JRSSEM 2023, Vol. 02, No. 7, 1445 – 1462
E-ISSN: 2807 - 6311, P-ISSN: 2807 - 6494

LOGISTIC REGRESSION WITH NON-FINANCIAL LIABILITY RATINGS ON THE INDONESIA STOCK EXCHANGE

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Submitted: 15th January 2023 *Revised*: 12th February 2023 *Accepted*: 25th February 2023

Abstract: Companies that issue bonds have an obligation to pay interest regularly according to a predetermined period of time and the principal at maturity. This study aims to determine and analyze the effect of profitability on bond ratings in non-financial companies listed on the IDX for the 2018-2021 period. The analytical method used in this study is a quantitative analysis method using Microsoft Excel 2016 software and SPSS (Statistical Package for Social Sciences) version 26.0 as tools to test data. The purpose of this analysis is to get the relevant information contained in the data and use the results to solve a problem. The results of this study state that a positive liquidity value indicates that companies with high liquidity are most likely to be in efficient conditions, for example, companies do not use financing through bonds because companies have large internal funds and tend to choose to use internal funds first compared to external financing sources such as issuance of bonds resulting in high corporate value and affect the bond rating. These results indicate that liquidity has a positive influence on bond ratings of non-financial companies listed on the Indonesia Stock Exchange in 2018-2021, thus supporting the research hypothesis. This is because liquidity shows a positive direction, where the higher the level of liquidity, the greater the acquisition of a non-financial company's bond rating.

Keywords: Logistic Regression; Non-Financial Liability; Bursa Efek Indonesia.

INTRODUCTION

Bond investment is a type of investment that is in great demand by capital owners (investors) because bonds have a fixed income. The fixed income is derived from the principal of the bond and interest that will be received periodically at maturity. The profit derived from bond investment is that the bondholder has the first right to the company's assets if the company in question undergoes liquidation because the company has entered into a contract to be able to pay off the bonds that have been purchased by the bondholder. Bond investment is relatively better and safer compared to stock investment. Bonds are preferred by companies that need additional funds because they are easier to obtain. However, bonds are a type of investment that has some risks for investors. One of the risks that can arise is the company's inability to pay off bonds to investors or it can be called bad bonds (Ilmiawan et al., 2018).

The advantage of investing in bonds compared to stocks is in terms of paying returns. The income received from shares comes from dividends and capital gains. Dividend payments are given when coupon bond payments have been made. If from the payment of coupon bonds there is no remaining for dividends, then shareholders do not benefit from the shares owned. Another advantage derived from bond investments is that bondholders have the first right to the company's assets if the company goes into liquidation. This happens because the company has an agreement contract to pay off the bonds that have been purchased by the bondholders. In other words, bond investment is relatively better (safe) than stock investment (Sumiyati & Hartono, 2017)

Companies that issue bonds have the obligation to pay interest regularly in accordance with the predetermined period and the principal of the loan at maturity. Bonds are basically debt securities offered to the public. Although bonds are considered a safe investment, they still have risks. One such risk is the company's inability to pay off bonds to investors. Before being offered, bonds must be rated by an agency or bond rating agency (Rating Agency). A bond rating agency is an independent agency that provides risk-scale rating information, one of which is bond securities as a clue as to the extent of a bond's security for investors. Such security is indicated by the ability of a company to pay interest and pay off the principal of the loan. So that investors can use the services of the bond rating agent to get information about bond ratings. This rating process is carried out to assess the company's performance, so that the rating agency can state whether or not the bond is worth investing (Hidayat, 2018).

Bond ratings represent the risk scale of all traded bonds. This scale shows how safe a bond is for investors as shown by the company's ability to pay interest and principal on loans. Bond ratings are one of the references from investors when deciding to buy a bond. When an entity's bond rating is in the high category (investment grade) it means that the rating agency considers the company's performance to be good. This information will be responded to by investors by

allocating their funds to the company because investors think that the company can improve its welfare, as a result, abnormal returns will increase. On the other hand, if there is a low bond rating (*non-investment grade*) indicates that the company's performance has decreased. As a result, investors are less interested in investing their funds into the company. Information from bond ratings will certainly be very useful for investors in making investments, especially investments in bonds. Investing in bonds has three components of profit that investors consider in choosing investments in bonds, namely interest income, *capital gains*, and *special future gains* (Dwitayanti & Zahara, 2018).

