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How sales growth and leverage affect financial distress

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ABSTRACT

COVID-19 pandemic had an extraordinary impact on various economic sectors, including the transportation sector. The imposition of social distancing certainly has an impact on the company's financial condition. The purpose of this research was to determine the effect of sales growth and leverage on the financial distress of transportation companies in Indonesia. Sales growth is measured by the change in sales every year and leverage is measured by the Debt to Asset Ratio. The sample used in this research is the financial statements of transportation companies listed on Indonesia Stock Exchange for 2019 - 2023, consist of 118 samples. The analytical method used is multiple regression. From the results of multiple regression analysis, it was found that sales growth did not have a significant effect on financial distress and leverage have a significant effect on financial distress.

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1. INTRODUCTION

Since the announcement of the first corona virus disease 2019 (Covid-19) case in Hubey China in December 2019 and Indonesia on March 2 2020, the whole world has experienced an extraordinary impact in all walks of life, as well as in the financial sector (Zhang et al., 2020). Since the first case of Covid-19 was found in Indonesia, and spread rapidly, the government has issued various regulations to inhibit and stop the spread of the virus. That's PP No. 21 (2020) about social restriction or called PSBB. This policy regulates the implementation of strict quarantine which reduces people's social activities which in the long term has an impact on economic activity.

The existence of these social restrictions has also had a major impact on the transportation sector, according to data released by the Ministry of State Secretary as a result of Covid-19 the transportation sector contributing 3.57% of the Indonesian economy experienced a decrease in customers during 2020, the land transportation sector -17.65%, sea transportation -17.48%, and air freight -80.23% (Setneg.go.id, 2020). The decline in the number of customers certainly have a negative effect on the condition of transportation sector companies. Several transportation companies stopped trading their shares on the stock market, such as Garuda Indonesia Airlines' shares which stopped trading on June 18, 2021 because the company delayed payment of the maturity obligation which indicated a problem with company's going concern (Nurhalizah, 2021). Likewise, PT Air Asia Indonesia during 2020 had loss of IDR 2.8 trillion (Tempo.com, 2021).

This condition shows that during the Covid-19 pandemic, the company's main goal to generate maximum profits, was difficult to fulfill. According to Rahman (2021) 92% of property and real estate companies experienced financial distress during pandemic. Financial distress is a condition when

the company's operational goals, to generate profits, are not realized (Platt & Platt, 2006). One of the factors that affect the level of financial distress is sales growth (Handayani et al., 2019). If sales growth is positive, indicating that the company's operational activities have succeeded in realizing the planned target to realization increasing revenue. In addition, sales growth can also be used as a tool to predict company growth in the future (Dianova & Nahumury, 2019).

Besides sales growth, another factor that can predict financial distress is leverage. The leverage ratio is used to measure a company's ability to manage its debt (Subramanyam, 2017). The leverage ratio can be seen from how much the company's assets are obtained from debt (Dirman, 2020). The higher leverage value indicates that the greater the company's assets are obtained from debt. According to Modigliani and Miller leverage can be used to measure companies financial health. Leverage is calculated by comparing total liabilities with total assets can strongly predict financial distress (Tian & Yu, 2017). However, the results of other studies show that leverage is not able to influence the prediction of company's financial distress (Dianova & Nahumury, 2019). Based on the explanation above, the purpose of this study is to see how company's income and debt can affect the company's financial health which is proxied by altman z-score model. This research was conducted because Covid-19 which hit the world and Indonesia in particular had a significant impact on the transportation industry. So it is necessary to know whether sales growth and company debt policies can affect the occurrence of financial distress in companies.

2. RESEARCH METHOD

Trade-off Theory

The trade-off theory explains how companies choose corporate funding obtained from debt and capital (Miller, 1977). The decision to increase the company's debt will provide benefits such as reducing the company's obligation to pay taxes thereby increasing the company's after-tax cash flow. However, in other conditions when a company increases the amount of its debt to a certain level it can increase the risk of default on the company which results in financial failure (Ai et al., 2020).

Signaling Theory

Signaling theory describes how management behavior in providing information about the condition of the company as a whole to information users to understand the condition of the company (Connelly et al., 2011). This information will certainly be useful for investors and creditors. The predicted value of a company's financial distress can be a useful signal/information for stakeholders for decision making.

