



THE EFFECT OF FINANCIAL RATIO ON VALUE COMPANIES WITH FINANCIAL DISTRESS AS INTERVENING VARIABLES IN THE COMPANY MANUFACTURE

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Abstract

Globalization that has occurred throughout the world has significantly impacted various aspects of the life of the world community. This study aimed to determine the direct effect of liquidity, solvency, profitability, and financial distress on firm value partially and simultaneously, as the indirect effect of liquidity, solvency, and profitability on firm value through financial distress as an intervening variable. This study uses a quantitative approach. In a sample of 28 companies, this study uses SPSS 22. The results of testing the liquidity effect on the firm value obtained t count 2.424 > t table 2.093 and a significance of 0.048 < $\alpha = 0.05$. The results of testing the effect of solvency on the firm value obtained t count 2.558 > t table 2.093 and a significance of 0.013 < $\alpha = 0.05$. The results of testing the liquidity effect on the firm value obtained t count 0.098 > t table 2.093 and a significance of 0.922 < $\alpha = 0.05$. The results of testing the liquidity effect on the firm value obtained t count 2.152 > t table 2.093 and a significance of 0.019 < $\alpha = 0.05$. Sobel test results show that financial distress cannot mediate the indirect effect of liquidity, solvency, and profitability on firm value. The regression coefficient for the direct effect of liquidity on firm value is 0.739. Meanwhile, the indirect effect of liquidity through financial distress as an intervening variable is -0.03293.

Keywords: Financial Ratios, Firm Value, Financial Distress

JEL Classification: M10, M21, M41

1. INTRODUCTION

Globalization that has occurred throughout the world has significantly impacted various aspects of the life of the world community (Suneki, 2012). The impact of world globalization causes economic shocks. If these shocks cannot be anticipated, they will not last long; for example, a decrease in income, foreign investment will decrease, and import activities will increase (Basmar et al., 2021).

Economic conditions that are constantly changing affect the activities and performance of companies, both small companies, and large companies, and in conditions like this, companies are required to consistently maintain

stable performance, develop innovation and expand business scope so that they can continue to survive and achieve the goals desired by the company (Jabid et al., 2022).

Companies can be delisted from the Indonesia Stock Exchange because they are in a state of financial distress or experiencing financial difficulties (Sari et al., 2019). A company can be categorized as experiencing financial distress if the company has poor performance, including those that show a negative operating profit, negative net profit, a negative book value of equity, and the company is merging (Carolina et al., 2017). Another

phenomenon of financial distress is that many companies tend to experience liquidity difficulties, which is indicated by the decreasing ability of the company to fulfill its obligations to creditors (Yustika et al., 2015)

Indonesia's current condition is very prone to financial distress, especially in several national companies. This resulted from a trade war between the US and China, which caused developing countries such as Indonesia to experience a slowdown in economic growth (Situmorang, 2018).

Falling exports and export commodity prices exacerbated this condition on world commodity markets which would cause the company to go bankrupt. The bankruptcy of a company can be seen from the delisting of the company from the IDX. Decree of the Bureau of Directors of the Jakarta Stock Exchange Number: Kep-308/BEJ/07-2004 defines delisting of securities from the register listed on the Exchange so that these securities cannot be traded on the Exchange. There have been several cases of company incompetence in financial management which resulted in companies initially listed on the Indonesia Stock Exchange but have now been delisted from the Indonesia Stock Exchange.

2. LITERATURE REVIEW AND HYPOTHESES

2.1. LITERATURE REVIEW

Financial statements report activities carried out by the company in a certain period. Activities that have been carried out are stated in figures in the form of rupiah currency and foreign currency (Putro & Chabachib, 2012). In the end, we can assess management performance in that period. We know this comparison as a financial ratio analysis (Syam, 2022).

Firm value is significant because the high corporate value will be followed by high shareholder prosperity. The higher the stock price, the higher the company value (Dj et al., 2011). A high company value is the desire of the company owners because a high value

indicates the prosperity of the shareholders is also high (Karmilawati, 2022). Shareholder and company wealth is represented by the market price of shares, which reflects investment decisions, financing, and asset management (Widodo & Kurnia, 2016).

