Bond Ratings: Impact of Financial Performance and Maturity

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Abstract. Bond ratings provide a signal to issuers and investors about the probability of default on debt payments, especially the long-term debt of a company. This study aims to examine the effect of financial performance and maturity on bond ratings, especially banks listed on the Indonesia Stock Exchange. This study uses the entire banking sector listed on the Indonesia Stock Exchange for the 2013-2022 period and rated by PT PEFINDO. The sampling method is purposive sampling method. This sample consists of 14 banks, hypothesis testing using multiple linear regression analysis with SPSS data processing tool. The results showed that profitability and liquidity had a significant positive effect on bond ratings, while the solvency and maturity variables had a significant negative effect on bond ratings.

Keywords: Bond Ratings, Maturity, Liquidity, Leverage, Profitability

1 Introduction

The capital market serves as a platform for parties with extra cash and those in need of cash to connect by selling and purchasing securities, most of which have longer maturities than one year (1). The existence of a capital market in a country can be used as a point of comparison to determine how much business characteristics in that country influence other economic policies, such as fiscal and monetary policies. The Indonesian capital market offers investors a wide selection of existing assets to choose from due to the abundance of securities there. Bonds are one of the traded securities.

Bonds are publicly traded securities with clauses describing terms like nominal value, interest rate, time duration, name of issuer, and several other clauses outlined in laws enacted by relevant authorities (2). Compared to other securities, investing in bonds has a number of benefits. Bond investments are safer than stock investments since rewards on equities come from dividends and capital gains, while returns on bonds come from yields and bond coupons. Bonds are preferred by investors for two reasons: 1) bonds offer a positive rate of return with fixed income; and 2) stocks are less attractive than bonds due to their higher volatility (3).

Global threats in 2022, such as geopolitical tensions between Russia and Ukraine, China's protracted COVID-19 lockdown, and the rapid rise in benchmark interest rates across the board

have rattled global markets, including Indonesia's. Due to demands from rising US and Bank Indonesia benchmark interest rates, the bond market's performance declined throughout 2022. As a result, the benchmark bond's yield rose to a level of 7.6%, and the performance of the government bond index lagged behind that of the corporate bond index. Table 1 below is the recapitalization of bond trading between government bonds and corporate bonds.

Table 1. Bond Trade Recapitulation

Period	Goverment Bonds			Corporation		
	Outstanding (Rp million)	Volume (Million)	Frequency	Outstanding (Rp million)	Volume (Million)	Frequency
2017	2,099,765,960	3,842,419,890	214,618	387,329,515	322,133,270	30,476
2018	2,365,350,521	5,007,798,520	230,763	411,857,395	327,616,844	30,324
2019	2,752,740,926	6,902,457,248	276,368	445,101,358.89	388,435,483	36,769
2020	3,870,756,831	10,624,628,430	468,117	425,708,853.84	377,544,298	37,788
2021	4,521,977,429	13,794,702,276	539,514	430,340,718.59	342,987,085	32,263
2022	5,162,462,331	11,122,333,122	524,032	446,084,712.80	425,236,302	41,700

Source: Capital Market Statistics, Financial Services Authority (OJK)

Table 1 shows that the issue of corporate bonds will rise once more in 2022 compared to 2021. The rating agency for debt instruments or bonds, PT Pemeringkat Efek Indonesia (Pefindo), claims that the trend of interest rates is currently low and the yield on SUN is not yet high. influenced a number of issuers to publish corporate bonds. Up to this point, the non-financial industrial sector has been more attentive in issuing corporate bonds, accounting for 55.2% of all issuances. In actuality, associations of financial institutions have released corporate bonds more regularly in the past.

Bonds nevertheless contain risks one of which is the company's failure to pay back bonds to investors, even though they are generally thought of as a safe investment. Investors that purchase defaulted bonds will only receive a portion of the original bond return. According to (4) the probability of default increases as bond maturity approaches. Investors should consider bond ratings before making an investment since

they might provide information about the likelihood that a firm would default on its obligations. Investors use bond ratings as one piece of information when determining whether a bond is worthwhile. Bond ratings are primarily used to give investors reliable information about a company's financial performance, industrial business position, and bond issuers (bonds) in the form of ratings (5).

