Research Paper

The Effect of Leverage, Liquidity, Profitability, and Growth Ratio on Bond Ratings with Earnings Management as a Moderating Variable in Manufacturing Companies Listed on the IDX 2019-2023

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ABSTRACT

This study aims to analyze the moderating effect of earnings management on the relationship between leverage, liquidity, profitability, and growth ratio with bond ratings of manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2019-2023 period.

The population of this study includes all manufacturing companies listed on the IDX that issued bonds, published complete annual financial statements, were rated by PEFINDO, and whose bonds had not matured during the 2019-2023 period, totaling 165 companies. The sampling technique used was purposive sampling, resulting in 14 companies selected as the sample over a five-year period from 2019-2023. The data were analyzed using panel data regression with the assistance of Views 10 software.

The results show that leverage and growth ratio significantly influence the bond ratings of manufacturing companies listed on the IDX. Meanwhile, liquidity and profitability have no significant effect. Furthermore, earnings management moderates the relationship between leverage and bond ratings, but does not moderate the effects of liquidity, profitability, or growth ratio on bond ratings in manufacturing companies listed on the IDX.

Keywords: leverage, liquidity, profitability, growth ratio, bond rating, earnings management

INTRODUCTION

Global economic activity experienced turmoil at the onset of the COVID-19 pandemic. Geopolitical tensions between Russia and Ukraine began in early 2022, leading to the imposition of sanctions, disrupting the global supply chain of various commodities, and leading to rising energy and food prices. Central banks subsequently tightened monetary policy, resulting in an economic slowdown. After the pandemic ended, Indonesia remained impacted by global financial turmoil, such as the strengthening of the US dollar, the increase in the Federal Reserve's benchmark interest rate, and the depreciation of the rupiah. In response to the pandemic, the government implemented tax incentives, reduced the Bank Indonesia benchmark interest rate, and relaxed credit restructuring policies.

The government's credit restructuring policies failed to prevent Indonesian companies from defaulting amid the global economic turmoil. The current situation

demonstrates that uncertainty remains a challenge for domestic business activity. According to the Financial Services Authority (OJK), Indonesia's non-performing loan ratio increased in 2020 to 3.07%, up from 2.93% in 2019. It is supported by a PEFINDO report showing increased bond defaults for issuers rated by PEFINDO under the investment-grade category. In 2019, the default rate for corporate bonds was 3.70%, compared to 5.61% in 2020.

According to Munawir (2014), investors in Indonesia prefer government bonds over corporate bonds due to the low risk of default. The highest growth occurred in corporate bonds, reaching IDR 60.818 trillion in 2018–2019, while the most significant increase occurred in government bonds, reaching IDR 1,165.379 trillion in 2017–2018. Given the continued growth in bond trading each year, this trend indicates that investing in bonds in Indonesia can offer profitable prospects for investors.

Debt security rating agencies recognized by the Financial Services Authority (OJK) are divided into national and international categories. PT Pemeringkat Efek Indonesia (PEFINDO) is an example of a domestic rating agency. Global rating agencies include Standard & Poor's, Fitch Ratings, PT Fitch Ratings Indonesia, and PT Kasnic Credit Rating Indonesia (PT Moody's Indonesia). The use of data from PT PEFINDO publications is discussed in this paper, given that PEFINDO is the sole licensed domestic rating agency with a dominant position in the rating business (Bareksa, 2019).

The creditworthiness of a bond can be determined by analyzing ratios, which guide investors and creditors in making decisions or considering a company's performance and prospects. Accounting information, expressed in relative or absolute terms, is a method of processing and interpreting specific relationships between figures in a financial report. The better the financial ratios, the higher the bond rating. Financial ratios that form the basis for bond rating assessments include leverage, liquidity, profitability, and growth ratio.

Companies in the basic materials, industrial, and non-cyclical consumer sectors that experienced defaults, resulting in bankruptcy and causing significant losses to numerous parties, including PT Megalestari Unggul (a manufacturing company in the industrial sub-sector). PT Megalestari Unggul and its four debt guarantors were declared bankrupt by the Central Jakarta Commercial Court on February 22, 2017. The total amount of bonds defaulted was IDR 376.84 billion to PT Senja Imaji Prisma.

PT Multicon Indraja Terminal, a manufacturing company in the basic materials sub-sector, has defaulted on bonds totaling Rp678.03 billion. PT Asia Paper Mills, a manufacturing company in the basic materials sub-sector, was declared bankrupt by the Central Jakarta Commercial Court on August 7, 2017, with defaulted bonds totaling Rp568 billion.

