



Identifying Financial Distress Firms: A Case Study on Property and Real Estate Companies Listed In Indonesian Stock Exchange

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Abstract

The objective of this study is to investigate the simultaneous and partial effects between ratio of liquidity, leverage, profitability and sales growth to financial distress in property companies listed in Indonesian Stock Exchange in 2013-2017. Sampling technique used in this study is purposive sampling technique. Sample in this study is as many as 38 samples within 5 years; therefore, a total of 190 company samples were obtained. Technique of analysis used in this study is logistic regression analysis using application of SPSS 24.0. Based on the research result, the ratio of liquidity, leverage, profitability and sales growth variables affect financial distress by 61.3%, and the rest of 38.7% is affected by other factors outside the research variables. Partially, liquidity variable has a positive effect to financial distress and profitability variable has a negative effect to financial distress. On the other hand, leverage variable proxied with debt to asset ratio and sales growth has no effect to financial distress.

Keywords—Financial Distress, Leverage, Liquidity, Profitability; Sales Growth

Abstrak

Penelitian ini bertujuan untuk mengetahui adanya pengaruh secara simultan dan parsial antara rasio likuiditas, leverage, profitabilitas dan sales growth terhadap financial distress pada perusahaan property dan real estate yang terdaftar di Bursa Efek Indonesia tahun 2013-2017. Teknik pengambilan sampel dalam penelitian ini adalah teknik purposive sampling. Sampel dalam penelitian ini adalah sebanyak 38 sampel dalam kurun waktu 5 tahun sehingga didapat 190 total sampel perusahaan. Teknik analisis yang digunakan dalam penelitian ini adalah analisis regresi logistik dengan menggunakan aplikasi SPSS 24.0. Berdasarkan hasil penelitian, variabel rasio likuiditas, leverage, profitabilitas dan sales growth mempengaruhi financial distress sebanyak 61,3%, dan sisanya 38,7% dipengaruhi oleh faktor lain di luar variabel penelitian. Secara parsial, variabel likuiditas berpengaruh positif terhadap financial distress dan variabel profitabilitas berpengaruh negatif terhadap financial distress. Sedangkan variabel leverage yang diproksikan dengan debt to asset ratio dan sales growth tidak berpengaruh terhadap financial distress.

Kata kunci— Financial Distress, Leverage, Liquidity, Profitability; Sales Growth

I. INTRODUCTION

Financial Distress is a phase of a decline in financial conditions occurred before the occurrence of bankruptcy, marked by the inability of companies to fulfil their obligations (Simanjuntak et al., 2017). According to Platt & Platt (2002), the company that is experiencing financial distress could be marked with: there is a workforce termination, there is no dividend distribution conducted by the company, a low ratio of interest coverage, a smaller cash flow compared to long-term debt, negative operating profit, there is a change in equity price, termination of operations, and the company receives a negative EPS.

In the middle of 2013, Bank Indonesia began to tighten its policy. Bank Indonesia raised the minimum down payment of requirement and cut mortgage loan for the second home ownership. In addition, Bank Indonesia raised BI rate to 7.50% to overcome inflation. This is of course has a big impact on the property & real estate

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sector. In 2014, property & real estate sector experienced a decline. Residential Property Price Index of Bank Indonesia declined to 6.3%, whereas in 2013, the annual growth rate was able to reach 11.5% (Indonesia-investments, 2015). Until 2017, the growth of property & real estate sector was weak, and it is predicted that this sector will rise in 2019.

With this phenomenon, it is important to acknowledge finding out the possibility of financial distress in Property and Real Estate Companies. Therefore, all stakeholders are able to make precise decisions about their activities. The purpose of this study is to find out whether there are simultaneous and partial effects between liquidity, leverage, profitability and sales growth to financial distress. The benefits of this study for companies can be taken as consideration in analysing their financial performance as well as to find out signs of financial distress, so that companies can take appropriate actions or policies to anticipate bankruptcy even financial distress. As for investors, it is hoped to provide information to be taken as consideration in determining the right investment direction and avoiding companies experiencing financial distress, particularly in property and real estate companies listed in Indonesian Stock Exchange.

