

# INVESTIGATING THE EFFECT OF LIQUIDITY, LEVERAGE AND SALES GROWTH ON FINANCIAL DISTRESS

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**ABSTRAK.** Tujuan penelitian ini adalah untuk menganalisis pengaruh likuiditas, leverage dan growth terhadap Financial Distress pada perusahaan property dan real estate yang terdaftar di Bursa Efek Indonesia periode 2014 sampai dengan 2018. Jumlah sampel sebanyak 125 amatan ditentukan dengan menggunakan metode purposive sampling. Pengumpulan data dilakukan dengan teknik dokumentasi melalui situs Bursa Efek Indonesia (BEI). Metode analisis data yang digunakan adalah statistik deskriptif dan uji asumsi klasik. Pengujian hipotesis dalam penelitian ini menggunakan analisis regresi linear berganda dengan uji *t*, uji *F*, dan koefisien determinasi. Pengelolaan data dilakukan dengan menggunakan SPSS versi 25. Hasil penelitian menunjukkan bahwa secara simultan likuiditas, leverage dan sales growth berpengaruh signifikan terhadap financial distress. Sedangkan secara parsial likuiditas, leverage berpengaruh signifikan terhadap financial distress. Dan sales growth tidak berpengaruh signifikan terhadap financial distress.

**Kata Kunci:** Likuiditas, Leverage, Sales Growth, Financial distress.

## INTRODUCTION

The global economic crisis that occurred in 2008 actually began in the United States economic crisis which then spread to other countries throughout the world, including Indonesia. The crisis resulted in the general weakening of business activity throughout the world and some even went bankrupt, such as companies located in America, Europe, Asia and other countries including Indonesia (Simanjuntak et al, 2017).

In fact, there are still many companies that go bankrupt as a result of financial distress problems that cannot be overcome properly. A recent phenomenon that has occurred in Indonesia is delisting of several companies in 2019. Delisting is if the shares listed on the Exchange have decreased criteria so that they do not meet the listing requirements, then the shares can be excluded from listing on the Exchange.

Based on the observations of the table above, it shows that the property & real estate sector has the greatest number of companies delisted by the IDX, namely as many as 6 companies from 2011 to 2019. Delisting results in Issuer's shares that can no longer be traded on the Exchange. Indicators of companies experiencing financial distress are delisted from the capital market. After the company is removed from the IDX, all liabilities owned by the company will be removed, including the obligation to issue financial statements. According to Madhushani and Kawshala, (2018), financial distress is a situation when a company does not have sufficient assets to pay off its obligations, both short-term obligations and long-term obligations, where the company's finances are in an unhealthy state or crisis. Among them are Property & Real Estate companies that have been delisting from IDX for the past 9 years, with the following details:

**Table 1 List of Delisting Companies in the Last 9 Years (2011-2019)**

Sektor	2011	2012	2013	2014	2015	2016	2017	2018	2019	Total
Advertising, printing, media			1							1
Alas kaki		1								1
Bank					1				2	3
Hotel & pariwisata	1									1
Konstruksi non bangunan		1								1
Lembaga pembiayaan			1							1
Makanan & minuman	1				1					2
Pakan ternak		1								1
Perdagangan barang produksi			1	1					1	3
Perdagangan eceran	1								1	2
Plastik & kemasan	1								1	2
Property & real estate	1	1	1				3			6
Pulp & kertas			1					1		2
Tambang & batubara			1				2		1	4
Tekstil dan garmen			1		1					2

Source: [www.sahamok.com](http://www.sahamok.com), data processed by researchers

Another phenomenon of financial distress is the number of companies that tend to experience liquidity problems, which is indicated by the decline in the company's ability to meet its obligations to creditors (Hanifah, 2013) in Hidayat and Meiranto (2014). Liquidity in this study was measured using the current ratio. In practice it is often used that the current ratio with the standard 200% (2:1) is sometimes considered a pretty good or satisfactory measure for a company. According to Kasmir (2016: 134) "Current ratio is a ratio to measure the ability of companies to pay short-term liabilities or debt that will soon mature at the time of the overall collection."