PT Dwi Aneka Jaya Kemasindo Tbk, a cardboard and paper packaging company in the basic materials sub-sector, officially filed for bankruptcy on November 22, 2017, with defaulted bonds totalling Rp1.1 trillion. PT Istaka Karya (Persero), a manufacturing company in the industrial sub-sector, went bankrupt due to accumulated defaulted bonds reaching Rp14.6 trillion. PT Sariwangi Agricultural Estate Agency (SAEA), a well-known manufacturing and non-cyclical consumer sub-sector tea company, went bankrupt after failing to repay its bonds to Bank ICBC Indonesia worth IDR 317 billion in 2023. PT Multistrada Arah Sarana Tbk, a tire manufacturer in the manufacturing sector and an industrial sub-sector, went bankrupt with total debts reaching IDR 2.2 trillion due to a bond default in 2023.

The accuracy of bond ratings from Indonesian rating agencies has been scrutinized due to some incidents. For example, Bank Global's 2004 bond rating was given an A- rating by the Kasnic rating agency, indicating that, compared to other Indonesian obligors, the issuer has a high capacity to meet its long-term financial

obligations. However, compared to higher-rated obligors, the obligor is often more vulnerable to adverse consequences from economic conditions and changes. This rating is considered poor in the rating category, and the company is categorized as investment grade, as indicated by the negative sign. When Bank Indonesia revealed that Bank Global's license had been revoked, the rating was downgraded to D (default). It indicates that the obligor (issuer) with this rating has failed to make all scheduled payments, both rated and unrated, and Global Bank is now classified as non-investment grade. Because rating agencies evaluate based solely on events rather than continuously monitoring company performance, this is likely the result of agency bias. Furthermore, the rating agency has not provided further details on how bond ratings are determined using financial and non-financial variables.

Leverage (DER) has a negative impact on bond ratings, according to Kurniawan and Suwanti (2017) and Amalia (2013), two studies that examined the elements that influence bond ratings. On the other hand, Septyawati (2013) claims that leverage (DER) increases bond ratings. Munawir (2014) states that a company's debt-to-equity ratio indicates the amount of debt taken to meet its financial needs. The higher the leverage ratio, the more debt is used to pay for assets, or the greater the likelihood of the business going bankrupt. Investors can evaluate a company's financial situation based on this.

While Almilia and Devi (2007) and Adams et al. (2003) report that liquidity through the current ratio has a positive and significant impact, Hasan and Dana (2018) and Sari and Badjra (2016) find it to have a negative and significant effect. A business's capacity to pay its short-term debt is known as liquidity. Septyawati (2013) found that a company's ability to pay its long-term debt is influenced by its liquidity, indicating how easily it can repay its short-term debt.

According to Hasan and Dana (2018), bond ratings are positively and marginally affected by profitability, as measured by ROA. ROA, as a measure of profitability, has a beneficial and substantial impact, according to Kurniawan and Suwanti (2017) and Amalia (2013). Conversely, return on assets (ROA), a measure of profitability, has a negligible and negative impact, according to Almilia and Devi (2007). Profitability ratios describe the capacity to generate profits using cash or business assets. Higher profitability ratios are preferred because more profits are generated (Sjahrial & Purba, 2013).

According to Sejati (2010), Almilia, and Devi (2007), bond ratings are significantly and positively affected by growth, as indicated by the book-to-market ratio. According to Mestri (2017), growth does not affect bond ratings. The ratio that shows the proportion of a company's growth over time is called the growth ratio. This increase is an accounting indicator that influences bond rating predictions because a positive rise in annual surplus can signal a different financial situation, according to Burton et al. (1998).

According to Prastiani (2018), earnings management significantly moderates the positive effects of ROCE, CR, DER, and TATO on bond ratings. Meanwhile, Fratiwi and Suryandani (2021) state that earnings management significantly mediates the impact of profitability and liquidity on bond ratings.

These findings demonstrate that various factors influence bond ratings. This study will examine financial factors using bond ratings as the dependent variable, earnings management as the moderating variable, and leverage, liquidity, profitability, and growth ratio as the independent variables. Earnings management serves as the moderating variable.

