The Effect of Liquidity, Leverage, and Profitability on Financial Distress (Case Study of Property and Real Estate Companies on the IDX 2017-2019)

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ABSTRACT: Financial distress is a condition of financial difficulties experienced by a company. Companies must be able to predict the possibility of financial difficulties in order to avoid potential bankruptcy. This study aims to obtain empirical evidence regarding the effect of liquidity, leverage, and profitability on financial distress in Property and Real Estate companies listed on the Indonesia Stock Exchange (IDX) for the 2017-2019 period. The sampling technique in this study used purposive sampling with the criteria as companies listed consecutively on the Indonesia Stock Exchange for the period 2017-2019. Companies that meet the criteria to be sampled in this study are as many as 53 companies. The analysis technique used in this research is logistic regression analysis. The results of this study indicate that liquidity has a significant negative effect on financial distress, leverage has a significant positive effect on financial distress, and profitability has a significant negative effect on financial distress.

Keywords: Financial distress, liquidity, leverage, profitability.

I. INTRODUCTION

Changes in the economic situation certainly affect the performance of a company (Septiani & Dana, 2019), causing increasingly fierce competition faced by companies to maintain their company's existence. The importance of carrying out an analysis to predict bankruptcy is very much needed in order to anticipate bankruptcies in the future. Risk analysis can be seen from internal and external companies. Companies tend to be able to analyze possible risks that occur in the internal environment because they better understand the condition of the company. External risk is an event originating from outside the company and outside the company's control. These events are usually rare but have a big enough impact on the company. The Covid-19 pandemic in 2020 is evidence of economic conditions affecting company value. External conditions are also supported by other factors such as industry trends and company-specific problems that will lead to bankruptcy. Bankruptcy occurs due to a number of factors, one of which is financial difficulties or what is known as financial distress. The potential for bankruptcy can be in the form of too much debt held by the company and an unexpected increase in interest rates (Yuliawati & Dana, 2020). Financial distress is a broad concept used to describe situations when companies face financial difficulties (John & Ogecukwu, 2018). Financial distress starts when a company cannot meet its scheduled payments or when cash flow projections indicate that the company is unable to make payments. Predicting financial distress is a very important thing for companies to do in order to anticipate the risk of bankruptcy that will occur in the future (Agustini & Wirawati, 2019). A case study shows that the occurrence of financial distress is usually the result of a series of errors, misjudgment, and weaknesses that can be attributed directly or indirectly to management. Predictions regarding financial difficulties can be found through financial ratio analysis (Dewi & Mahfudz, 2016). The use of these ratios because signs of potential financial difficulties are generally evident in ratio analysis long before the company experiences failure, namely the ratio of liquidity, leverage and profitability as appeared on Rahmawati & Hendriyana (2018), Agustini & Wirawati (2019) and Susilowati et al. (2019).

The first ratio that can affect financial distress is liquidity. The liquidity ratio provides an overview of the company's ability to pay debts that are due in one year (Kipkemoi, 2019). A company can be said to be liquid if the company can settle its short-term obligations at maturity, but if the company cannot complete its short-term obligations at maturity, the company can be said to be illiquid (Septiani & Dana, 2019). Companies that have a high level of liquidity indicate that they have a number of current assets that are ready to be used to pay their short-term debt so that the company can avoid financial distress (Carolina et al., 2018). The ratio used in this study is the current ratio. The current ratio is used in this research to analyze how much influence the availability of current assets has to meet current liabilities as a determinant of the risk of financial

The second ratio that can affect financial distress is leverage. The leverage ratio is a ratio that helps companies understand the extent to which the company is financed by debt or from outside parties in carrying out the company's operational activities (Ramadhanty & Budiasih, 2020). If a financing company uses more debt, it will allow the company to be unable to pay off debt in the future due to the large number of interest expenses borne by the company, it will ultimately disrupt the company's operational activities and the potential for financial distress. The leverage ratio in this research is proxied by the Debt to Equity Ratio (DER). DER compares long-term debt with own capital, to determine the amount of use of long-term debt compared to own capital (Anggraeni & Rahyuda, 2020). Carolina et al. (2018) state that leverage does not affect financial distress. Yanuar (2018) and Curry (2020) state that leverage has no significant negative effect on financial distress. Susilowati et al. (2019), and Agustini & Wirawati (2019) state that they have a significant positive effect on financial distress. But Dewi & Dana (2017) state that it has a positive and insignificant effect on financial distress.

