THE INFLUENCE OF PROFITABILITY AND LIQUIDITY TOWARDS FINANCIAL DISTRESS AND INSTITUTIONAL OWNERSHIP AS MODERATING VARIABLE

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Abstract *– Apart from looking at the financial statements, financial distress can also be caused by internal factors such as poor internal management and external factors such as the pandemic condition due to the Covid-19 virus which occured since 2019. The Covid-19 pandemic has disrupted normal life and triggered economic reduction all around the world. The property and real estate sector was one of the most affected sector by Covid-19. Most property prices had been dramatically dropped. The purpose of this study was to examine the effect of profitability and liquidity on financial distress and the role of institutional ownership in moderating the effect of profitability and liquidity on financial distress. The object of this research is the property and real estate sector which listed on the Indonesia Stock Exchange during 2018-2022 period. This research used 225 samples taken using purposive sampling technique. Data analysis was carried out with panel data regression. The results of this research is that profitability has a significant effect on financial distress, while liquidity and institutional ownership do not have a significant effect on financial distress. In addition, this research shows that institutional ownership can strengthen the influence of profitability on financial distress but weaken the effect of liquidity on financial distress.*

Keywords: financial distress, profitability, liquidity, institutional ownership

I. INTRODUCTION

According to Kwon (2012), financial distress is a term in corporate finance that is used to indicate a condition when a company is unable to pay its obligations to creditors. There are several analysis models carried out by researchers to measure the level of financial distress in companies, such as Altman Z Score, Springate, Zmijewski, and Ohlson models (Lestari, 2021). A company will encounter a condition of financial distress first before it finally goes bankruptcy. This is because at that time the financial situation in the company was in a crisis, where in these circumstances the company could encounter a decreasing funds in running its business which could be due to decreasing sales or results of operations carried out by company to make a profit, but the income or results obtained are not comparable with the many obligations or debts that have matured.

As previously mentioned that financial distress does not only occur due to internal but also external factors. One of the external factors that can cause financial distress at this time is the pandemic condition due to the Covid-19 virus which occur since 2019. Covid-19 is not only impacting in the health sector, but also has an impact on the economy. The Covid-19 pandemic has disrupted normal life and triggered a massive economic slowdown across the country. The economic impact of

the pandemic has been especially severe in developing countries where the loss of income caused by the pandemic has exposed and exacerbated some of the pre-existing economic weaknesses. During the Covid-19 pandemic in Indonesia, many companies experienced a decline in their financial and operational performance. This led to a weakening of the ongoing business, both in the financial and operational sectors of the company and even suffered large losses. As a result, many companies have implemented a work from home system for their workers, and many companies have even been forced to repatriate or terminate the employment relationship with their employees.

The impact of the Covid-19 pandemic has also caused 13 public companies delisted from the Indonesian Stock Exchange. During the Covid-19 pandemic in Indonesia, most property prices, such as houses, apartments and motorized vehicles, experienced a sharp decline. This is due to a decrease in demand for property in line with the increasing caution of the public in spending amid a pandemic. According to data published by the Indonesian Ministry of Finance, sales of primary residential properties in the second quarter of 2021 show a decline on an annual basis. House sales during this period contracted -10.01% (yoy), down from 13.956% (yoy) in the previous quarter, but better than the -25.6% (yoy) contraction in quarter II-2020. The decline in sales volume in the second quarter of 2021 occurred in small (-15.4%, yoy) and large (-12.99%, yoy) house types, while medium-sized house types recorded slower growth (3.63%, yoy). Therefore, since 2021, the government has started disbursing stimulus for the property sector in order to revive people's interest in buying houses or renting offices. The results of research conducted by Fitrijanti (2022), show that financial distress and company size have a positive effect on disclosure of corporate social responsibility in the period before and during the Covid-19 pandemic. Meanwhile, the age of the company before and during the Covid-19 pandemic had no effect on the disclosure of corporate social responsibility. Another research was conducted by Mulyaningsih (2021), showing the result that the company experienced financial difficulties during the Covid-19 disease pandemic. Companies experiencing financial difficulties suffer from a lack of liquidity, reduced profits, lower retained earnings, and high dependence on external financing from debt. However, research conducted by Azizah (2021) actually stated contradictory results, namely that there was no significant difference between the level of financial distress both before and during the Covid-19 pandemic. So it can be concluded that the average financial distress before and during the Covid-19 pandemic has a value that is not much different. This research is also supported by research conducted by Tiffany (2021) which shows that there is no difference in predictions before, during and after the global financial crisis. Because there are contradictions between previous studies related to financial distress before and during the pandemic, financial distress related to the phenomenon of the Covid-19 pandemic is still interesting and relevant for research. In addition, there are also some investors who still stick with the company even though they are experiencing financial distress, so it is very important to analyze the differences in company financial distress which will later be able to provide good understanding to investors and creditors before investing in a company.