The study sample is the bond rated by PT PEFINDO Indonesia in the manufacturing sector listed on the Indonesia Stock Exchange from 2019 to 2023. Manufacturing companies were chosen because they are a widespread type of business in Indonesia, providing significant opportunities for issuers to offer investment options to investors. Furthermore, manufacturing bonds

have a considerable investment value. Considering this context, the author researched "The Effect of Leverage, Liquidity, Profitability, Growth Ratio on Bond Ratings with Earnings Management as a Moderating Variable in Manufacturing Companies Listed on the IDX in 2019-2023".

LITERATURE REVIEW
Bond Rating
According to Tandelilin (2010), bond ratings are crucial for investors and businesses. First, bond interest rates and a company's cost of debt can be used to measure the direct impact of the rating, as bond ratings are a direct indication of the company's default risk. Second, because most businesses purchase bonds rather than individuals, they are restricted to buying only investment-grade securities. Therefore, businesses are prohibited from purchasing new bonds if there are many available buyers and no new bonds are being issued. Low-rated bonds default more often than high-rated bonds due to the increased risk and smaller market.

Bond ratings indicate a company's capacity to meet its financial commitments. Businesses with the highest idAAA bond rating are less likely to default on principal and interest payments. However, firms with the lowest idD bond rating are less likely to default on interest and principal payments. Therefore, investors bear less risk if the bond rating is higher. Conversely, investors face a greater risk of not receiving their loans back if the bond has a lower rating.

Leverage
According to Efendi and Dewianawati (2021), the Debt to Equity Ratio (DER) is a ratio that illustrates a company's capital capacity to meet all obligations and reflects the ratio between liabilities and equity in the company's finances. A high debt-to-equity ratio indicates a business has a very high financial risk. A company with high financial risk is a sign that the company is experiencing financial problems.

The leverage ratio provides an overview of how much debt is used in relation to its equity. The leverage ratio in this study will be determined using the DER, which shows the ratio of total debt to total equity or total capital in accordance with capital structure theory, using the formula:

$$DER = \frac{Total\ Debt}{Total\ Equtiy} x100\%$$

Liquidity
According to Fahmi (2011), a company's liquidity ratio measures its capacity to meet its immediate financial commitments. Therefore, short-term liquidity is another term for the liquidity ratio. Generally, two components comprise the liquidity ratio: the quick ratio (asset test ratio) and the current ratio. One frequently cited indicator of a company's short-term solvency, namely its capacity to repay debts as they fall due, is the current ratio. According to the pecking order theory, companies must be able to use debt optimally and examine the proportion of debt to the company's assets to avoid the risk of declining investor confidence.

The liquidity ratio in this study will be determined using the current ratio, which demonstrates the company's ability to meet its short-term obligations, using the formula:

$$Current\ Ratio = \frac{Current\ Asset}{Current\ Debt}$$

Profitability
Kasmir (2014) stated that the ratio used to evaluate a business's capacity to seek profit is profitability. This ratio includes earnings per share, profit margin, return on equity, return on investment, and return on assets. Return on Assets, or ROA, can be used to calculate profitability ratios. A business's capacity to use capital invested in assets to pursue margins or profits is known as return on assets (ROA). A high ROA level indicates a company's sound financial condition and ability to survive and repay its obligations within the agreed period.

The profitability ratio in this study will use ROA, which demonstrates a company's ability to utilise assets to seek margins, using the formula:

$$ROA = \frac{Net\ Profit\ After\ Tax}{Total\ Asset} x100\%$$

Growth Ratio

Burton et al. (1998) state that positive growth indicates a business's financial health. A bond rating agency's choice of rating and ranking is positively correlated with strong company development. According to Kasmir (2014), the growth ratio is related to a company's capacity to maintain its financial standing despite economic expansion and the business sector in which it operates. Sales growth, net profit, earnings per share, and dividends per share are important metrics that can be used to evaluate this.

The growth ratio is measured by sales growth, or the sales growth ratio. The sales growth ratio can be calculated using the formula:

$$Sales\ Growth\ Ratio = \frac{Sales_n - Sales_{n-1}}{Sales_{n-1}}$$

Earnings Management

The Indonesian Institute of Accountants (IAI) (2016) explains that because investors and creditors are the primary audience for financial reports, it seems reasonable that earnings data should be the focus of attention. Management knows this issue and often engages in earnings management for specific reasons. According to Scott (2000: 351), earnings management presents earnings by selecting a combination of accounting process rules to increase a business's market value or improve managerial utility efficiency. It is achieved through earnings presentation. According to Scott (2000: 351), corporate managers describe earnings management in two ways. The first is maximising managerial utility efficiency, also known as opportunistic behaviour. The second is to ensure that all parties participating in the contract can benefit from an efficient contract. Scott (2000: 272) explains that the purpose of opportunistic behaviour is increasingly prominent in earnings management. According to Scott (2000), there are several reasons why companies may engage in earnings management. These include incentive programs, loan agreements, taxes, political costs, changes in chief executives, and initial public offerings.

