

THE RELATIONSHIP BETWEEN MANAGERIAL OVERCONFIDENCE, LEVERAGE, AND MANAGERIAL OWNERSHIP AND EARNINGS MANAGEMENT

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Abstract

Earnings information in financial statements serves as a primary reference for evaluating corporate performance and strategic decision-making. Amid increasing pressure and uncertainty in a dynamic business environment, earnings management practices are often employed by management as a response to external expectations and internal constraints, reflecting agency problems arising from misaligned interests between capital providers and managers as decision-makers. This study aims to obtain empirical evidence on the relationship between managerial overconfidence, leverage, and managerial ownership and earnings management in manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2019–2023 period. The sample was selected using purposive sampling, resulting in 128 firms with a total of 640 firm-year observations. Data were analyzed using multiple linear regression with SPSS software. The results indicate that managerial overconfidence is negatively associated with earnings management, while leverage is positively associated with earnings management. Meanwhile, managerial ownership shows no significant relationship with earnings management. These findings emphasize that financial pressure, as reflected by high leverage, plays a more dominant role in driving earnings management practices than managerial overconfidence or managerial ownership. Accordingly, firms with higher leverage levels tend to have a stronger inclination to engage in earnings management as a response to external financial obligations.

Keywords: Earnings Management, Managerial Overconfidence, Leverage, Managerial Ownership

INTRODUCTION

Companies are increasingly aware of the importance of periodic and continuous disclosure of financial statements. This awareness stems from the role of financial statements in providing information on a company's financial condition and managerial performance, which serves as a communication tool for stakeholders, including the public (Kurniawan & Fuad, 2022). Consequently, financial statements become the basis for decision-making and represent management's accountability to shareholders.

Corporate earnings are often regarded as a key indicator of firm performance (Anisya et al., 2023). High reported earnings are frequently perceived as reflecting superior corporate conditions. However, excessive focus on earnings also provides incentives for managers to embellish financial statements. In preparing financial reports, accrual-based accounting principles are commonly applied because they provide more relevant and reliable information

than cash-based accounting (FASB, 2008). Accrual accounting recognizes revenues and expenses in the period in which they occur rather than when cash is received or paid. Nevertheless, the flexibility inherent in accrual accounting is often exploited by management to intervene in financial reporting in order to alter reported earnings in line with specific objectives. Such intervention is referred to as earnings management. Scott and O'Brien (2020) define earnings management as managerial intervention in accounting policies or specific actions that influence reported earnings to achieve particular objectives. Earnings management can take various forms, including income smoothing, income-increasing, and income-decreasing strategies. Income smoothing aims to stabilize earnings by adjusting revenues and expenses to reduce volatility and enhance the perception of stable firm performance. Income-increasing strategies are typically employed to meet market expectations, maintain stock prices, or achieve specific financial targets (Beneish, 2001). Conversely, income-decreasing strategies are often adopted during management turnover, where newly appointed managers tend to report lower earnings at the beginning of their tenure to improve perceived performance in subsequent periods (Widianjani & Yasa, 2019). This strategy may also be used to avoid high taxation or to take advantage of government incentives (Yantiari & Yasa, 2023). However, this study does not focus on the direction of earnings management—whether earnings are increased or decreased—but rather on the degree of managerial intervention in accounting earnings, measured in absolute terms. This approach is intended to provide a more comprehensive depiction of earnings management intensity without distinguishing between motivations or directional effects.

The bankruptcy of Enron Corporation in 2001 represents one of the largest financial scandals in the United States. Li (2010) reveals that Enron employed mark-to-market accounting to recognize unrealized profits and concealed debt through Special Purpose Entities (SPEs), which were used to shift liabilities to separate entities to make financial statements appear healthier. Such accounting strategies reflect significant intervention in financial reporting.

Managerial position and share ownership play an important role in corporate decision-making, including decisions related to financial reporting. In developing countries such as Indonesia, ownership structures tend to be concentrated among majority shareholders, such as founding families or controlling groups. Claessens et al. (2000) show that in East Asian countries, including Indonesia, insider ownership is relatively high, with 84.6% of firms having managers originating from controlling shareholder groups. This indicates that insider ownership in Indonesia has unique characteristics, whereby managers act not only as corporate executives but also as part of controlling owners with substantial decision-making power.