Leverage Ratio is how the use of debt as funding for a company that is used by companies to improve company performance (Santoso and Handayani, 2019: 154). In this study, leverage is measured using Debt to Total Assets (DAR) because this ratio shows the amount of total debt to the total assets owned by the company. Previous studies generally use financial ratios to determine the condition of the company in the future, so this study will also use financial ratios to provide an overview of the good and bad condition of the company, namely liquidity ratios, leverage ratios, and sales growth ratios (sales growth) as an independent variable and financial distress as the dependent variable.

## **THEORETICAL BASIS**

### ***Signaling Theory***

According to Wolk et al. (2000), signalling theory is a theory that reveals that companies give signals to users of financial statements, both in the form of positive signals (good news) and negative signals (bad news). Signalling theory explains the reasons companies provide information for the capital market. According to Brigham and Houston (2001), the relationship between signalling theory and the variables in this study, namely, the high value of the current ratio shows a positive signal for creditors, because the company is considered capable of paying off all its current liabilities. While the debt to assets ratio with a high value will show a negative signal for creditors, because the higher this ratio indicates that the more funding is carried out by debt. Companies with positive sales growth, will also give a positive signal to all parties, because the company has a tendency to be able to maintain the survival of the company.

### ***Financial Distress***

Platt and Platt (Fahmi, 2014: 93), defines financial distress as a stage of decline in financial conditions that occurred before bankruptcy. Financial distress starts from the company's inability to fulfil its obligations, especially short-term obligations including liquidity obligations and also included obligations in the solvency category.

### ***Predicting Financial Distress***

Analysis of financial statements can be used to predict financial distress by analysing further and in-depth in certain areas. Currently there are many models to predict bankruptcy that have been developed in various countries, one of which is the x-score model.

### ***Financial Ratio Analysis***

Financial ratio analysis is the main tool in analysing financial statements (Muslich, 2003). According to Hery (2015: 164-166), financial ratio analysis is generally used by three main groups of users of financial statements, namely company managers, credit analysts, and stock analysts.

### ***Liquidity***

According to Kariyoto (2017) Liquidity is the ability of a company to fulfil its financial obligations in the short term or at the time of collection. Current ratio is usually

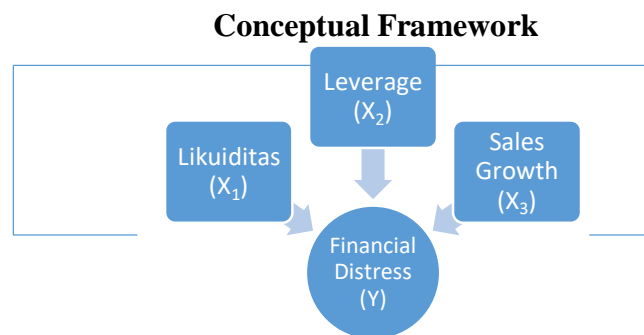
used as a tool to measure the state of a company's liquidity, and is also a clue to being able to know and guess how much the company's ability to meet its financial obligations.

### **Leverage**

Leverage ratio is a ratio used to measure a company's ability to pay all of its obligations including short-term and long-term obligations when a company is going to be liquidated (Yustika, 2015). This means how much debt burden borne by the company compared to its assets.

### **Growth Ratio**

Kasmir (2016: 114) defines that sales growth is a ratio that illustrates the company's ability to maintain its economic position in the midst of economic growth and its business sector. According to the results of research conducted by Widhiari and Merkusiwati (2015), the ratio of sales growth can be used to predict future sales growth, because the ratio of sales growth can describe the success of the company in the past period so that it can be a prediction for the future.