Financial distress is when the company is in a declining financial condition, which can lead to bankruptcy. According to Aulia and Prijati (2018), the causes of financial difficulties are due to economic factors, management errors, and natural disasters.

2.2. HYPOTHESES

The hypothesis can be interpreted as a temporary answer to the research formulation (Kartika et al., 2019). Based on the formulation of the problem and the description of the conceptual framework above, two alternative/working hypotheses are proposed in this study as follows:

- H1: Liquidity, Solvability, Profitability, and Financial distress have a direct effect on firm value simultaneously and partially.
H2: Liquidity, Solvability, and Profitability have an indirect effect on firm value through financial distress as an intervening variable.

3. RESEARCH METHODS

This research uses a primary research type with a quantitative approach. According to Saragih et al. (2021), quantitative research is research based on positivism, used to examine specific populations or samples, data collection uses research instruments, and data analysis is quantitative/statistical, intending to test established hypotheses.

The population is a generalization area consisting of objects or subjects with specific quantities and characteristics determined by the researcher. The population in this study are manufacturing companies listed on the Indonesia Stock Exchange for the 2017-2021 period, namely 110 companies.

The sample is part of the population with the characteristics to be investigated and represents the entire population. The sampling method in this study was purposive sampling, in which the sample was selected based on an assessment of some of the characteristics of the population members adjusted for the study. The specified characteristics are as follows:

1. It is recorded as a company listed on the Indonesia Stock Exchange (IDX) from 2017 to 2021 and continuously reports its financial statements.
2. Reports published using the rupiah currency.
3. Companies that submit complete data related to the variables needed in this study during the 2017-2021 research period

4. RESULTS AND DISCUSSION

4.1. RESULT

Descriptive statistical analysis is used to provide an overview of the research object being sampled. The independent variables used in this study consist of liquidity, solvency, and profitability. At the same time, the dependent variable used in this study is firm value, while financial distress is an intervening variable. Descriptive statistical results of the dependent and independent variables in a sample of manufacturing companies in the 2017 – 2021 period are presented in table 1.

Table 1. Descriptive Statistic

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Rasio Likuiditas (X1)	110	,443	4,628	1,62941	,646607
Rasio Solvabilitas (X2)	110	,943	1,311	,46710	,220659
Rasio Profitabilitas (X3)	110	,869	,346	,40793	,088567
Tobins' Q (Y)	110	,053	2,746	1,32165	,161545
Zscore (Z)	110	1,009	3,082	1,42825	,629505
Valid N (listwise)	110				

Based on table 4.1, several things can be described as follows:

1. The total number of research samples is 22 companies with 110 observations, namely 22 companies multiplied by five periods, with three independent variables using a ratio scale.

2. The first independent variable, liquidity (CR), has a minimum value of 0.44, a maximum value of 4.63, and an average value of 1.63, with a total of 110 observations. This shows that the liquidity of the manufacturing companies studied during the study period can be good because the average value is above 1.

3. The second independent variable, the Solvability Ratio (DAR), has a minimum value of 0.04, a maximum value of 1.31, and an average value of 0.47, with a total of 110 observations. This shows that the leverage of the manufacturing companies studied during the study period can be quite risky because they are at an average value above 90%; if the company cannot generate good profits with its debt, it can go bankrupt.

4. The third independent variable, profitability (ROE), has a minimum value of 0.87, a maximum value of 0.35, and an average value of 0.41, with a total of 110 observations. This shows that the manufacturing companies' profitability during the study period is less able to generate profits because the average value is below 0.

5. The dependent variable, namely the company's value proxied by tobins' Q, has a minimum value of .053, a maximum value of 2.746, and an average value of 1.32 with a total of 110 observations. This shows that the manufacturing companies studied during the study can be well notarized.

6. The results of the descriptive statistical analysis of financial distress, proxied by the Z-Score, have a minimum value of 1.009, a maximum value of 3.082, and an average value of 1.128 with a total of 110 observations. This shows that the manufacturing companies studied during the study period tend to be prone to experiencing financial distress with a standard value according to the Springate method.