The next ratio that can affect financial distress is profitability. Profitability is the company's ability to generate profits (Ananto et al., 2017). Companies that have sufficient funds will allow companies to avoid financial distress in the future (Agustini & Wirawati, 2019). The profitability ratio in this research is proxied by Return on Assets (ROA). ROA is used to assess the company's ability to obtain net profit from the increase in assets used by the company. Companies that have a high ROA level indicate that the company is able to generate profits, which can be used for various things, both to finance company activities and to pay for its obligations (Carolina et al., 2018). (Titik & Tri (2018) and Carolina et al. (2018) show that profitability has no significant effect on financial distress. However, Handayani (2020) stated that profitability had no significant effect on financial distress and Susanti et al. (2020), Susilowati et al. (2019) stated that profitability had a negative significant effect on financial distress.

This research is conducted at Property and Real Estate companies listed on the Indonesia Stock Exchange (BEI). The choice of companies in this sector is because the Property and Real Estate industry sector has a high risk in which the source of funds in this sector is obtained through bank loans and large investments. This sector operates by using fixed assets, namely land and buildings which require a long-term time to get a return. There are data results obtained from the annual reports of Property and Real Estate companies listed on the IDX which indicate the potential for financial difficulties.

Table 1. Earning Per Share in Property and Real Estate Companies listed on the IDX for the 2016-2019

<table>
<thead>
<tr>
<th>Company</th>
<th>Code</th>
<th>EPS in IDR</th>
</tr>
</thead>
<tbody>
<tr>
<td>Binakarya Jaya Abadi Tbk</td>
<td>BIKA</td>
<td>-131.7</td>
</tr>
<tr>
<td>Bhuwatanala Indah Permai Tbk</td>
<td>BIPP</td>
<td>5.83</td>
</tr>
<tr>
<td>Bukit Darmo property Tbk</td>
<td>BKDP</td>
<td>-4.24</td>
</tr>
<tr>
<td>Metro Realty Tbk</td>
<td>MTSM</td>
<td>-10</td>
</tr>
<tr>
<td>Pakuwon Jati Tbk</td>
<td>PWON</td>
<td>34.69</td>
</tr>
<tr>
<td>Wijaya Karya Bangunman Tbk</td>
<td>WEGE</td>
<td>24.69</td>
</tr>
</tbody>
</table>

Source: Processed Data, 2020

Based on Table 1, the result of the existence of financial difficulties which is marked by a negative EPS value in Property and Real Estate companies in 2016-2019. The Earning Per Share ratio is a ratio to measure the success of management in achieving benefits for shareholders. EPS was chosen as a proxy in financial distress because according to Sari and Hartono (2020), if the profits provided by the company to shareholders are large, it shows the company's success in achieving high profits. Vice versa, the smaller the profit the company gets to give to shareholders, the lower the company's ability to manage the company, which indicates that the company has experienced a decline in performance. The condition of the decline in the value of EPS if it continues will result in opportunities for financial distress to the company.

II. HYPOTHESIS DEVELOPMENT

A high liquidity value indicates that the company is able to cover its current liabilities and is considered good in its management. If a company experiences financial difficulties, the company usually starts to pay off its trade payables slowly and borrows more from the bank, both of which will increase current liabilities, which causes the current ratio to decrease, indicating a problem. Masdupi et al. (2018) show that the liquidity ratio has a significant negative effect on financial distress, which means that the more liquid a company
is, this indicates that the company is able to fulfill its obligations. maturity soon so that it will avoid the possibility of financial distress. 

**H1:** Liquidity has a negative and significant effect on Financial Distress.

A high leverage value proves that the company is unable to pay off debts owned by the company at maturity. High leverage indicates that the company in carrying out its operations uses more debt so that in the future it is possible for the company to experience payment difficulties due to debt that is greater than its assets. Susilowati et al. (2019), Agustini & Wirawati (2019) who state that the leverage ratio has a significant positive effect on financial distress. The results of these studies indicate that the greater the funding of a company through debt, the more likely the company will experience financial distress.

**H2:** Leverage has a positive and significant effect on Financial Distress.

A high profitability value indicates that the company's ability to earn a profit within a certain time is based on the efficiency and effectiveness of using assets. The effective use of company assets will reduce the costs incurred by the company so as to obtain savings and sufficient funds to run their business (Agustini & Wirawati, 2019). Susilowati et al. (2019), Affiah & Muslih (2018) which state that the profitability ratio has a significant negative effect on financial distress. The results of these studies indicate that the greater the profit the company gets, the smaller the possibility of the company experiencing financial distress.

**H3:** Profitability has a significant negative effect on financial distress.

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**Figure 1 Conceptual Framework**

III. METHODS

This research design is a causal associative research with a quantitative approach. This study aims to analyze the relationship between liquidity, leverage, and profitability on financial distress. This research was conducted at the property and real estate sub-sector companies listed on the Indonesia Stock Exchange which can be accessed through the website www.idx.co.id. The object of this research is the condition of financial difficulties experienced by the property and real estate sub-sector companies listed on the Indonesia Stock Exchange in the 2017-2019 period.

