Pengaruh *Leverage*, Rasio Aktivitas, dan Nilai Pasar terhadap Peringkat Obligasi

The Impact of Leverage, Activity Ratio, and Market Value on Bond Rating

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ABSTRACT

This research is a quantitative investigation of the impact of leverage, activity ratio, and market value on bond ratings. This study's sample employed the strategy of purposive sampling to acquire as many as 25 financial institutions listed by PEFINDO in 2018-2021, resulted in the number of data of 100. The research used a paned data regression analysis with a significance threshold of 0.05 Eviews version 12.0 to test the hypotheses. The results suggests that variable activity ratios with the Total Assets Turnover (TAT) proxy and market value with the Market to Book Value (MBV) proxy indicates a significant negative influence on the bond ratings of financial companies, whereas leverage with a Debt to Assets Ratio (DAR) proxy indicates no significant influence. The suggestion that can be given is that the proxy used is not the best indicator for estimating PEFINDO's bond rating in making an appropriate assessment of bond issuance, so it is recommended to use another proxy that is more appropriate in measuring leverage, activity ratio, and market value.

Keywords: Leverage, activity ratio, market value, bond rating.

ABSTRAK

Penelitian ini bertujuan untuk mengetahui pengaruh dari *leverage*, rasio aktivitas, dan nilai pasar terhadap peringkat obligasi. Sampel dari penelitian ini diperoleh dengan metode *purposive sampling*, yang menghasilkan sampel sebanyak 25 perusahaan keuangan yang diterbitkan oleh PEFINDO pada tahun 2018-2021, sehingga seluruh data penelitian adalah sebanyak 100. Metode yang digunakan yaitu regresi data panel dengan program Eviews versi 12.0 untuk menguji hipotesis. Adapun hasil penelitian menunjukkan bahwa rasio aktivitas dengan *proxy Total Assets Turnover* (TAT) dan nilai pasar dengan *proxy Market to Book Value* (MBV) menunjukkan pengaruh negatif yang signifikan terhadap peringkat obligasi perusahaan keuangan, sedangkan *leverage* dengan *proxy Debt to Assets Ratio* (DAR) menunjukkan tidak ada pengaruh yang signifikan. Saran yang dapat ditawarkan kepada perusahaan, dapat digunakan sebagai bahan untuk memproyeksikan peringkat obligasi untuk membuat penilaian yang lebih tepat mengenai penerbitan obligasi, dan diharapkan menjadi bahan untuk evaluasi perusahaan dan peningkatan kinerja. Saran yang dapat diberikan adalah bahwa proxy yang digunakan bukanlah indikator terbaik untuk memperkirakan peringkat obligasi PEFINDO dalam membuat penilaian yang tepat mengenai penerbitan obligasi, sehingga disarankan menggunakan *proxy* lain yang lebih tepat dalam mengukur *leverage,* rasio aktivitas, dan nilai pasar.

Kata kunci: Leverage, rasio aktivitas, nilai pasar, dan peringkat obligasi.

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INTRODUCTION

The financial industry is essential to the expansion of the Indonesian economy. The Indonesia Stock Exchange (IDX) lists the banks, financial institutions, securities businesses, and insurance subsectors of the financial sector. In Indonesia, PT. Pemeringkat Efek Indonesia (PEFINDO) is the institution that is most widely used as a reference in issuing bond ratings. There are two categories of PEFINDO ratings, namely investment grade (idAAA, idAA, idA, idBBB) and non-investment grade (idBB, idB, idB, idCCC, idD).

In 2018–2021, bond issuances were dominated by the financial sector, where the number of bond issuers increased every year. However, the value of bond issuance issuance decreased in 2020 and rose in 2021. There was a decrease in the value of bond issuance in 2020 and another increase in 2021. The number of bond issuers has increased every year. The following is data on the total issuance value of bond issuances along with the number of issuing issuers each year.

