is less than 10 and the tolerance value is more than 10 percent or 0.1, so that it is interpreted that among independent variables there is no multicholinerity (Ghozali, 2016). Here are the results of multicholinerity:

Table 3 Multicholinerity Test Results

		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Return on Equity	,506	1,976
	Current Ratio	,465	2,148
	Debt to Equity Ratio	,128	7,803
	Debt to Asset Ratio	,125	7,977

Source : Data processed on IBM SPSS 25 (2022)

Table 3 shows the results of the multicholinerity test in the form of a tolerance value greater than 0.1 in each independent variable, as well as a VIF value below 10 in each independent variable. This indicates no symptoms of multicholinerity in the regression model.

d. Heteroskedasticity Test

The heteroskedasticity test in this study used the glejser test to determine whether there was a variance inequality of residual values for all observations. If the value of the in-dependent variable siignifikansi with the residual absolute >0.05 then there is no heteroskedasticity problem (Ghozali, 2016). The following are the results of the heteroskedasticity test:

Table 4 Heteroskedasticity Test Results

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t.	Sig
1 (Constant)	1,927	1,350		1,427	,165
Return on Equity	-,394	,260	-,377	-1,520	,140
Current Ratio	-,305	,345	-,229	-,886	,383
Debt to Equity Ratio	-,122	,191	-,316	-,640	,527
Debt to Asset Ratio	-,925	2,147	-,215	-,431	,670

Source : Data processed on IBM SPSS 25 (2022)

Table 4 resulted in conclusions that each of the independent variables in the study did not encounter symptoms of heteroskedasticity because the significance value of each independent variable had a value higher than 0.05.

## 2. Hypothesis Test

### a. Partial Test (t test)

Partial testing (t-test) is carried out by testing the regression coefficient by determining the statistical formula to be tested. To get a conclusion the partial influence of each variable. Based on table 5, it shows that there are several influences of each variable as follows:

Table 5 t Test Results

Model	Unstandardized Coefficient		Standardized Coefficient		
	B	Std. Error	Beta	t	Sig
1 (Constant)	3,304	2,024		1,632	,114
Return on Equity	1,925	,389	,521	4,946	,000
Current Ratio	1,887	,517	,401	3,652	,001
Debt to Equity Ratio	,354	,287	,258	1,234	,228
Debt to Asset Ratio	-7,726	3,219	-,508	-2,401	,024

Source : Data processed on IBM SPSS 25 (2022)

- The Effect of Return on Equity on Financial Distress During the Covid-19 Pandemic  
The value of the coefficient of return on equity is 4,946 which indicates the existence of a unidirectional relationship. Significance smaller than the significant limit ( $0.000 < 0.05$ ) it was found to be the effect of the positive significance of return on equity on financial distress.
- The Effect of Current Ratio on Financial Distress During the Covid-19 Pandemic  
The value of the current ratio coefficient is 3.652 which indicates a unidirectional relationship. The significance is smaller than the significant limit ( $0.001 < 0.05$ ) so the effect of the positive significance of the current ratio on financial distress was found.
- The Effect of Debt to Equity Ratio on Financial Distress During the Covid-19 Pandemic  
The value of the debt to equity ratio coefficient is 1,234 which indicates a unidirectional relationship. The significance is greater than the significant limit ( $0.228 > 0.05$ ) so there is no positive significance of the debt to equity ratio on financial distress.
- The Effect of Debt to Asset Ratio on Financial Distress During the Covid-19 Pandemic

The value of the debt to asset ratio coefficient is -2.401 which indicates an insignificant relationship. The significance is less than the significant limit ( $0.024 < 0.05$ ) so the negative significance of the debt to asset ratio on financial distress was found.

b. Simultaneous Test (f test)

Simultaneous testing (test f) determines the outcome of an independent variable whether it has an influence on the dependent variable. The benchmark in decision determination is used if the sig value is less than 5 percent, then it is found to be the influence of the significance of simultaneously independent variables on the dependent variable. The results of the calculation of the f test are as follows:

Table 6 f Test Results

Model	Sum of Squares	Df	Mean Square	F	Sig
1 Regression	201,934	4	50,483	37,850	,000 <sup>b</sup>
Residual	36,012	27	1,334		
Total	237,946	31			

Source : Data processed on IBM SPSS 25 (2022)

Table 6 shows the significance value is smaller than the significance limit ( $0.000 < 0.05$ ) then there is a simultaneous significant influence between return on equity, current ratio, debt to equity ratio, and debt to asset ratio on the financial distress variable.

c. Coefficient of Determination Test

The coefficient of determination test provides a large percentage picture of all independent variables in explaining the dependent variables. The results of the calculation of the coefficient of determination test are as follows:

Table 7 Coefficient of Determination Test Results

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,921 <sup>a</sup>	,849	,826	1,154899

Source : Data processed on IBM SPSS 25 (2022)

Table 7 shows that the financial distress variable can be explained or influenced by 82.6% by the variables of return on equity, current ratio, debt to equity ratio, and debt to asset ratio. So that 17.4% of the level of financial distress is explained by factors outside the study.

**Conclusion**

The results showed that statistically the return on equity had a positive and significant effect on financial distress. Current ratio has a statistically positive and significant effect on financial distress. Debt to equity ratio has a statistically positive but not significant effect on financial distress. Debt to asset ratio statistically has a negative and significant effect on financial distress. As well as the simultaneous influence of return on equity, current ratio, debt to equity ratio, and debt to asset ratio statistically have a significant effect on financial distress. This financial ratio analysis has no impact if it is carried out by investors separately in analyzing financial distress in its current state, due to the covid-19 pandemic conditions that cause most companies to experience a decline in performance, on the contrary, proving the ratio of return on equity, current ratio, debt to equity ratio and debt to asset ratio together has an influence on financial distress implies that this financial ratio together is useful for investors as a consideration for making investment decisions in a company if there is another disaster like the Covid-19 pandemic so that it can increase returns and reduce risks in investing in a company.

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