

PROFITABILITY AS MEDIATING ON RELATION BETWEEN FINANCIAL DISTRESS AND FIRM SIZE TO FIRM VALUE IN THE SITUATION OF BEFORE, IN AND AFTER PANDEMIC COVID-19: STUDY CASE PROPERTY AND REAL ESTATE SECTOR (2017-2021)

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ABSTRACT

The purpose of this study is to examine the effect of financial distress and firm size on firm value with profitability as intervening/mediating variables. The population of this study was real-estate companies listed on Indonesia Stock Exchange in 2017-2021 that were impacted by when the COVID-19 pandemic occurred. The statistics in this study used Partial Least Square (PLS) based on Structure Equation Model (SEM) Method (SmartPLS3.0). From this study, it can conclude financial distress have an effect on profitability, for financial distress, firm size and profitability do not have an effect on firm value.

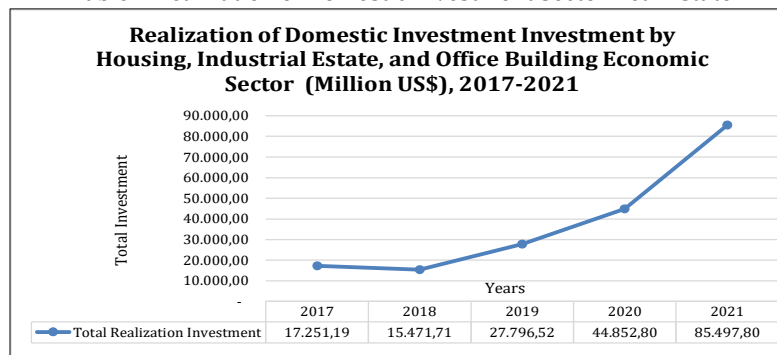
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1. INTRODUCTION

The industries of real estate, building construction, and real estate sectors play a crucial part in Indonesia's economic growth. This industry serves as a further gauge of a nation's economic progress. It has a ripple effect on other economic sectors and is a sizable industry that can take in a lot of personnel. It is clear that the sectors of property, real estate, and building construction have a substantial influence that can promote the growth of other economic sectors, particularly the creation of financial products.

In Indonesia, a number of properties, real estate, and building construction issuers have shown a significant increase in performance over the past few years. The investment realization of domestic investment by the economic sector throughout the period of 2017–2021, as reported by the Indonesian Central Bureau of Statistics, provides evidence for this claim.

Table 1 Realization of Domestic Investment Sector Real Estate



Source: Indonesian Central Bureau of Statistics

Table 2 Indonesia Consumer Confidence Index (CCI)



Source: Indonesian Central Bureau of Statistics

From Table 1, the statistics data above demonstrate that the realization of investment in the property, real estate, and building construction sectors often rises annually. From 2020 to 2021, there was a substantial increase, reaching 90.62 percent.

However, at the same time, because of the COVID-19 pandemic, Indonesia's economy is slowing down in line with the people's diminishing purchasing power in recent years that relay with data Consumer confidence index. The consumer confidence index is an index that reflects the confidence of Indonesian consumers regarding current economic conditions and consumer expectations in the coming period. The consumer confidence index is a simple average of the index of current economic conditions and the index of consumer expectations.

Table 2 shows A poll by Bank Indonesia on the Consumer Confidence Index From 2017 to 2019, it was relatively stable; however, it fell to 96.50 in 2020, indicating a decrease in public purchasing power. This suggests that individuals are unsure about the state of the Indonesian economy. The property, real estate, and building construction industries have all been impacted in some way. Property investments have been more challenging in recent years due to the public's limited purchasing power, which makes it challenging for investors to sell their real estate holdings for better prices.