This study uses logistic regression analysis because the dependent variable in this study is non-parametric and has more than one independent variable. The step in this logistic regression analysis according to Santoso (2014: 218) to assess the feasibility of the regression model can be used Hosmer & Lameshow. The results of the regression feasibility can be assessed by the goodness of fit test measured by Chi-Square at the bottom of the Hosmer & Lameshow test. Meanwhile, to test the whole model using the model fit test. This model is used to assess whether the hypothesized model is fitting or not with the data.

The results of this study show that there is a positive effect between liquidity and financial distress. Next, there is a negative effect between profitability and financial distress. On the other hand, leverage variable and sales growth has no effect to financial distress.

II. THEORETICAL FRAMEWORK

Financial distress is a process of declining financial position experienced by companies before bankruptcy or liquidation (Platt & Platt, 2002). According to Fahmi (2014:169), financial distress is marked by the inability of companies to fulfil their obligations, particularly short-term obligations, namely obligation and solvency obligations. Saunders (2014: 800) stated that financial distress is a period when borrower is unable to pay his/her obligations to creditor. Elloumi & Gueyie (2001) stated that financial distress in corporations is marked by negative earnings per share (EPS) in a company. A company with negative EPS in a few years show that the company's growth is not good. Investors are less interested in investing the company. EPS utilizes dummy variable, score of 1 (one) in companies experiencing financial distress where the companies have negative EPS for two consecutive year and score of 0 (zero) for companies that are not in financial distress condition that is marked with positive EPS.

Liquidity ratio is a ratio that measures the ability of a company in settling their short-term liabilities. Liquidity of a company is marked by the size of assets that can be converted into cash (Mafiroh & Triyono, 2016). The bigger ratio of liquidity, the better financial condition of a company is so as to minimize the occurrence of financial distress. This is in line with research conducted by Vitarianjani (2015) as well as Widhiari & Merkusiwati (2015) who found that liquidity ratio is measured by using current ratio that affects financial distress negatively.

Leverage or solvency ratio is a ratio that measures the how much a company is financed by debt (Fahmi, 2014:72). A high leverage ratio will also make investors reluctant to invest their capital and creditors who are reluctant to provide loans because of the high risk that the company has. This certainly makes it difficult for the company to find additional fund as well as increase the possibility of financial distress in the company. This is in line with researches conducted by Saleh & Sudiyanto (2013), and Muflihah (2017) who found that leverage ratio that is measured with debt ratio has a positive effect of financial distress in the company.

Profitability ratio is a ratio that measures the management in a whole in gaining profit, both from sales or investment. The higher the profitability ratio of the company, the more efficient the company is in managing its assets to obtain profits, so as to minimize the possibility of financial distress in the company. This is in line with researches conducted by Saleh & Sudiyatno (2013) as well as Muflihah (2017) who found that profitability has a negative effect on financial distress.

Sales growth is the ability of a company in increasing sales from time to time and measures how well the company in maintaining its economic position (Widardjo & Setiawan, 2009). The higher the sales growth of the company indicates the higher the profit and the healthier company, so the possibility of financial distress is getting smaller. This is in line with a research conducted by Widhiari & Merkusiwati (2015) who found that sales growth has a negative effect on financial distress.

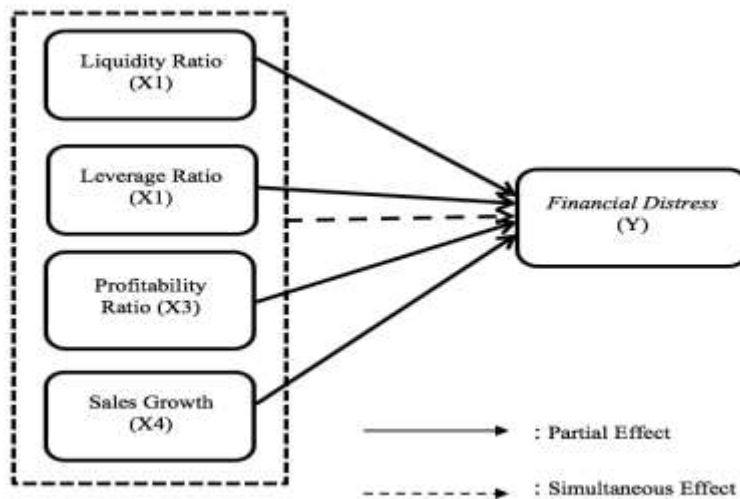


Figure 1. Conceptual Framework

III. METHODOLOGY

Sampling technique in this study is purposive sampling. There are 38 samples in a period of 5 years, so a total of 190 samples of the company were obtained. Analysis technique used in this study is logistic regression analysis. The model used in this study is:

$$Ln = \frac{FD}{(1 - FD)} = \alpha + \beta_1 CR + \beta_2 DAR + \beta_3 ROA + \beta_4 Sales + \epsilon$$

Where:

- $Ln = \frac{FD}{(1 - FD)}$: Probability of companies experiencing financial distress
- α : Constant
- $\beta_1 \beta_2 \beta_3 \beta_4$: Regression coefficient
- CR : Current Ratio (current asset / current liabilities)
- DAR : Debt Asset Ratio (total liabilities / total asset)
- ROA : Return On Asset (earning after tax / total asset)
- Growth : Sales Growth ($sales_t - sales_{t-1} / sales_{t-1}$)
- ϵ : error

IV. RESULT

A descriptive statistic test was conducted to provide a descriptive explanation of each variable used in this study without relationship between both independent and dependent variables.

Table 1. Descriptive Statistic

	N	Minimum	Maximum	Mean	Std. Deviation
Liquidity	190	.207727	19.067406	2.72462080	2.761360003
Leverage	190	.033530	.960652	.37637535	.166425049
Profitability	190	-.087951	358901	.05789609	.065807516
Sales_growth	190	-.912302	8.432627	.22300109	.835849395
Financial_distress	190	0	1	.06	.244
Valid N (listwise)	190				

Based on table 1, it can be seen that for liquidity, profitability, sales growth, and financial distress, mean values show lower score than the score of standard deviation, meaning that data tested in this study are varied. On the other hand for leverage variable, the mean values show greater number than the value of standard deviation. This means that data tested in this study are relatively homogenous. Simultaneous and partial hypothesis testing were conducted using logistic regression model with enter model on a significance level of (α) 5%. Previously, to determine the feasibility, regression model was tested using Hosmer & Lemeshow by considering the value of goodness of fit measured with chi-square value.

Table 2. Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	1.884	8	.984

Table 2 above shows the result of Hosmer & Lemeshow Test, and chi square value is obtained of 1.884 with the significance level of 0.984. If the significance level is greater than 0.05 or $\text{Sig} > \alpha(0,05)$, the null hypothesis is accepted. This shows that the model can be accepted so the hypothesis testing can be accepted as well.

The next step is to assess the feasibility of model (*overall model fit*). In this testing, the value between *-2log likelihood* (-2LogL) in the beginning (*Block number* = 0) and the value of *-2log likelihood* at the end (*Block number* = 1) will be compared. This testing is used to determine if additional independent variables to the model can significantly repair the data (Ghozali, 2016:328).

Table 3. Overall Model Fit

Overall Model Fit (-2LogL)	
-2LogL Block Number = 0	Value 89.516
-2LogL Block Number = 1	Value 83.275

Table 3 above shows that the value of -2LogL in the beginning (-2LogL Block Number = 0), where constant is included in the model, shows the value of 89.516. On the other hand, the value of the following -2LogL (-2LogL Block Number = 1), where the model is added with constant and independent variables, shows the value of 83.275. Comparing these two values, it can be seen that the value of -2LogL Block Number = 0 is greater than the value of -2LogL Block Number = 1 with a decline of 6.241. Therefore, it can be concluded that model fits the data, and that liquidity, leverage, profitability and sales growth variables significantly improve model fit.

A. Simultaneous Testing (F Test)

Simultaneous testing using regression logit model with the significance level of enter model (α) 5%. Logit regression is used to test the effects of liquidity, leverage, profitability, and sales growth on financial distress.