Financial distress is a condition that describes a company experiencing financial difficulties prior to the bankruptcy. Qualitative data is obtained in the annual financial statements of the Property and Real Estate sub-sector companies listed on the Indonesia Stock Exchange for the period 2017 - 2019. The annual financial statements of the Property and Real Estate sector companies are expressed in dummy variables measured using Earning Per Share. The units of measurement for EPS in thousands are as follows:

\[ \text{Earnings Per Share} = \frac{\text{Earnings per share}}{\text{Price Per Share}} \]  

If Earning Per Share in the Property and Real Estate sector company shows a number less than 0 then it is classified as a company experiencing financial distress and the dummy variable coding is coded as 0, whereas if Earning Per Share shows a number more than 0, then the company can be said as companies that do not experience financial distress and in the coding of the dummy variable are coded 1.

Liquidity in this study is measured by the current ratio, which is comparing current assets with current debt. The current ratio formula in percent is as follows:

\[ \text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}} \times 100\% \]  

Leverage in this study is measured by the Debt to Equity Ratio (DER) by comparing total debt to equity held in the Property and Real Estate sub-sector companies on the Indonesia Stock Exchange during the 2017-2019 period. The formula for the Debt to Equity Ratio in percent is as follows:

\[ \text{DER} = \frac{\text{Total Debt}}{\text{Equity}} \times 100\% \]
Profitability in this study is measured by Return On Asset (ROA), which compares profit after tax with total assets owned by the property and real estate sub-sector companies on the Indonesia Stock Exchange during the 2017-2019 period. The Return On Asset formula in percent is as follows:

\[
\text{ROA} = \frac{\text{Net Profit}}{\text{Total Assets}} \times 100\% \tag{4}
\]

The population in this study were all property and real estate sub-sector companies listed on the Indonesia Stock Exchange during the 2017-2019 period, totaling 67 companies and there were 53 companies that met the criteria as a sample. The data collection method in this study uses secondary data collection methods. The data analysis technique used in this study was logistic regression. The general logistic regression model is as follows:

\[
\ln \frac{p}{1-p} = \alpha + \beta_1 \text{CR} + \beta_2 \text{DER} + \beta_3 \text{ROA} + e \tag{5}
\]

\[
\ln \frac{p}{1-p} \text{ is log of the comparison between financial distress opportunities and non financial distress opportunities}
\]

\[
\alpha \text{ = Constant}
\]

\[
\beta_1 \text{ = Liquidity regression coefficient}
\]

\[
\beta_2 \text{ = Leverage regression coefficient}
\]

\[
\beta_3 \text{ = Profitability regression coefficient}
\]

\[
e \text{ = Error}
\]

### IV. RESULTS AND DISCUSSION

The current ratio at the minimum value is 2.34 found in the company PT Bekasi Asri Pemula in 2017, while the maximum value in the current ratio variable is 1276.86 at the Puradelta Lestari Tbk company in 2018. The average obtained in the first variable which is 162.4799 and the standard deviation is 240.34666. Debt to Equity shows that the minimum value obtained is 0.08 in the Bukit Darmo Property company in 2019. The maximum value obtained in the second variable is 250 which is found in the Forza Land Indonesia Tbk company in 2017. The average obtained on the second variable is 43.4534 and the standard deviation is 57.74726. Return On Asset shows that the minimum value obtained is -15.00 which is found in the company Lippo Cikarang Tbk in 2019. The maximum value is 26.05 found in the Indonesian Paradise Property Tbk company in 2019. The average obtained is 3.3965 and the standard deviation is 4.69739.

<table>
<thead>
<tr>
<th>Table 2. Descriptive Statistics of Independent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
</tr>
<tr>
<td>---</td>
</tr>
<tr>
<td>Current Ratio</td>
</tr>
<tr>
<td>Debt to Equity</td>
</tr>
<tr>
<td>Return On Asset</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
</tr>
</tbody>
</table>

Source: Processed Data, 2020

<table>
<thead>
<tr>
<th>Table 3. Frequency of Dependent Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frequency</td>
</tr>
<tr>
<td>-----------</td>
</tr>
<tr>
<td>Valid</td>
</tr>
<tr>
<td>1</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Source: Processed Data, 2020

10 companies that experienced financial difficulties with a percentage of 6.3% and 149 companies engaged in the Property and Real Estate sector were spared from financial difficulties with a percentage of 93.7%. The Hosmer and Lemeshow Test value is 4.356. The significance level of 0.824 is greater than 0.05, which means that the model in this study is acceptable because it matches the observation data and can explain the influence of the independent variables and the dependent variable. The value at -2 Log Likelihood (block number = 0) is 108,127 and after inserting three independent variables the value of -2 Log Likelihood (block number = 1) at the end has decreased to 67,834. The decrease that occurs at the value of -2 Log Likelihood indicates a good regression model, or in other words the hypothesized model fits the data.