Even though the indexes for the property, real estate, and building construction sectors continued to decline, the shares of issuers in this sector were still relatively liquid. Investments in the property, real estate, and building construction sectors are long-term. This sector grows in line with economic growth. Investors are interested in investing in this sector because the price of land and buildings tends to rise when land supply is constant while demand is continually increasing. This increased demand is in line with the increase in population and the community's need for a place to live and a place for activities. Therefore, even though the property, real estate, and building construction sector indices in recent years have shown a decline, the fact that the public's need for the property is still high and the growth in the number of people themselves indicates that the property, real estate, and building construction sector is still a booming sector choice for the medium term and long-term investment [1].

Companies in the property, real estate, and building construction sectors are engaged in constructing houses, buildings, and other public facilities. These sector stocks have several characteristics. Economic conditions strongly influence stocks in this sector. The better the economic conditions, the greater the sales opportunities for companies in this sector because more and more people can afford to buy their products. The following characteristic is that this sector is the sector that feels the first impact when there is an increase in interest rates or inflation because most of the companies engaged in the property and real estate sector use bank loans as capital [2].

The primary goal of property and real estate sector enterprises, like that of other organizations, is maximizing the welfare of shareholders and other stakeholders by increasing the company's value. Firm value is significant because a high firm value will be followed by high shareholder prosperity [3]. And the more profitable a company is, the more valuable it becomes. As a result, maximizing firm value is equivalent to maximizing profit by maximizing market value. The market determines the worth of the corporation's owner's assets through the share price. As a result, maximizing stock market prices is similar to increasing the value of shareholders' assets. The market capitalization of the company's outstanding shares in the market determines the formula for assessing the value of an entity [4].

A company's ability to employ resources from its main line of business and create income is measured subjectively by its financial performance. The phrase is also employed as a broad indicator of a company's overall financial health over a specific time frame [5]. A Financial Performance Report summarizes a company's financial performance and assists various investors and stakeholders in making investment decisions by reporting the company's financial health. A company that is financially sound and

consequently has a high corporate value is said to be in excellent health. Stock prices will rise when a company's value is high, and investors are attracted to invest in it, whereas stock prices will fall when the company's financial performance is poor [6].

An economic term called "firm value" indicates the worth of a company. It is the worth that a company has at a specific time. It is a sum of money that, theoretically, one must pay to acquire or gain control of a corporate firm. The company's financial performance reflects its capacity for resource management and allocation. The effect of financial performance on business value is statistically significant. Investors' major criterion for choosing a firm to invest in is its strong financial performance. The worth of the company is predicted to rise as financial performance improves, so the greater the financial performance, the greater the value of the company [7].

The purpose of this study is to examine the effect of financial difficulties and company size on profitability; influence financial difficulties, company size, and profitability on the company's intrinsic value; as well as the indirect effect of financial distress and firm size on value company intrinsic through profitability as intervening variable at company property and real estate in Indonesia. To provide good results on the impact of financial distress as a result of the Covid 19 pandemic, the research timeframe was conducted from 2017 to 2021, before the pandemic occurred, during the pandemic and after the pandemic. There have been some previous researches conducted on this research topic [8]; [9]; [10]; [11]. Most of the previous researcher limited disclosure firm value. Business executives and academics are fascinated by the concept of firm value. The first question is what metrics should be used to assess the firms' value. Another issue is what influences the firms' value. For the first, different metrics, encompassing ROA, ROE, EPS, Tobin's Q, EV, stock price, and PER, are widely employed to assess firms' values. Nevertheless, those metrics compute the measure ratio of Firm Value as known as a relative value. Although different viewpoints exist, this paper uses the Free Cash Flow to Firm (FCFF) method that generates an absolute value based on Discounted Cash Flow (DCF) approach.

2. LITERATURE REVIEW

2.1 Firm Value – Free Cash Flow

Firm value is an investor's perception of a company's level of success and healthy [12]. According to [13], free cash flow to firm becomes one of the factors that affect firm value. The amount of free cash flow generated by a company during the accounting period indicates its health. If they have a lot of free cash flow, they can do whatever they want with it to increase the value of the company.

