

Volume 1, 2023, PP: 158-166

The factors that affect financial distress during the covid-19 pandemic

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Abstract

This research aims to determine the effect of sales growth, profitability, liquidity, and operating cash flow on financial distress during the Covid-19 pandemic. The population in this study are all property, real estate, and construction companies listed on the Indonesia Stock Exchange in 2019-2021. The sampling technique used a purposive sampling method. Samples that meet the criteria are 44 companies with a total of 132 data for three years of observation. Data analysis used logistic regression with the help of SPSS program. The results of the study show that sales growth and profitability have an effect on financial distress, while liquidity and operating cash flow have no effect on financial distress.

Keywords: Sales Growth, Profitability, Liquidity, Financial Distress, Covid-19

DOI: 10.20885/InCAF.vol1.art18

INTRODUCTION

The changing economic situation due to the Covid-19 pandemic can affect the company's activities and performance. When the performance of the company's resources is not able to compete and the company is unable to process its activities, it will experience losses which in the end will have an impact on the company experiencing financial distress. The rating agency Pefindo stated that the financial performance of the property sector was at the highest risk of being affected by the Covid-19 pandemic (Situmorang, 2020).

Currently, the property sub-sectors that suffer the most are malls and hotels with a maximum traffic of 40%. The results of the Central Statistics Agency (BPS) survey in 2020 recorded 82.85% of companies affected by the Covid-19 pandemic. Based on the sector, the construction business experienced a decrease in revenue, which was 87.94 (Nurhaliza, 2021). Financial problems faced by a company if allowed to drag on can lead to bankruptcy (Andre & Taqwa, 2014). So that companies can take corrective actions, it is very important to know information about financial distress which can be done by analyzing the company's financial ratios. Several studies have been conducted to determine the usefulness of financial ratio analysis in assessing the level of financial distress of a business (Murni, 2018).

Sales growth in this study is a type of ratio that describes the company's development in maintaining its economic position in the midst of economic growth and its business sector (Kasmir, 2010). Profitability ratio can be used to predict financial distress conditions. Profitability ratio is a ratio that shows the company's ability to generate net income at a certain level of sales, assets, and share capital (Hanafi & Halim, 2007). Liquidity is a ratio used to measure a company's ability to meet its short-term obligations that have matured (Hendra, 2009). Liquidity ratio is used to predict the occurrence of financial distress.

In addition, the cash flow ratio can also be used to predict the occurrence of financial distress. Cash flow is a report that provides relevant information regarding cash receipts and disbursements within a certain period of time. Every company in running its business will experience cash inflow and cash outflow (Hariyanto, 2018). Based on this description, this research was conducted to determine the effect of sales growth, profitability, liquidity, and operating cash flow on financial distress in property, real estate, and construction companies during the Covid-19 pandemic.

LITERATURE REVIEW

Signaling Theory

Signaling theory explains that the company provides information about the company in the form of positive or negative signals to users or users of financial statements (Putri & Mulyani, 2019). Signaling theory can be used to give a signal to managers about the good or bad information in the company. Thus, the usefulness of information if a company experiences financial distress is that it can accelerate management actions to prevent problems before bankruptcy occurs. For this reason, the management can take merger or takeover actions so that the company is better able to pay its debts, manage the company better, and give a signal of bankruptcy in the future.

Financial Distress

Financial distress as two extreme points, namely between short-term liquidity to insolvable conditions. Financial distress is usually short-term, but can develop more severe to result in the company being insolvable (Hanafi & Supriyadi, 2018). Financial distress is caused by the company not being able to control and maintain the stability of its financial performance which started from the failure to promote the products it produces, resulting in a decrease in sales and revenue. Companies that are in financial distress have the potential to go bankrupt in the real sense, namely legally bankrupt. However, this does not mean that all companies experiencing financial distress will end up in bankruptcy. Companies can get through these bad conditions depending on the right management decision in handling the problem.

