Effect of Financial Distress and Firm Size to Firm's Intrinsic Value and Profitability as Intervening Variable on Property and Real Estate Sector

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Abstract: The intrinsic value of a firm is the fair value of all future net cash flows resulted from a business. The purpose of this research is to examine the effect of financial distress and firm size on profitability; the effect of financial distress, firm size, and profitability on intrinsic value of firm; and the indirect effect of financial distress and firm size on intrinsic value of firm by profitability as intervening variable. The population of the research was the companies in property and real estate sector listed in BEI (Indonesia Stock Exchange). The statistics method which used to test hypotheses is path analysis. The result show that financial distress had a negative and significant influence on profitability, firm size had a positive and insignificant influence on profitability, financial distress had a negative and insignificant influence on intrinsic value, firm size and profitability had a positive and significant influence on intrinsic value, profitability could mediate the correlation of financial distress with intrinsic value of firm, and profitability could not mediate the correlation of firm size with intrinsic value of firm.

1 INTRODUCTION

The main purpose of the establishment of a company is to maximize the welfare of shareholders and other stakeholders by increasing the value of the company. The value of the company is very important because of the high value of the company which will be followed by a high prosperity shareholders (Brigham, 2010).

The intrinsic value of the company is also known as fair value, which is the total present value of net cash flow. The intrinsic value can be measured by free cash flow to firm (FCFF) are projected to obtain the present value of net cash flow of the company by the method of discounted cash flow models (DCF model). DCF model is one method that can be used to conduct an assessment to obtain the fair value of the company so that the value can be compared with the market value, where the value of the market in question is the value that is formed from the number of outstanding shares at the market price of shares offered

One of the factors that affect the value of a company or can be controlled is the profitability of the company. The company's profitability is a measure of the achievements of the company arising from the management decision-making process, because it has a relationship of capital utilization effectiveness, efficiency and profitability of activity performance (Fidhayatin, 2012). Financial performance can be achieved by the company within a certain period is a healthy picture or failure of a company. In addition to providing a profit for the owners of capital or investor, healthy companies can also demonstrate the ability to repay the debt in a timely manner.

The size of the company is also a factor that can determine the performance of the company (Sambharakreshna, 2010). It can be seen from the company's ability to generate profits, because the larger the company, the greater the company's ability to cope with financial problems and the company's ability to generate high returns because it is supported by adequate resources, especially the

company's assets so great that the obstacles companies such as adequate equipment and the like can be resolved. According to Djongkang and Rita (2014) financial distress is a situation where the company suffered a loss or operating cash flow is not sufficient to meet the needs of the company's liabilities. Furthermore, of the losses will lead to capital deficiency due to impairment of retained earnings are used to pay dividends, and total equity as a whole will be deficient. The condition indicates a company is experiencing financial difficulties (financial distress) which in the end if the company is not able to get out of the above conditions, then the company would be insolvent.

Some studies suggest that firms with large total assets will be more likely to be able to generate higher profit levels (Sembiring, 2008). Profit may indicate the company's performance. The greater the profit, the better the performance of the company and good corporate performance will certainly increase the value of the company. This is reflected in the results of research Gill and Obradovich (2012) which states that the size of the company and significant positive effect on firm value

However, financial distress are proxied by the model financial soundness of companies indicate different things, Pi or the results of the score against financial distress which if the probability of reaching the number 1 means that the company has entered the status of the financial difficulties of the most severe, whereas when it reaches 0 means the company no financial difficulties. Therefore, by increasing the level of the financial difficulties facing the company will have a negative impact on profitability of the company.

Increasing profitability means that the company's prospects in the future rated increasing as well, which means that the better the company's value in the eyes of investors. If the company's ability to generate income increases, the share price will also increase. Improved share price reflects the company good value for investors.

Based on the above, the proposed hypothesis is as follows:

H1 : There is the effect of financial distress and firm size on profitability
H2 : There is the effect of financial distress, firm size and profitability of the company's intrinsic value
H3 : There is the indirect effect financial distress and firm size to the company's intrinsic value through profitability as an intervening variable.
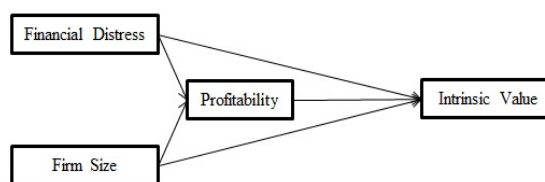

Figure 1: Conceptual framework showing the linkage between financial distress, firm size, profitability, and the company's intrinsic value.