Table 4. *Omnibus Test of Model Coefficients*

	Chi-square	Df	Sig.
Step	49.776	4	.000
Block	49.776	4	.000
Model	49.776	4	.000

Testing of *Omnibus Test of Model Coefficients* is used to examine the effect of the overall independent variables simultaneously to dependent variables. From the logistic regression resting result of *Omnibus Test of Model Coefficients*, it is known that the value of *chi-square* = 49.776 with degree of freedom = 4, and the significance level of 0.00 ($p\text{-value} < 0.05$), then H_{01} is rejected and H_{a1} is accepted, which means that liquidity, leverage, profitability, and sales growth has a significant effect on financial distress.

B. Partial Testing (*t-test*)

In this study, the partial testing was conducted to find out the effect of liquidity, leverage, profitability, and sales growth on financial distress. The test was conducted by examining regression coefficient by looking at the significance value compared to the significant level (α).

In this study, the partial testing was conducted to find out the effect of liquidity, leverage, profitability, and sales growth on financial distress. The test was conducted by examining regression coefficient by looking at the significance value compared to the significant level (α).

Tabel 5. *Variables in the Equation*

	B	S.E.	Wald	df	Sig.	Exp(B)
Liquidity	.402	.151	7.064	1	.008	1.495
Leverage	3.609	2.802	1.658	1	.198	36.925
Profitability	-49.544	13.359	13.755	1	.000	.000
sales_growth	.159	.431	.136	1	.712	1.172
Constant	-5.132	1.576	10.602	1	.001	.006

From the testing results, the following regression model equation is obtained:

$$FD = -5.132 + 0.402CR + 3.609DAR - 49.554ROA + 0.159Sales + \epsilon$$

- 1) Liquidity ratio, regression coefficient of 3.609 is obtained with a significance level of $0.008 < \alpha = 0.05$ that means that liquidity has a significant positive effect on financial distress. This result shows that companies with a high liquidity ratio have a bigger probability to experience financial distress. This is probably because the companies do not have enough funds in cash to meet their short-term liabilities at maturity, and also if the liquidity ratio is too high, then it can be said that the companies are not efficient in managing their current assets.
- 2) Leverage ratio, regression coefficient of 3.609 is obtained with the significance level of $0.198 > \alpha = 0.05$ that means that leverage ratio does not affect financial distress. This can be caused because when companies have a high total debt, accompanied with high total assets, they are able to pay debts using the companies' assets. In addition, when the company's debts are due and the company has not been able to pay the debts; the company makes a decision to borrow funds from outside parties to pay off the debts to maintain the company. Therefore, it can be concluded that leverage does not affect the possibility of financial distress. (Liana dan Sutrisno, 2014).
- 3) Profitability ratio, regression coefficient of -49,544 is obtained with the significance level if $0.000 < \alpha = 0,05$ that means that profitability has a negative effect on financial distress, or the higher the profitability of a company, the lower the likelihood of financial distress in a company, and so on vice versa. The higher the profitability ratio indicates the more effective a company in managing its assets to gain profits, so that the company can be avoided from financial distress. On the other hand, if the profitability ratio is low, it indicated that the company has a low productivity in generating profits, so that it will complicate the company in internal funding for investment and can cause the occurrence of financial distress.

- 4) Sales growth, regression coefficient of 0.159 is obtained with the significance level of $0.712 < \alpha = 0.05$ that means sales growth does not affect financial distress. The companies with a high sales growth value can maintain the survival of the companies and are avoided from financial distress condition, because the profits generated by the companies are increasing. The low sales growth will only affect to the decline of profits, and as long as the sale decline does not exceed the predetermined (margin of safety), it will not create a problem and does not affect directly to financial distress. This result shows that the high and low sales growth will not affect *financial distress* of a company.

V. CONCLUSSION & RECOMMENDATION

The results of this study show that there is a positive effect between liquidity and financial distress, which means the higher the liquidity risks of a company, the higher the probability of financial distress of a company. Therefore, the company must manage their currents assents well to avoid financial distress. Next, there is a negative effect between profitability and financial distress, which means the lower the profitability ratio of a company, the bigger probability of financial distress of a company. Therefore, the company should maximize the use of its assets to obtain profit to avoid financial distress.

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