II. METHODS

The data used is secondary data in the form of financial statements of property and real estate companies for the 2018-2022 financial year obtained from the Indonesian Stock Exchange website. Financial distress in this study is proxied by the Altman Z-Score. Altman (1968) used the stepwise multivariate discriminant analysis (MDA) model in his research. The output of the MDA technique is a linear equation that can distinguish between two states of the dependent variable. The five ratios used by Altman are included in the MDA analysis and produce the following model.

$$Z = 1.2X1 + 1.4X2 + 3.3X3 + 0.6X4 + 1.0X5$$

While:
X1 = *working capital/total assets*
X2 = *retained earning/total assets*
X3 = EBIT/*total assets*
X4 = *Market value of equity/total liabilities*
X5 = *Sales/total assets*

Altman uses cut-off values of 2.675 and 1.81. This means that if the Z value obtained is more than 2.675, the company is predicted not to experience financial distress in the future. A company whose Z value is between 1.81 and 2.675 means that the company is in a gray area, namely the company is experiencing financial problems.

In this study using statistical methods descriptive statistical analysis, classic assumption test consisting of multicollinearity test and heteroscedasticity test. the statistical model used in testing the hypothesis is multiple linear regression. In testing the hypothesis, namely by testing the coefficient of determination, partial test (T-Test) and different effect tests using simple linear regression. All of these statistical tests were carried out twice, namely on data before the 2018-2019 Covid-19 pandemic and during the 2020-2021 Covid-19 pandemic.

$$Y = a + |ß1\ X1| + |ß2\ X2| + |ß1\ X1\text{-}INST| + |ß2\ X2\text{-}INST| + \varepsilon$$

While:
Y = *Financial distress*
a = konstanta
ß1-2 = regression coefficient
X1 = ROA
X2= *Current ratio*
INST= *Institutional ownership*
ε = *error*

III. RESULTS AND DISCUSSION

This research takes the population, namely companies in the property and real estate sector listed on the Indonesia Stock Exchange in the period 2018 - 2022 with a total of 51 companies.

Table 1. Descriptive Analytics

Variabel	n	Minimum	Maximum	Sum	Mean	Std. Deviation
Z-Score	225	(1,8)	7,4	345,1	1,4	1,2
ROA	225	(0,4)	0,3	3,9	0,0	0,1
Current Ratio	225	0,1	160,3	1.231,1	4,8	12,7
INST	225	-	1,0	145,2	0,6	0,3

Table 2. Chow Test Result

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	2.444780	(50,201)	0.0000
Cross-section Chi-square	121.147215	50	0.0000

According to the results of the Chow test above, the probability value of the cross-section F is 0.000, which means that the probability value is less than 0.005, so in this test the model chosen is FEM.

Table 3. Hausman Test Result

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	4.405140	3	0.2209

The Hausman test shows that the prob value is 0.2209 > 0.05, so in this test the REM model is selected.

Table 4. LM Test Result

Lagrange Multiplier Tests for Random Effects
Null hypotheses: No effects
Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided (all others) alternatives

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	21.76326 (0.0000)	0.685608 (0.4077)	22.44887 (0.0000)

The Breusch-Pagan Both value is 0.0000 <0.05, so in this case the REM model is selected.

Table 5. Multicollinearity Test Result

Classic Assumption Test

	Y	X1	X2	M
Y	1.000000	0.173897	0.318658	0.053575
X1	0.173897	1.000000	0.037010	0.084435
X2	0.318658	0.037010	1.000000	0.110245
M	0.053575	0.084435	0.110245	1.000000

According to the table above, the resulting value between variables does not exceed 0.90. So the conclusion is that there is no high correlation for each independent variable so that it is free from multicollinearity.