Managerial ownership is often regarded as a mechanism for aligning the interests of managers and shareholders (the alignment effect) (Jensen & Meckling, 1976). Le and Nguyen (2023) argue that managerial ownership serves as an effective incentive to minimize agency conflicts. By holding company shares, managers are encouraged to act in the firm's best interest by managing operations responsibly and transparently, as their decisions directly affect the value of their shareholdings (Warfield et al., 1995). Prior studies by Alzoubi (2016), Reyna (2018), Nguyen et al. (2021), Herrera and Andayani (2019), Amarsanaa et al. (2021), and Januri (2021) also document a negative relationship between managerial ownership and

earnings management, indicating that higher managerial share ownership reduces the likelihood of financial statement manipulation.

However, managerial ownership within a concentrated ownership structure does not always result in an alignment effect. Claessens et al. (2000) highlight that in firms with concentrated ownership, conflicts of interest may arise not only between managers and shareholders but also between majority and minority shareholders. In certain cases, controlling shareholders who also serve as managers may have incentives to employ accounting policies that benefit their own interests, such as maintaining corporate control or enhancing firm attractiveness to external investors through strategic financial reporting. Conversely, in firms where managerial ownership genuinely functions as an incentive rather than a control mechanism, financial reporting transparency tends to be better maintained. Therefore, it is important to examine the role of managerial ownership in the Indonesian corporate context, specifically whether it serves as an interest-alignment mechanism that reduces earnings management or instead functions as a tool for majority shareholders to influence financial reporting for personal benefit.

Numerous factors have been identified as determinants of earnings management practices, including firm size, profitability, operational complexity, ownership structure, and corporate governance mechanisms (Yanti & Setiawan, 2019; Kurniawan & Fuad, 2022; Anggraeni & Dewi, 2023; Muhamad et al., 2024; Sukrasta & Wirakusuma, 2024; Widianjani & Yasa, 2019). However, prior studies have largely focused on structural and external factors while overlooking internal managerial characteristics and the specific dynamics of the manufacturing industry, which typically requires substantial investment in fixed assets and long-term financing. Based on these considerations, this study aims to analyze the relationship between managerial overconfidence, leverage, and managerial ownership and earnings management in manufacturing firms listed on the Indonesia Stock Exchange during the 2019–2023 period.

METHOD

This study employs a quantitative approach with a systematic, planned, and structured research design to examine the relationship between managerial overconfidence, leverage, managerial ownership, and earnings management. The research object consists of manufacturing firms listed on the Indonesia Stock Exchange (IDX) during the 2019–2023 period. Indonesia was selected as the research setting due to its relatively lower corporate governance quality compared to other Asian countries, thereby allowing the findings to contribute to strengthening regulatory oversight of financial reporting by authorities such as the Financial Services Authority (OJK) and the IDX. The study utilizes secondary data obtained from companies' annual financial statements, with purposive sampling applied based on data completeness and listing status criteria (Sugiyono, 2020; Asian Corporate Governance Association, 2023).

The dependent variable in this study is earnings management, measured using the Modified Jones Model with the absolute value of discretionary accruals as a proxy to capture the intensity of earnings management practices regardless of manipulation direction. The independent variables include managerial overconfidence, proxied by Industry-Adjusted Excess Investment based on residual asset growth relative to sales growth; leverage,

measured using the debt-to-assets ratio (DAR); and managerial ownership, calculated as the percentage of shares held by management relative to total outstanding shares. These proxies are intended to represent managerial decision-making behavior, corporate financing structure, and internal control mechanisms related to earnings reporting practices (Schrand & Zechman, 2012; Yanti & Setiawan, 2019; Nguyen et al., 2021; Dechow et al., 1995; Bassiouny et al., 2016).