Financial Ratio Analysis

Financial ratio analysis is to compare the figures in the financial statements to determine the financial position of a company and assess management performance in a certain period (Faldiansyah et al., 2020). This financial ratio analysis is carried out to predict the potential for financial difficulties early on, so that the company can take control measures to prevent bankruptcy in the future. One aspect that shows the importance of financial ratio analysis is predicting the survival of the company. This survival prediction is very important for management and company owners to anticipate the possibility of bankruptcy (Arsanti et al., 2021).

HYPOTHESIS DEVELOPMENT

The Effect of Sales Growth on Financial Distress

Sales growth is a ratio to measure and inform the sales development of a company by looking at its growth (Saputra & Salim, 2020). This ratio describes the company's ability to increase its level of sales from time to time. If it can increase the level of income from year to year, then it can help the company survive in the future and reduce the risk of financial distress. Based on these several things, the following hypotheses can be formulated:

H₁: Sales growth has an effect on financial distress conditions.

The Effect of Profitability on Financial Distress

Profitability ratio is defined as a ratio that measures the company's ability to generate net income at a certain level of sales, assets, and share capital (Hanafi & Supriyadi, 2018). With high profits, it can attract investors who want to invest to save the company in the future from the threat of financial distress. According to Nukmaningtyas & Saparila (2018), one of the indicators that can be used to measure a company's profitability is Return On Assets (ROA), which is a measure of a company's ability to generate net income with a certain level of sales, assets, and share capital. The greater the ROA achieved by the company, the less likely the occurrence of financial distress. Based on this, the following hypotheses can be formulated:

H₂: Profitability has an effect on financial distress conditions.

The Effect of Liquidity on Financial Distress

Liquidity ratio is a ratio that shows the ability of a company to meet its short-term obligations by utilizing its current assets (Susanti et al., 2020). The ratio used to measure liquidity is the current ratio (CR). By knowing the CR, it will be able to predict the occurrence of financial distress. The higher the CR value, the lower the risk of the company experiencing financial distress, which means the company is able to properly fund and repay its short-term obligations. Based on this, the following hypotheses can be formulated:

H₃: Liquidity has an effect on financial distress conditions.

The Effect of Operating Cash Flow on Financial Distress

Operating cash flow is an indicator that determines whether the operations carried out by the company can generate cash. Thus, operating cash flow can be a signal for investors about the financial condition of a company (Mas'ud & Srengga, 2012). Cash flow ratio is very important in detecting the possibility of bankruptcy and financial distress. The greater the company's total cash flow, the smaller the possibility of financial distress in the company.

Based on this, the following hypotheses can be formulated:

H₄: Operating cash flow has an effect on financial distress conditions.

The framework of thought in this research can be realized with the following picture:

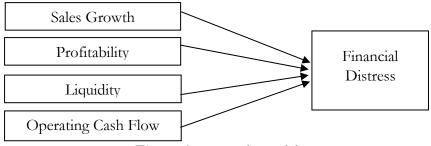


Figure 1. Research Model

RESEARCH METHOD

This research is a type of causative research with the aim of knowing the effect of sales growth, profitability, liquidity, and operating cash flow on financial distress. This study uses quantitative methods. The data used is secondary data obtained from www.idx.co.id in the form of audited financial statements of property, real estate, and construction companies listed on the IDX. Sampling used a purposive sampling method with several criteria, namely companies engaged in the property, real estate, and construction sectors listed on the IDX, publishing financial statements consecutively and audited during 2019-2021, and experiencing negative net income of at least one times during the period of the year. Based on these criteria, a sample of 44 companies was obtained. By using the method of combining data during the 3 years of observation, a sample of 132 companies were obtained.

Operational Research Variables

Financial Distress

This study uses a dummy variable with measurement indicators: a value of 1 for companies experiencing financial distress conditions, if the company has experienced negative net operating income for two consecutive years; and a value of 0 for companies that do not experience financial distress, if the company for two consecutive years does not experience negative net operating income. To determine the year of the company experiencing financial distress is the year in the variable period X the research year and a year after the variable period X the research year (Andre & Taqwa, 2014).