As the source of internal funds, free cash flow portrays the degree of a company's financial adaptability. Companies with surplus free cash flow perform better than other companies because they have the resources available to take a competitive advantage that other companies are unable to. Furthermore, a company with a high free cash flow is more likely to survive in difficult circumstances than a company with a low free cash flow [14]. This is due to the company's significant cash reserves, which it may employ to maintain steady operating activity and determine its long-term success.

[15] (in [16]) defines cash flow free as "cash flow in excess of that required to fund all projects that have positive net present values when discounted at the relevant cost of capital." Brigham and Houston [17] define FCF as the amount of cash that could be withdrawn without harming a firm's ability to operate and to produce future cash flows and the measurement formula of Free Cash Flow to Firm (FCFF) is :

$$FCFF = [EBIT (1 - \text{Tax rate}) + \text{Depreciation}] - [\text{Capital Expenditure} + / - \Delta \text{Net Operating Working Capital}]$$

The intrinsic value of the firm, also known as the fair value, is the total present value of free net cash flow to firm [18] and measured by formula

$$\sum_{t=1}^{t=\infty} \frac{FCFF_t}{(1 + WACC)^t}$$

Where,

FCFF_t = Free Cashflow to firm in year t

WACC = Weighted average cost of capital

2.2 Profitability

Profitability reflects shareholders' wealth, and accordingly, appeals to investors. Profitability is an important component of performance evaluation because it shows the proportion of profit in comparison to asset investment, equity, or sales. One of the most important tasks for businesses is to increase profitability [19].

Profitability influences the value of a company, eliciting a positive response from investors who can cause an increase in stock prices on the market, which ultimately raises the company's perceived value in the eyes of investors [20].

Several profitability ratios can be used to determine a company's ability to generate profits. In general, to measure profitability used metric Return on Assets, Return on Equity, Net Profit Margin, Earning per Share, and Operating Profit Margin [21] [22].

2.3 Financial Distress

Every business has the potential to go bankrupt, likewise with the Property and Real Estate companies which are the topic of this research. Bankruptcy begins with a state of financial distress. Financial distress is a broad concept that encompasses a variety of situations in which a company faces financial difficulties. The terms bankruptcy and failure are commonly used to describe such situations. Financial distress is defined by [23] as a situation in which an institution is experiencing operational, managerial, and financial difficulties. The working definition used in this study is taken from [24], who define financial distress as a firm's inability to pay its current obligations on the due dates.

According to [25], causal factors of Financial distress can come from within or outside the company. The factors within these companies are Cash Flow Difficulties, Large Amounts of Debt, and Losses in the company's operational activities for several years. Of course, because there are multiple causes of financial distress, there are numerous methods for predicting financial distress.

There are many ways to predict financial distress. Using the Altman and Ohlson models, [26] forecast the bankruptcy of Japanese listed companies by using the financial distress model the Altman and Ohlson models [27] determine financial distress among the companies Practice Note 17 (PN17) listed in Bursa Malaysia by using the Altman Z-Score Model as a proxy for financial distress. In research entitled The Accuracy of Financial Distress Prediction Models conducted by [28] uses a complete financial distress model, namely Altman Revised Model, Springate Model, Fulmer Model, Taffler Model, Grover Model, Zmijewski Model, and Ohlson Model. This research aims to find the predictor model of financial distress, which is the most accurate predictor of financial distress in companies' real estate and property listed on the Indonesia Stock Exchange.

2.4 Firm Size

Firm's Size is a size or scale that shows the size of a company. According to [29], firm size is a scale used to classify an association's amount similarly to various determinants, in the way that total amount of money saved, total income, and stock exchange advantage, thus. The size of a company is usually determined by its total assets and total sales [30]. In general, large companies will receive more attention or become more well-known to the public. Companies with large total assets are thought to have good prospects in a relatively stable period and can generate profits when compared to companies with small total assets [31].