Data analysis was conducted using descriptive statistics, classical assumption tests (normality, heteroskedasticity, multicollinearity, and autocorrelation), and multiple linear regression to examine the statistical relationships among variables. The regression model was employed to assess the direction and strength of relationships between independent and dependent variables simultaneously, without implying causality. Hypothesis testing involved the F-test to assess model feasibility, the coefficient of determination (R^2) to evaluate explanatory power, and t-tests to determine the significance of each independent variable. All data processing was performed using Microsoft Excel and SPSS to ensure accuracy and consistency of results (Gujarati & Porter, 2013; Ghozali, 2021; Utama, 2016).

RESULTS AND DISCUSSION

Overview of the Research Setting and Scope

This study was conducted on manufacturing firms listed on the Indonesia Stock Exchange (IDX). The data utilized are secondary data obtained from companies' financial statements and annual reports for the 2019–2023 period, accessed through the official IDX website and the respective companies' official websites. The population consists of 128 manufacturing firms listed on the IDX. From this population, 640 firm-year observations were selected as the research sample using purposive sampling, a sampling technique based on specific criteria aligned with the research objectives.

Description of Research Variable Data

Table 1. Descriptive Statistics Results

Variable	N	Minimum	Maximum	Mean	Standard Deviation
EM	640	0,0000	0,6749	0,0721	0,0749
MO	640	-0,9937	2,2915	0,0083	0,1810
LEV	640	0,0025	5,5222	0,5287	0,5477
KM	640	0,0000	0,9562	0,0826	0,1932
Valid N (listwise)	640				

Source: Processed data, 2025

Based on the descriptive statistics presented in Table 1, the total number of observations in this study is 640. The characteristics of each variable are described as follows.

- 1) The dependent variable, earnings management (EM), has a minimum value of 0.0000, observed in PT Citra Tubindo Tbk (CTBN) in 2019. This indicates the existence of firms that undertake almost no earnings adjustments, implying that the reported earnings closely reflect the firm's actual financial condition. Conversely, the maximum value of 0.6749, recorded by PT FKS Food Sejahtera Tbk (AISA) in 2020, indicates that earnings adjustments reached approximately 67% of total accruals. This level is considered high

and suggests that a substantial portion of reported earnings was shaped by accounting policies selected by management.

The mean value of 0.0721 indicates that, on average, approximately 7% of reported earnings among sample firms were adjusted through accounting discretion. In other words, for every IDR 100 of reported earnings, around IDR 7 did not fully originate from the firm's underlying economic condition but rather resulted from earnings management practices, such as accelerated revenue recognition or delayed expense recording. These findings confirm that earnings management practices are empirically present in the observed data rather than being merely theoretical phenomena.

The standard deviation of 0.0749 slightly exceeds the mean, indicating a relatively high dispersion of data around the central value. Although the difference is not substantial, this condition suggests that the data are not overly concentrated and that variability across observations should be considered. From a statistical perspective, a standard deviation exceeding the mean may indicate a skewed distribution, although it does not necessarily imply a violation of statistical assumptions.

- 2) The first independent variable, managerial overconfidence (MO), has a minimum value of -0.9937, observed in PT Inti Keramik Alam Asri Industri Tbk in 2019. This reflects firms whose asset growth and sales growth were approximately 11% lower than the industry average, which may indicate managers who adopt a highly cautious approach to corporate expansion.

In contrast, the maximum value of 2.2915, recorded by PT Pyridam Farma Tbk in 2021, indicates firms whose growth exceeded the industry average by approximately 27.6%, reflecting managers who are highly confident and potentially overly optimistic about their firm's future prospects.

The mean value of 0.0083, which is close to zero, suggests that managers in the sample generally exhibit balanced behavior, neither excessively aggressive nor overly conservative in investment decision-making. This indicates the absence of extreme dominance, implying that overly optimistic and highly cautious managers coexist in relatively balanced proportions.

The standard deviation of 0.1810 exceeds the mean, indicating a relatively wide dispersion of data around the central value. In statistical terms, a standard deviation larger than the mean may indicate a skewed distribution, although this does not necessarily lead to violations of statistical assumptions.