Table 1. Issuance Value and Number of Bond Issuers in the Financial Sector 2018-2021

Year	Emission Value	Number of Issuers
2018	90.401,93	50
2019	97.343,87	51
2020	77.979,10	54
2021	82.604,12	61

Source: www.ojk.go.id

The rating process used by banks focuses on determining the borrower's repayment capacity. Bond ratings are used in the trading of securities to determine if a security's issuer has the financial wherewithal to repay its obligations by the maturity date. In both cases, the main goal of the credit rating is to lower the risk that the issuer won't pay back the loan, (Onvirjuba, 2016).

The value contained in the bond rating reflects all information containing investment risks, and such information will be the responsibility of the investor or creditor. The rating issued by PEFINDO will be evaluated by investors or creditors to determine whether the issuer is able to repay its long-term debt in the future (Sunaryo & Mb, 2019).

According to Hery (2017), the higher the leverage ratio, the higher the proportion of debt used in asset financing investments, which means that the company's financial risks are increasing and vice versa. When associated with bond ratings, higher leverage ratios result in bond ratings declining. This phenomenon is in line with research Prastiani (2018), Kustiyaningrum *et al*. (2017), Sari and Badira (2016), Rosa and Musdholifah (2016) and, Henny (2016),which stated that leverage did not significantly affect bond ratings. This phenomenon is different from research Wijaya (2019), Ng and Arif (2019), Chabowski *et al*. (2019), Sajjad and Zakaria (2018), Hiqmahtunnisah *et al*. (2018), Winanti *et al*. (2017), Sun and Zhang (2017), Bakhtiari (2017), Partha and Yasa (2016), Khatami *et al*. (2016), and Ayres (2016), which stated that leverage had a significant effect on bond ratings.

An efficiency ratio, also known as an activity ratio, assesses the effectiveness with which a company utilizes its resources to increase sales and maximize profits, (Darmawan, 2020). When linked to bond ratings, a higher activity ratio will increase the bond's rating. This phenomenon is in line with research Juardi and Sueno (2019), Prastiani (2018), Ismail *et al*. (2018), Gul *et al*. (2018), Griffin *et al*. (2018), Dewi and Suaryana (2017), Winanti *et al*. (2017), Astuti (2017), Partha and Yasa (2016), and Henny (2016), which stated that the ratio of activity affects bond ratings significantly. The phenomenon is inconsistent with the research Hakim & Supeno (2020), and Zuhri *et al*. (2019) which stated that the activity ratio had no significant effect on bond ratings.

Market value connects a stock's market price with a stock's earnings, cash flow, and book value. The market value ratio allows management to understand investors' perceptions of future prospects and past performance, where the market value reflects the growth of the company (Sumiati & Indrawati, 2019). When linked to bond ratings, the greater market value will increase

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the bond's rating. The phenomenon is in accordance with research Wijaya (2019), Chabowski *et al*. (2019), Livingston *et al*. (2018), Hiqmahtunnisah *et al*. (2018), Dewi and Suaryana (2017), Khatami *et al*. (2016), Fracassi *et al*. (2016), and Sirma and Rahyuda (2015),which stated that market value had a significant effect on bond ratings. However, there are different research results conducted by Setiawati *et al*. (2019), Zuhri *et al*. (2019), Ayres (2016), Sun and Zhang (2017), and Henny (2016), which state that market value did not significantly affect bond ratings.

The goal of this study is to assess the impact of the leverage ratio factor, the activity ratio, and market value on the bond ratings of financial sector businesses based on the gap phenomena, in which the results of prior research on bond ratings are still very divergent.

Literature Review
Leverage and Bond Rating

To obtain funding, certain conditions of transparency are required. The combination of the use of these funds is called the debt fund usage ratio, also known as the leverage ratio (Pangestuti, 2019). A ratio called leverage gauges how much debt is used to fund a company's assets. Leverage is a general term used to describe how well a business can pay off both short-term and long-term debt.

Leverage has the ability to predict the ratings of bonds issued by PEFINDO. Rating companies tend to pay attention to leverage as a variable that affects bond rating scales (Partha & Yasa, 2016). Leverage has a significant and unambiguous effect on rating upgrades and downgrades. An increase in leverage makes a rating upgrade unlikely and will increase the chances of a downgrade (Bakhtiari, 2017). With the increase in leverage, the higher the debt to equity ratio, the lower the bond rating. This is due to the reduced public confidence in bonds, and vice versa. If the capital is very small, the bond rate will increase due to public confidence in the bond (Hidayat, 2018). Leverage will affect the bond's rating as investors will see the extent to which the company uses debt to fund activities. If the company has high leverage, it can affect the bond rating (Hiqmahtunnisah *et al.,* 2018). If the amount of debt is higher than the number of assets, this could mean that the company is doing worse, so the rating of bonds issued by PEFINDO will be higher if the leverage is low (Wijaya, 2019).