Bond rating organizations' services are available to capital owners who want to learn more about bond ratings. In order for the rating agency to determine whether or not the bonds are suitable for investment, the rating procedure is used to evaluate the performance of the firm. According to (1) the lesser the bond's risk is to investors, the less probable it is that the bonds will default on their interest and loan principal payments. In calculating bond ratings, OJK recognizes five agencies: PT Fitch Ratings, Moody's Investor Service, Standard & Poor's (S&P), and PT Pemeringkat Efek Indonesia (PEFINDO). Bank Indonesia and other businesses rely on bond ratings from PT PEFINDO to entice investors and determine the stability of the business, so this

study makes reference to their ratings. Investors can ascertain the caliber of the bonds issued by the issuing corporation by focusing on the rating provided by the institution.

According to PT Pefindo's figures for 2022, financial institutions such multi-finance firms, banks, and non-bank financial institutions continue to dominate the issuing of corporate bonds. This sector will continue to expand as long as profit margins are high and the economy continues to recover quickly and in a positive manner. Pefindo indicated that for both the 5-year and 10-year tenor AAA-rated corporate bonds, the yield trend in 2022 will be downward. This runs counter to the movement in BBB-rated corporate bond yields. Bonds with a AAA rating yield less, which means they are now more expensive. In the meantime, a drop in the price of the rating bonds is suggested by an increase in BBB rating bond rates. Investors looking for less risky corporate bonds have typically been the cause of the paradoxes that have recently happened. Potential dangers are typically seen by investors as being near-term.

Quantitative considerations can be taken into account when determining bond ratings (4). The evaluation of financial success, which may be gauged by ratio analysis, is one of these quantitative factors. The financial ratios used in this study are based on research by (6), who claimed that generally speaking, the ratios frequently used in analyzing bank financial ratios are divided into several groups. These groups include the liquidity ratio, which is used to measure the level of liquidity of banking companies, the solvency ratio, which is used to gauge the success of capital in financial companies, including banking, and profitability, which is used to gauge the company's capacity to generate income in all its various forms.

According to (7), a company's profitability is its capacity to generate profits over a specific time period by utilizing its productive assets or capital, including both overall capital and own capital. One of the factors that rating agencies consider when evaluating corporate bonds is profitability. The danger of default or default risk decreases when a firm's profitability increases, resulting in a higher bond rating for that corporation. According to studies by (8), (9), (10), (11), profitability has a favorable impact on bond ratings. (12) and (13) revealed many research findings indicating that profitability has a detrimental impact on bond ratings. This demonstrates how inconsistent research findings can be.

The ability of the business to satisfy its financial obligations both long-term and immediately is measured by the solvency ratio. Businesses with high solvency ratios typically struggle to fulfill their obligations. The risk of the company defaulting is higher the higher the solvency ratio of the corporation, which indicates how much of its assets are funded by debt. The rating provided to the company is better the lower the solvency ratio. It has been established through prior study by (14), (15), (16) that the solvency ratio significantly lowers bond ratings. (17) and (18) all came to different conclusions on the solvency ratio's impact on bond ratings. The capacity of the business to settle its immediate liabilities is known as liquidity. A high liquidity number can indicate that a firm is more likely to be able to pay down its long-term debt and that it has the capacity to do so, which will improve the company's bond rating. According to (19), (20), and (21) bond ratings are impacted by liquidity. (22) study found no connection between liquidity and bond ratings.

Maturity has an impact on bond rating as well. (4) argument, which contends that maturity affects bond ratings, supports this. The day on which bondholders will receive their bonds' face values is known as the maturity of the bonds. Bonds having a shorter life can act as a positive signal because they are less risky than bonds with a longer life, which will help the company's bonds receive a higher rating. Maturity was found to have an impact on bond ratings in study

done by (23). Based on several phenomena and also the research gaps of several previous researchers, this study aims to examine the effect of financial performance and maturity on bond ratings, especially banks listed on the Indonesia Stock Exchange.