- 3) The second independent variable, leverage (LEV), has a minimum value of 0.0025, observed in PT Langgeng Makmur Industri Tbk in 2021. This indicates firms whose assets are almost entirely financed by equity, with only 0.25% funded through debt.

Conversely, the maximum value of 5.5222, recorded by PT Asahimas Flat Glass Tbk in 2021, reflects firms with a high dependence on external financing, suggesting a potentially overleveraged condition or highly aggressive use of financial leverage.

The mean value of 0.5287 indicates that most firms in the sample adopt relatively conservative financing structures, with a balanced proportion of debt. This

may reflect firms' efforts to avoid excessive interest burdens or financial risk, or it may indicate sufficient internal liquidity and capital to finance operations and investments.

The standard deviation of 0.5477 slightly exceeds the mean, indicating a relatively high level of data dispersion. Although the difference is not substantial, this condition suggests that the data are not highly centralized and that variability across observations is present. Statistically, a standard deviation exceeding the mean may indicate a right-skewed distribution.

- 4) The third independent variable, managerial ownership (KM), has a minimum value of 0.0000, observed in 247 firms or approximately 38.59% of the sample. This indicates that a substantial number of firms have no managerial share ownership at all, meaning that control functions are entirely held by external shareholders.

The maximum value of 0.9562, observed in PT Akasha Wira International Tbk in 2022, indicates a very high level of managerial ownership. The mean value of 0.0826 suggests that corporate ownership structures are largely dominated by external shareholders.

The standard deviation of 0.1932 exceeds the mean, indicating considerable variability in managerial ownership levels across firms. From a statistical standpoint, a standard deviation greater than the mean may signal a skewed data distribution, although this does not necessarily imply violations of statistical assumptions.

Results of Data Analysis

Classical Assumption Tests

1) Normality Test

Table 2. Normality Test Results

		Residual Tidak Terdistandarisasi
N		640
	Rata-Rata	0,0000000
	Standar Deviasi	0,7374190
Perbedaan paling ekstrem	Absolut	0,157
	Positif	0,157
	Negatif	-0,143
Uji Statistik		0,157
Sig. (2 arah)		0,000

Source: Processed data, 2025

Based on the normality test results presented in Table 2, the significance value (Sig. 2-tailed) of 0.000 is lower than the 0.050 significance level. This indicates that the residual data in this study are not normally distributed. This condition may be attributed to the relatively large sample size and the presence of extreme values within the dataset. As noted by Pek et al. (2018), when sample sizes are sufficiently large, the normality assumption becomes less critical in the context of hypothesis testing and confidence interval estimation.

2) Heteroskedasticity Test

Table 3. Heteroskedasticity Test Results

<i>Spearman's rho</i>	MO	LEV	KM	Abs_res
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MO	Correlation Coefficient	1,000	-0,169	-0,005	0,015
	Sig. (2-tailed)	0	0,000	0,905	0,708
	N	640	640	640	640
LEV	Correlation Coefficient	-0,169	1,000	0,054	0,086
	Sig. (2-tailed)	0,000	0	0,174	0,029
	N	640	640	640	640
KM	Correlation Coefficient	-0,005	0,054	1,000	-0,110
	Sig. (2-tailed)	0,905	0,174	0	0,005
	N	640	640	640	640
Abs_res	Correlation Coefficient	0,015	0,086	-0,110	1,000
	Sig. (2-tailed)	0,708	0,029	0,005	0
	N	640	640	640	640

Source: Processed data, 2025

Based on the heteroskedasticity test results presented in Table 3 using Spearman's rho, the two-tailed significance values for managerial overconfidence (MO), leverage (LEV), and managerial ownership (KM) with respect to absolute residuals (Abs_res) are 0.708, 0.029, and 0.005, respectively. These results indicate that the significance value for MO exceeds the 0.05 threshold, whereas LEV and KM fall below 0.05. Accordingly, the regression model fails the heteroskedasticity test and therefore cannot be used for further analysis in its original form.