The results of the study are in line with research Ng & Arif (2019), Chabowski *et al.* (2019), Sajjad & Zakaria (2018), Sun & Zhang (2017), Winanti *et al.* (2017), and Khatami *et al.* (2016), which stated that leverage affects bond ratings. Based on theoretical studies and pertinent research, this study's hypotheses are as follows:

H$_1$: Leverage affects bond ratings.
Activity Ratio and Bond Rating

Companies that effectively use all their assets will produce maximum sales when the company becomes better at managing its business activities. It will get a large profit from sales (Meran & Pangestuti, 2020). An activity level is a ratio used to quantify the efficacy of an organization's utilization of its assets or the efficiency with which it uses its resources. The activity ratio is composed of receivable turnover, inventory turnover, working capital turnover, fixed asset turnover, and total asset turnover (Cashmere, 2016).

Rating companies tend to use activity ratios as a variable that affects bond rating scales. The activity ratio measures how effectively management is using the resources that the company has. Companies with high activity ratios generate profits more quickly than companies with low activity ratios. It also shows that companies with high activity ratios will be able to better fulfill their obligations (Partha & Yasa, 2016). The higher the activity ratio value, the more the sukuk rating increases. The impact of the ratio of activity on the Islamic bond rating is to determine how a company or bank can effectively use its own funding sources (Astuti, 2017). The activity ratio describes the effectiveness of the company's management. A high activity ratio always results in a very high sukuk rating (Winanti *et al.*, 2017). Companies with high activity levels tend to generate higher revenues than companies with low activity levels. If the company is active, the rating of corporate bonds can fall into the investment grade category. High sales tend to bring higher profits, so the company is more likely to fulfill all its obligations to investors (Prastiani,

2018). Companies with high activity are defined by an increase in sales generated relative to total assets possessed. As a result, the investor community or investors have greater trust in the firm's financial performance, causing the rating of the sukuk issued by the company to rise, (Juardi & Sueno, 2019).

This is in line with research Ismail *et al*. (2018), Gul *et al*. (2018), Griffin *et al*. (2018), Dewi and Suaryana (2017), and Henny (2016), which states bond ratings can be influenced by activity. Based on theoretical studies and pertinent research, this study's hypotheses are as follows:

H₂: Activity affects bond ratings

Market Value and Bond Rating

The market price of a company's stock is correlated with its profits, cash flow, and book value per share by a set of data known as "market value." Market value ratios can give managers insight into how investors perceive a company's previous performance and future prospects. The market value reflects the growth of the company. The market value ratio is comprised of the price to book value, price to cash flow, and price to earnings ratios, (Sumiati & Indrawati, 2019).

The market value of a corporation as determined by the market-to-book value ratio is one of the choices depending on the opinions of investors. Market to book value is a ratio that indicates how the market perceives a company's financial health (Sirma & Rahyuda, 2015). Having a high market value is typically associated with less risk and is likely to raise a bond's grade (Khatami *et al.*, 2016). The bigger the market value, the higher the bond rating for the corporation. Strong market value is positively correlated with bond ratings (Dewi & Suaryana, 2017). Companies with good market value have an investment gap, meaning that the company has something reliable and can provide profits so that it can pay off debt and the principal of bonds and improve bond ratings (Hiqmahtunnisah *et al.*, 2018). Market value has a significant influence on bond ratings. However, lower-rated publishers have higher market ratios (Livingston *et al.*, 2018).

This is in line with research Wijaya (2019), Chabowski *et al.* (2019), Syawal and Fachrizal (2016), Rosa and Musdholifah (2016), and Fracassi *et al.* (2016), which states that market value affects bond ratings. Based on theoretical studies and pertinent research, this study's hypotheses are:

H₃: Market value affects bond ratings.