2 Literature Review And Hypothesis Development

2.1 Bond

Bonds, which are available on the capital market, are a source of funding for both the government and companies. In simple terms, a bond is a security that the issuer issues to investors (bondholders), promising to pay a return in the form of periodic coupons and the principal amount when the bond matures. A bond is defined by the Indonesia Stock Exchange as a transferable medium-long term note that contains a guarantee from the issuing party to pay interest in return for a specific amount of time and pay off the original debt to the bond buyer at a predetermined time. (24) suggests that there are several potential risks faced by investors in bond investment, namely interest rate risk, default risk, call risk, purchasing risk, reinvestment risk, liquidity risk.

2.2 Bond Ratings

Bond ratings are an assessment of the risk associated with bonds that are traded by a rating agency and a source of information for investors (based on BAPEPAM and Financial Institution Decisions Kep-151/BL/2009). Investors are anticipated to benefit from the rating information while choosing investments. As a result, investors can decide whether to buy bonds or not. Bonds with a low rating indicate that the bond's security is weak. By selecting to invest in bonds with a higher rating, investors can stay away from these bonds. High-rated bonds will, however, yield a lower rate of return than low-rated bonds.

There are three rating agencies, namely PT PEFINDO (Indonesian Rating Agency), PT Fitch Ratings Indonesia, and PT ICRA Indonesia, according to Bank Indonesia Circular Letter Number 13/31/DPNP dated 22 December 2011 concerning Rating Agencies and Ratings Recognized by Bank Indonesia. The oldest rating company in Indonesia is PT PEFINDO, which was established in 1993. Each rating agency's rating symbol differs somewhat but nevertheless conveys the same idea. The "id" prefix on the bond ratings issued by PT PEFINDO indicates that the bond ratings have been modified for Indonesian conditions. A plus (+) or minus (-) sign can be used to change the ratings from idAA to idB. A category rating with a plus sign (+) is closer to the ranking above it. A rating category that is closer to the rating below it is denoted by the negative sign (-). It is used to identify a rating category's strength.

2.3 Financial Performance

Financial ratios are one of several ways that can be used in analyzing a company's financial condition, this is a very common practice where the results will provide a relative measurement of the company's operations (25). (26) financial ratios are activities of comparing the numbers in the financial statements by dividing one number by another. Financial ratios are designed to evaluate financial reports. Financial statements report the company's position at one point in

time and its operations over several periods. Financial statements can be used to predict the profits that investors will get in the future. According to (27) there are several bank financial ratios that are considered important, including profitability, liquidity, solvency.

2.4 Maturity

According to (28), the maturity period is the duration between the bond's issuance and maturity date. Bond maturities range from one year to more than five. In general, a bond's coupon or interest rate rises as the maturity date approaches. Bonds with a 1-year maturity window will be simpler to forecast, making them less risky than bonds with a 5-year maturity window. The age or maturity of the bonds—that is, the amount of time until the bond issuer pays back the principal debt—according to (24).

2.5 Hypothesis

Profitability indicates a company's ability to remain in business (29). In order to improve the ranking of bonds, a company's profitability ratio must be higher in order for it to be better able to cover periodic interest payments and the principal guarantee. The higher the level of profitability a company achieves, the lower the risk that it will be unable to make payments, and the higher the company's ranking.

H1: Bond rankings are impacted by profitability

Companies that are able to fulfill their financial commitments on time are liquid and have more current assets than current liabilities. High degree of liquidity will demonstrate the company's sound financial standing, and this will have an impact on how bond ratings are predicted. The probability of failure is lower and the company's bond rating is higher the more liquid the bond-issuing entity was.

H2: Bond rankings are impacted by liquidity

According to (30) Companies with high levels of solvency tend to have a low ability to meet their obligations, thus the lower the company's solvency, the higher the ranking given to the company. The low value of the solvency ratio can be interpreted that only a small portion of assets is funded by debt and the smaller the risk of company failure.

H3: Bond rankings are impacted by solvency

Bonds with a quick maturity duration will be simpler to forecast, making them less risky than bonds with a long maturity period (31). Bonds having a shorter life can act as a positive signal because they are less risky than bonds with a longer life, which will help the company's bonds receive a higher rating.