## **HYPOTHESIS DEVELOPMENT**

### **1. Effect of Liquidity on Financial Distress**

Research on liquidity measurement using the current ratio shows significant negative results (Damayanti et al, 2017; Dewi and Dana 2017, Widhiari and Merkusiwati, 2015). This means that the greater the availability of funds to meet its obligations, the less likely the company will experience financial distress. And vice versa in other words, the higher the ratio measurement results, the more current assets are available to cover short-term liabilities that will soon mature. So, the company will avoid financial distress. In practice it is often used that the current ratio with the standard 200% (2: 1) is sometimes considered a pretty good or satisfactory measure for a company. The formulation of the hypothesis based on the opinions that have been described is as follows:

H1 = Liquidity Ratio has a negative effect on the prediction of Financial Distress.

### **2. Effect of Leverage on Financial Distress**

Leverage in this study is measured by Debt to Asset Ratio (DAR) which is a debt ratio that is used to measure the ratio between total debt to total assets. The use of large third-party funds will lead to the emergence of large amounts of obligations that must be paid by the company, if this is not handled properly, then the possibility of the company experiencing financial distress will be even greater (Hanifah and Purwanto, 2013). This means that leverage affects the financial distress faced by the company, the study was conducted by Simanjuntak et al (2017) supported by other studies that also show that debt to asset ratio has a significant and significant effect on financial distress. (Antika and Djuminah, 2017; Damayanti et al, 2017; Noviandri, 2014) and Haq, et.al, (2013). The formulation of the hypothesis based on the opinions that have been described is as follows:

H2 = Leverage Ratio has a positive effect on the prediction of financial distress.

### **3. Effect of Sales Growth on Financial Distress**

According to Brigham and Houston (2011: 145), "companies with relatively stable sales can be more secure getting more loans and bear higher fixed costs than companies with unstable sales. Research conducted by Nurhayati, Nurcholisah and Aprian (2019), supported by other studies Yudiawati and Indriani (2016) and Widhiari and Merkusiwati (2015), which also shows that debt to asset ratio influences and significantly affects financial distress. So financial distress will not be experienced by the company if the company has a high sales growth ratio. Therefore, this research formulates the hypothesis as follows:

H3: Sales growth negatively influences financial distress

## **RESEARCH METHODS**

### **Dependent Variable**

Dependent variable / Dependent variable is a variable that is affected or which becomes a result, because of the independent variable (Sugiyono, 2011). The dependent variable in this study is financial distress.

### **Independent Variable**

Independent variable / Independent variable is a variable that influences or is the cause of changes or the emergence of the dependent variable (Sugiyono, 2011). The independent variables used in this study are the current ratio, debt to total asset ratio, and sales growth.

### **Operational Definition**

Arief and Edi (2016:57) "Liquidity ratios are ratios that aim to measure a company's ability to meet its short-term obligations" A company that is able to meet its financial obligations on time means that the company is in a liquid state.

$$\text{Current Ratio} = \frac{\text{Current Asset}}{\text{Current Liabilities}}$$

1. *Debt to Total Asset Ratio (DAR)*

Is a debt ratio used to measure the ratio between total debt to total assets? In other words, how much the company's assets are financed by debt or how much the company's debt affects the management of assets. (Cashmere, 2014: 156).

$$\text{Total Debt to Total Asset Ratio} = \frac{\text{Total Liability}}{\text{Total Asset}}$$

2. *Sales Growth*

It is a ratio that illustrates the ability of a company to maintain its economic position in the midst of economic growth and its business sector (Kasmir, 2012).

$$\text{Sales Growth} = \frac{\text{This Year Sales} - \text{Last year's sales}}{\text{Last year's sales}}$$

3. *Financial Distress*

It's a stage of decline in financial conditions that occurred before the bankruptcy (Plat and Plat in Fahmi, 2013). In this explanation it can be concluded that financial distress is an entity that experiences a problem of declining financial conditions that are usually temporary, but will develop worse if these conditions are not quickly resolved and cause the company to go bankrupt.