RESEARCH METHODS

Population and Sample

This study's population consists of all firms rated by PEFINDO between 2018 and 2021. This study looked at a sample of 25 businesses in the financial sector that were ranked by PEFINDO based on set criteria (Table 2). A total of 100 businesses were looked at.

Table 2. Sample Criteria

Sample Criteria	Total
Financial companies rated by PEFINDO	169
Financial companies not listed on the Indonesia Stock Exchange for the 2018-2021 period.	120
Financial companies with incomplete financial statement data based on the variables used in the 2018-2021 research period.	24
Number of sample companies used	25
Number of years of research (2018-2021)	4
Number of analyzes used	100

Data Collection Techniques

This study's methodology comprised a review of the relevant literature, documentation of bond ratings given by PEFINDO, and Indonesia Stock Exchange-listed financial accounts. On its website, www.idx.co.id, the Indonesia Stock Exchange has financial statements. The PEFINDO website, www.pefindo.com, has information about bond ratings.

Data Analysis Techniques

This research uses numerical or quantitative data. All the data that has been collected will be analyzed and then tested for hypotheses. In this study, the statistical analysis program EViews version 12.0 was used to analyze the data. Panel data combines time series and cross-sectional information. This is the panel data regression model used:

$Yit = \alpha + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + e$

Information:

Y_{it}: Bond Ratings

α: Constants

$\beta_{(1,2,3)}$: Regression coefficient for each independent variable

X_1: Leverage

X_2: Activity Ratio

X_3: Market Value

i: Issuer Name

t: Time Period

e: Error

Hypothesis Test

The estimation method in the regression model uses panel data as follows: 1) Common Effect Model or Pooled Least Square (PLS), 2). Fixed Effect Model (FEM), 3). Random Effect Model (REM),

In choosing the right three models for use in the study, tests were carried out as follows:

a. F Restricted Test (Chow Test). The Chow test is carried out to determine the common effect or fixed effect.
b. Hausman Test. A fixed effect or random effect model is selected using this test.
c. Lagrange Multiplier Test. This test is used to decide whether to adopt a random effect or common effect model.

In this study, a statistical technique known as a partial test—sometimes known as a hypothesis test—is used to assess if independent variables have any significant influence on the bound variables. In addition, the uji coefficient of determination is utilized (adjusted R^2). Adjusted R^2 is a way to measure how well a model can account for changes in variables it depends on.

RESULTS AND DISCUSSION

Descriptive Statistical Analysis

To create a graphical representation of each research variable, descriptive statistics are utilized to characterize the processed data. Using the descriptive statistical approach adopted in this study, the mean, median, maximum, minimum, and standard deviation of each variable were calculated. The following Table 3 is the result of a descriptive statistical analysis of data processing using the Eviews version 12 program for the research years 2018 to 2021 of the 25 financial companies:

Table 3. Descriptive Statistical Results

	RANK	DAR	TAT	MBV
Mean	14,56000	0,789435	0,123301	1,267904
Median	15,00000	0,837653	0,085690	1,090802
Maximum	18,00000	0,968225	0,443090	4,987307
Minimum	9,00000	0,398487	0,059498	0,245557
Std. Dev.	2,949679	0,118248	0,085291	0,812840
Observations	100	100	100	100

Source: Eviews 1 2,0 (data processed)

Panel Data Regression Analysis

The type of data used in this study is panel data. Pooled Least Square, Fixed Effect Model, and Random Effect Model are used to analyse panel data. Before selecting a model, three tests were conducted: a Lagrange Multiplier test for determining whether to use a Random Effect or

Common Effect model; a Hausman test for determining whether to use a Fixed Effect or Random Effect model; and a Chow test for determining whether to use a Common Effect or Fixed Effect model.