Financial Distress

Financial distress describes the condition that the company's cash flow is unable to cover the company's current liabilities (Wruck, 1990). Operationally, the occurrence of financial distress indicates that the company failed to pay off bonds, bank debt, and failed to pay dividends (Beaver, 1966). Prediction of financial distress can be used as a signal to detect potential bankruptcy of the company so that management can immediately improve the company's financial condition. This information is also useful for external parties in making investment decisions (Kurniasanti & Musdholifah, 2018).

Sales Growth

Sales growth is a ratio that describes a decrease or increase in sales in a certain period. A high sales growth value indicates that the company has good performance and gives a positive signal to investors to invest and vice versa if the sales growth is negative it will give a signal that the company's financial condition has decreased (Giarto & Fachrurrozie, 2020). The results of research conducted by Widhiari & Merkusiwati (2015) show that sales growth has a significant effect on financial distress. The same results were shown by research conducted by Lubis & Patrisia (2019) that firm growth which is proxied by sales growth has a significant effect on financial distress. Based on the explanation above, the hypothesis in this study is:

H_1 : Sales growth affects significantly on financial distress

Leverage

A high level of leverage indicates that the company's capital structure obtained from debt is also high. Likewise the case with the portion of asset funding owned by the company is also increasingly obtained from debt. This will increase the risk of the company experiencing financial distress is also getting bigger. In line with that, the results of the study show that leverage has a significant positive effect on financial distress (Dini et al., 2021). The results of research conducted by Kariani & Budiasih (2017) explain that leverage has a negative effect on financial distress. Research conducted by Kazemian et al. (2017) and Lubis & Patrisia (2019) show that there is a significant influence between leverage and financial distress. Then the hypothesis in this study is:

H_2 : Leverage affects significantly on financial distress.

This study uses secondary data taken from the financial statements of transportation sector companies listed on the Indonesia Stock Exchange for 2019-2023. The sampling method used in this research is purposive sampling method. The criteria used are transportation companies which are companies that give public transportion services and the companies have completed data during observation year. Based on these criteria, 7 transportation companies were obtained that match the criteria with quarterly financial statement during 2019 – 2023. The total sample used in this study was 118 datas.

The data analysis technique used in this study is multiple linear regression analysis with sales growth and leverage as independent variables and financial distress as the dependent variable. The sales growth is proxied by the movement of sales in each sample period (Widhiari & Merkusiwati, 2015), leverage is proxied by the Debt to Asset Ratio (Mappadang et al., 2019) and financial distress is assessed by the Altman Z-Score model (Ashraf et al., 2019).

Table 1. Variables

Variabel	Indikator
Financial Distress (Y)	Z-Score = $3{,}3\frac{EBIT}{Total\ Assets} + 1{,}2\ \frac{Net\ Working\ Capital}{Total\ Assets} + 0{,}99\frac{Sales}{Total\ Assets} + 0{,}6\ \frac{MVoE}{BVoD} + 1{,}4\ \frac{Retained\ Earnings}{Total\ Assets}$
Sales Growth (X1)	SG = $\frac{Sales\ t - Sales\ t-1}{Sales\ t-1}$
Leverage (X2)	DAR= $\frac{Total\ Liability}{Total\ Assets}$

The regression model in this research is:

Z-Score = a + β_1 SG + β_2 DAR

To obtain the Best Linear Unbias Estimator result from this model, a classic assumption test is performed which are consists of a normality test, multicollinearity test, heteroscedasticity test and autocorrelation test.

3. RESULTS AND DISCUSSIONS

Descriptive Statistics

Based on the data obtained from this research, the descriptive statistics values are as follows:

Table 2. Descriptive statistics of financial distress

Categories	Amount	Percent
Non-Financial Distress	21	17.8%
Grey Area	26	22.03%
Financial Distress	71	60.17%
Total	118	100%

The data above shows that from 118 samples, 60.17 % were indicated financial distress at the transportation company, 22.03% were in the Gray Area and only 17.8% were not financial distress.

This result shows us that during the Covid-19 pandemic, transportation companies experienced financial difficulties.

Table 3. Statistics descriptive

	Mean	Std. Deviation	N
Financial Distress	2.4237	.777197	118
SG	-1.857363	16.8126	118
DAR	.481743	.36804	118

From the data above it can be seen that the financial distress variable has a mean value of 2.4237 and a standard deviation of 0.78. Because the standard deviation value is lower than the average value of the data, this shows that the data is spread equally where the majority of the data distribution is in the gray area and distress. For the mean value of sales growth were equal to -1.857 with a standard deviation of 16.812. Because of the standard deviation value is greater than mean , it can be concluded that the distribution of sales growth data is high. Mean for leverage is 48.17% and the standard deviation is 36.80%. This shows that mean of assets funded by debt is 48.17% and with a smaller deviation value of 36.80% so the data is spread equally.