Data Transformation

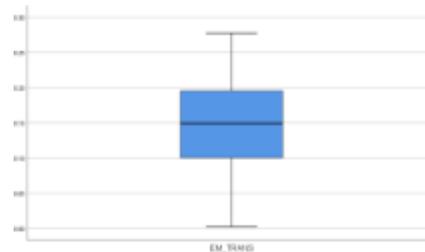
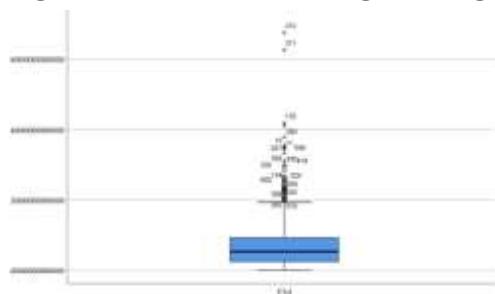


Figure 1. Results of Earnings Management Variable Transformation



The managerial overconfidence (MO) variable was addressed using the interquartile range (IQR) method, as it contains negative values that preclude logarithmic or square-root transformations. In addition, the distribution of MO improved after outlier detection and adjustment.

The leverage (LEV) and managerial ownership (KM) variables exhibited several outliers based on boxplot visualization. However, classical assumption tests indicated that these outliers did not cause substantial deviations from normality or homoskedasticity. Therefore, logarithmic transformations were applied to improve data distribution and ensure compliance with classical assumption requirements.

Results of Transformed Data Analysis
Descriptive Statistics of Transformed Data

Table 4. Descriptive Statistics of Transformed Variables

Variable	N	Minimum	Maximum	Mean	Standard Deviation
EM_TRANS	640	0,0025	0,2776	0,1511	0,0670
MO_TRANS	640	-0,2367	0,2370	0,0004	0,0997
LEV_TRANS	640	0,0012	0,8144	0,1694	0,1001
KM_TRANS	640	0,0000	0,2914	0,0291	0,0645
Valid N (listwise)	640				

Source: Processed data, 2025

Based on the descriptive statistics presented in Table 4, each transformed variable can be interpreted as follows.

1. Earnings Management after Transformation (EM_TRANS)

The transformed earnings management variable has a minimum value of 0.0025, indicating the presence of firms that engage in minimal earnings management, with reported figures closely reflecting actual financial conditions. Conversely, the maximum value of 0.2776 indicates firms that adjust earnings by approximately 27% of total accruals, suggesting that a substantial portion of reported earnings is determined by management’s accounting policy choices. The mean value of 0.1511 indicates that, on average, approximately 15% of reported earnings among sample firms result from earnings management practices, such as accelerated revenue recognition or delayed expense recognition. The standard deviation of 0.0670 suggests that the data are relatively concentrated around the mean and more stable compared to pre-transformation data. This indicates that the transformation successfully improved the distribution and reduced skewness.

2. Managerial Overconfidence after Transformation (MO_TRANS)

The maximum value of 0.2370 indicates firms whose expansion exceeds the industry average by approximately 24%, reflecting highly confident managerial behavior. Conversely, the minimum value of -0.2367 indicates firms whose expansion is approximately 24% below the industry average, reflecting highly cautious managerial attitudes, often associated with capital constraints, market uncertainty, or financial pressure. The mean value of 0.0004 indicates the absence of aggressive expansion tendencies across the sample. This value is slightly closer to the negative direction, suggesting that most firms tend to invest conservatively, face limited external pressure, and are not strongly motivated to engage in earnings management to sustain performance perceptions. In contrast, overconfident firms typically require additional capital and must maintain financial reporting credibility. The standard

deviation of 0.0997, which is substantially higher than the mean, indicates that data dispersion remains present but is not extreme following outlier treatment.

3. Leverage after Transformation (LEV_TRANS)

The minimum value of 0.0012 indicates firms whose assets are almost entirely financed by equity. In contrast, the maximum value of 0.8144 indicates firms that finance up to 81% of their assets through debt, reflecting strong dependence on external financing. The mean value of 0.1694 indicates that, on average, approximately 17% of corporate assets are financed by debt, reflecting a relatively conservative capital structure. This approach may reflect firms' efforts to manage financial risk prudently or the availability of sufficient internal liquidity to finance operations and investment activities. The standard deviation of 0.1001 remains slightly higher than the mean, indicating persistent variability; however, the logarithmic transformation resulted in a more controlled distribution that does not interfere with regression estimation.