The determination of the earnings management ratio is measured by estimating managed accruals using the Modified Jones model:

$$DA_{it=} \frac{TA_{it}}{A_{it-1}} NDA_{it}$$

Description:
Ait-1: Total assets of company i in year t-1
NDAit: Nondiscretionary accruals of company i in year t
TACit: Total accruals of company i in period t
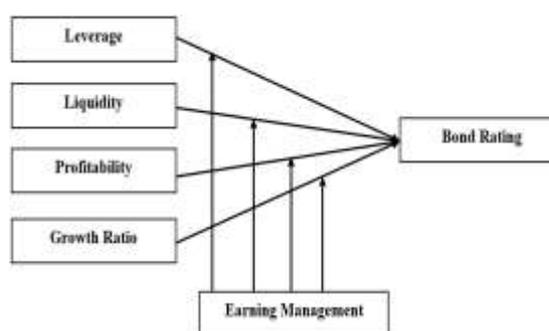DAit: Discretionary accruals of company i in period t

Framework

Figure 1. Conceptual Framework

H1: Leverage has a positive and significant effect on the bond ratings of manufacturing companies.
H2: Liquidity has a positive and significant effect on the bond ratings of manufacturing companies.

H3: Profitability has a positive and significant effect on the bond ratings of manufacturing companies.

H4: The growth ratio has a positive and significant effect on the bond ratings of manufacturing companies.

H5: Earnings management moderates the effect of leverage on bond ratings.

H6: Earnings management moderates the effect of liquidity on bond ratings.

H7: Earnings management moderates the effect of profitability on bond ratings.

H8: Earnings management moderates the effect of the growth ratio on bond ratings.

MATERIALS & METHODS

This study uses associative research. Research aimed at determining whether one independent variable influences another dependent variable is called associative research. The population considered in this analysis is 165 manufacturing companies listed on the Indonesia Stock Exchange (IDX) between 2019 and 2023. The observation period for companies issuing shares is 5 years, from 2019 to 2023.

This study uses a sample of manufacturing companies. The data is available online on the Indonesia Stock Exchange website at www.idx.co.id and each sample company's website. The sampling criteria were:

Manufacturing companies listed on the IDX between 2019 and 2023.

Manufacturing sector companies that issued bonds, rated by PEFINDO and not yet due for maturity between 2019 and 2023.

Manufacturing companies that published annual financial reports between 2019 and 2023.

The sampling approach used was purposive sampling. Purposive sampling considers certain factors, particularly those experts recommend (Sanusi, 2011). Based on these criteria, 14 companies met the requirements. This study had a total of 70 units of analysis (14 x 5 years). Data processing, regression, and the creation of accurate and fair prediction tools were all performed using Microsoft Excel and Econometric Views Student (Eviews) software.

RESULT

Panel Data Regression Model Selection

To select the most appropriate model for panel data processing, several tests can be performed, including the Chow test (common effect vs. fixed effect), the Hausman test (fixed effect vs. random effect), and the Lagrange multiplier test (random effect vs. common effect). The following are the models selected in this study, which will be used in subsequent research:

Chow Test

The Chow test is used to determine which model is most appropriate between the common effect model (CEM) and the fixed effect model (FEM). In this test, the significance level used is 0.05 or 5%. The criteria used in this model are: if the probability value is $> \alpha$ 0.05, then Ho is accepted, meaning the common effect model (CEM) is more suitable. Conversely, if the probability value is $< \alpha$ 0.05, then Ha is accepted, meaning the fixed effect model (FEM) is more appropriate. The results of the Chow test are as follows:

Table 1. Chow Test Results

Effects Test	Statistic	d.f.	Prob.
Cross-section F	25.902252	(13,47)	0.0000
Cross-section Chi-square	146.985279	13	0.0000

Source: EViews Output 10, 2025

Based on the results of this table, the F-statistical probability value is 0.0000, which is less than the significance level of 0.05. It indicates that Ho is rejected and Ha is accepted, meaning the fixed effects model is the appropriate model for panel data regression between the common effects model (CEM) and the fixed effects model

(FEM). The Hausman test was then performed.