This classic assumption test was carried out to determine the condition of the existing data in this study and determine the fastest analytical model to use. The classical assumption test results consist of normality, autocorrelation, heteroscedasticity, and multicollinearity test results.

The normality test is a test of the normality of the data distribution. This test aims to test whether, in a regression model, the dependent variable and independent variable or both are typically distributed. In this study, to test whether the data distribution is normal or not, it can be done with the SPSS program by using the Kolmogorov-Smirnov test with the criteria that if the Kolmogorov-Smirnov test value is > 0.05 , it means that the data is normally distributed. If the significant value of the Kolmogorov-Smirnov test is < 0.05 , the data is declared not normally distributed (Ghozali, 2013).

Table 2. Normally Distributed

One-Sample Kolmogorov-Smirnov Test			Unstandardized Residual
N			110
Normal Parameters ^{a,b}	Mean		1,36600090
	Std. Deviation		,31809144
Most Extreme Differences	Absolute		,266
	Positive		,266
	Negative		-,186
Test Statistic			,266
Asymp. Sig. (2-tailed)			,032 ^c
Monte Carlo Sig. (2-tailed)	Sig.		,342 ^d
	99% Confidence Interval	Lower Bound	,340
		Upper Bound	,356

a. Test distribution is Normal.
 b. Calculated from data.
 c. Lilliefors Significance Correction.
 d. Based on 10000 sampled tables with starting seed 2000000.

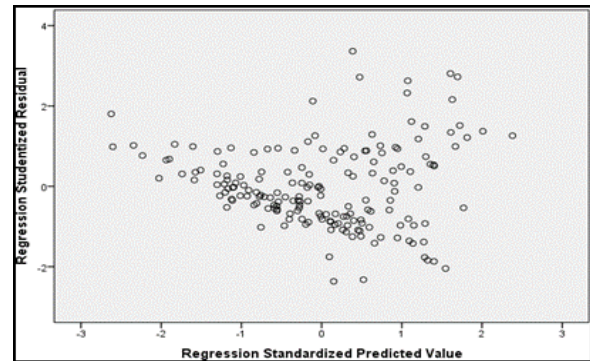
Based on table 2 shows the value of the Kolmogorov-Smirnov statistical test with a Monte Carlo value of 0.343. The data is normally distributed if the Kolmogorov-Smirnov test value is > 0.05 . Monte Carlo significance value $0.343 > 0.05$, it can be concluded that the data is normally distributed and meets the normality assumption.

The heteroscedasticity test aims to test whether, in the regression model, there is an inequality of variance from one residual observation to another. If the residual variance from one observation to another remains, then it is called homoscedasticity, and if it is different, it is called heteroscedasticity. A good regression model has homoscedasticity or does not have heteroscedasticity. The basis for the decision taken is as follows:

1. If a specific pattern, such as the existing dots, forms a regular pattern (wavy, widens, then narrows), then heteroscedasticity has occurred.

2. If nothing is clear and the points spread above and below zero on the Y axis, then there is no heteroscedasticity (Ghozali, 2013).

Table 3. Scatterplots Graph



According to Janie (2012), the multicollinearity test aims to test whether there is a correlation between the independent variables in the regression model. In a good regression model, there should be no correlation between the independent variables/independent variables. If the independent variables are correlated, then these variables are not orthogonal. Orthogonal variables are independent variables whose correlation values between the independent variables are equal to zero. Whether or not multicollinearity exists can be known or seen from VIF; if $VIF \leq 10$ or tolerance value ≥ 0.1 , there is no multicollinearity problem.

The autocorrelation test aims to determine whether, in the linear regression model, there is a correlation between the residuals in period t and the residuals in period $t-1$. If there are sequential observations in time with one another, then autocorrelation occurs. A good regression model is free from autocorrelation. The Durbin-Watson statistical test (DW test) determines the presence of autocorrelation. The following is a decision-making table on whether there is autocorrelation or not.