2 METHOD

The population of this research is company property and real estate sectors listed in Indonesia Stock Exchange in 2016. The population is 49 companies. The target population is a company that does not have a negative net income and has a complete data relating to the variables used in the study, ie 37 companies. All companies in the target population was observed (sample saturated). Data is sourced from the company's financial statements are audited downloaded from the website of Indonesia Stock Exchange, namely www.idx.co.id. The focus of research is in real estate companies and real estate. The data used is secondary data that is historical cross section. Research in the form of ex post facto research, because the data is sourced from the issuer's financial statements have been published and are used without change. Research is causality, the research wants to find an explanation in the form of causality (cause-effect) between some of the variables that are developed in the management (Ferdinand, 2006). The hypothesis presented is a hypothesis of causality. Analysis of the data will result in a general conclusion. Data was analyzed using path analysis. This analysis is used because there is a possible relationship between the variables in the model is linear. The confidence level used is 95%, which means that the alpha is 5%.

Structural equations to test the first hypothesis:

$$Y1 = X1X1 + \rho Y1 \, \rho Y1X2X2 + \text{\EUR}1 \qquad (1)$$

Y1 = endogenous variables Profitability
X1 = exogenous variables Financial Distress
X2 = exogenous variables Firm Size
ρY1X1 = path coefficients X1 to Y1
ρY1X2 = path coefficient of X2 to Y1
Є1 = coefficient error 1 path variables

Structural equation for testing the second hypothesis:

$$PY2X1X1 + Y2 = Y1 + \rho Y2X2X2 + \rho Y2Y1 \, \epsilon 2 \qquad (2)$$

Y2	= endogenous variables Company Value
Y1	= endogenous variables Profitability
X1	= exogenous variables Financial Distress
X2	= exogenous variables Firm Size
$\rho Y2X1$	= path coefficients X1 to Y2
$\rho Y2X2$	= path coefficient X2 to Y2
$\rho Y2Y1$	= path coefficient Y1 to Y2
$\epsilon 2$	= coefficient error 2 path variables

The indirect effect calculations for testing the third hypothesis:

• The indirect effect (indirect effect) X1 to Y2 through Y1 = $\rho Y1X1$ x $\rho Y2Y1$
• The indirect effect (indirect effect) X2 to Y2 through Y1 = $\rho Y1X2$ x $\rho Y2Y1$

The research variables and operational definitions:

• Y1 is the company's performance in this case is measured by Return on Assets (ROA) formula:

$$ROA = \frac{EAT}{Total \; Assets} \; (1) \qquad (3)$$

• Y2 Intrinsic value can be measured by the free cash flow to firm (FCFF) are projected to obtain the present value of net cash flow of the company by the method of discounted cash flow models (DCF model). Damodaran (1997) FCFF formulate as follows:

$$FCFF = EBIT \, (1\text{-tax}) \, (1\text{-Reinvestment Rate}) \qquad (4)$$

On the Discounted Cash Flow method (DCF) model, the present value of the overall results of the projection and the terminal value at a discount rate, is the company's intrinsic value.

• X1 is a possibility of companies experiencing financial distress. To calculate the risk of financial distress of the company can use the methods of financial soundness (Fachrudin, 2008) formula:

$$Pi = \frac{1}{[1 + 2.71828 - (-5.472 + 9{,}555xa8i - 32{,}347xa2i)]} \qquad (5)$$

• X2 is a measure of the company. The size of the company can be measured by the natural logarithm (natural log) of the total assets (Naiker *et al.*, 2008).

3 RESULTS AND DISCUSSIONS

The results will be discussed in three subsections, they are testing the first hypothesis, the second hypothesis, and the third hypothesis.

3.1 First Hypothesis Testing

3.1.1 Testing Classical Assumptions

1. Residual Normality Test
   Kolmogorov-Smirnov test statistic p-value shows 0197 (> 0.05), indicating that the residual normality assumption has been fulfilled
2. Test Multicolinearity
   Tolerance value of each variable is 0921, which is greater than 0.1. VIF value of 1.085, which is smaller than 10. This shows that there is no multi-kolonieritas.
3. Test Heteroscedasticity
   Glejser test found that the significant value of t test is greater than 5% alpha which indicates that the data is free from the problem of heteroscedasticity.

3.1.2 Goodness of Fit Assessment Model

1. The coefficient of determination is worth 0.117 which means that the ability of the model to explain variations in profitability variable was 11.7%, while the remaining 88.3% is explained by other variables not included in the model.
2. Test f
   Significant test F is 0.036. Values smaller than 5% alpha indicates that the model used is feasible and can be used for further analysis.
3. Test t
   Financial Distress have a negative effect and significant (p-value is worth 0.013) toward Profitability. While the Firm Size have a positive effect but not significant (p-value is worth 0.923) toward Profitability.

Table 1: Path Model 1.