H4: Bond rankings are impacted by maturity

3 Research Methods

This research is a type of explanatory research with a quantitative approach. The population of this study is the banking sector listed on the Indonesia Stock Exchange for the 2013-2022 period and rated by PT PEFINDO. Then the sample selection was carried out using a purposive sampling method to obtain a representative sample according to the specified criteria. Based on the selection of samples that have been done, obtained 10 companies with a research period of 10 years. The data used in this study is secondary data sourced from banking company financial statements for the 2013-2022 period available on the Indonesia Stock Exchange and banking company bond rating reports issued by PT PEFINDO.

Bond Ratings

A bond's security level is expressed through a bond rating. The bond rating that was employed in this study is the investment grade bond rating (AAA, AA, A, BBB). By assigning a value to the bond rating, the bond rating is measured using an ordinal scale in this study. Assuming that a rating with a plus sign (+) has the same value as one rating above it, since the plus sign implies that the rating has security near to the top rating, bond ratings will be assessed using the numbers 1 (one) to 5 (five). Bond ratings with a plus sign imply that the security has a rating that is very near to the highest possible. Bond ratings are categorized as follows:

Table 2. Bond Ratings

No	Bond Rating	Score	No	Bond Rating	Score
1	idAAA	18	10	idBBB-	9
2	idAA+	17	11	idBB+	8
3	idAA	16	12	idBB	7
4	idAA-	15	13	idBB-	6
5	idA+	14	14	idB+	5
6	idA	13	15	idB	4
7	idA-	12	16	idB-	3
8	idBBB+	11	17	idCCC	2
9	idBBB	10	18	idD	1

Source: Pefindo (2022)

Profitability

Demonstrates the company's capacity for profit, both in terms of sales, total assets, and profit on capital owned. Return on Assets (ROA) is one tool that may be used to assess a bank's profitability. A company's capacity to utilise its assets to generate profits is measured by its ROA (27). The formula for ROA is as follows:

$$ROA = \frac{Earning\ After\ Tax}{Total\ Asset}$$
(1)

Liquidity

Demonstrates the business's capacity to make timely payments on short-term financial obligations. According to (32), liquidity depicts the link between a company's cash and other current assets and its current liabilities. The Loan to Deposit Ratio serves as a stand-in for the liquidity variable in this study. The Loan to Deposit Ratio (LDR) is used to assess a bank's ability to meet short-term obligations to third parties through extended loans. Its calculation

method is as follows:

$$Loan\ to\ Deposit\ Ratio = \frac{Total\ Loans}{Total\ Deposits}$$
(2)

Solvency

Comparing the percentage of owned capital used to finance investments with debt. The lower the solvency value, the less chance there is of a company failing because only a tiny portion of assets are backed with debt. The debt to equity ratio (DER), which is calculated as follows, serves as a proxy for the solvency ratio in this study:

$$Debt\ to\ Equity\ Ratio = \frac{Total\ Debt}{Equity}$$
(3)

Maturity

The bondholder will receive payment of the bond's principal or face value on the date of maturity. Because the maturity variable is a dummy variable, the measurement scale employs a nominal scale. If the bond has a maturity of one to five years, it is measured by assigning a value of 1 (one), and if it has a maturity of more than five years, it is measured by assigning a value of 0 (zero).

Data Analysis Technique

The classic assumption test is carried out so that the regression model is BLUE (Best, Linear, Unbiassed, Estimated), and to find out some deviations that occur in the data used for research. The classical assumption tests used in this study are: Normality, Multicollinearity, Autocorrelation and Heteroscedasticity Tests. Multiple linear analysis is a linear relationship between two or more independent variables (X1, X2,...Xn) and the dependent variable (Y). Multiple linear analysis is used to measure the effect of more than one independent variable on the dependent variable. The data used is usually an interval or ratio scale.