Hausman Test

The Hausman test is used to determine which model is most appropriate between the fixed effects model (FEM) and the random effects model (REM). In this test, the significance level used is 0.05 or 5%. The criteria used in this model are: if the probability value of the random cross-section is <0.05, then Ha is accepted, meaning that the fixed effects model (FEM) is more suitable for panel data regression. Meanwhile, if the probability value of the random cross-section is >0.05, Ho is accepted, meaning that the random effects model (REM) is more suitable for panel data regression. The test results of the Hausman test are as follows:

Table 2. Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	29.423600	9	0.0005

Source: EViews Output 10, 2025

Based on the test results, the probability value of the random cross-section is 0.0009, which is less than the significance value of 0.05 or 5%. It indicates that Ha is accepted, and the appropriate model to use for panel data regression between the fixed effects model (FEM) and the random effects model (REM) is the fixed effects model.

Lagrange Multiplier Test

The Lagrange multiplier test determines the more appropriate method between the common and random effects models. Because the Chow and Hausman tests use the same fixed effects panel data model, this study did not continue with the Lagrange multiplier test.

Table 3. Panel Data Regression Results with the Fixed Effect Model

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	13.47343	0.343312	39.24547	0.0000
X1	0.505426	0.101138	4.997403	0.0000
X2	0.242525	0.157840	1.536527	0.1311
X3	-0.094721	0.126558	-0.748440	0.4579
X4	1.523186	0.596309	2.554358	0.0139
Z	-0.667481	2.086761	-0.319865	0.7505
X1Z	1.872742	0.436740	4.288003	0.0001
X2Z	-0.448044	1.230531	-0.364106	0.7174
X3Z	2.242257	3.151490	0.711491	0.4803
X4Z	3.279805	3.908416	0.839165	0.4056

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.938373	Mean dependent var	14.38571
Adjusted R-squared	0.909527	S.D. dependent var	2.566749
S.E. of regression	0.772047	Akaike info criterion	2.579251
Sum squared resid	28.01463	Schwarz criterion	3.318043
Log likelihood	-67.27380	Hannan-Quinn criter.	2.872708
F-statistic	32.52983	Durbin-Watson stat	2.176771
Prob(F-statistic)	0.000000		

Source: EViews Output 10, 2025

The table above shows that the probability of the t-statistic test shows that three variables appear significant at 5% α. Furthermore, the adjusted R-squared value is 0.909527. The F-statistical probability value of 0.000000 indicates that the model is significant. The Durbin-Watson statistic value of 2.176771 exceeds the range of 2.

Classical Assumption Test
Normality Test

The normality test determines whether the linear regression model has a normal data distribution. If the probability value is > α 0.05, it can be concluded that the data is normally distributed; if the value is less than α 0.05, it can be concluded that the data is not normally distributed. The results of the normality test in this study can be seen in the following figure:

Table 4. Normality Test Results

	Residuals
Observation	70
Jarque-Beta	1,789981
Probability	0,408611

Source: EViews Output 10, 2025

The normality test table shows that the probability value is at 0.351942, above the significance level of 0.05 or 5%. It indicates that the data in this study are normally distributed and can be analyzed further.

Multicollinearity Test

The multicollinearity test determines whether a correlation exists between independent variables in the regression model. A good regression model should not correlate with its independent variables. If multicollinearity exists between variables, the regression coefficients of the independent variables cannot be determined, and the standard error value will be infinite. The following table shows the results of the multicollinearity test:

Table 5. Multicollinearity Test Results

	Y	X1	X2	X3	X4	Z
Y	1.000000	0.242545	0.424857	-0.141056	0.322824	-0.145465
X1	0.242545	1.000000	0.068534	0.034197	-0.091661	-0.110028
X2	0.424857	0.068534	1.000000	0.004222	0.046952	-0.088423
X3	-0.141056	0.034197	0.004222	1.000000	-0.161932	0.109812
X4	0.322824	-0.091661	0.046952	-0.161932	1.000000	-0.016989
Z	-0.145465	-0.110028	-0.088423	0.109812	-0.016989	1.000000

Source: EViews Output 10, 2025

Based on the table above, the results of the multicollinearity test indicate that the correlation coefficients between the independent variables do not exceed 1.0, indicating no multicollinearity problem in the regression model.