Table 6. Heteroscedasticity Test Result

Dependent Variable: RESABS
Method: Panel EGLS (Cross-section random effects)
Date: 08/14/23 Time: 12:19
Sample: 2018 2022
Periods included: 5
Cross-sections included: 51
Total panel (balanced) observations: 255
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	0.000308	0.000336	0.914815	0.3612
X2	0.002226	0.001798	1.237679	0.2170
M	0.004750	0.008794	0.540082	0.5896
C	0.021684	0.006036	3.592430	0.0004

The resulting value for each variable is not less than 0.05. So the conclusion is that the variables used are free from heteroscedasticity.

Panel Data Regression

The panel data estimation method was used in this research to explain the effect of profitability, liquidity and institutional ownership on financial distress and to explain the effect of the moderating variable, namely institutional ownership, in moderating the effect of profitability and liquidity on financial distress.

Table 7. Panel Data Regression

Dependent Variable: Y
Method: Panel Least Squares
Date: 08/14/23 Time: 12:17
Sample: 2018 2022
Periods included: 5
Cross-sections included: 51
Total panel (balanced) observations: 255

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	0.001999	0.000727	2.749469	0.0065
X2	0.015373	0.003714	4.139262	0.0001
M	-0.040596	0.022486	-1.805445	0.0725
C	0.010379	0.014081	0.737124	0.4619

Then the equation of regression is:

Y= 0.010379+0.001999+0.015373+(0.040596)

Table 8. F-Test Result

R-squared	0.457693	Mean dependent var	0.015608
Adjusted R-squared	0.314696	S.D. dependent var	0.066661
S.E. of regression	0.055184	Akaike info criterion	-2.770730
Sum squared resid	0.612092	Schwarz criterion	-2.020815
Log likelihood	407.2680	Hannan-Quinn criter.	-2.469083
F-statistic	3.200726	Durbin-Watson stat	2.497024
Prob(F-statistic)	0.000000		

The F test is conducted to show whether the independent variable used will affect the dependent variable simultaneously or not. a value of 0.0000 <0.05 means that X1 and X2 and M simultaneously have a significant effect on Y, meaning that the regression model in this study is feasible to test.

Table 9. Coefficient of determination Test Result

R-squared	0.457693	Mean dependent var	0.015608
Adjusted R-squared	0.314696	S.D. dependent var	0.066661
S.E. of regression	0.055184	Akaike info criterion	-2.770730
Sum squared resid	0.612092	Schwarz criterion	-2.020815
Log likelihood	407.2680	Hannan-Quinn criter.	-2.469083
F-statistic	3.200726	Durbin-Watson stat	2.497024
Prob(F-statistic)	0.000000		

The R-Square value is 0.457693, so X1, X2 and the moderating variable have an effect of 45.7% on Y.

IV. CONCLUSION

Table 10. T-Test Result

Dependent Variable: Y
Method: Panel Least Squares
Date: 08/14/23 Time: 12:17
Sample: 2018 2022
Periods included: 5
Cross-sections included: 51
Total panel (balanced) observations: 255

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	0.001999	0.000727	2.749469	0.0065
X2	0.015373	0.003714	4.139262	0.0001
M	-0.040596	0.022486	-1.805445	0.0725
C	0.010379	0.014081	0.737124	0.4619

The results of hypothesis testing in this study are:

a. Profitability (X1) with a sig value of 0.0065 which is less than 0.05 means that profitability affects financial distress, then H1 is accepted.

b. Liquidity (X2) with a sig value of 0.0001 which is less than 0.05 means that liquidity affects financial distress, then H2 is accepted.

c. Institutional ownership (M) with a sig value of 0.0725 which is greater than 0.05 means that institutional ownership has no effect on financial distress, so H5 is rejected.

Table 11. First Moderation Regression Results

Dependent Variable: Y
Method: Panel EGLS (Cross-section random effects)
Date: 08/14/23 Time: 12:38
Sample: 2018 2022
Periods included: 5
Cross-sections included: 51
Total panel (balanced) observations: 255
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X1	-0.002375	0.002337	-1.016242	0.3105
M1	0.006676	0.003369	1.981515	0.0486
M	-0.021682	0.019010	-1.140541	0.2551
C	0.022298	0.012864	1.733312	0.0843

The moderating variable (INST) shows a sig value of 0.0486 <0.05 meaning that the moderating variable (INST) is able to moderate the relationship X1 to Y.