Sales Growth

The measurement of the sales growth variable can be formulated as follows (Almilia & Kristijadi, 2003):

$$Sales\ Growth = \frac{Sales_t - Sales_{t-1}}{Sales_{t-1}}$$

Profitability

Profitability is measured using ROA whose amount is formulated as follows (Hendra, 2009):

$$ROA = \frac{Net\ Profit}{Total\ Assets}$$

Liquidity

Liquidity is measured using the current ratio with the formula (Hendra, 2009):

$$CR = \frac{Current\ Asset}{Current\ Liabilities}$$

Operating Cash Flow

Operating cash flow in this study is calculated by (Mas'ud & Srengga, 2012):

In this study, the original data must be transformed using standardization because the cash flow variable has units that are not the same as other variables. Standardization is done by converting the original data into standard values or z-scores.

Analysis Method

In this study, the hypothesis was tested using logistic regression analysis. The logistic regression model used is:

$$Ln\frac{P}{(1-P)} = \alpha + \beta_1 SG + \beta_2 ROA + \beta_3 CR + \beta_4 OCF + \varepsilon$$

Information:

 $Ln \frac{P}{(1-P)} = \text{Log comparison of opportunities for financial distress with non-financial distress.}$

 α = Constant

 $\beta_1 - \beta_4$ = Variable Coefficient

SG = Sales Growth ROA = Profitability CR = Current Ratio

OCF = Operating Cash Flow

 ε = Error Term

RESULT AND DISCUSSION

Descriptive Statistics

Descriptive statistics show the minimum, maximum, mean, and standard deviation of each variable in this study. The results of descriptive statistics test can be seen in Table 1.

Variabel Minimum Maximum Mean Std. Deviation SG -0.8994.360 0.060 0.801 ROA -0.439 0.277 -0.023 0.083 4.137 7.261 CR 0.126 65.252 0.992 **OCF** -4.568 5.668 0.000 FD 0.000 1.000 0.318 0.467

Table 1. Descriptive Statistics Test Results

Overall Model Fit Test

The results of the overall model fit test can be seen in Table 2.

Table 2. Overall Model Fit Test Result

-2 Log Likelihood Block Number 0	-2 Log Likelihood Block Number 1
165.130	125.232

In Block Number 0 (Beginning Block), which is the first model with only constants without any independent variables, the value of -2 Log Likelihood is 165.130. In Block Number 1 it decreased to 125.232, so it can be concluded that H0 cannot be rejected, which means that the hypothesized model is fit and feasible to use.

Coefficient of Determination Test

The results of the coefficient of determination test can be seen in Table 3.

Table 3. Coefficient of Determination Test Results

Step	-2 Log	Cox & snell R	Nagelkarke R-
	Likelihood	square	Square
1	125.232	0.261	0.365

The results of the coefficient of determination test show the Nagelkarke R-Square value of 0.365, which means that the variability of the dependent variable that can be explained by the independent variable is 36.5% and the remaining 63.5% is explained by the variability of other variables outside the research model. In other words, the variable sales growth, profitability, liquidity, and operating cash flow can simultaneously explain the financial distress of 36.5%.

Regression Model Feasibility Test

The results of the regression model feasibility test using the Hosmer and Lemeshow Test can be seen in Table 4.

Table 4. Hosmer and Lemeshow Test Results

Step	Chi-square	df	Sig.
1	5.069	8	0.750

The results of the feasibility test of the regression model obtained a chi-square value of 5.069 with a significance value of 0.750. From these results it can be seen that the significance value is greater than 0.05, so H0 is accepted. This means that the logistic regression model can be used for further analysis.

Logistic Regression Test

The results of the logistic regression test in this study can be seen in Table 5.