Moderated Regression Analysis (MRA)

Table 6. Results of Moderated Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	13.47343	0.343312	39.24547	0.0000
X1	0.505426	0.101138	4.997403	0.0000
X2	0.242525	0.157840	1.536527	0.1311
X3	-0.094721	0.126558	-0.748440	0.4579
X4	1.523186	0.596309	2.554358	0.0139
Z	-0.667481	2.086761	-0.319865	0.7505
X1Z	1.872742	0.436740	4.288003	0.0001
X2Z	-0.448044	1.230531	-0.364106	0.7174
X3Z	2.242257	3.151490	0.711491	0.4803
X4Z	3.279805	3.908416	0.839165	0.4056

Source: EViews Output 10, 2025

Based on the table above, the research hypotheses are as follows:

1. The first hypothesis (H1) regarding the effect of leverage on bond ratings yields a significance level of $0.00 < 0.05$ with a t-value of 4.99. It indicates that leverage significantly impacts bond ratings, thus accepting hypothesis (H1).

2. The second hypothesis (H2) regarding liquidity on bond ratings yields a significance level of $0.13 > 0.05$ with a t-value of 1.53. It indicates that liquidity does not significantly influence bond ratings, thus rejecting the hypothesis (H2).

3. The third hypothesis (H3) regarding the effect of profitability on bond ratings yields a significance level of $0.45 > 0.05$ with a t-value of -0.74. It indicates that profitability does not significantly influence bond ratings, thus rejecting hypothesis (H3).

4. The fourth hypothesis (H4), regarding the effect of the growth ratio on bond ratings, yielded a significance level of $0.01 < 0.05$ with a t-value of 2.55. It indicates that the growth ratio has a significant positive effect on bond ratings, thus accepting the hypothesis (H4).

5. The fifth hypothesis (H5), regarding earnings management's moderating effect on leverage on bond ratings, yielded a significance level of $0.00 < 0.05$ with a t-value of 4.28. It indicates that earnings management can moderate the relationship between leverage and bond ratings, thus accepting the hypothesis (H5).

6. The sixth hypothesis (H6), regarding earnings management's moderating effect on liquidity on bond ratings, yielded a significance level of $0.71 > 0.05$ with a t-value of -0.36. It indicates that earnings management cannot moderate the relationship between liquidity and bond ratings, thus rejecting the hypothesis (H6).

7. The seventh hypothesis (H7), regarding earnings management's moderating effect on profitability on bond ratings, yielded a significance level of $0.48 > 0.05$ with a t-value of 0.71. It indicates that earnings management cannot moderate the relationship between profitability and bond ratings, thus rejecting hypothesis (H7).

8. The eighth hypothesis (H8), regarding earnings management's moderating effect on growth ratio on bond ratings, yielded a significance level of $0.40 > 0.05$

with a t-value of 0.83. It indicates that earnings management cannot moderate the relationship between growth ratio and bond ratings, thus rejecting hypothesis (H8).

F Test
The F test in this study was conducted to determine whether a regression model simultaneously influences all independent variables on the dependent variable. The results of the F test can be seen in the table below:

Table 7. F Test Results

R-squared	0.938373	Mean dependent var	14.38571
Adjusted R-squared	0.909527	S.D. dependent var	2.566749
S.E. of regression	0.772047	Akaike info criterion	2.579251
Sum squared resid	28.01463	Schwarz criterion	3.318043
Log likelihood	-67.27380	Hannan-Quinn criter.	2.872708
F-statistic	32.52983	Durbin-Watson stat	2.176771
Prob(F-statistic)	0.000000		

Source: EViews Output 10, 2025

To analyze the F test, note the F-statistic and probability values (F-statistic) in Table 5.10 of the above panel data regression equation model. The F test results in this study indicate that the F-statistic is 32.52, and the probability value of the F-statistic is less than 0.05 or 5%, i.e., 0.00 < 0.05. It is concluded that leverage, liquidity, profitability, and growth ratio significantly affect bond ratings.

Coefficient of Determination
The coefficient of determination is used to determine the ability of an independent variable to influence the dependent variable. The coefficient of determination value lies between zero and one. If the coefficient of determination value is close to one, the independent variable provides almost all the information needed to predict the dependent variable. The coefficient of determination value is measured in the adjusted R-squared.