1. Chow Test

The Chow test was conducted to determine which of the pooled least square and fixed effect models employed in the study was superior. In the Chow test, the following hypothesis was used:

H_0 = Pooled Least Square (PLS)

H_a = Fixed Effect Model (FEM)

Based on the hypothesis above, H_0 will be accepted if the probability value of the Chi Square Cross-section > 0,05, while H_0 is rejected if the probability value of the Chi Square Cross-section < 0,05. The following are the chow test results:

Table 4. Chow Test Results

Effects Test	Statistics	d.f.	Prob.
Cross-section F	324,749230	(25,93)	0,0000
Cross-section Chi-square	473,824982	24	0,0000

Source: Eviews 12.0 (data processed)

Based on Table 4, if the probability of cross-section F of 0,0000 is less than 0,05 or 0,0000 < 0,05, then H_0 is rejected and H_a is accepted. Rejection of H_0 indicates structural changes to the study data, so Pooled Least Square is not recommended in this study. So the right model based on the Chow test is the Fixed Effect Model, because there is a possibility of changes to the sequence of time and series of units in each sample used through intercept in the study.

2. Hausman Test

The Hausman test was applied to establish the superior model between the Fixed Effect Model and the Random Effect Model utilized in the investigation. The following theories are utilized in the Hausman Test:

H0 = Random Effect Model (REM)

Ha = Fixed Effect Model (FEM)

Based on the hypothesis above, H_0 is accepted if the probability value of Cross-section Random > 0,05, and H_0 is rejected if the probability value of Cross-section Random < 0,05. The following are the results of the Hausman Test:

Table 5. Hausman Test Results

Test Summary	Chi-Sq. Statistics	Chi-Sq. d.f.	Prob.
Cross-section random	2,108835	3	0,5501

Source: Eviews 12.0 (data processed)

Based on Table 5, the study's cross-section random probability value of 0,5501 is greater than 0,05 or 0,5501 > 0,05, meaning that H_0 is accepted and H_a is rejected. The results showed the right and best model based on the Hausman test was the Random Effect Model.

3. Lagrange Multiplier Test

It can be determined from the Chow test and the Hausman test that the models used in the Chow test and the Hausman test are the Fixed Effect Model and the Random Effect Model, respectively. Additionally, the Lagrange Multiplier test was employed to evaluate whether the Common Effect Model and the Random Effect Model were the superior models. The following assumptions are employed by the top model tests:

H_0 = Common Effect Model (CEM)

H_a = Random Effect Model (REM)

Table 6. Lagrange Multiplier Test Results

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	138,7521	2,038655	140,7908
	(0,0000)	(0,1533)	(0,0000)

Source: Eviews 12.0 (data processed)

Based on the results from Table 6, the probability value of cross section random is 0,0000 < 0,05. Then H_0 was rejected and H_a was accepted, so the best model used in this study based on the Lagrange Multiplier test was the Random Effect Model.

Panel Data Regression Model Used

According to the findings of the tests that have been run, the Random Effect Model is the appropriate estimation model for this investigation. The following is a description of the estimation findings from the study of the impact of independent variables on dependent variables:

Table 7. Random Effect Model

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	14,47837	0,840527	17,27872	0,0000
Dar	1,463782	0,701063	1,846692	0,0679*
Tat	-3,372814	0,901299	-2,228993	0,0281**
MBV	-1,46273	0,056502	-5,262030	0,0000***

*** sig 1%; ** sig 5%; * sig 10%
Source: Eviews 12,0 output (data processed)

Based on the test results on the Random Effect Model, the regression equation from the estimation results is as follows:

Rating = 14,47837 + 1,463782 DAR − 3,372814TAT − 1,46273 MBV

Table 8. Test Results t

Variables	Coefficient	Std. Error	t-Statistics	Prob.
C	14,52323	0,840527	17,27872	0,0000
Dar	1,294647	0,701063	1,846692	0,0679
Tat	-2,008988	0,901299	-2,228993	0,0281
MBV	-0,297313	0,056502	-5,262030	0,0000

Source: Eviews 1 2,0 output (data processed)

a. The Effect of Leverage (DAR) on Bond Ratings
   Based on Table 8, the probability of the Leverage (DAR) variable shows a value of 0,0679, where the value is greater than 0,05 or 0,0603 > 0,05 with a coefficient value of 1,294647. The$_{calculated}$ t value in this study was smaller than t_{table} or 1,846692 < 1,98498, so the decision was that H_a was rejected and H_0 was accepted. The results show that the leverage (DAR) variable has no effect on the bond's rating.