The prediction strength of the regression model in predicting the possibility of a company experiencing financial distress in the Property and Real Estate sub-sector company (Code 0) is 23.5%. This value shows that of the 17 companies that are predicted to experience financial distress, there are 4 companies that experience
financial distress. The prediction strength of the possibility that the Property and Real Estate sub-sector company will not experience financial distress is 97.9%. This value shows that of the total 142 companies that are predicted not to experience financial distress, there are 3 total companies that experience financial distress. The classification accuracy of this model is 89.9%, which means that the results of this study are quite good because they are close to 100%.

The Nagelkerke R Square value is 0.454 which means that the CR, DER, and ROA variables as independent variables are able to explain the variation of financial distress as the dependent variable by 45.4%, while 54.6% is explained by variations in other variables that are not included in the regression equation model.

### Table 4. Variables in the Equation

<table>
<thead>
<tr>
<th>Step 1°</th>
<th>B</th>
<th>S.E</th>
<th>Wald</th>
<th>df</th>
<th>Sig</th>
<th>Exp (B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CR</td>
<td>-0.003</td>
<td>0.001</td>
<td>5.687</td>
<td>1</td>
<td>0.17</td>
<td>997</td>
</tr>
<tr>
<td>DER</td>
<td>0.108</td>
<td>0.049</td>
<td>4.946</td>
<td>1</td>
<td>0.026</td>
<td>1.114</td>
</tr>
<tr>
<td>ROA</td>
<td>-0.137</td>
<td>0.059</td>
<td>5.358</td>
<td>1</td>
<td>0.021</td>
<td>0.872</td>
</tr>
<tr>
<td>Constant</td>
<td>2.361</td>
<td>0.529</td>
<td>19.932</td>
<td>1</td>
<td>0.000</td>
<td>10.600</td>
</tr>
</tbody>
</table>

Source: Processed Data, 2020

The regression model that is formed based on the estimated parameter values in Variable in The Equation is as follows:

\[
\text{Ln} \frac{p}{1-p} = 2.361 - 0.003 \text{CR} + 0.108 \text{DER} - 0.137 \text{ROA}\]

Liquidity, which is proxied by Current Ratio, shows a regression coefficient of -0.003 with a movement of the variable probability value of 0.017 which is smaller than the significance level of 0.05 (5%). This means that H1 is accepted and indicates that the Current ratio has a negative and significant effect on the condition of financial distress in the Property and Real Estate sector companies listed on the Indonesia Stock Exchange.

Debt to Equity Ratio, which is a proxy for leverage, shows a regression coefficient of 0.108 with a probability value movement of 0.026 which is smaller than the significance level of 0.05 (5%). This means that H2 is accepted and indicates that the Debt to Equity Ratio has a positive and significant impact on financial distress conditions in the Property and Real Estate sector companies listed on the Indonesia Stock Exchange.

Profitability, which is proxied by Return On Asset, shows a regression coefficient of -0.137 with a variable probability value movement of 0.021 which is smaller than the significance level of 0.05 (5%). This means that H3 is accepted and indicates that profitability has a negative and significant effect on financial distress conditions in the Property and Real Estate sector which are listed on the Indonesia Stock Exchange.

### V. CONCLUSION

The results showed that liquidity had a significant negative effect on financial distress. The higher the liquidity value indicates that the lower the potential for financial difficulties experienced by the company, because it shows that the company is able to fund and pay off its short-term obligations so that it can avoid financial difficulties. Leverage has a significant positive effect on financial distress. The higher the debt owned by the company, the higher the potential for financial difficulties experienced by the company, because it allows the company to be unable to pay its debts in the future which will result in bankruptcy. Profitability has a significant negative effect on financial distress. The higher the level of profitability the company has, the lower the potential for financial difficulties experienced by the company because it shows the company is able to generate profits by using its assets so that it avoids financial difficulties.

The company is expected to pay attention to factors that can influence the occurrence of financial distress in terms of financial ratios, such as liquidity, leverage and profitability. Investors and potential investors who want to invest in Property and Real Estate companies on the IDX should pay attention to financial ratios such as liquidity, leverage and profitability in the company so as to minimize losses. For further researchers, it is expected to re-examine the validity of the liquidity, leverage and profitability variables that can affect financial distress and use non-financial variables to further strengthen the testing of variables that can affect financial distress in a company.

This study has limitations that need to be considered so that it can be improved in further research. The limitation in this study is that the causes of financial distress can be seen from the financial and non-financial aspects of the company, but in this study only from a financial perspective.

### REFERENCES

Indonesia Tahun 2012-2016. Ekspanzi, 10(2), 241–256.