4. Managerial Ownership after Transformation (KM_TRANS)

The minimum value of 0.0000 indicates that some firms in the sample have no managerial share ownership. Conversely, the maximum value of 0.2914 indicates firms where managers own up to 29% of outstanding shares, granting them substantial influence over corporate direction and policy. The mean value of 0.0291 (2.91%) suggests that managerial ownership is generally low, indicating that this mechanism has not been widely adopted as a means of aligning managerial and shareholder interests among most sample firms. The standard deviation of 0.0645 exceeds the mean, indicating uneven distribution and residual skewness; however, the condition improved compared to the pre-transformation data.

Classical Assumption Tests of Transformed Data

Heteroskedasticity Test

Table 5. Heteroskedasticity Test Results (Transformed Data)

<i>Spearman's rho</i>		MO_TRA	LEV_TR	KM_TR	Abs_res
		NS	ANS	ANS	
MO-TRANS	Correlation Coefficient	1,000	-0,169	-0,004	0,013
	Sig. (2-tailed)	0	0,000	0,916	0,749
	N	640	640	640	640
LEV_TRANS	Correlation Coefficient	-0,169	1,000	0,054	-0,006
	Sig. (2-tailed)	0,000	0	0,174	0,878
	N	640	640	640	640
KM_TRANS	Correlation Coefficient	-0,004	0,054	1,000	-0,076
	Sig. (2-tailed)	0,916	0,174	0	0,005
	N	640	640	640	640
Abs_res	Correlation Coefficient	0,013	0,006	-0,076	1,000
	Sig. (2-tailed)	0,749	0,878	0,056	0
	N	640	640	640	640

Source: Processed data, 2025

Based on the heteroskedasticity test results in Table 5 using transformed data, the two-tailed significance values for managerial overconfidence (MO_TRANS), leverage (LEV_TRANS), and managerial ownership (KM_TRANS) with respect to absolute residuals (Abs_res) are 0.749, 0.878, and 0.056, respectively. All significance values exceed the 0.05 threshold, indicating no significant relationship between the independent variables and the absolute residuals. This confirms that the regression model is free from heteroskedasticity and satisfies the homoskedasticity assumption.

Multicollinearity Test

Table 6. Multicollinearity Test Results (Transformed Data)

Model Variable	Tolerance	VIF
1 (Constant)	–	–
MO_TRANS	0.972	1.029
LEV_TRANS	0.972	1.029
KM_TRANS	1.000	1.000

Source: Processed data, 2025

Based on Table 6, all independent variables exhibit tolerance values above 0.10 and Variance Inflation Factor (VIF) values below 10. These results indicate the absence of high correlations among independent variables. Therefore, the regression model is free from multicollinearity issues, and each independent variable can be reliably analyzed separately.

Autocorrelation Test

Table 7. Autocorrelation Test Results

	Unstandardized Residual
Test Value	-0.00086
Cases < Test Value	320
Cases ≥ Test Value	320
Total Cases	640
Number of Runs	303
Z	-1.424
Sig. (2-tailed)	0.154

Source: Processed data, 2025

Based on Table 7, the run test results show a significance value of 0.154 (> 0.05), indicating that the residuals are randomly distributed and that no autocorrelation is present in the regression model. Thus, the assumption of error independence is satisfied, and the relationship between the independent variables and earnings management is not influenced by correlated error patterns.