b. Effect of Activity Ratio (TAT) On Bond Ratings
   In table 8, the probability of the Activity Ratio (TAT) variable has a value of 0,0281, it is known that the value is smaller than 0,05 or 0,0281 < 0,05 with a coefficient value of −2,008988. The calculated t value in this study was greater than t_{table} or −2,228993 < −1,98498, so the decision that H_0 was rejected and H_a was accepted. Based on these results, the activity ratio (TAT) variable negatively affects the bond's rating.

c. Effect of Market Value (MBV) on Bond Ratings
   Based on table 8, the probability of the Market Value variable (MBV) has a value of 0,0000, where the value is greater than 0,05 or 0,0000 < 0,05 with a coefficient value of −0,297313. The$_{calculated}$ t value in this study was smaller than t_{table} or −5,262030 < −1,98498, so the decision was that H_a was rejected and H_0 was accepted. These results show that the market book value (MBV) variable has no effect on the bond's rating.

Coefficient of Determination Test (Adjusted R^2)

The test for the coefficient of determination (adjusted R^2) is designed to determine the extent to which independent factors, such as leverage (DAR), activity ratio (TAT), and market value, can explain dependent variables, such as bond ratings (MBV). According to the adjusted value of R^2, which is close to one, the independent variable provides nearly all of the information necessary to predict the change in the dependent variable. The adjusted R-squared reveals the results of the test for the determination coefficient. The value of the adjusted R-Squared is 0,282934, or 28 percent. The capacity of independent variables, namely leverage (DAR), activity

ratio (TAT), and market value (MBV), to explain or influence just 28 percent of the dependent variables, whilst 72 percent of the dependent variables are explained by factors beyond the scope of this study.

Discussion

The Effect of Leverage on Bond Ratings

The results of the partial test (t test) in Table 7 show the probability of the leverage variable having a value of 0,0679, where the value is greater than 0,05 or 0,0679 > 0,05 and the calculated t value is smaller than t table 1,846692 & 1,98498. The results show that the leverage variable has no significant effect on the bond's rating.

In this study, leverage is quantified using the debt-to-assets ratio (DAR), which is calculated by comparing total liabilities with total assets, but it is unable to prove the influence of leverage on bond ratings. According to Partha and Yasa (2016), the lower the company's leverage, the more likely the bond rating. If this leverage shows a high value, this indicates that the company has excessive debt and indicates the possibility that the company will not be able to create sufficient profits to pay its bond obligations. PEFINDO's assessment is based on debt ratio analysis. The higher the debt ratio, the lower the rating given by PEFINDO. This is because the more debt burden is borne, the more difficult it is for the company to pay off the bonds, so the bond ratings that will be obtained are also lower. When the leverage ratio is high, it means that most of the assets are financed by debt, which has an impact on the company's low ability to pay off its obligations so that it can lower the company's bond rating. The effect of leverage on bond ratings can be caused by companies that have high leverage even though it is for the long term, but this is considered bad because of the amount of debt they have. Companies and creditors prefer a lower debt ratio because the lower this ratio, the greater the attenuation of losses suffered by the company and creditors in the event of liquidation, and this will also be considered by investors who will buy bonds. However, the results of this study indicate that debt policy has no effect on bond rating determination. This is probably due to the principle of a trade-off between the risks and benefits of using debt. The use of debt is justified as long as the use of debt can be expected to provide greater economic profitability than interest on debt.

However, in this study, there is no influence between leverage and bond ratings. The findings of this investigation contradict prior studies by Ayres, (2016), Khatami *et al.* (2016), Partha and Yasa (2016), Bakhtiari (2017), Sun and Zhang (2017), Winanti *et al.* (2017), Hiqmahtunnisah *et al.* (2018), Sajjad and Zakaria (2018), Chabowski *et al.* (2019), Ng and Arif (2019), and Wijaya (2019), it indicated that leverage has a substantial impact on bond ratings.