A person who wants to invest in bonds needs information that is used as a basis for his decision-making. A bond rating is one of the information used as a basis for consideration to decide whether the bond is worth investing in and knowing the level of risk. Bond ratings announced to the public can reduce information asymmetry between bond issuing companies and investors. Bond ratings have an important role as a signal of a company's performance. This signal is used as one of the basis for decision-making of information users. The Financial Accounting Standards Board seeks to draw up appropriate standards, so that the financial statements produced by the company reflect the reality of a business entity. In reality, the looseness of the established standards is often misused by the management to carry out engineering. One of the bond ratings is determined from the results of the company's financial statements, so that if a company's performance is good, the bond will also have a good rating, so many investors are interested in the bond (Romhadhoni et al., 2019). There are several studies that examine the factors that affect bond ratings including profitability, liquidity, leverage, bond lifespan, company size against bond ratings.

The bond rating phenomenon can be seen in the case of one of the issuers, namely Mobile 8 Telekom, Tbk where in 2018 this company had failed to fulfill its obligation to pay the 12th interest and 9th interest and fine for Mobile 8 bonds which continued to decline from year to year, causing the company not to have sufficient funds to pay its bonds. This bond default problem is not the first time that has occurred, in March 2017 the IDX also suspended FREN shares and bonds as the company did not pay interest on its bonds of Rp. 675 billion. With the default, rating agency PEFINDO downgraded the company's bond rating to "D" from "CC" (Astuti & Fitria, 2019; Ikhsan, 2020).

One of them is the existence of a company ranked by PT PEFINDO but has defaulted, which raises a question about the accuracy of rating agents in Indonesia. As happened to the taxi company once late in paying its bond interest debt that had overdue on March 26, 2018. Pefindo downgraded the bond rating from BB- to D due to a default issued in 2014. However, in April 2018, TAXI had paid the interest debt and Pefindo downgraded TAXI's rating from BB- to SD (Selective Default). SD rating is a default bond at maturity but akyn continues to make payment of the bond on

time there are other obligations (www.finance.detik.com, December 13, 2018). The phenomenon of default risk is also in the case of PT Bakrie Telecom Tbk. (BTEL), namely in 2016 it did not pay ßunga coupons on guaranteed senior notes bonds issued by its subsidiary, Bakrie Telecom Pte Ltd around RPI 63.72 billion with a principal debt of 250 million US dollars with a coupon of 11.50% with a fall in time o ligation on May 7, 2015 (http://bisniskeuangan.kompas.com).

There is also the company AISA or PT Tiga Pilar Sejahtera Food Tbk, which pays interest and instruments from bonds maturing on June 26, 2018 and sukuk maturing on July 19, 2018Qléngan values of Rp 600 billion and Rp 300 billion respectively (ww,v.finance.de .com, July 25, 2019). In addition to the Three Pillars of Sejahtera Food, there is also PT Kawasan Industri Jababeka Tbk (KIJA) which is threatened with default on bonds caused by the replacement of the management structure (Idonesia.com, July 18, 2019).

Profitability shows a company in making its profit in a period. This ratio can be seen from the return *on* assets (ROA) where the company makes its profit by utilizing the assets it owns, while in the *return on* equity (ROE) the company generates its profit by utilizing the equity or capital owned by the company. Profitability is the best indicator in showing the health of a company, but actually bond investment has no effect on the profit of a company because no matter how much profit a bondholder company will only receive according to the specified interest rate. The better the level of profitability of a company, the better the company in making a profit, the company can fulfill its obligations on time. Previous research according to (Astuti & Fitria, 2019) stated that the profitability ratio has a positive effect on bond ratings, while according to (Putri, 2018), profitability has no effect on bond ratings, and according to (Sumendap et al., 2018) profitability ratios negatively affect bond ratings.

