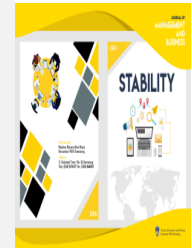




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**THE EFFECT OF DER, ROA AND COMPANY SIZE ON BOND RATINGS OF NON-FINANCIAL COMPANIES RATED BY PT PEFINDO**

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**Abstract**

*Investment in bonds has a risk of default, therefore, before making an investment, investors should seek information about the company's financial condition. An understanding of bond quality is important for investors. One indicator of bond quality that must be considered before investing is the rating. This study aims to analyze the determinants of bond ratings for case studies of non-financial companies listed on the IDX. The factors studied were debt to equity ratio, return on assets and company size. The sampling technique used was purposive sampling with a total sample of 11 companies. Logistic regression analysis was chosen as the data analysis technique. The results showed that the debt to equity ratio has a negative and significant effect, while the return on assets has a negative and insignificant effect. Firm size has no significant positive effect on bond ratings.*

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## INTRODUCTION

Corporate funding through stocks or bonds in the capital market is increasingly in demand by companies, this is indicated by the recorded growth of the capital market in Indonesia (Anggraeni et al, 2019). Many millennial investors choose to invest in bonds because the risk is much lower and relatively safer when compared to stocks. Based on data from the Financial Services Authority (OJK), the number of investors as of May 31 2021 recorded that the capital market single investor identification (SID) reached 5,327,094 investors. This figure is based on the data above, showing the number of investors growing 5.58 percent on a monthly basis from the position of 5,088,093 investors at the end of April 2021.

Bonds have the lowest level of risk and tend to be more stable (Sari and Badjra, 2016). The maturity period of the bonds varies, some are relatively short, such as one year, and some are long term, namely 30 years. Investors must of course be able to analyze the risk of an investment in making investment decisions, one of which is with bond ratings. Bond ratings can be useful as a marketing tool. Companies that get a good rating will have attractiveness in the eyes of investors (Bahtera, 2017).

Bond rating is an indicator of bond quality and security based on the financial status of the bond issuer. Bond rating is a rating that shows that the bond issuer will pay off the debt and interest in a timely manner (Ruspriono and Marsoem, 2021). The company will be assisted by the rating results carried out by the bond rating agency in selling its bonds through the capital market. Companies that issue bonds will try to have high bond ratings so that the company's attractiveness in the eyes of investors can increase and bond prices will be high (Bahtera, 2017).

The factors that influence bond ratings according to Wijayanti & Priyadi (2014) include profitability ratios, leverage and company size. leverage in this study is proxied using the Debt to Equity Ratio (DER), the profitability ratio is proxied by ROA, while company size is measured using the natural logarithm of total assets.

The first variable is DER, which is the ratio that compares the total debt and total equity owned by the company (Hery, 2016). According to Kustiyaningrum, et al (2016) leverage shows the amount of collateral available for creditors in the company. Sakinah's research, et al (2017) shows that leverage has a positive and significant effect on bond ratings. Meanwhile, Darmawan et al.'s research (2020) states that DER has a positive and

significant effect on bond ratings, and Setiawati et al. (2020) research that DER does not have a significant positive effect on bond ratings.

The second variable is Return on Assets (ROA). ROA is a ratio that describes how much of a company's net profit comes from the company's ability to optimize its assets (Hery, 2016). The resulting ROA shows the amount of net profit generated from total assets after adjusting for the costs of financing these assets (Hanafi and Halim, 2018). Based on research conducted by Hasan, et al (2018) ROA has a positive but not significant effect on bond ratings. Research according to Darmawan, et al (2020) ROA has no significant negative effect on bond ratings. Research according to Setiawati, et al (2020) ROA has a significant positive direct effect on bond ratings. Meanwhile, research according to Fikriyah, (2018) ROA has no significant positive effect on bond ratings.

The variable that influences the next bond rating is company size. "Company size helps investors to know the company's ability to pay bond interest periodically and repay the loan principal which can increase bond ratings" (Sari and Badjra, 2016). The number of assets owned by the company reflects the size of the company. The greater the assets owned, according to Fikriyah (2018) these assets will describe the guarantee for the payment of these bonds. Based on Darmawan et al's research, (2020) company size has a significant negative effect on bond ratings, company size has a positive and insignificant effect on bond ratings (Setiawati et al, 2020), company size has a significant negative effect on bond ratings (Fikriyah, 2018). This is due to the high level of investor confidence in companies with large sizes.

Non-financial companies that have been rated by PT PEFINDO are the chosen object of research, this is because non-financial companies have the most issuers listed on the Indonesia Stock Exchange. Non-financial companies tend to be more extensive in disclosing variables. Previous research tended to take only one sector as the object of research, so the research was conducted using a broader research object, namely non-financial companies. The results of the research reflect more on the actual situation of companies listed on the Indonesia Stock Exchange and their bonds are rated by PT Pefindo.