This is because from 2018 to 2021, 18 out of 25 financial companies, or 72 percent, experienced an increase in leverage but were not followed by a decline in bond ratings. One of the companies that experienced an increase in leverage was Radana Bhaskara Finance Tbk (HDFA) by 3,4 percent, which in 2017 had a leverage of 0,8637 or 86,37 percent, and in 2018 it was 0,8973 or 89,73 percent. The increase in leverage was offset by a downgrade of the bond's rating, which was originally rated idA-to idBBB-. The following also happened to Verena Multi Finance Tbk (VRNA), which experienced a decrease in leverage by 8 percent, where in 2020 it had a leverage of 0,8268, or 82,68 percent, and in 2021 it had a leverage of 0,74796, or 74,796 percent. The decrease in leverage was offset by a rise in the bond's rating, which was originally rated idA-to-idA.

This study's findings support the research by Prastiani (2018), Kustiyaningrum *et al.* (2017), Sari and Badira (2016), Rosa and Musdholifah (2016), and Henny (2016).

Effect of Activity Ratio to Bond Rating

In Table 7, the partial test (t test) shows the probability of the Activity Ratio variable of 0,0281, the value is smaller than 0,05 or 0,0281 < 0,05. The value of $-t_{counts}$ the variable Activity Ratio is greater than $-t$ of the$_{table}$ or $-2,228993 < -1,98498$. Based on these results, the Activity Ratio variable has a significant effect on the bond's rating.

The activity ratio in this study is proxied by total asset turnover (TAT) by comparing income with total assets. The negative relationship in this study shows that the activity ratio has an inverse effect on the bond rating, meaning that the higher the TAT, the lower the bond rating or vice versa. Companies with high activity should tend to be able to generate higher profits so that the company is able to pay bond interest regularly and pay off the principal. This happens because in Indonesia, when looking at the rating of corporate bonds, the thing that must be considered is everything in terms of obligations or debts of the company. The results of this study are inconsistent with the research Henny (2016), Astuti (2017), Dewi and Suaryana (2017), Winanti *et al.* (2017), Griffin *et al.* (2018), Juardi and Sueno (2019), which stated that the ratio of activity to proxies of Total Asset Turnover (TAT) had a positive effect on bond ratings.

This is because in the research period from 2018 to 2021, there was the greatest decrease in the activity ratio when compared to the increase. In 2017, the activity ratio decreased by 80 percent, in 2018 by 76 percent, and in 2019 by 44 percent. Of the total 25 financial companies ranked by PEFINDO, five companies, or 20 percent, are experiencing an increase in TAT accompanied by a decrease in bond ratings and vice versa, namely: Mayapada Internasional Tbk (MAYA), Bank Woori Saudara Indonesia 1906 Tbk (SDRA), Clipan Finance Indonesia Tbk (CFIN), Radana Bhaskara Finance Tbk (HDFA), and Verena Multi Finance Tbk (VRNA). Furthermore, as many as six companies, or 24 percent, have high TAT but received low bond ratings, consisting of Batavia Prosperindo Finance Tbk (BPFI), Clipan Finance Indonesia Tbk (CFIN), Mandala Multifinance Tbk (MFIN), MNC Kapital Indonesia Tbk (BCAP), Radana Bhaskara Finance Tbk (HDFA), and Verena Multi Finance Tbk (VRNA). One of the companies that has a low TAT in this study is Bank Woori Saudara Indonesia 1906 Tbk (SDRA) with a value of 0,0660 or 6,60 percent in 2021, but its bond rating received the highest value of 11 or idAAA. There was a decrease in TAT of 0,87 percent and was accompanied by an increase in the bond rating which was originally idAA to idAAA. In 2020, its activity ratio was 0,0747 or 7,47 percent with revenue of Rp. 2.214.687.000.000,00 and total assets of Rp. 29.631.693.000.000,00, then in 2021 it had revenues of Rp. 2.438.993.000.000,00 and total assets of Rp. 36.936.262.000.000.

The results of this study are supported by research Prastiani (2018), Ismail *et al.* (2018); Partha and Yasa (2016).