3. METHOD

3.1 Type and Data Source

The type of data used is secondary data, the data is real-estate company in Indonesia Stock Exchange. The population of this study is real-estate company listed in Indonesia Stock Exchange in 2017 – 2021. The population is selected by author because real-estate industry is the most impacted by COVID-19 pandemic. For the population, the number real-estate company listed in Indonesia Stock Exchange is 81 companies. Based on this population, purposive sampling was carried out with criteria:

1. issue audited financial reports;
2. have positive EBIT;
3. complete company financial data.

3.2 Analysis Method

In this study, a quantitative methodology was applied. According to [32], a quantitative technique is a research strategy based on positivism, used to analyze populations or samples, data collecting utilizing research tools, data processing is quantitative/statistical, and the goal is to test established hypotheses.

The structural equation modeling (SEM) method based on partial least squares (PLS) was employed in this study's inferential statistics with the aid of SmartPLS3.0 [33]. The PLS approach was chosen in light of the fact that this study's construct was built using reflecting indicators. This variable or construct with

reflective indicator presupposes that the variant, which is the manifest of the construct domain, explains the covariance between the model measurements. The indicator's movement is in the direction of the construct to indicator transition [34].

In this study, the construct of financial distress is formed with two indicators, firm size is formed with one indicator, probability is formed with two indicators, enterprise value is formed with one indicator.

4. RESULT AND DISCUSSION

4.1 Measurement model (outer model)

The measurement model in PLS or called outer model, represent the validity and reliability model. The outer model with reflective indicators was assessed through convergent validity and discriminant validity from latent construct indicators and composite reliability for indicator block [35] [36].

4.1.1 Convergent validity

Convergent validity was assessed based on the result of the loading factor value. In confirmatory research, the loading factor value should be more than 0.7 [35] [37]. The result of convergent validity test is presented below.

Table 3. Results of composite reliability

Variables	Composite Reliability
Financial Distress	0.925
Firm Size	1.000
Profitability	0.907
Firm Value	1.000

Based on table above, the composite reliability for each construct has shown a value above 0.7. It shows that each research construct is reliable.

Based on the data processing using SmartPLS3.0, below is the result of loading factor.

Table 4. Results of loading factor

Variables	Sym	Financial Distress	Firm Size	Profitability	Enterprise Value
Financial Distress					
Revised Z-Score Model	FD1	0.898			
Springate Model	FD2	0.956			
Firm Size					
Ln Total Asset	FS		1.000		
Profitability					
Return on Asset	P1			0.860	
Net Profit Margin	P2			0.959	
Firm Value					
Ln Free Cash Flow to Firm (FCFF)	EV				1.000

Source: The results of PLS data processing

Ln = natural logarithm

Thus, the indicators for financial distress, firm size, profitability, and enterprise value are not eliminated from the model. The indicators of each variable include, among others; the financial distress variable composed by two indicators, namely, revised z-score model and springate model; the firm size variable composed by one indicator, namely, ln total asset; furthermore, profitability variable composed by two indicators, namely, return on asset and net profit margin, the last, enterprise value composed by one indicator, ln free cash flow to firm.

4.1.2 Discriminant Validity

For the reflective indicators, the discriminant validity is assessed by comparing the square-foot AVE for each construct with correlation value between construct in the model. If the value of square-foot AVE for each construct is greater than the latent variable correlations in the model, then model has a good discriminant validity value. The recommended AVE value must be greater than 0.5 [38]. The results of discriminant validity test are presented in table below.

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Table 5. Results of AVE and square root AVE

Variables	AVE	Square root AVE
Financial Distress	1.000	1.000
Firm Size	0.860	0.927
Profitability	1.000	1.000
Firm Value	0.830	0.911

Source: The results of PLS data processing

4.1.3 Composite Reliability

The reliability of construct with reflective indicators was assessed based on the results of composite reliability. According to the rule of thumb which is usually used for assessing the reliability of the construct is that the value of composite reliability must be greater than 0.7 for confirmatory research [39]. The result of composite reliability is presented below.