Table 4. Multiple linear regression

Variables	Coefficient	Signification	t
Constant	2.726	0.000	12.222
SG	-0.015	0.075	-1.798
DAR	-3.202	0.000	-8.240
Adj. R square	0.436		

Regression Model

Financial Distress = 2.726 – 0.015 Sales Growth – 3.202 DAR

When Debt to Asset Ratio is zero or considered constant, so the financial distress value is 1,711. Then if sales growth increase 1% financial distress will decrease by 0.015 and vice versa. The debt to asset ratio coefficient is -3,202, its mean that for every 1% increasing in DAR , financial distress will decrease by -3.202.

Determination Coefficient

From the results above it can be explained that Sales Growth and Debt to Asset Ratio explain the Financial Distress in this regression model which is 43.6 %, and 56.4% is explained by other factors outside the model. The results above also show that the relationship between sales growth and debt to asset ratio with financial distress is 0.66, which is show a strong relationship.

Hypothesis Test

The results of first hypothesis show that the significance value of the Sales Growth variable is 0.075 where this value is greater than the alpha significance level used, which is 5%, so sales growth has no significant effect on financial distress. However, for the second hypothesis, the DAR significance value is 0,000 which is less than the 5% alpha significance level, so leverage as measured by DAR has a significant effect on financial distress.

Discusion

Effect of Sales Growth on Financial Distress

Sales growth is a measurement of changes in company sales from time after time. If sales increase, it means that the company's income has increased, which indicates that it will also increase company profits (Dianova & Nahumury, 2019). The existence of sales growth which has an impact on increasing profits will later describe the company's financial health so that the company does not experience financial distress. However, in this study the results showed that sales growth did not have a significant effect on financial distress. This means that an increase or decrease in sales growth does not have a significant impact on financial distress. In research conducted on

transportation companies in Indonesia in 2019 – 2023, where during the COVID-19 pandemic there were social restrictions, of course there was a decrease in sales, but when there was a decrease in sales it was not followed by financial distress, and vice versa when there was an increase in sales, the company experiencing financial distress. This is due to an increase in sales but not followed by an increase in company profits because companies have to pay its debt first. Besides that, there are an increase in expenses/costs so that when sales growth, the company cannot generate profits. In simple terms, it can be concluded that sales growth has no effect on the company's financial distress.

This result is consistent with previous research (Dianova & Nahumury, 2019; Giarto & Fachrurrozie, 2020) that sales growth has no significant effect on financial distress. Meanwhile, another study conducted by (Handayani et al., 2019)) explains that sales growth has a significant effect on financial distress.

Effect of Leverage on Financial Distress

Leverage in this study is measured by the debt to asset ratio (DAR). The DAR value describes the size of the company's assets obtained from debt. The higher DAR value indicates that the composition of debt to generate company assets is also higher. A higher DAR will increase the risk that the company will have difficulty paying off its debts, both long-term debt and short-term debt.

This study shows the results that the debt to asset ratio has a significant effect on financial distress. This means that the higher DAR, it will have a significant influence on the company's financial distress. When DAR increases, the company is increasingly experiencing financial distress, and vice versa. From the research data, it can be seen that when there is an increase in DAR figure, the altman ratio value is getting lower, meaning that financial distress is approaching or occurring.

These results are consisten with previous research conducted by Diyanto (2020); Dwiantari & Artini (2021); Kurniasanti & Musdholifah (2018); Lucky & Michael (2019). Meanwhile, research conducted by Dirman (2020); Widhiari & Merkusiwati (2015) found that leverage has no significant effect on financial distress.

4. CONCLUSION

Based on this research, that has been conducted on transportation companies in Indonesia in 2019 - 2023, the results show that sales growth has no significant effect on financial distress, while leverage as measured by the debt to asset ratio has an significant effect on financial distress. There are still many limitations of this study, including the small number of samples used so that further research can increase the number of samples used and the data analysis technique used in this research should combined with ordinal regression analysis. Second, because the economic conditions during the covid pandemic were not good, so the company's financial distress data fluctuated greatly. Researchers should add moderating variables in this study like macro economic factors. The further research can added athor variabel as independent variable like corporate governance and corporate performance. Added moderating variabel like inflation and regulations and increase the numbers of samples used.

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