The Effect of Market Value on Bond Ratings

In Table 7, the partial test (t test) shows the probability of a Market Value of 0,0000, the value is less than 0,05 or 0,0000 < 0,05. The$_{calculated}$ t value in this study was smaller than the table t or −5,262030 < −1,98498. The results show that the Market Value variable has a significant effect on the Bond's Rating. Market value is proxied by Market to Book Value (MBV), which is calculated by comparing market value with stock book value. A company with a good market value has an investment gap, meaning that the company has something reliable and can provide profits so that it can pay off debt and the principal of bonds and improve bond ratings (Hiqmahtunnisah *et al.*, 2018). The negative relationship in this study shows that market value has an inversely proportional influence on bond ratings, meaning that the higher the MBV, the lower the bond rating will be or vice versa. The existence of a significant influence between market value and earnings management can be explained by the fact that market value is not the main source of information from the perspective of investor considerations. Most investors assume that the company's reported earnings do not show the overall management performance. And many things that affect the market value of the company, namely internal factors and external factors. The results of this study are inconsistent with the research by Sirma and Rahyuda, (2015), Rosa and Musdholifah (2016), Dewi and Suaryana (2017), Hiqmahtunnisah *et al.* (2018), Livingston *et al.* (2018), Chabowski *et al.*, (2019), and Wijaya (2019), which stated that the market value had a significant positive effect on bond ratings.

This is because in the research period 2018 to 2021, there was more decline in market value when compared to the increase. In 2019 the decline in market value was 36 percent, in 2018 it was 56 percent, and in 2021 it was 60 percent. One of the companies that experienced a decline in market value was Bank Woori Saudara Indonesia 1906 Tbk (SDRA), which experienced a decrease in market value by 38 percent in 2019, 10 percent in 2020, and 8 percent in 2021. The

market value of the company in 2019 was 0,9591 or 95,91 percent with a stock market value of Rp. 890,00 with a book value of Rp. 928,00, then in 2020 of 0,8635 or 86,35 percent with a stock market value of Rp. 860,00 and a book value of Rp. 996,00, and of 0,7875 or 78,75 percent with a stock market value of Rp. 830,00 and a book value of Rp. 1.054,00 in 2021. The decline in market value was offset by an increase in the bond rating which was originally idA+ to idAA, then idAA+, and idAAA. The same thing happened to Clipan Finance Indonesia Tbk (CFIN) in 2020, which experienced an increase in market value by one percent. In 2021, companies had a market value ratio of 0,2769, or 27,69 percent, with a stock market value of Rp. 280,00 and a book value of Rp. 1.011,00, while in 2021, the market value was 0,2878, or 28,78 percent, with a stock market value of Rp. 314,00 and a book value of Rp. 1.091,00. The bond's rating went from idA+ to idAA-, which made up for the fact that its market value went up. The results of this study are supported by research Khatami *et al*. (2016), Fracassi *et al*. (2016); Syawal and Fachrizal (2016).

CONCLUSION

The results of testing variable activity ratios using the Total Assets Turnover (TAT) proxy and market value using the Market to Book Value (MBV) proxy showed the result of a significant negative influence on the bond ratings of financial companies, while leverage used a proxy with a Debt to Assets Ratio (DAR) indicates the absence of significant influence on the bond ratings of financial companies. Hence, it can be advised to companies that the three proxies are not best factor for predicting bond ratings in terms of making decisions related to bond issuance appropriately.

The limitation of this study is that there are issuers rated PEFINDO that are not yet listed on the Indonesia Stock Exchange, so it is quite difficult to obtain reliable financial information from these companies. Suggestions that can be proposed for further research are improving the model by investigating other variables outside of this research that can affect bond ratings, such as variables beyond financial ratios, so that the results obtained are more varied. It is also recommended to increase sampling from the population in order to clearly describe the condition of the population, not only taking samples from financial companies but also non-financial companies rated by PEFINDO. In addition, additional research periods can be carried out so that the prediction of bond ratings can be better. Suggestions that can be given to issuers are that the proxy used in this study is not the best indicator for estimating bond ratings by PEFINDO in making judgments about bond issuance, so it is recommended to use other proxies that are more appropriate in measuring leverage, activity ratios, and market value. In addition, it is necessary to pay attention to other factors that can affect bond ratings such as company growth, bond age, existence of collateral, and company size.

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