Based on research conducted by Rismawaty (2012) which states the zmijewski model is the most appropriate model applied to companies in Indonesia because the level of accuracy is the highest compared to other prediction models. The Zmijewski model is known as the X-score. The author uses a model that was successfully developed (Fanny and Saputra in Peter and Yoseph, 2011), namely:

**Research Population and Sample**

The population in this study are all property and real estate companies that are on the Indonesia Stock Exchange (IDX). In this study using purposive sampling as a data collection technique. Purposive sampling is a sampling technique with certain considerations (Sugiyono, 2011). Following is an explanation of the research sample selection criteria in the following table

**Table 2 Research Sample Criteria**

No.	Explanation
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1	Property and real estate companies that have financial statements in the 2014-2018 period.
2	Property and real estate companies that provide complete data needed in research, namely liquidity, leverage, and sales growth
3	Property and real estate companies that prepare financial statements using the rupiah.

### Data Types and Collection Techniques

The documentation method is a method of collecting data by collecting data on documents that already exist in the records that have been stored. In this study data were taken from the Indonesia Stock Exchange (IDX) with its supporting website [www.idx.co.id](http://www.idx.co.id).

### DISCUSSION RESULT

Table 3 shows the description of the research object. In the current ratio variable, the data that is processed is 125 and N is missing or the data that is not processed is 0. The mean or mean value of the current ratio is 1,939, the standard deviation is 1.3875, from the results of the standard errors of mean we can determine the minimum and maximum population data ranges. The maximum value is 7.7597 and the minimum value is 0.2077. Descriptive Debt to Asset Ratio results, 64 processed data and N missing or unprocessed data are 0. Mean or average DAR 0.421030, standard deviation 0.15859, from the results of standard errors of mean, the range of data can be determined minimum and maximum population. The maximum value is 0.7873 and the minimum value is 0.345.

Descriptive results of Sales Growth, 64 processed data and N missing or unprocessed data as much as 0. Mean or the average value of Sales Growth 0.120873, standard deviation 0.791844 from the results of standard errors of mean can be determined minimum and maximum population data ranges. The maximum value is 8.4326 and the minimum value is -6473.

**Table 3. Analysis of Descriptive Statistics of Research**

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Current Ratio	125	.2077	7.7597	1.939265	1.3875160
Debt to Assets Ratio	125	.0345	.7873	.421030	.1585980
Sales Growth	125	-.6473	8.4326	.1208736041	.79184441022
X-Score	125	-.2656	4.4583	2.135901	.9832283
Valid N (listwise)	125				

Source: Results of data processing with SPSS

In table 4 above it can be seen that the Sales growth variable has the lowest value of -.6473 and the highest value of 8.4326 with an average value of 0.1208 and its standard deviation (level of data distribution) of .791844. Variable Current ratio has the lowest value of .2077 and the highest value of 7.7597 with an average value of 1.939265 and its standard deviation (level of data distribution) of 1.3875160. Debt to asset ratio variable has the lowest value of .0345 and the highest value of .7873 with an average value of .4210300 and its standard deviation (level of data distribution) of .1585980.

**Table 4. Normality Test Results**

One-Sample Kolmogorov-Smirnov Test	
	Unstandardize d Residual
N	125
Asymp. Sig. (2-tailed)	.069 <sup>c</sup>

Source: Results of data processing with SPSS

Based on table 5 below, it is known that the results of the Kolmogorov-Smirnov test output indicate the Asymp value. Sig (2-tailed) of 0.069 > 0.05, it can be concluded that the data is normally distributed.

**Table 5 Multicollinearity Test**

Coefficients <sup>a</sup>				Keterangan
Model		Collinearity Statistics		
		Tolerance	VIF	
1	(Constant)			
	<i>Current Ratio</i>	.951	1.052	There is no multicollinearity
	<i>Debt to Assets Ratio</i>	.949	1.054	There is no multicollinearity
	<i>Sales Growth</i>	.995	1.005	There is no multicollinearity
a. Dependent Variable: X-Score				

Source: Results of data processing with SPSS

The results of collinear calculations as shown in table 6, it is known that all independent variables have a tolerance value of more than 0.10 (10%) and a VIF value of less than 10. Thus it can be said that there is no significant collinear in the regression results for the overall sample model (full sample) or in other words the regression model avoids the problem of multicollinearity.