leverage is the amount or proportion of the use of debt in financing its capital investment, this ratio can be shown from debt to total asset ratio, debt to equity ratio (DER), *Long-term to total assets,* etc. The *leverage* ratio shows how much a company uses external debt to finance its operations and expansion. *Leverage* is often interpreted as boosting a company's performance and is synonymous with debt. The reason is, debt and loans can indeed boost the company's performance than if the company only relied on the strength of its own capital. If the leverage level of a company is high, it shows that the company uses a large amount of debt in the company's performance, the lower the leverage level of a company the better the company's performance and it is likely that the company will fulfill its obligations. There are previous studies that stated that the leverage ratio negatively affects the bond rating, namely according to Restuti (2020) dissenting from (Apritasari, 2018), which states that the leverage ratio does not affect the bond rating, but according to Satoto (2019) *leverage* has a positive effect on bond ratings.

There are several studies that examine the factors that affect bond ratings, including profitability. Profitability is the ability of management to make a profit

(Utari. (2014). Previous studies on profitability affect bond ratings according to Widiyastuti (2016), Henny (2016), Suwarti & Kurniawan (2015), stated that profitability assessed using ROA had a significant positive effect on bond ratings. In contrast to the research of other variables, namely liquidity variables. Liquidity is the company's ability to fulfill all its maturing obligations (Utari (2014). According to the results of Azani's research, Khairunnisa & Dillak (2017), Hidayat (2018), that the test results using logistic regression proved that the liquidity variable was measured using the current ratio indicator on bonds rated by PT. PEFINDO from 2011 to 2015 had a significant positive effect on bond ratings. The next variable is the leverage variable, which is a description of a company's ability to meet and maintain its ability to always be able to fulfill its obligations in paying debts on time, Fahmi. (2013). On leverage variables according to Azani khairunnisa & Dillak.. (2017), Widiyastuti (2016), Dwitayanti (2018), Mardiyati et al. (2015), Sakinah et al. (2017), stated that leverage has a significant positive effect on bond ratings. The fourth variable there is the life of the bond. The life of the bond is maturity value or also known as maturity value is the value promised to be paid at the time the bond matures, Anandasari & Sudjarni, (2017). Meanwhile, research according to Faizah (2019) and Widiastuti & Rahyuda (2016), states that maturity has a significant positive effect on bond ratings. In the last independent variable, the size of the company is the size of a company which can be expressed by total assets or by total net sales. The larger the total assets, the larger the size of a company. The larger the assets, the greater the capital invested, while the more debt turnover in the company (Hery, 2017). According to Sari & Badjra (2016), Pinanditha & Suryantini (2016), stated that the size of the company proxied by size has a significant positive effect on bond ratings. Here are some explanations related to bonds, bond ratings, factors that affect bond ratings.

Based on the background above, the author is interested in researching the ratio of financial to bond ratings of companies. This research is a modification of previous researchers, namely Ni Made Estiyanti and Gerianta Wirawan Yasa (2017) and Periklis Gogas, Theophilos Papadimitriou and Anna Agrapetidou (2019) about financial ratios that affect bond ratings, researchers decided to research with the title "The Effect of Profitability, *Leverage and* Liquidity on Bond Ratings in Non-Financial Companies Listed on the IDX for the 2018-2021 Period.

MATERIALS AND METHODS

This research uses a quantitative research approach. Quantitative research is a study that basically uses a deductive-inductive approach. This approach departs from a theoretical framework, the ideas of experts, and the understanding of researchers based on their experience, then developed into problems posed to obtain justification (verification) or rejection in the form of field empirical data documents.

The quantitative approach aims to test the theory, build facts, show relationships between variables, give a statistical description, assess and forecast

the results. Research designs that use a quantitative approach must be structured, standard, formal and designed as carefully as possible beforehand. The design is specific and detailed because the design is a research design that will be carried out actually. This study is to test the effect of the Profitability, Leverage, and Liquidity variables on the Bond Rating variables. Meanwhile, to analyze the influence of each variable using multiple linear regression analysis techniques.