Multiple linear regression analysis is used to determine the direct effect of the independent variables on the dependent variable. This study's multiple linear regression analysis stages are the coefficient of determination test, partial test (t test), and simultaneous test (F test).

The coefficient of determination (R^2) is a coefficient that shows the percentage influence

of all independent variables on the dependent variable. This percentage shows how much the independent variable can explain the dependent variable. The greater the coefficient of determination, the better the independent variables explain the dependent variable.

The following equation is obtained based on the results of statistical calculations as in table 5.8.

$$Z = 2.351 - 0.139X_1 - 0.449 X_2 + 1.489 X_3$$

1. Constants

Based on these tables and equations, it can be seen that the constant has a regression coefficient of 2.351, which means that if the variables liquidity (X1), solvency (X2), and profitability (X3) are zero, it means that there is an increase in financial distress of 2.351 in manufacturing companies listed on the IDX during 2017 -2021.

2. Liquidity (X1)

Liquidity proxied by the current ratio has a regression coefficient of -0.139, meaning that for every increase in liquidity by 1, there will be a decrease in financial distress by 0.139, assuming other variables are held constant. The results show t count $-1.422 < t$ table 2.093 and a significance of $0.044 > \alpha = 0.05$, so partial liquidity does not affect financial distress.

2. Solvency (X2)

Solvability proxied by the debt-to-assets ratio has a regression coefficient of -0.449, meaning that for every increase in the solvency of 1, there will be a decrease in financial distress of 0.449, assuming other variables are considered constant. The results show t count $-1.326 < t$ table 2.093 and a significance of $0.121 > \alpha = 0.05$, so partial solvency does not affect financial distress.

4. Profitability (X3)

Profitability proxied by return on equity has a regression coefficient of 1.437, meaning that for every increase in profitability of 1, there will be an increase in financial distress of 1.437, assuming other variables are held constant. The results show t-count $2.338 > t$ table 2.093 and a significance of $0.008 < \alpha = 0.05$, then partial profitability significantly affects finances. The direct, indirect, and total effects can be seen in Table 4.

Table 4. Direct, Indirect and Total Influence

Information	Influence		
	Live	Indirect	Total
Liquidity to financial distress (P1)	-0.139		
Solvability to financial distress (P2)	-0.449		
Profitability against financial distress (P3)	1,489		
Financial distress on firm value (P7)	0.152		
Liquidity to Firm Value (P4)	0.739	-0.03293	0.25903
Solvability to Firm Value (P5)	2,449	-0.088	-0.83
Profitability to Corporate Value (P6)	0.388	0.18833	3.15433

4.2. DISCUSSION

The partial test results show that the liquidity proxied by CR has a significant direct effect on firm value. The results of testing the liquidity effect on the firm value obtained t count $2.424 > t$ table 2.093 and a significance of $0.048 < \alpha = 0.05$. The results of this research test support or are consistent with the results of Belthasar Trita Siahaan (2017) that CR affects firm value. Liquidity affects company value because liquidity is a short-term obligation that must be resolved immediately. If liquidity cannot be resolved, it will burden the company's debt. The higher the CR of a company, the smaller the shareholder risk, and the high CR value of a company will reduce uncertainty for investors (Ang, 2010).

The partial test results show that the solvency proxied by DER has a significant direct effect on firm value. The results of testing the effect of Solvability on the firm value obtained t count $2.558 > t$ table 2.093 and a significance of $0.013 < \alpha = 0.05$. The results of this research test support or are consistent with the results of Henny Rahyudi (2019) that DAR significantly affects company value. The higher the level of the company's long-term debt, the more burdened the company will be with interest; moreover, the value of long-term debt must be significant. The increasing burden on creditors shows that the company's capital sources are highly dependent on outsiders, thus

reducing investor interest in investing their funds in the company, which impacts decreasing the company's stock price (Ang, 2010). This will make investors reluctant to invest in the company, and it will impact the company's value.