## METHOD

The data collection technique used in this research is documentation, namely data on non-financial companies that issue bonds and data on non-financial company bond ratings that have been rated by PEFINDO ([www.pefindo.com](http://www.pefindo.com)). The data is in the form of financial statement data and bond ratings. The population in this research is non-financial companies that have a bond rating from PT Pefindo and have been listed on the IDX. The method of determining the sample using a purposive sampling method, namely determining several samples that meet the criteria. After going through the selection there were 11 companies and consisted of 55 samples.

Bond rating in this study is the dependent variable. Bond ratings are categorized into two, namely bonds with an Investment Grade rating where the bond ratings include idAAA, idAA, idA, idBBB. This category will be given a value of one (1), while for the Non-Investment Grade category and those that do not have a rating are given a value of zero (0).

Leverage is a ratio that describes how much a company's activities are funded with debt (Kasmir, 2014). This leverage is proxied by DER (Debt to Equity Ratio), namely by comparing the total debt to the equity owned by the company. DER represents the capital structure of a company, which can be used to analyze default risk.

DER is the profitability ratio consists of ROA (Return on Assets), which is a ratio that shows the ability of all existing assets to be used to generate profits. Return on Assets (ROA) is the result of a comparison between EBIT and total assets, where ROA is also able to measure a company's ability to generate profits in previous years which is projected in the future (Susanti et al, 2020). The formula for calculating ROA is as follows:

ROA is company size measured by the size of the company's assets. Company size is one of the factors that investors consider before investing (Fikriyah, 2018). Company size is proxied by calculating the Natural Logarithm (Ln) of total assets.

$$\text{Size} = \text{Ln} (\text{Total Assets})$$

## RESULTS AND DISCUSSION

The hypothesis in the study was tested using logistic regression analysis (logistic regression). This is the dependent variable which is a dummy variable, namely a variable that has two alternative types, namely categories 1 and 0.

**Table 1.** Descriptive Statistical Test Results

	Frequency	Percent	Valid Percent	Cumulative Percent
<i>Non Investment Grade</i>	15	26,8	27,3	27,3
<i>Investment Grade</i>	40	71,4	72,7	100,0
<b>Total</b>	<b>55</b>	<b>98,2</b>	<b>100,0</b>	

Source: processed data (2022)

Table 1 shows the distribution of the number of companies with bond ratings that are included in the investment grade and non investment grade categories. Based on the frequency table, there are 15 observations (26.8%) of companies whose bonds are included in the non-investment grade bond rating and while companies that obtain investment grade bond ratings are as many as 40 observations (71.4%).

**Table 2.** Overall Model Fit

<i>Iteration</i>	<i>-2 Log likelihood</i>
Step 0	64,455
Step 1	56,039

Source: processed data (2022)

Table 2 shows the results of the overall model fit test, it is known that there is a decrease in the initial and final -2Log Likelihood value where in block 0, namely 64.455, it becomes 56.039 in block 1 or there is a decrease in chi square of 8.416. The -2Log Likelihood value at the beginning was 64.455 which only used constants without using the independent variables, whereas if the variables DER, ROA and size were included in the model then the -2Log Likelihood value was 56.039. So it can be concluded that the regression model used in the study as a whole is fit and feasible for further analysis.

**Table 3.** Hosmer and Lemeshow Test

Step	Chi-square	df	Sig.
1	9,816	7	,199

Source: processed data (2022)

The Hosmer and Lemeshow test aims to test whether there is a difference between the prediction model and the observation results. Seen in Table 3 it is known that the chi-square value is 9.816 with a significant value of 0.199. The significant value shows greater than 0.05 ( $> 0.05$ ) so there is no difference between the predictions of the logistic regression model and the observed data. Therefore, it can be concluded that the model is in accordance with the observations.

**Tabel 4.** Logistic Regression Test

	B	Sig.
DER	-2,746	,026
ROA	-15,999	,242
Size	,025	,705
Constant	3,380	,115

Source: processed data (2022)

Based on Table 4, the regression coefficient value for the DER variable is -2.746 and the significance is 0.026 which is less than 0.05 so that H1 is accepted, namely DER has a significant negative effect on bond ratings. That is, the higher the DER value indicates the greater the debt that must be borne by the company so that the risk of default is also high. This has resulted in lower bond ratings.

The results of the ROA variable test show that the regression coefficient is -15.999 with a significance value of 0.242  $> 0.05$  so that H2 is rejected, because the significance value is greater than 0.05. This shows that the size of the profit earned by the company has no significant effect on the rating of the bonds that will be obtained.

The regression coefficient and significance values for firm size variables are 0.025 and 0.705, respectively. This significance value is greater than 0.05 so it can be concluded that H3 is rejected. That is, the larger the size of the company, the higher the bond rating obtained, although the effect is not significant.

## CONCLUSIONS AND SUGGESTIONS

Based on the results of the research that has been done, it can be concluded that the debt to equity ratio has a significant negative effect on bond ratings, while profitability proxied by ROA has no significant negative effect on bond ratings. Firm size has a significant positive effect on bond ratings. Further research is recommended to carry out tests with a wider sample and different testing methods.

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