Coefficients					
Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	.060	.190		.316	.754
Financial Distress	-.154	.059	-.425	-2623	.013
Firm Size	.001	.007	.016	.097	.923
a. Dependent Variable: Profitability					

The mathematical equation of path model 1:

$$Y1 = -0,425X1 + 0.016X2 \qquad (6)$$

3.1.3 Influence of Financial Distress and Firm Size on Profitability

In the first hypothesis testing found that the financial distress a negative effect and significant towards profitability. The size of the company does not affect the performance of the company.

The findings suggest that if other things being equal, an increase in the risk of financial distress by 1% percent will reduce profitability, in this case is the ratio of earnings after tax to total assets, amounted to 15.4%. This is not out of the capital structure as well as the determining factors of financial distress itself, which is dominated by the capital structure of debt are particularly vulnerable to the crisis and very likely increasing financial difficulties for any gains. The decline in profitability as a result of the larger companies are at risk of experiencing financial difficulties.

These research discovered that the average probability of financial distress is 0.12 to 0.19 standard deviation. This high amount indicates that the company is not in financial difficulty so that there is a possibility that careful management in the composition of its capital structure and maximize existing assets to become the company's net profit, due to the influence of financial distress to profitability is negative.

Firm size does not affect the profitability of the company. This indicates that company size is not a guarantee that the company will have a good performance. Epi (2017) also found that there is no effect of firm size on firm performance. But Fachrudin (2011) found that the size of the company's positive effect on performance.

3.2 Second Hypothesis Testing

3.2.1 Testing Classical Assumptions

1. Residual Normality Test
   Kolmogorov-Smirnov test statistic shows that p-value 0.067 (> 0.05), indicating that the residual normality assumption has been fulfilled
2. Test Multicolinearity
   Tolerance value of financial distress variables, firm size and profitabily respectively, are 0.766, 0.921, 0.823, greater than 0.1. VIF respectively 1,085 1,305 1,215, which is less than 10. This shows that there is no multicollinearity.
3. Test Heteroscedasticity
   Glejser test found that the significant value of t test is greater than 5% alpha which indicates that the data is free from the problem of heteroscedasticity.

3.2.2 Goodness of Fit Assessment Model

1. The coefficient of determination is worth 0.422 which means that the ability of the model to explain variations in the company's intrinsic value variable is equal to 42.2%, while the remaining 57.8% is explained by other variables not included in the model.
2. Test f
   Significant test f is 0.000. Values smaller than 5% alpha indicates that the model used is feasible and can be used for further analysis.
3. Test t
   Financial Distress have a negative effect but not significant (p-value is worth 0.613) toward the company's intrinsic value. Firm Size have a positive and significant effect (p-value is worth 0.000) toward the company's intrinsic value. Profitability is positive and significant (p-value is worth 0.029).

Table 2: Path Model 2.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-69344,16	17215.220		-4028	.000
	Financial Distress	-2984.334	5840.556	-.077	-.511	.613
	Firm Size	2548.205	595 012	.591	4283	.000
	Profitability	35596.356	15539.246	.334	2,291	.029
a. Dependent Variable: Intrinsic Value						

The mathematical equation of path model 2:

$$Y2 = -0.077X1 + 0.591X2 + 0.334Y1 \qquad (7)$$

3.2.3 Influence of Financial Distress, Firm Size and Profitability of the Company's Intrinsic Value

In the second hypothesis testing found that the financial distress does not affect the company's intrinsic value. Firm Size and significant positive effect on the company's intrinsic value. Profitability have a positive and significant impact.

Financial distress does not affect the company's intrinsic value. This suggests that financial distress was not a reflection of the company has an intrinsic value that is positive or negative, but only as a reflection on the quality of management to manage the assets of the company. This is not in line with research by Choy *et al.* (2011) where his research shows that the higher the risk of the company is experiencing financial difficulties, the value of companies represented by the stock price will decrease. The results of this study concluded that financial distress do not significantly affect the value of the company because the company's value is calculated by using the income approach that method of calculation is more focused to the prospect of revenue streams economically owned by the company while the financial distress summarily rather the ratio of debt and income divided by total asset so it is difficult to connect with the company's intrinsic value. Unlike the case with previous studies using PBV or stock prices as a proxy for the value of the company through the investor perception of the company is so significant effect.

Statistical test results showed that the Firm Size positive effect on the company's intrinsic value,

meaning that the larger the size of the company, increasing the company's value. The larger the company's assets, generally will increasingly attract investors to own shares of the company. Company with great assets is generally a leading company in the sector. Large companies can easily access to the capital markets. Ease of access to the capital markets means that companies have the flexibility and ability to obtain funds, for ease of accessibility to the capital markets and its ability to raise more funds. The ease their captured by investors as a positive signal and a good prospect that size could have a positive influence on firm value. This is in line with research by Maheswari (2016) where his research shows that the larger the company, as measured by the logarithm of the total assets of the company have the value of the companies represented by PBV will increase. This is because the larger the total assets of the company which owned the greater the prospects of economic revenue stream that would be obtained in the future.