**Table 6 Autocorrelation Test Results**

Model Summary <sup>b</sup>					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.957 <sup>a</sup>	.916	.914	.20374	2.071
a. Predictors: (Constant), LAG_X3, LAG_X1, LAG_X2					
b. Dependent Variable: LAG_Y					

Source: Results of data processing with SPSS

Based on table 6 above the resulting Durbin Watson value is 2,071. The comparison uses the significance value for  $\alpha = 5\%$ , the number of samples ( $n$ ) = 125, and the number of independent variables ( $k$ ) = 3, the dL value is 1.6592 and the dU value is 1.7574. DW-test values in the region  $dU < DW\text{-test} < 4-dU$  or  $1.7574 < 2,071 < 2.2426$ , it can be concluded that there is no autocorrelation. And analysis shows that there is no heteroscedasticity problem in the regression model.

### Hypothesis Testing

The analysis used to test the hypotheses in this study uses multiple linear regression analysis. Multiple linear regression is used to determine the effect of independent variables on the dependent variable.

**Table 7 Analysis of Multiple Linear Regression**

Coefficients <sup>a</sup>					
		Unstandardized Coefficients	t	Sig.	Description
Model		B			
1	(Constant)	4.546	61.619	.000	
	<i>Current Ratio</i>	.043	2.789	.006	Significance
	<i>Debt to Assets Ratio</i>	-5.928	-43.510	.000	Significance
	<i>Sales Growth</i>	.013	.492	.623	Not Significance
a. Dependent Variable: X-Score					

Source: Results of data processing with SPSS

The regression equation above can be explained as follows:

A constant of 4,546; meaning that if CR (X1), DAR (X2) and Sales Growth value is 0, then Financial Distress (Y ') the value is Rp. 4,546.

1. CR variable regression coefficient (X1) of .043; this means that if other independent variables have a fixed value and CR has increased 1%, then Financial distress (Y ') will decrease by Rp.0.43.
2. DAR (X2) variable regression coefficient of -5,928; this shows that DAR has a opposite relationship to financial distress. This implies that every DAR increase in one unit then the financial distress variable (Y) will decrease by 5,928 assuming that the other independent variables of the regression model are fixed.
3. Sales growth (X3) variable regression coefficient of .013; meaning that if other independent variables have a fixed value and sales growth has increased 1%, then Financial distress (Y ') will experience a decrease of Rp.0.13.

### Statistical Test F

The F test basically aims to find out whether all independent variables included in the regression model have a simultaneous (joint) effect on the dependent variable or not (Nurhayati, et al, 2015: 14). This test uses a significance level of 0.00 and compares F-count with F-table.

**Table 8 Simultaneous Statistical Test Results F**

ANOVA <sup>a</sup>			
Model		F	Sig.
1	Regression	5.889	.000 <sup>b</sup>

Source: Results of data processing with SPSS

Based on the F statistical test results table, the count is 5,889 with a significance value of 0.00. Fcount (5.889) > Ftable (2.61), significance value 0.00 < 0.05, the regression model can be used to predict financial distress or show CR, DAR and Sales growth variables simultaneously affect financial distress.

### Determination Coefficient Test (R2)

Determination Coefficient Test aims to measure how much the model's ability to explain the dependent variation. The coefficient of determination ranges between 0 and 1. If the value of R2 is small, it means that the ability of the independent variable in explaining the variation of the dependent variable is very limited.

**Table 9 Simultaneous Determination Coefficient Test Results**

Model Summary			
Model	R	R Square	Adjusted R Square

1	.972 <sup>a</sup>	.945	.943
a. Predictors: (Constant), Sales Growth, Current Ratio, Debt to Assets Ratio			

Source: Results of data processing with SPSS

Based on table 10 the value of R square is 0.945 and adjusted R2 is 0.943, this shows that the ability of independent variables namely liquidity ratios, leverage, and sales growth (CR, DAR and Sales Growth) affect the dependent variable (financial stress) of 94.3 % and the rest of (1-R2) 5.7% is the contribution of influence made by other factors not observed in this study.