Table 8. Coefficient of Determination Results

R-squared	0.938373	Mean dependent var	14.38571
Adjusted R-squared	0.909527	S.D. dependent var	2.566749
S.E. of regression	0.772047	Akaike info criterion	2.579251
Sum squared resid	28.01463	Schwarz criterion	3.318043
Log likelihood	-67.27380	Hannan-Quinn criter.	2.872708
F-statistic	32.52983	Durbin-Watson stat	2.176771
Prob(F-statistic)	0.000000		

Source: EViews Output 10, 2025

Based on the panel data regression analysis above, the adjusted R-squared value is 0.9095. This figure indicates that the independent variables in this study, consisting of leverage, liquidity, profitability, and growth ratio, can influence bond ratings by 90%, with the remaining 10% influenced by factors not explained in this study.

DISCUSSION
The Effect of Leverage on Bond Ratings
Statistically, the effect of leverage on bond ratings yielded a significance level of 0.00 < 0.05, with a t-value of 4.99. It indicates that leverage significantly influences bond ratings, thus accepting the researcher's hypothesis (H1). It aligns with the research of Sari and Bajra (2016).
Leverage influences bond ratings because a higher debt-to-equity ratio increases the likelihood of a company being unable to repay its bonds. Therefore, leverage is a concern for PEFINDO when rating bonds. Companies with significant debt financing incur high interest expenses, impacting cash flow. Disrupted cash flow raises the risk of default and lowers the company's bond rating.

The Effect of Liquidity on Bond Ratings
Statistically, the effect of liquidity on bond ratings yielded a significance level of 0.13 > 0.05, with a t-value of 1.53. It indicates that liquidity positively and significantly affects bond ratings, thus rejecting the researcher's hypothesis (H2). It is due to the economic relaxation and postponement of bond premium payments during the pandemic, which requires the bond rating process to be assessed based on the company's long-term ability.
This research disagrees with Amalia (2013) and Hidayat (2018), who stated that a high level of liquidity reflects a company's ability to meet its short-term obligations. The relationship between current assets and liabilities can be used to evaluate a company's liquidity level. This liquidity ratio

reflects a company's ability to repay its debts when they fall due. If a company experiences financial difficulties, it may delay payments on bills (debts), bank loans, and other obligations. The greater a company's assets, the lower its debt, and vice versa. Companies with low debt tend to have high liquidity and high bond ratings.

The Effect of Profitability on Bond Ratings

Statistically, the effect of profitability on bond ratings yielded a significance level of 0.45 > 0.05, with a t-value of -0.74. This indicates that profitability has no effect. It means that profitability does not significantly influence bond ratings, thus rejecting the researcher's hypothesis (H3). The profitability level measures the profit earned in relation to investment sales. A better profitability ratio indicates a company's ability to generate profits.

This research aligns with Alie and Febrianta's (2020) study, which found that profitability does not significantly influence bond ratings. According to Brigham and Houston (2012), bond ratings indicate the security level of a bond. The level of risk or inability of an issuer to pay its obligations is known as the bond rating. Therefore, the results of this study indicate that fluctuating profitability does not affect the level of debt repayment.

The Effect of Growth Ratio on Bond Ratings

Statistically, the effect of growth ratio on bond ratings yielded a significance level of 0.01 <0.05, with a t-value of 2.55. It indicates that the growth ratio significantly influences bond ratings, thus accepting the researcher's hypothesis (H4). A strong company growth ratio is positively related to bond rating agencies' rating and grade decisions. This ratio indicates a company's ability to generate profits and its expected growth over time. This research aligns with Amalia (2013) and Sejati (2010), who argue that the growth ratio reflects a company's ability to maintain its economic position amidst

economic growth and its business sector. Strong company growth is positively related to bond rating agencies' rating and grade decisions.

The Effect of Leverage on Bond Ratings with Earnings Management as a Moderating Variable

Statistically, the effect of leverage on bond ratings yielded a significance level of 0.00 < 0.05, with a t-value of 4.28. This indicates that earnings management can moderate the relationship between leverage and bond ratings, thus accepting the researcher's hypothesis (H5).

Leverage reflects a company's ability to finance its investments. Companies with significant debt financing experience high interest expenses, impacting cash flow. Disrupted cash flow raises the risk of default and lowers the company's bond rating. Companies then manage earnings to distort cash flow to appear favourable and increase bond ratings. Therefore, earnings management can moderate the effect of leverage on bond ratings.

The Effect of Liquidity on Bond Ratings with Earnings Management as a Moderating Variable

Statistically, the effect of liquidity on bond ratings yielded a significance level of 0.71 > 0.05, with a t-value of -0.36. This indicates that earnings management cannot moderate the relationship between liquidity and bond ratings, thus rejecting the researcher's hypothesis (H6).