The results of the partial test show that the relative profitability of ROE has a significant direct effect on firm value. The results of testing the liquidity effect on the firm value obtained t count $0.098 > t$ table 2.093 and a significance of $0.922 < \alpha = 0.05$. The test results of this study support or are consistent with the results of Mahendra (2011) that ROE affects firm value. The higher the level of profit earned by the company, the higher the company's ability to pay dividends to shareholders. The excellent the profitability, the better the company's performance because the rate of return is greater Sugiarto (2011). This will undoubtedly encourage the desire of investors to invest in the company.

The partial test results show that financial distress has a significant direct effect on firm value. The results of testing the liquidity effect on the firm value obtained t count $2.152 > t$ table 2.093 and a significance of $0.019 < \alpha = 0.05$. The results of this research test support or are consistent with the results of Henny Rahyudi's research (2019) that financial distress significantly affects company value. The lower the soundness level of the company, the more risk the company will be in the future; this certainly raises concerns for investors if the company goes bankrupt. This, of course, will make investors reluctant to invest in the company, so it will impact the company's value.

The test results show that liquidity, solvency, profitability, and financial distress significantly affect firm value. These results support the hypothesis and indicate that all independent variables can explain or predict the dependent variable. This shows that H1 is accepted.

Sobel test results show that financial distress cannot mediate the indirect effect of liquidity, solvency, and profitability on firm value. The regression coefficient for the direct effect of liquidity on firm value is 0.739 .

Meanwhile, the indirect effect of liquidity through financial distress as an intervening variable is -0.03293 . These findings show that the direct effect is greater than the indirect effect ($0.739 > -0.03293$), and the t -value of the Sobel test is smaller than the t -table value ($-1.40093651 < 2.093$), meaning that liquidity has no significant effect on firm value through financial distress as an intervening variable.

The regression coefficient for the direct effect of solvency on firm value is 2.449 . Meanwhile, the indirect effect of solvency through financial distress as an intervening variable is -0.089 . These findings show that the direct effect is greater than the indirect effect ($2.449 > -0.089$) and the t -value of the Sobel test is smaller than the t -table value ($1.12239143 < 2.093$), meaning that solvency has no significant effect on firm value through financial distress as an intervening variable.

The regression coefficient for the direct effect of profitability on firm value is 0.388 . At the same time, the indirect effect of profitability through financial distress as an intervening variable is 0.18837 . These findings show that the direct effect is greater than the indirect effect ($0.388 > 0.18833$), and the t -value of the Sobel test is smaller than the t -table value ($1.863389513 < 2.093$), meaning that profitability does not have a significant effect on firm value through financial distress as an intervening variable. This means indicating that H2 is unacceptable.

5. CONCLUSION

Based on the results of the research and discussion in the previous chapter, the researchers concluded that simultaneously and partially, the variables of liquidity, solvency, and profitability financial distress directly affect the value of manufacturing companies listed on the IDX.

The direct effect of liquidity, solvency, and profitability variables on firm value is greater than the indirect effect of liquidity, solvency, and profitability on firm value through financial distress as an intervening variable, and the t

value of the Sobel test < oft table for each of the variables of liquidity, solvency, and profitability, then financial distress is not proven as an intervening variable. Indirectly, the variables of liquidity, solvency, and profitability do not significantly affect the value of manufacturing companies listed on the IDX through financial distress as an intervening variable.

This research has several limitations as; follows the independent variables in this study are limited to financial ratios, namely liquidity, solvency, and profitability, even though many other internal and external factors can affect the possibility of a company's financial distress.

The observation period in this study is relatively short of examining the possibility of financial distress occurring in a company.

The sample is limited to only one sector, manufacturing companies listed on the Indonesia Stock Exchange (IDX).

Based on the limitations of the research above, the researcher suggests the following things. For future researchers, it is recommended to use more independent variables around financial ratios and other internal company and external factors that can affect the company's financial condition.

For future researchers, it is suggested to extend the research period to prove that the financial ratios used in this study can predict financial distress for the coming year.

The need for additional samples so that the research results can cover a broader range considering that there are several main sectors in companies listed on the Indonesia Stock Exchange.

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