RESULTS AND DISCUSSION

A. Overview of Research Objects

The data used in this study is secondary data sourced from the company's annual report for the period 2018 to 2021 obtained through the official website of the Indonesia Stock Exchange at the address of the www.idx.co.id, the Company's official website, the Indonesian Securities Rating (PEFINDO) at the https://www.pefindo.com address, taking from articles, journals, previous research, and other relevant sources. The data used are related to the profitability, leverage, and likwidity of the company as well as bond ratings. In this study, the purposive sampling method was used to determine the sample. Purposive sampling indicates that the sample used in the study is a representation of the existing population and is in accordance with the purpose of the study. The analysis method used in this study is a quantitative analysis method using the help of Microsoft Excel 2016 software and SPSS (Statistical Package for Social Sciences) version 26.0 as a tool to test data. The purpose of this analysis is to obtain the relevant information contained in the data and use the results to solve a problem. Here's a table with company names as follows:

Table 1.
Research Samples

Sample Criteria	Bond Amount
Bonds listed on the IDX during the 2018-2021 observation year	105
Bonds issued by companies that are not listed on the IDX during the 2018-2021 observation year	(33)
Bonds not rated by Pefindo during observation year 2018-2021	(17)
Bonds that do not publish financial statements during the observation year 2018-2021	(9)
Number of Observations 22 companies	28
Total sample 22 x 4 years =	112

Data processed 2022

Table 2.
Research Data Samples

No	Code	Non-Financial Company Name

1	HIGH	PT Tri Banyan Tirta Tbk
2	CAMP	PT Campina Ice Cream Industry Tbk
3	WAITING	PT Wilmar Cahaya Indonesia Tbk
4	CLEO	PT Sariguna Primatirta Tbk
5	DLTA	PT Delta Djakarta Tbk
6	HOCKEY	PT Buyung Poetra Sembada Tbk
7	ICBP	PT Indofood CBP Sukses Makmur Tbk
8	INDF	PT Indofood Sukses Makmur Tbk
9	MLBI	PT Multi Bintang indonesia Tbk
10	MYOR	PT Mayora Indah Tbk
11	PCAR	PT Pratama Cakrawala Abadi Tbk
12	PSDN	PT Prasidha Aneka Niaga Tbk
13	BREAD	PT Nippon Indosari Corpindo Tbk
14	SKLT	PT Sekar Laut Tbk
15	STTP	PT Siantar Top Tbk
16	ULTJ	PT Ultra Jaya Milk Industry
17	GGRM	PT Gudang Garam Tbk
18	HMSP	PT Hm Sampoerna Tbk
19	RMBA	PT Bentoel Internasional Investama Tbk
20	WIIM	PT Wismilak Inti Makmur Tbk
21	DVLA	PT Darya Varia Laboratoria Tbk
22	INAF	PT Indofarma Tbk
23	HIGH	PT Tri Banyan Tirta Tbk
24	CAMP	PT Campina Ice Cream Industry Tbk
25	WAITING	PT Wilmar Cahaya Indonesia Tbk
26	CLEO	PT Sariguna Primatirta Tbk
27	DLTA	PT Delta Djakarta Tbk
28	HOCKEY	PT Buyung Poetra Sembada Tbk
29	ICBP	PT Indofood CBP Sukses Makmur Tbk
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41	RMBA	PT Bentoel Internasional Investama

		Tbk
42	WIIM	PT Wismilak Inti Makmur Tbk
43	DVLA	PT Darya Varia Laboratoria Tbk
44	INAF	PT Indofarma Tbk
45	HIGH	PT Tri Banyan Tirta Tbk
46	CAMP	PT Campina Ice Cream Industry Tbk
47	WAITING	PT Wilmar Cahaya Indonesia Tbk
48	CLEO	PT Sariguna Primatirta Tbk
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50	HOCKEY	PT Buyung Poetra Sembada Tbk
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107	RMBA	PT Bentoel Internasional Investama Tbk
108	WIIM	PT Wismilak Inti Makmur Tbk
109	DVLA	PT Darya Varia Laboratoria Tbk
110	INAF	PT Indofarma Tbk
111	HIGH	PT Tri Banyan Tirta Tbk
112	CAMP	PT Campina Ice Cream Industry Tbk

B. Results of Descriptive Statistical Analysis

According to Ghozali (2018) descriptive statistical analysis provides an overview or description of a data seen from the *mean*, standard deviation, maximum, and minimum values.