### Statistical Test t

The t test statistic shows how far the influence of one independent variable individually in explaining the variation of the dependent variable. T test in this study was conducted by comparing the significance of t with  $\alpha$  of 0.05.

**Table 10 Test Statistics t**

Coefficients <sup>a</sup>			
Model		t	Sig.
1	(Constant)	61.619	.000
	CR	2.789	.006
	DAR	-43.510	.000
	SG	.492	.623
a. Dependent Variable: X-Score			

Source: Results of data processing with SPSS

From the table above it is known that the results of the t test conducted using the SPSS 22 program, then the following hypotheses are discussed:

1. Testing the current ratio variable

Current ratio has a t-count of 2.789 with a significance of 0.006. These results indicate a significance value of  $0.006 < 0.05$ .  $1.9791 < \text{t-count} < \text{t-table}$  ( $2.789 > 1.9791$ ). This shows that the current ratio has a significant effect on financial distress, then H0 is rejected.

2. Testing the debt to asset ratio variable

Based on the t test results obtained the value of t-count of -43,510 and t-table of 1.9791 so that  $\text{t-count} < \text{t-table}$  ( $-43.510 < 1.9791$ ). The table above also shows that the significance value is  $0.00 < 0.05$ . Significant t is smaller than  $\alpha$  (0.05). Means there is a significant influence. This shows that the debt to asset ratio has no significant effect on financial distress or the hypothesis is rejected.

3. Testing the variable sales growth

Based on the t test results obtained t-test value of 0.492 and t-table of 1.9791 so that t-count <t-table (0.492 <1.9789). The table above also shows that the significance value is 0.623 > 0.05. Significant t is greater than  $\alpha$  (0.05), then Hypothesis. This shows that sales growth has no significant effect on financial distress.

## CONCLUSION AND RECOMMENDATION

### Conclusion

This research examines the effect of liquidity, leverage, and sales growth on financial distress. Companies included in the population in this study are property and real estate sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2014 - 2018. The population is 25 companies and a sample of 125 samples (25 x 5) is obtained. The analysis in this study uses multiple regression models with the IBM Statistical Package for Social Science (SPSS) version 22. Based on the data collected, the results of the tests that have been carried out and the discussion in the previous chapter, the following conclusions can be drawn:

1. Liquidity measured by using the current ratio has a significant positive effect on the company's financial distress as measured by X-Score. This shows that the greater the liquidity ratio, the less likely the company is experiencing financial distress. And also, the company is not in a liquid condition because the company's current assets cannot cover its current debt so that it can trigger financial distress. The same results were found in research conducted by Susi Puspita Sari (2018), Ginting (2017), Ardian, and Andre (2017). Antikasari and Djuminah, 2017; Damayanti et al, 2017; Noviandri, (2014) and Haq, et.al, (2013).
2. Leverage measured by using the debt to assets ratio has a significant negative effect on the company's financial distress as measured by X-Score. This needs to be considered by the company, where the company needs to increase its debt ratio by adding a number of debts, and it is hoped that the company will be able to take advantage of debt funding to get multiple returns. Similar results were also found in research conducted by Rohmadini et al (2018) and Sagala (2018).
3. Sales Growth does not significantly influence the company's financial distress as measured by X-Score. This shows that sales growth cannot predict financial distress, meaning that the company's level of sales growth cannot be used as an assessment of the state of financial distress. The higher the company's growth, the lower the probability that

the company will experience financial distress. Similar results were also found in studies conducted by Eminingtyas (2017) dan Andriansyah (2018).

### **Recommendation**

After analysing the results of this study, the suggestion that can be given by the writer is that further research is expected to add other proxies to represent the financial ratios used. By also adding research samples with other sectors through the expansion of observations and different criteria, to obtain more valid results and can be realized.

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