These reserach found that an increase in the company's profitability significantly improve the company's intrinsic value. Profitability is a picture of the performance of the company, for investors, in using its assets efficiently and effectively in generating profits. The ability of property companies to generate huge profits in the future will be able to increase cash flow of companies that have an impact on increase the intrinsic value of the company, it is because of a positive relationship between the flow of net cash flows of companies with profitability. This is in line with research by Khumairoh (2017) which found a significant positive relationship between profitability and value of companies in which the company is able to produce high profits can be a positive signal to investors about the company's performance was good.

3.3 Third Hypothesis Testing

The indirect effect of financial distress and Firm size of the intrinsic value of the company through the company's performance as an intervening variable can be seen below:

- Indirect effect (indirect effect) X1 to Y2 through Y1 = -0.425 x 0.334 = -0.142
- Indirect effect (indirect effect) X2 to Y2 through Y1 = 0.016 x 0.334 = 0.005

Statistical test results in Table 2 above shows that the profitability of a significant effect on the alpha 5% of the company's intrinsic value (p-value 0.029). Therefore, the indirect effect of financial distress and firm size of the company's intrinsic

value as calculated above is also a significant possibility.

3.3.1 The Indirect Effect of Financial Distress and Firm Size of the Intrinsic Value of the Company through Profitability as an Intervening Variable

Known to directly influence financial distress given the intrinsic value of the company amounted to -0.077 while the indirect effect of financial distress through the profitability of the company's intrinsic value is obtained by multiplying the beta financial distress to profitability with a beta value of the profitability of the company's intrinsic value, namely: -0.425 x 0.334 = -0.14195 total effect given the financial distress of the intrinsic value of the company is a direct influence plus the indirect effect is -0.077 + -0.14195 = -0.21895 based on the above calculation is known that value of direct influence of -0.077 and the indirect influence of -0.14195, which means that value of indirect negative effect greater than the negative value of the direct effect, these results shows that financial distress to profitability have a significant effect towards company's intrinsic value.

These means that with the increase in profitability or ability company makes a profit is able to influence financial distress in improving the company's intrinsic value. Profitability in this case ROA indirectly caused a negative effect on the company's intrinsic value calculated by the free cash flow to the firm does not regard the depreciation element, but the profitability is calculated by taking the element of depreciation accounting profit.

This study is in line with Tamarani (2015) that profitability is able to mediate between size of company's influence on the value of the company.

Results of recent research in this study were able to mediate the profitability of firm size effect on the company's intrinsic value. Known to directly influence a given firm size the intrinsic value of the company for 0.591 while the indirect effect of firm size through the profitability of company's intrinsic value is obtained by multiplying beta firm size to profitability with a beta value of profitability of company's intrinsic value is: 0.016 x 0.334 = 0.005 then total effect of a given firm size of intrinsic value of company is a direct influence coupled with indirect effect that is 0.591 + 0.005 = 0.571 based on a above calculation known that value of the direct influence of 0.591 and indirect influence by 0.

This means that with the increase in profitability or ability company makes a profit does not affect the size of the company in improving the company's intrinsic value. This study is in line with Pratama (2016) that profitability is not capable of mediating influence between size of company to value of the company.

4 CONCLUSIONS

This study found a negative effect on the profitability of the company's financial distress. The risk of financial distress or financial difficulties can affect the performance of company due to negligence of management in managing its capital structure and quality will be assets that also applies vice versa if management able to manage its capital structure well in the sense according to the needs of the company and also in improving the quality assets that company will have risk of financial distress can be reduced and therefore the smaller the risk of financial distress, firm performance will certainly be better considering the company is able to productively and efficiently to the assets the company had.

The risk of financial distress do not affect value of company where company is experiencing a high risk of financial distress or not at all can affect value of company. Firm size has a positive effect on firm value. The greater total assets of company, the greater the value of the company. Back again this indicates that firm size as measured on total assets on logarithm can be managed by a company well because basically the higher the assets are likely to increase in operating expenses will these assets, but in this study the greater the assets, the higher the value of the company so can be said to be capable management with a maximum of managing their assets to enhance corporate value. Profitability positive and significant effect on firm value. It is characterized by the higher level of profitability of the company's ability to take advantage of all its assets to obtain optimum profit superbly.

The intrinsic value of the company, the profitability of financial distress is able to mediate relation to the intrinsic value of the company and firm size is able to directly influence the intrinsic value of the company without having to first go through profitability. It can be concluded that the direct effect of financial distress of the company's intrinsic value is smaller than the indirect effect through profitability and firm size of the intrinsic

value is greater than the indirect effect through profitability.

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