Table 3.
Descriptive Statistical Results
Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Profitability	112	1.00	748.00	81.1023	79.2194
Leverage	112	52.00	2201.00	734.6705	346.40441
Liquidity	112	343.00	994.00	311.1023	258.49672
Pering_Obligasi	112	.00	15.00	.9773	.5608
Valid N (listwise)	112				

Source : Data processed 2022

From the results of descriptive statistical calculations in the table above, the analysis can be explained as follows:

1. The table above explains the variable profitability of non-financial companies listed on the Indonesia Stock Exchange in 2018-2021. The highest profitability of non-financial companies listed on the Indonesia Stock Exchange in 2018-2021 is 748.00, while the minimum profitability of non-financial companies listed on the Indonesia Stock Exchange in 2018-2021 is 1.00. The average Profitability of non-financial companies Listed on the Indonesia Stock Exchange in 2018-2021 is 81.1023, and the standard deviation of Profitability of non-financial companies Listed on the Indonesia Stock Exchange in 2018-2021 is 79.2194.
2. The table above explains the variable leverage of non-financial companies listed on the Indonesia Stock Exchange for 2018-2021. The highest leverage of non-financial companies listed on the Indonesia Stock Exchange in 2018-2021 is 2201.00, while the minimum leverage of non-financial companies listed on the Indonesia Stock Exchange in 2018-2021 is 52.00. The average Leverage of non-financial companies Listed on the Indonesia Stock Exchange in 2018-2021 is 734.6705, and the standard deviation of Leverage from non-financial companies Listed on the Indonesia Stock Exchange in 2018-2021 is 346.40441.
3. The table above explains the Liquidity variables of non-financial companies listed on the Indonesia Stock Exchange in 2018-2021. The highest liquidity of non-financial companies listed on the Indonesia Stock Exchange in 2018-2021 is 994.00, while the minimum liquidity of non-financial companies listed on the Indonesia Stock Exchange in 2018-

2021 is 343.00. The average Liquidity of non-financial companies Listed on the Indonesia Stock Exchange in 2018-2021 is 311.1023, and the standard deviation of Liquidity from non-financial companies Listed on the Indonesia Stock Exchange in 2018-2021 is 258.4967.

4. The table above describes the variable bond ratings of non-financial companies listed on the Indonesia Stock Exchange for 2018-2021. The highest Bond Rating of non-financial companies listed on the Indonesia Stock Exchange for 2018-2021 is 15.00, while the minimum Bond Rating of non-financial companies listed on the Indonesia Stock Exchange for 2018-2021 is .00. The average Bond Rating of non-financial companies Listed on the Indonesia Stock Exchange in 2018-2021 is .9773, and the standard deviation of Bond Ratings of non-financial companies Listed on the Indonesia Stock Exchange for 2018-2021 is .5608.

C. Uji Kelayakan Model *(Goodness of Fit*

The feasibility of the regression model was assessed using Hosmer and Lemeshow's Goodness of Fit Test. Hosmer and Lemeshow's Goodness of Fit Test tests the null hypothesis that empirical data match or fit the model (there is no difference between the model and the data so the model can be said to be fit).

Table 4.
Model Feasibility Test Results
Hosmer and Lemeshow Test

Step	Chi-square	df	Itself.
1	7.939	8	.439

Source : Data processed, 2022

Table 5.4 shows that the statistical value of Hosmer and Lemeshow's Goodness of Fit Test is 7,939 with a significance of .439. So with a significant level of .439 whose value is greater than 0.05 shows that the model is able to predict the value of observations in research or it can be said that the model is acceptable because it matches the observation data.