Multiple Linear Regression Analysis

Table 8. Multiple Linear Regression Results

Model Variable	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
1 (Constant)	0.133	0.005	–	25.264	0.000

Model Variable	Unstandardized Coefficients (B)	Std. Error	Standardized Coefficients (Beta)	t	Sig.
MO_TRANS	-0.077	0.026	-0.114	-2.896	0.004
LEV_TRANS	0.106	0.026	0.159	4.046	0.000
KM_TRANS	0.011	0.040	0.010	0.266	0.790

Source: Processed data, 2025

Based on the multiple linear regression results presented in Table 8, the regression equation used in this study is formulated as follows:

$$EM_TRANS = 0,133 - 0,077 MO_TRANS + 0,106 LEV_TRANS + \epsilon \quad (4.1)$$

The regression results can be interpreted as follows.

1. Constant

The constant value of 0.133 indicates that when all independent variables are assumed to have no effect (equal to zero), the baseline level of earnings management is 0.133 units. This suggests that earnings management practices persist even in the absence of managerial overconfidence, leverage, and managerial ownership effects, implying the influence of other factors outside the model.

2. Managerial Overconfidence

The regression coefficient for managerial overconfidence is -0.077 , indicating that a one-unit increase in overconfidence reduces earnings management by 0.077 units, *ceteris paribus*. This suggests that higher managerial confidence is associated with a lower tendency to engage in earnings management. This result is supported by a relatively small standard error (0.026) and a significance level of 0.004 (< 0.05), indicating a negative, statistically significant, and reliably estimated relationship.

3. Leverage

The regression coefficient for leverage is 0.106, indicating that a one-unit increase in leverage increases earnings management by 0.106 units, holding other variables constant. This suggests that higher debt levels intensify earnings management tendencies due to pressure from creditors and interest obligations. This result is supported by a small standard error (0.026) and a significance level of 0.000 (< 0.05), indicating a positive, statistically significant, and precisely estimated effect.

Model Feasibility Test (F-test)

Table 9. Results of Model Feasibility Test (F-test)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	0.128	3	0.043	9.864	0.000 ^b
Residual	2.740	636	0.004		
Total	2.868	639			

Source: Processed data, 2025

Referring to Table 9, the significance value of the F-test is 0.000, which is lower than the 0.05 significance level. This indicates that the regression model employed in this study is statistically significant and appropriate for examining the relationships among variables related to earnings management. In other words, the independent variables—managerial overconfidence (MO), leverage (LEV), and managerial ownership (KM)—collectively play a significant role in explaining variations in earnings management practices among manufacturing firms listed on the Indonesia Stock Exchange during the 2019–2023 period. These findings suggest that earnings management practices observed in the sample do not occur randomly but are associated with firms’ internal characteristics. Accordingly, the regression model is capable of capturing meaningful relationships between managerial behavior, capital structure, and internal ownership in the context of financial reporting, particularly with respect to how corporate earnings are reported during the observation period.

Coefficient of Determination (R² Test)

Table 10. Results of Coefficient of Determination (R² Test)

Model	Correlation Coefficient (R)	Coefficient of Determination (R ²)	of Adjusted R ²	Standard Error of the Estimate
1	0.211	0.044	0.040	0.0656413462

Source: Processed data, 2025

Based on Table 10, the correlation coefficient (R) is 0.211, the coefficient of determination (R²) is 0.044, and the adjusted R² is 0.040. These results indicate that approximately 4.0% of the variation in earnings management practices can be explained by the independent variables included in the model, while the remaining 96.0% is influenced by other factors outside the model.

Although the adjusted R² value is relatively low, this does not imply that the regression model is inappropriate. Model adequacy is primarily determined by the simultaneous significance test (F-test). These findings underscore that earnings management is a complex phenomenon influenced by numerous factors beyond the variables examined in this study.

Hypothesis Testing (t-test)

Hypothesis testing was conducted to assess the extent to which each independent variable individually explains variations in the dependent variable, namely earnings management. The results of the t-tests are indicated by the significance (Sig.) values and are summarized in Table 8. Further interpretation of the hypothesis testing results is presented below.

1) Relationship between Managerial Overconfidence and Earnings Management

Based on the t-test results in Table 8, managerial overconfidence (MO_TRANS) has a significance value of 0.004, which is lower than the 0.05 significance threshold. This indicates that managerial overconfidence is significantly associated with earnings management. However, the regression coefficient of -0.077 indicates a negative relationship, suggesting that higher levels of managerial overconfidence are associated with a lower tendency to engage in earnings management practices.