		В	S.E.	Wald	df	Sig.
Step 1a	SG	-2.074	0.687	9.120	1	0.003
	ROA	-13.760	4.383	9.854	1	0.002
	CR	0.014	0.041	0.117	1	0.733
	OCF	-0.436	0.366	1.420	1	0.233
	Constant	-1.546	0.353	19.178	1	0.000

Table 5. Logistics Regression Test Results

Based on the table, the logistic regression equation is obtained:

$$Ln \frac{P}{(1-P)} = -1.546 + (-2.047)SG + (-13.760)ROA + 0.14CR + (-0.436)OCF$$

Based on the logistic regression equation, the following interpretation can be obtained:

The constant is -1.546. This shows that without the influence of the independent variables, namely sales growth, profitability, liquidity, and operating cash flow, the probability of financial distress is 1.546.

The SG coefficient is -2.074. This shows that, meaning that if the SG (sales growth) variable increases by 1 unit, then the probability of financial distress will decrease by 2,074 units, assuming that other variables remain. Conversely, if the SG variable decreases by 1 unit, then the probability of financial distress will increase by 2,074 units.

The ROA coefficient is -13.760. This shows that if ROA (profitability) increases by 1 unit, then the probability of financial distress will decrease by 13.760 units, assuming that the other variables are constant. On the other hand, if ROA decreases by 1 unit, the probability of financial distress will increase by 13.760 units.

The CR coefficient is 0.014. This means that if the CR (liquidity) increases by 1 unit, the probability of financial distress will increase by 0.014 units, assuming that the other variables are constant. On the other hand, if the CR decreases by 1 unit, the probability of financial distress will decrease by 0.014 units.

The OCF coefficient is -0.436. This means that if the OCF (operating cash flow) increases by 1 unit, the probability of financial distress will decrease by 0.436 units, assuming that the other variables are constant. On the other hand, if the OCF decreases by 1 unit, the probability of financial distress will increase by 0.436 units.

Hypothesis Test

The Effect of Sales Growth on Financial Distress

Through the logistic regression analysis test in table 5 shows that the significance value of SG is 0.003 < 0.05. This means that the variable sales growth in companies engaged in the property, real estate, and construction sectors studied during the Covid-19 pandemic had an effect (statistically significant) on financial distress, so that H₁ was accepted. The results of this study support the research conducted by Subagyo et al. (2022) and research before the Covid-19 pandemic by Rahayu & Sopian (2017) which concluded that sales growth had an effect (statistically significant) on financial distress. This shows that the sales growth variable has a significant effect on financial distress both in normal situations and during the Covid-19 pandemic.

The higher the growth rate of a company's sales indicates that the company is successful in carrying out its strategy in terms of product marketing and sales, so that the greater the profit that will be obtained from these sales. This is done by companies in normal situations and after the Covid-19 pandemic, every company is still trying to innovate to keep up with the times to increase its sales. Therefore, sales growth has an influence on the possibility of a company experiencing financial distress.

The Effect of Profitability on Financial Distress

Through the logistic regression analysis test in table 5 shows that the significance value of ROA is 0.002 < 0.05. This means that the profitability variable measured using ROA in companies engaged in the property, real estate, and construction sectors studied during the Covid-19 pandemic had an effect (statistically significant) on financial distress conditions, so that H₂ was accepted. The results of this study support the research conducted by Fitri & Syamwil (2020) and research before the Covid-19 pandemic by Nukmaningtyas & Saparila (2018) which concluded that profitability has an effect (statistically significant) on financial distress. This shows that the profitability variable has a significant effect on financial distress both in normal situations and during the Covid-19 pandemic.

During the Covid-19 pandemic, companies reduced business activities which resulted in an average decrease in profitability. Property, real estate, and construction companies experiencing financial distress generally have negative profitability. Negative profitability indicates that there is no effectiveness in using company assets to generate net income. This indicates a condition of financial distress experienced by the company and indicates an ineffective use of company assets in generating profits. The ineffective use of these assets shows that the company has not been able to generate maximum profits during the Covid-19 pandemic. If profitability continues to decline and even has a negative value, then the possibility of the company experiencing bankruptcy will be even greater. Thus it can be said that profitability has an influence on financial distress conditions.