Liquidity, measured by the ratio of current assets to current liabilities, indicates a company's ability to meet short-term obligations. The level of company liquidity in this study did not affect bond ratings. Furthermore, earnings management did not moderate the relationship between liquidity and bond ratings because earnings management focuses on current-year operating cash flow. In contrast, rating agencies focus on assessing long-term operating cash flow and a company's capital structure. Liquidity, on the other hand,

focuses on operating cash flow and the company's total current assets.

The Effect of Profitability on Bond Ratings with Earnings Management as a Moderating Variable

Statistically, the effect of profitability on bond ratings yielded a significance level of $0.48 > 0.05$, with a t-value of 0.71. This indicates that earnings management cannot moderate the relationship between profitability and bond ratings, thus rejecting the researcher's hypothesis (H7).

Profitability reflects a company's ability to generate net income by comparing net income and total assets. Earnings management also manipulates corporate earnings, focusing on the short term. Earnings management cannot moderate the relationship between profitability obtained using the growth ratio method and bond ratings because bond ratings examine profitability over the long term and several years. Although this study observed a decline in a company's ability to generate profits, this did not necessarily change the company's bond ratings.

The Effect of Growth Ratio on Bond Ratings with Earnings Management as a Moderating Variable

Statistically, the effect of growth ratio on bond ratings yielded a significance level of $0.40 > 0.05$, with a t-value of 0.83. This indicates that earnings management cannot moderate the relationship between growth ratio and bond ratings, thus rejecting the researcher's hypothesis (H8).

The growth ratio reflects the percentage growth in net profit by comparing the difference between current year sales and the previous year's sales, divided by the previous year's sales. The growth ratio reflects the company's actual condition, thus influencing bond ratings. Earnings management can manipulate accounting earnings, such as allowances for losses, depreciation, and amortisation. Earnings management cannot directly impact sales or asset growth significantly. Therefore, earnings management cannot moderate the effect of profitability on bond ratings.

CONCLUSION

Based on the discussion in the previous chapters, answering the problem formulation, research objectives, and referring to the process and results of data analysis in this study, the following conclusions can be drawn:

1. Leverage significantly and positively affects bond ratings for manufacturing companies and their components listed on the Indonesia Stock Exchange.
2. Liquidity does not significantly affect bond ratings for manufacturing companies and their components listed on the Indonesia Stock Exchange.
3. Profitability does not significantly affect bond ratings for manufacturing companies and their components listed on the Indonesia Stock Exchange.
4. Growth ratio significantly affects bond ratings for manufacturing companies and their components listed on the Indonesia Stock Exchange.
5. Earnings management can moderate the relationship between leverage and bond ratings for manufacturing companies and their components listed on the Indonesia Stock Exchange.
6. Earnings management cannot moderate the relationship between liquidity and bond ratings for manufacturing companies and their components listed on the Indonesia Stock Exchange.
7. Earnings management cannot moderate the relationship between profitability and bond ratings for manufacturing companies and their components listed on the Indonesia Stock Exchange.
8. Earnings management cannot moderate the relationship between growth ratio and bond ratings in manufacturing companies and their components listed on the Indonesia Stock Exchange.

LIMITATIONS

The limitations of this study are:

1. The research subjects were manufacturing companies and their components listed on the Indonesia Stock Exchange.
2. The research observations only examined data from 70 companies.
3. Of the eight hypotheses, only three were accepted with a significance level of 5%, while five were rejected.

SUGGESTIONS

Based on the research results, the author recognizes that no research is free from errors and shortcomings. This study still has limitations. Therefore, the author would like to offer suggestions to address these limitations, including:

1. This study used manufacturing companies as the research population. It is recommended that the research be expanded by focusing on sub-sectors of companies listed on the Indonesia Stock Exchange, such as industrial companies.
2. It is recommended that future research conduct similar research outside of conditions where the global economy is experiencing a specific phenomenon, such as COVID-19, to minimize the occurrence of particular phenomena in the research results.
3. If researchers still wish to conduct similar research during a specific global economic phenomenon, they can replace the moderating variable, earnings management, with cost management. It is intended to provide a more particular view of company management strategies and eliminate the possibility of unique data being included in the research results.

IMPLICATIONS

Based on the limitations and results of this study, this study implies that, based on signaling theory, bond ratings indicate the extent of a company's default risk. The trend observed in this study is an increase in leverage, not accompanied by profit-generating capacity, resulting in an increase in debt not in line with the company's profit growth.

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