D. Model Fit

To assess the entire model (*Overal model fit*) it can be seen from the value of -2log likelihood at the beginning (block number = 0) and the value of -2 log likelihood at block number = 1. If the value of -2 log likelihood of block number = 0 is greater than the value of -2 log likelihood in block number = 1. So it shows that the hypothesized model fits the data. Here are the results of the likelihood log -2 test, which is more in the table, below:

Table 5. Overall Model Fit Test 1

Iteration History[a,b,c]			
Iteration		-2 Log likelihood	Coefficients
			Constant
Step 0	1	83.449	1.504

Source : Data processed 2022

The overall assessment of the model is done by comparing the value between -2 Log Likelihood at the beginning (Block Number = 0), where the model enters only constants, with the value -2 Log Likelihood at the end (Block Number = 1), where the model enters constants and free variables. This table shows that the statistical value of 2 Log Likehood (block number = 0) without variables, only a constant of 83,449. It can be said that models without variables are not fit.

Table 6. Overall Model Fit Test 2

Iteration History[a,b,c,d]

Iteration		-2 Log likelihood	Coefficients			
			Constant	Profitability	Leverage	Likwiditas
Step 1	1	68.035	3.011	-.001	-.002	-.001
	2	62.063	4.669	-.002	-.003	-.002
	3	61.294	5.554	-.001	-.004	-.003
	4	61.262	5.766	-.001	-.004	-.003
	5	61.262	5.776	-.001	-.004	-.003
	6	61.262	5.776	-.001	-.004	-.003

Initial -2 Log Likelihood: 83.449

The initial -2Likelihood value is 83,449 and after the inclusion of all three independent variables, the final -2 Likelihood value decreases to 61,262 This decrease in the value - 2Likelihood indicates that the addition of an independent variable to the model can improve the model so that the model is said to be fit.

E. Coefficient of Determination *(Nagelkarke R Square)*

The Nagelkarke value of R^2 can be interpreted as the value of R^2 in multiple regression. The Nagelkarke R^2 value seen in

snell's cox n value can be used to measure the model's ability to describe dependent variables. The following are the results of the Nagelkarke R^2 value, more presented in the table:

Table 7. Nagelkarke R Square Test Results

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	61.262[a]	.223	.564

a. Estimation terminated at iteration number 6 because parameter estimates changed by less than .001.

The magnitude of the value of the coefficient of determination in the logistic regression model is indicated by the value of Nagelkerke R square. Based on the results of the tests carried out, the value of the R square agelkerke is 0.564 which means that the variability of the dependent variables that can be explained by the independent variables namely, profitability, leverage and liquidity is 56.2%, while the remaining 43.8% is explained by other variables outside the research model.

F. Multicholinearity Test

The multicholinearity test aims to test whether a regression model found a correlation between free (independent) variables. A good regression model is a regression in the absence of symptoms of a strong correlation among its free variables. Multicholinearity testing in logsitic regression using correlation matrices between independent variables and calculation of Tolerance and VIF values. Test results are shown in Table 5.8.

Table 8 Multicholinearity Test Results

Coefficients[a]

Model		Unstandardized Coefficients		Collinearity Statistics	
		B	Std. Error	Tolerance	BRIGHT
1	(Constant)	1.124	.099		
	Profitability	.019	.001	.961	1.041
	Leverage	.000	.000	.931	1.074
	Liquidity	.000	.000	.947	1.056

a. Dependent Variable: Peringkat_Oblig

The results of the multicholinearity test show that there are no independent variables that have a Tolerance value of less than 0.10 which means that there is no correlation between independent variables. The results of calculating the VIF value also show that there are no independent variables that have a VIF value of more than 10. So it can be concluded that there is no multicholinearity between independent variables in the regression model.