The Effect of Liquidity on Financial Distress

Through the logistic regression analysis test in table 5 shows that the significance value of CR is 0.733 > 0.05. This means that the liquidity variable measured using CR in companies engaged in the property, real estate, and construction sectors studied during the Covid-19 pandemic had no effect (statistically not significant) on financial distress, so H₃ was rejected. The results of this study are in accordance with research conducted by Fitri & Syamwil (2020) and research prior to the Covid-19 pandemic by Nukmaningtyas & Saparila (2018) which concluded that liquidity had no significant effect on financial distress. This shows that the results obtained are consistent from research conducted in normal situations and during the Covid-19 pandemic, namely the liquidity variable has no effect (statistically not significant) on financial distress.

There is no significant difference between the liquidity of companies that experience financial distress and those who do not, because there is no direct relationship between debt and financial distress. Liquidity is the level of the company's ability to meet its current liabilities as measured by the ratio between total current assets and total current liabilities. In current assets there are accounts receivable and accounts receivable which if later will be used to pay current debts, it takes a long time and varies between companies to convert receivables and inventories into cash which will be used to finance company obligations. This shows that whatever level of liquidity the company will not affect the possibility of the company experiencing financial distress (Dirman, 2020). Therefore, the liquidity variable has no effect (not significant) on financial distress conditions both in normal situations and during the Covid-19 pandemic.

The Effect of Operating Cash Flow on Financial Distress

Through the logistic regression analysis test in table 5 shows that the significance value of operating cash flow is 0.233 > 0.05. This means that the operating cash flow of companies engaged in the property, real estate, and construction sectors studied during the Covid-19 pandemic had no effect (statistically not significant) on financial distress, so H₄ was rejected. The results of this study are in accordance with research conducted by Faldiansyah et al. (2020) and research prior to the Covid-19 pandemic by Nukmaningtyas & Saparila (2018) which concluded that operating cash flow had no significant effect on financial distress. This shows that the results obtained are consistent from research conducted in normal situations and during the Covid-19 pandemic, namely the operating cash flow variable has no effect (statistically not significant) on financial distress.

The size of the operating cash flow does not affect the company's financial distress. There is no effect of operating cash flow on financial distress because the amount of cash flow relatively fluctuates from time to time, both in companies that experience financial distress and those that do not experience it. So it cannot be ascertained that the small operating cash flow of the company indicates that the company is experiencing financial distress, as well as a high cash flow value does not necessarily indicate that the company is able to fulfill its obligations to creditors. Therefore, the operating cash flow variable has no effect (not significant) on financial distress both in normal situations and during the Covid-19 pandemic.

CONCLUSION

Based on the results of the analysis it can be concluded that the variables sales growth and profitability (ROA) in companies engaged in the property, real estate and construction sectors listed on the IDX in 2019-2021 during the Covid-19 pandemic had a significant effect on financial distress, while variables liquidity (CR) and operating cash flow have no effect (not significant) on financial distress. The research results obtained are consistent with research that was conducted in normal situations before the Covid-19 pandemic by Rahayu & Sopian (2017) and Nukmaningtyas & Saparila (2018). This means that there is no change in the results of research conducted both in normal situations and during the Covid-19 pandemic, namely the sales growth and profitability variables still have a significant effect on financial distress.

This study has several limitations. First, this study only proxies financial distress with one measure, namely negative net income for two consecutive years. Second, this study only uses four independent variables, namely sales growth, profitability, liquidity, and operating cash flow, so the ability of the independent variables in this study is very limited in explaining the variability of the dependent variable. For further research, other variables can be added, both financial and non-financial information which are expected to have an influence on financial distress.

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