Table 6. Results of R-Square

Variables	R Square
Profitability	0.459
Firm Value	0.093

Source: The results of PLS data processing

4.2 Structure model (inner model)

The structure model (inner model) was assessed by looking R-Square for each endogenous latent variable as predictor of structure model. Based on Table V. R-Square value for profitability disclosure variable is 0.459, it means 45.9% of profitability disclosure variable can be influenced by return on asset and net profit margin, while the rest 54,1% influenced by other variables. For enterprise value, it obtained R-Square value 9.3% disclosure variable influence by free cash flow to firm (FCFF), while the rest 92.7% influence by other variables.

The model in this research is said to be fit for support empirical data. As known, structure model's Goodness of Fit on Partial Least Square (PLS) analysis in the form predictive value-relevance (Q2) is $1 - (1 - 0.459) (1 - 0.093) = 0.509$ or 50.9%. That is, the model can explain the profitability and enterprise value in 50.9%, while the remaining 49.1% is explained by other variables outside the model. Based on [40], show that the $Q2 > 50\%$ indicate the model is moderate-fit and suitable for further analysis.

The basis used in testing hypotheses is the value found in output of Path Coefficients (Mean, STDEV, T-values). To see whether proposed hypotheses are accepted or rejected, it can be seen from result of t-statistics. The limit to reject or accept proposed hypotheses is ± 1.96 (significance level = 5%) where if t statistics $> t$ table (> 1.96 (two-tailed)), H_a is accepted and H_0 is rejected. The results of t-statistics can be seen in Path Coefficients (Mean, STDEV, T-Values) table below.

Based on both calculations above, the t-values are:

Table 7. Results of path coefficient (mean, STDEV, t-values)

Variables	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	Standard error (STERR)	T-Statistics (O/STDEV)
Financial Distress → Firm Value	-0.117	-0.088	0.312	0.312	0.374
Financial Distress → Profitability	0.688	0.703	0.082	0.082	0.351
Firm Size → Firm Value	0.025	0.066	0.149	0.149	0.169
Firm Size → Profitability	-0.051	-0.040	0.089	0.089	0.567
Profitability → Firm Value	-0.218	-0.231	0.265	0.265	0.822

Source: The results of PLS data processing

For the illustration of full structural equation model in the data processing can be seen in the following:

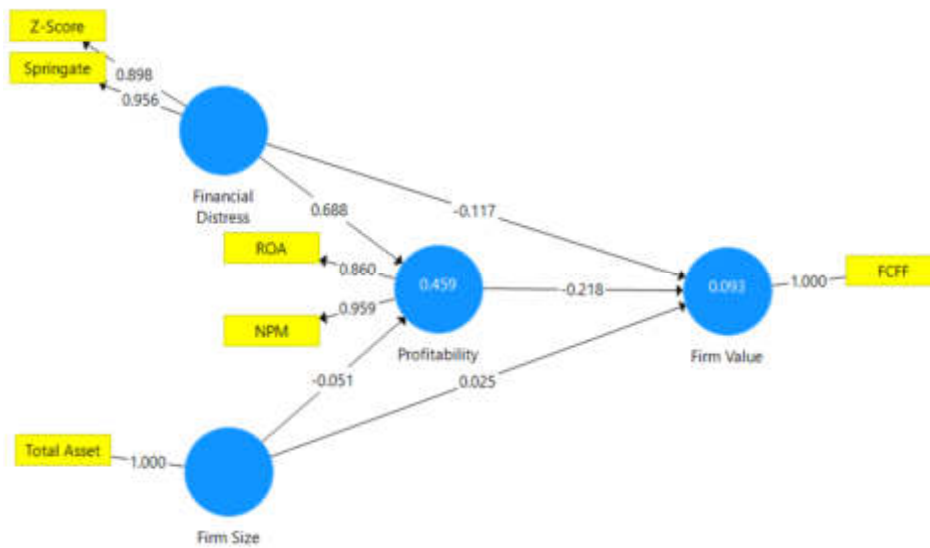


Figure 3. Full structural equation model

Table 8. Results of hypothesis test

Variables	Original Sample	Sample Mean	T-Statistics	T-Table	Conclusion
Financial Distress → Firm Value	-0.117	-0.089	0.372	1.96	Rejected
Financial Distress → Profitability	0.688	0.699	7.633	1.96	Accepted
Firm Size → Firm Value	0.025	0.057	0.176	1.96	Rejected
Firm Size → Profitability	-0.051	-0.038	0.581	1.96	Rejected
Profitability → Firm Value	-0.218	-0.247	0.806	1.96	Rejected

Source: The results of PLS data processing

From the table VI above, it can be seen:

First, for financial distress → firm value, the t-statistics value is smaller than t-table. Based on that, the result is rejected the hypotheses which states that financial distress influences enterprise value disclosure.

Second, for financial distress → profitability, the t-statistics value is bigger than t-table. Based on that, the result is accepted the hypotheses which states that financial distress influences profitability disclosure.

Third, for firm size → firm value, the t-statistics value is smaller than t-table. Based on that, the result is rejected the hypotheses which states that financial distress influences enterprise value disclosure.

Fourth, for firm size → profitability, the t-statistics value is smaller than t-table. Based on that, the result is rejected the hypotheses which states that firm size influences profitability.

Fifth, for profitability → firm value, the t-statistics value is smaller than t-table. Based on that, the result is rejected the hypotheses which states that profitability influences on enterprise value.

Based on table V above, by using Sobel formula then standard error of indirect financial distress variable on firm value.

$$\begin{aligned}
 Sab &= \sqrt{b^2 \cdot Sa^2 + a^2 \cdot Sb^2 + Sa^2 \cdot Sb^2} \\
 &= \sqrt{(-0.218)^2 \cdot (0.089)^2 + (-0.051)^2 \cdot (0.265)^2 + (0.082)^2 \cdot (0.265)^2} \\
 &= \sqrt{0,000319551 + 0,033240582 + 0,000472193} \\
 &= \sqrt{0,034032327} \\
 &= 0,184478526
 \end{aligned}$$

Based on calculations above, the t-values is:

$$t = ab / Sab = 0,149984 / 0,02173 = 6,902162908$$

From the calculations above, t-values obtained is 6.902, and its higher than t-table 1.96 with significance level 5 per cent. This indicates mediating parameter is significant.

Based on table V above, by using Sobel formula then standard error of indirect firm size variable on firm value.

$$\begin{aligned} Sab &= \sqrt{b^2 \cdot Sa^2 + a^2 \cdot Sb^2 + Sa^2 \cdot Sb^2} \\ &= \sqrt{(-0.218)^2 \cdot (0.082)^2 + (0.688)^2 \cdot (0.265)^2 + (0.082)^2 \cdot (0.265)^2} \\ &= \sqrt{0,000376438 + 0,000182655 + 0,000556252} \\ &= \sqrt{0,001115345} \\ &= 0,033396782 \end{aligned}$$

Based on calculation above, the t-values is:

$$t = ab / Sab = 0,011118 / 0,023585 = 0,471401314$$

From the calculations above, t-values obtained is 0.471, and its lower than t-table 1.96 with significance level 5 per cent. This indicates mediating parameter is not significant.

5. CONCLUSION

Based on the results of the research and discussion that have been described previously, it can be concluded that financial distress does not have any effect on firm value, financial distress have an effect on profitability, firm size does not have any effect on firm value, firm size does not have any effect on profitability, and profitability does not have any effect on firm value. In addition, probability disclosure mediates the effect on firm value for financial distress and probability disclosure does not mediate the effect on firm value for firm size.

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