G. Formed Regression Models and Hypothesis Testing

A logistic regression model can be formed by looking at the estimated value of the paramater in Variables in The Equation. The regression model formed based on the estimated value of parameters in Variables in The Equation is as follows : RATING = 5.776 + .001PROFIT + .004LEVE – .003LIKUID + εi

Table 9. Hypothesis Test Results

Variables in the Equation

		B	S.E.	Forest	f	Itself.	Exp(B)	95% C.I.for EXP(B) Lower	Upper
Step 1[a]	Profitability	0.001	0.012	0.007	1	0.033	.999	.976	1.023
	Leverage	0.004	0.001	6.757	1	0.009	.996	.993	.999
	Likwiditas	0.003	0.001	5.142	1	0.023	.997	.995	1.000
	Constant	5.776	1.418	16.583	1	0.000	32 2.503		

a. Variable(s) entered on step 1: Profitabilitas, Leverage, Likwiditas.

Hypothesis testing is carried out by comparing the significance level (*sig*) with the error rate *(β)* = 5%. The results of the hypothesis test are as follows:

1). Hypothesis 1. (Profitability positively affects bond ratings)

H1. states that profitability has a positive effect on bond ratings. Based on the results of the hypothesis test, it can be seen that the value of the regression coefficient is . 001 with a significance value of 0.033 < 0.05. Since the significance value is less than 0.05 then H1 is accepted. This means that profitability has a significant positive effect on bond ratings.

2). Hypothesis 2. (Leverage positively affects bond ratings)

H2. states that leverage has a positive effect on bond ratings. Based on the results of the hypothesis test, it can be seen that the value of the regression coefficient is .004 with a significance value of 0.009 < 0.05. Since the significance value is less than 0.05 then H2 is accepted. This means that leverage has a significant positive effect on bond ratings.

3). Hypothesis 3. (Liquidity positively affects bond ratings)

H3. states that liquidity can have a positive effect on bond ratings. Based on the results of the hypothesis test, it can be seen that the coefficient value is .003 with a significance value of 0.023 < 0.05. Since the significance value is greater than 0.05 then H3 is accepted. This means that the liquidity ratio has a significant positive effect on bond ratings.

B. Interpretation of Research Results

1. Effect of Profitability Terh a dap Bond Rating

Profitability is one of the measurements for company performance. The profitability of an enterprise indicates the ability of an enterprise to make a profit over a certain period. In this study, profitability calculated how much profit the company's assets generate. Based on hypothesis testing conducted in this study, it is stated that profitability has a significant positive influence on bond ratings with a regression coefficient of 0.001 and a significance level of 0.033 < 0.05, which means that a 1 percent increase in profitability will increase the chances of a bond rating.

The test results show a positive regression coefficient so that the effect of profitability on bond ratings is positive, where the higher the profitability generated by the company, the better the bond rating of a company, and vice versa. It can also be seen from the descriptive statistical test where companies with the high investment grade category have a high level of profitability compared to companies with the *low investment grade* category or an average value greater than the standard deviation of (81.1023 > 79.2194).

High profitability reflects good performance so it can be said that profitability is a good indicator in assessing the health of the company. High profit indicates the company's ability to fulfill its obligations on time. This has an impact on the bond rating assessment set by PEFINDO where the high profitability will also be better.

The results of this study are in accordance with research conducted by Siti Hariyati (2019), Arifman (2017), Manurung, et.al (2016) and Barkah Rian (2015) that companies that have high profits are considered capable of fulfilling their obligations, so that the possibility of default risk of these companies becomes lower. The company's high profitability indicates that the loans provided by the creditors have been used well by the company so that they are able to generate high profits.

2. Effect of Leverage Terh a dap Bond Rating

Leverage is a ratio used to measure how much of an asset a company has derived from debt or capital. The leverage of a company calculates the share of its own capital that is used as collateral for the entire debt. Based on the results of hypothesis testing conducted by this study, it is stated that leverage has a significant negative influence on bond ratings with a regression coefficient of 0.004 and a significance level of 0.009 < 0.05, which means that it can be concluded that the higher the liquidity of a company, the better its bond rating.