The multiple linear regression line equation can be written as follows:

$$Y = \alpha + \beta_1 ROA + \beta_2 LDR + \beta_3 DER + \beta_4 M + e \qquad (4)$$

Y = Bond Rating X_3 = DER (Debt to Equity Ratio)

α = Constant Value X_4 = MA (Maturity)

X_1 = ROA (Return On Assets) $\beta_{1,2,3,4}$ = Regression Coefficient

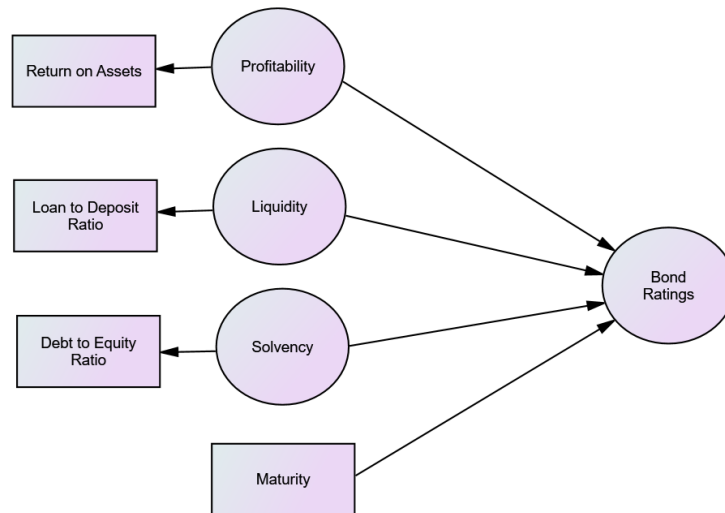X_2 = LDR (Loan to Deposit Ratio)   e = Errors

Fig. 1. Conceptual Framework

4 Results And Discussion

For this study, PT Pemeringkat Efek Indonesia (PT PEFINDO) provided bond rating data. BAPEPAM (Capital Market Supervisory and Implementing Agency) has granted Pefindo, a rating agency, an operational license. PEFINDO's primary role in rating operations is to offer an unbiased, trustworthy, and independent assessment of the credit risk of publicly issued bonds. A total of 14 banks were found to meet the criteria based on the findings of the research samples' selection, including Bank Bukopin, Bank Capital Indonesia, Bank CIMB Niaga, Bank Danamon Indonesia, Bank Mandiri, Bank Rakyat Indonesia, Bank CBC NISP, Bank Pan Indonesia, Bank Tabungan Negara, Bank Negara Indonesia, Bank DKI, Bank Mayapada Internasional, Bank Maybank Indonesia, and Bank Victoria International.

The minimum, maximum, mean, and standard deviation values for each research variable are included in the descriptive statistics employed in this study. The outcome of the descriptive statistics is:

Table 3. Descriptive Statistics

	N	Min	Max	Mean	Std. Deviation
ROA	140	-6,27	6,57	1,7553	1,68762
LDR	140	12,35	135,46	85,2962	15,10852
DER	140	0,30	1607,86	563,1389	409,90656
Maturity	140	2	10	5,72	1,684
Ratings	14	9	18	15,76	2,742

0

Source: processing data (2023)

Classic Assumption Test

4.1 Normality Test

Before conducting numerous linear regression tests, this test is conducted as a condition. In this test utilizing the Kolmogrov-Smirnov test, the regression model is normally distributed if the significance value is > 0.05. Table 4.11 below shows the results of the normalcy test:

Table 4. Normality Test Results

Number of Respondents	Significance	Information
140	0,216	Normal

Source: processing data (2023)

Based on table 4 shows that the variables of profitability, liquidity, solvency, maturity and bond ratings are normally distributed, due to the significance value (0.216 > 0.05).

4.2 Multicollinearity Test

In order to determine whether the regression model identifies a correlation between the independent (independent) variables, the multicollinearity test is used. The Variance Inflation Factor (VIF) number in this study can be used to determine if multicollinearity is present or absent. Multicollinearity is present if the VIF value is greater than 10, and it is absent if the VIF value is less than 10. A regression model that has no correlation between the independent variables is a good regression model. Table 5 below shows the results of the multicollinearity test:

Table 5. Multicollinearity Test Results

Independent Variable	Tolerance	VIF	Information
Profitability	0,883	1,132	Non-Multicollinearity
Liquidity	0,838	1,193	Non-Multicollinearity
Solvency	0,837	1,195	Non-Multicollinearity
Maturity	0,843	1,187	Non-Multicollinearity

Source: processing data (2023)

Table 5 demonstrates that no independent variables have a Tolerance value greater than 0.10 as a result of the calculation of the Tolerance value. There are no independent variables that have a Variance Inflation Factor (VIF) value greater than 10 as a result of the calculation. Therefore, it can be said that this regression model's independent variables do not exhibit multicollinearity.