Table 12. Second Moderation Regression Results

Dependent Variable: Y
Method: Panel EGLS (Cross-section random effects)
Date: 08/14/23 Time: 12:39
Sample: 2018 2022
Periods included: 5
Cross-sections included: 51
Total panel (balanced) observations: 255
Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
X2	0.018792	0.010312	1.822377	0.0696
M2	-0.002657	0.015677	-0.169480	0.8656
M	-0.007515	0.024157	-0.311107	0.7560
C	-0.003413	0.015566	-0.219243	0.8266

The moderating variable (INST) shows a sig value of 0.8656 > 0.05, meaning that the moderating variable (INST) is not able to moderate the relationship between X2 and Y.

It can be concluded that this study shows that profitability and liquidity variables affect financial distress, while institutional ownership variables have no effect on financial distress and moderating variables, namely institutional ownership can moderate the influence of profitability variables on financial distress but institutional ownership cannot moderate the effect of liquidity on financial distress. . The explanation of the results of this research is as follows:

a. There is an effect of profitability on financial distress (H1)

In this study, profitability as measured by ROA has a significant effect on financial distress. In line with the research conducted by Balasubramanian et al. (2019) which explains that profitability affects financial distress, the higher the company's profit will increase the financial value of distress so that the company is free from financial difficulties. These results are also in line with Dirman's research (2020) which states that the profitability variable calculated by return assets has a positive effect on financial distress. That is, the higher the ratio of return on assets, the higher the financial distress as measured by the z-score. High return on assets shows the company's ability to use existing assets to produce well. More effective and efficient management of company assets can result in better profits and more optimal use of funds.

However, there are several companies that are able to generate high profits but are unable to

control the adequacy of existing funds to cover costs and run their business, so that these companies will experience financial distress. The increase in ROA does not show that the company avoids financial distress. It is said so because the company can see from the income and the amount of costs incurred. Increasing costs and decreasing income from year to year can result in a number of net losses that increase from year to year, so that the company can experience financial distress.

b. There is no effect of liquidity on financial distress (H2)

In this study, liquidity as measured by the current ratio does not have a significant effect on financial distress. The hypothesis put forward in this study was rejected, but the results of this study are in line with research conducted by Dirman (2020), namely the liquidity variable as measured by the current ratio has no effect on financial distress. The company's liquidity shows the company's ability to fund the company's operations and pay off the company's short-term obligations. If the company is able to properly fund and pay off its short-term obligations, the potential for the company to experience financial distress will be smaller.

By comparing the total current assets owned by the company with total current liabilities. In current assets there are accounts and accounts receivable accounts which, if later used to pay the company's current liabilities, require quite a long time and vary between companies to convert receivables and inventories into cash which will be used to finance the company's liabilities. So no matter how big the company's liquidity, it will not affect the possibility of the company experiencing financial distress.

c. Institutional ownership moderates the effect of profitability on financial distress

In this study, institutional ownership strengthens the influence that profitability has on financial distress. With a high degree of institutional ownership, there is a greater probability that managers' strategic decisions will be aimed at maximizing shareholder value (Putra et al., 2019). Institutional shareholders play an important role in facilitating the emergence of companies from bankruptcy. The risk of financial distress is less pronounced among firms with more institutional owners who disclose more CSR information (Tarighi et al, 2022).

d. Institutional ownership does not moderate the effect of liquidity on financial distress

In this study, institutional ownership weakens the influence that liquidity has on financial distress. The higher the institutional ownership of a company, the higher the moritoring/control of management. Therefore, with strong control, the performance of an entity is also getting better and bankruptcy can be prevented.

e. Institutional ownership has no effect on financial distress

In this study, institutional ownership has no effect on financial distress. This is in line with previous research conducted by Cinantya et al. (2015) and Fan (2013) which state that institutional ownership has no significant effect on financial distress. Higher institutional ownership indicates the ability to monitor the company. The greater the institutional ownership, the more efficient use of company assets, so that the potential for financial difficulties can be minimized. This is because the greater the institutional ownership, the greater the monitoring carried out on the company, which in turn will be able to reduce the potential for financial difficulties that may occur in the company.

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