Variables in the Equation

		B	S.E.	Forest	df	Itself.	Exp(B)	95% C.I.for EXP(B) Lower	Upper
Step 1[a]	Profitability	0.001	0.012	0.007	1	0.033	.999	.976	1.023
	Leverage	0.004	0.001	6.757	1	0.009	.996	.993	.999
	Likwiditas	0.003	0.001	5.142	1	0.023	.997	.995	1.000
	Constant	5.776	1.418	16.583	1	0.000	322.503		

a. Variable(s) entered on step 1: Profitabilitas, Leverage, Likwiditas.

The test results show a negative regression coefficient, where the higher the leverage, the lower the company's bond rating, and vice versa. Based on descriptive statistical tests conducted, it is stated that companies with the high investment grade category have a higher level of leverage than companies with the low investment grade category. This indicates that the high level of leverage results in the company being faced with the risk of company failure because it tends to have a low ability to pay off its obligations and the bond rating has dropped.

The results of this study are in accordance with research conducted by Adi Wira Pinandhita (2016), Saputri (2016) which states that the smaller the company's leverage, the more its bond rating increases. The results of this study corroborate research from Sari (2018) Leverage, this high ratio means that most assets are funded with debt and this causes the company to be faced with a default risk problem so that the possibility of the company getting a bond rating is not good. Thus, these findings are consistent with the research conducted by Amalia (2017). However, these results contradict the research of Magreta & Nurmayanti (2019) and Manurung, et al. (2018).

Companies with a low *leverage* ratio are the higher the likelihood of obtaining a higher bond rating (Adams et al., 2017). Researchers think that external parties tend to look at companies that have low *leverage* because the risks owned by these companies are relatively small given the comparison of capital needed to cover the company's debt is low. If the company's leverage is too high, it is feared that there will be a default when issuing bonds later because the debt burden owned is already quite heavy.

3. Effect of Likwiditas Terh a dap Bond Rating

Liquidity is one of the tools used to measure a company's ability to meet

obligations that are due soon. Liquidity compares current assets with current debt of the company. Based on hypothesis testing in this study, a regression coefficient of. 003 showed a positive relationship to bond ratings. The results suggest that the third hypothesis is accepted. The test results show a positive regression coefficient so that the effect of liquidity on bond ratings is positive, where the higher the liquidity generated by the company, the more it will increase the bond rating of a company, and vice versa.

This result was in line with what was expected as liquidity was thought to have an influence on the bond's rating. A liquid company is considered to be able to fulfill its obligations in a timely manner so as to avoid the risk of default. However, this result occurs because investors tend to choose to consider other risks arising from *investment grade* bondsas they are considered more important. The results of this study are in accordance with research by Sari (2016) and (Dali et al., 2015) stated that a positive liquidity value indicates that the company has high liquidity is most likely to be in an efficient condition, for example the company does not use financing through bonds because the company has large internal funds and tends to choose to use internal funds first compared to external sources of financing such as The issuance of bonds resulted in a high company value and affected the rating of bonds. However, this study contradicts the research that (Almilia & Budisusetyo, 2017)

CONCLUSIONS

After data analysis and hypothesis testing, the results of the research discussed in Chapter V were obtained.

1. Profitability has a significant positive influence on bond ratings in non-financial companies listed on the Indonesia Stock Exchange in 2018-2021. The significance level is 0.033 < 0.05 and the regression coefficient is .001. These results show that the higher a non-financial company generates a profit, the better its bond rating will be. The high profit achieved by the company indicates that the company is able to fulfill its obligations on time.
2. Leverage has a significant negative influence on bond ratings in non-financial companies listed on the Indonesia Stock Exchange for 2018-2028 1. The significance level is 0.009 < 0.05 and the regression coefficient is -.004. These results show that the lower the company's leverage level, the better the bond rating will be. The high level of leverage indicts that companies use a lot of debt in funding their company's activities so that they tend to have a risk of failure in fulfilling their obligations.

Liquidity has a significance level of. 0.023 > 0.05 and a regression coefficient of .003. The results show that liquidity has a positive influence on bond ratings in non-financial companies listed on the Indonesia Stock Exchange for 2018-2028 1, thus supporting the research hypothesis. This is because liquidity shows a positive direction, where the higher the level of liquidity, the greater the bond rating of a non-financial company

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