4.3 Heteroscedasticity Test

In this study, the regression was determined using the heteroscedasticity test. If there was no heteroscedasticity, it was deemed to be satisfactory by comparing the significant value of the independent variable with the residual value. In this experiment, a 2-tailed test with a

significance threshold of 0.05 was used. It is determined that there is no heteroscedasticity if the correlation between the dependent variable and the residual is established at a significant level > 0.05.

Table 6. Heteroscedasticity Test Results

Variable	Spearman's rho	Information
Profitability	0,217	There is no heteroscedasticity
Liquidity	0,372	There is no heteroscedasticity
Solvency	0,065	There is no heteroscedasticity
Maturity	0,339	There is no heteroscedasticity

Source: processing data (2023)

According to table 6, there is a substantial link between service quality and customer satisfaction and Unstandardized Residual that is more than 0.05. The conclusion drawn from the test's results is that there is no heteroscedasticity in any of the independent variables.

4.4 Autocorrelation Test

The Durbin Watson test is used in the autocorrelation testing procedure. The autocorrelation test yielded the findings shown in table 7 below:

Table 7. Autocorrelation Test Results

Durbin Watson	K	N	dU	dL	Information
1.810	4	140	1,7830	1,6656	No Autocorrelation

Source: processing data (2023)

The Durbin-Watson value is 1.810, the dU value is 1.7830, the dL value is 1.6656, and the 4-dU value is 2.217, as can be seen from the results of table 7 above. The Durbin-Watson test findings indicate that the value of dU<dW<4-dU = 1.7830<1.810<2.217, leading to the conclusion that there is no autocorrelation in this regression model.

4.5 Multiple Linear Regression Analysis

Using multiple linear regression analysis, which tries to quantify the strength of the association between two or more variables, data processing. Profitability (X1), liquidity (X2), solvency (X3), and maturity (X4) are the factors employed in this study as independent variables that influence bond ratings (Y), the dependent variable. The results are displayed in table 6 below and are based on data processing using SPSS software version 21.0.

Table 8. Results of Multiple Linear Regression Analysis

Variable	Regression Coefficient (b)	t	Sig	Information
(Constant)	13,526	10,109	0,000	
Profitability	0,232	2,394	0,018	Significant
Liquidity	0,069	6,178	0,000	Significant
Solvency	-0,002	-5,180	0,000	Significant
Maturity	-0,493	-4,966	0,000	Significant

Source: processing data (2023)

The regression equation can be explained as follows:

$$Y = \alpha + \beta1ROA + \beta2LDR + \beta3DER + \beta4MA + e$$

$$Y = 13,526 + 0,232ROA + 0,069LDR + (-0,002)\ DER + (-0,493)\ MA + e$$

The bond rating variable will increase by 13.526 if the simultaneous variables of profitability, liquidity, solvency, and maturity do not change or are equal to zero. Profitability and liquidity have a positive coefficient, which indicates that these two factors have a positive impact on bond rating; the higher the profitability and liquidity, the higher the bond rating. Also indicating a negative relationship between the two factors and the bond rating is the negative coefficient on solvency and maturity.

4.6 Discussion

This research is a study on bond ratings of banking companies listed on the Indonesia Stock Exchange and rated by PT PEFINDO. This study aims to see whether ROA, CR, DER, and MA have a partial effect on bond ratings. The test results that have been carried out above show that:

a. Profitability affects the company's bond rating

According to the test results, profitability as determined by Return on Assets (ROA) has a sizable and sizable impact on bond ratings. The fact that the sig = 0.018 (0.05) indicates this. Since H1 is accepted based on the data, it can be deduced that there is some relationship between ROA and bond ratings. The stronger the bond grade and the smaller the danger of not being able to meet obligations are associated with the acquisition of significant profits. The company's profits show that its financial situation is sound. An organization's capacity to remain in business and fulfill its responsibilities might be indicated by a high degree of profitability. The results of this study are supported by research conducted by (9), (10), (11) which shows that the

profitability variable has a positive effect on bond ratings.

b. Liquidity affects the company's bond rating

The test results show that liquidity as measured by the Loan to Deposit Ratio (LDR) has a positive and significant effect on bond ratings. The results showed that H2 was accepted because the significance level was 0.000 <0.05. The ability of a corporation to meet its short-term financial obligations using its current assets is referred to as liquidity. A corporation that is financially strong and liquid will be able to meet its obligations, even those that are coming due shortly. Investors may be able to tell that a firm is in a liquid state and has assets higher than its present liabilities if it is able to meet its financial obligations on time. Higher liquidity reveals the strength of the company's financial position, which will influence bond ratings from a financial perspective. The research of Fadah, (19) and (21), which assert that liquidity has a favorable and significant impact on bond ratings, supports the findings of this study.

c. Solvability affects the company's bond rating

The test results demonstrate that bond ratings are negatively and significantly impacted by solvency as determined by the debt to equity ratio. The findings indicate that H3 is acknowledged, which explains why DER and bond ratings may have some influence. A negative DER value means that the corporation tends to have a high level of responsibility when it comes to meeting obligations because its overall debt load exceeds its equity holdings. The amount of debt that the corporation is carrying increases with solvency. Businesses at least have a component of their debt that is less than their capital ownership. Less liabilities also indicates that the corporation can only pay off debt using its available money. According to Chandra Ly Dali and colleagues (2015), a company with a relatively high Debt to Equity Ratio (DER) faces a high risk of failing to make interest payments and repay the principal of its debt at the agreed-upon time, placing it in the Low Investment Grade category and lowering its bond rating. The rating provided to the company is better the lower the solvency ratio. It has been established through prior study by (14), (15), (16) that the solvency ratio significantly lowers bond ratings.

d. Maturity affects the company's bond rating

The test results reveal that bond ratings are negatively and significantly impacted by maturity as determined by an interval scale. The fact that the sig = 0.000 (0.05) indicates this. The research's findings support the fourth theory, which explains why it is possible for the bond age and rating to have some influence on each other. Bonds with a long maturity are rated lower than bonds with short maturities because they are deemed to be less risky. In general, the corporation must pay more coupons or interest as a bond's term lengthens (Fauziah, 2014). Given that the value of money would drop over time and that the period of a debt is determined by its interest rate, the longer the term, the larger the losses that investors will experience when investing in bonds. A short bond life really denotes an investment grade bond rating because investors tend to avoid bonds with a long life because the dangers they encounter will also be bigger. The results of this study are in accordance with the research of (33), (21) and (23) which show that bond age affects bond ratings.

5 Conclusions

The following conclusions can be drawn from experiments that have been conducted using the SPSS program to study the impact of financial performance and maturity on bond ratings, particularly for banks listed on the Indonesia Stock Exchange. Bond ratings are positively and significantly impacted by profitability variables represented by Return on Assets (ROA) and liquidity represented by Loan to Deposit Ratio (LDR). This implies that the bond rating will rise if the company has the capacity to produce healthy earnings. Additionally, if a firm is able to meet its financial commitments on time, it can send a strong message to investors that the company is liquid and has more assets than debt, which will raise the bond rating. Solvency variables proxied by the Debt to Equity Ratio (DER) and Maturity have a negative and significant effect on bond ratings. The chance of a corporation failing increases with the solvency ratio. Therefore, the rating provided to the company will be higher the less solvent it is. Bond ratings frequently suffer as a result of solvability ratios. This demonstrates that the relationship between maturity and bond ratings is inverse. Bond ratings decline as maturity lengthens. Long-lived bonds are typically avoided by investors because of the increased risk they pose. The study's findings are anticipated to be used by issuers and investors as information and evaluation material. What elements can influence bond ratings so that the parties are anticipated to be able to control and mitigate any risks. There are various managerial implications based on the findings of the study. The results of this study's consequences for businesses will be considered in maintaining or obtaining investment-grade bonds. The issuing firm can maintain its financial performance based on the ratio of ROA, LDR, and DER in the accounting aspect, while in the non-accounting aspect, the issuing company can take the maturity variable into consideration to reduce the risks associated with bond issuance.

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