These findings fail to support the first hypothesis (H1), which posited a positive relationship between managerial overconfidence and earnings management. The rejection of this hypothesis can be justified by the characteristics of the sample. Most firms in this study exhibit low to moderate investment levels, with a mean value close to the minimum of -0.2367 . Meanwhile, the mean earnings management value of 0.1511 , which is relatively close to the maximum of 0.2776 , indicates that earnings management practices tend to occur at moderate to high intensity within the sample.

Under such conditions, managerial confidence may be directed toward relying on actual firm performance rather than manipulating reported earnings. Moreover, the absence of extreme financial pressure such as large financing contracts or aggressive growth targets—may explain why higher levels of overconfidence do not incentivize earnings management.

2) Relationship between Leverage and Earnings Management

Based on the t-test results in Table 8, the leverage variable (LEV_TRANS) has a significance value of 0.000 , which is lower than the 0.05 threshold. This indicates that leverage is significantly associated with earnings management. The positive regression coefficient of 0.106 indicates a positive relationship between leverage and earnings management.

Thus, higher levels of corporate leverage are associated with a greater tendency to engage in earnings management practices. These findings are consistent with the second hypothesis (H2), which proposed a positive relationship between leverage and earnings management. Accordingly, the second hypothesis is accepted, as the direction of the relationship aligns with the hypothesis and is supported by statistically significant results. In conclusion, higher debt levels tend to be followed by increased earnings management, reflecting pressure arising from creditor monitoring and interest obligations.

3) Relationship between Managerial Ownership and Earnings Management

Based on the t-test results in Table 8, managerial ownership (KM_TRANS) has a significance value of 0.790 , which is substantially higher than the 0.05 significance level. This indicates that managerial ownership is not significantly associated with earnings management. Furthermore, the positive regression coefficient of 0.011 is not statistically significant.

Accordingly, the findings fail to support the third hypothesis (H3), which proposed a negative relationship between managerial ownership and earnings management. The absence of empirical support suggests that managerial ownership does not have a meaningful association with earnings management within the regression model employed in this study. This result may indicate that managerial share ownership levels in the sampled firms are relatively low and therefore insufficient to influence managerial decision-making related to earnings management practices. As a result, managerial ownership does not function as an effective control mechanism in constraining earnings management in this context.

Discussion of Research Findings

The Relationship between Managerial Overconfidence and Earnings Management

The findings indicate that managerial overconfidence is negatively associated with earnings management, suggesting that higher levels of managerial confidence are linked to a lower tendency for firms to engage in earnings management practices. This result can be

explained by the characteristics of the sample, which show that corporate investment levels are generally moderate, thereby reducing external pressures such as debt financing needs, short-term earnings targets, and capital market demands. Under such conditions, managers who are confident in the firm's actual performance tend to rely on real operational outcomes rather than manipulating financial statements.

This finding is consistent with Chen et al. (2025), who argue that overconfident managers only utilize earnings information when it genuinely reflects the firm's underlying performance. Although this result contradicts the assumptions of agency theory and several prior studies suggesting that overconfidence promotes opportunistic behavior, the empirical context of this study—including the period of economic uncertainty during the pandemic—suggests that in the absence of strong external pressure, overconfident managers may behave more rationally and cautiously. Therefore, managerial overconfidence in this study does not function as a trigger for earnings management but rather reflects managers' confidence in firm performance without being driven by the need to conceal weaknesses or pursue artificial targets.

The Relationship between Leverage and Earnings Management

The results reveal a positive relationship between leverage and earnings management, indicating that higher corporate debt levels are associated with a greater propensity for earnings management. This finding is consistent with agency theory and positive accounting theory, particularly the debt covenant hypothesis, which posits that debt-related pressures motivate managers to maintain financial performance in order to comply with contractual requirements and meet creditors' expectations.

When firms approach potential debt covenant violations, managers have strong incentives to engage in accounting adjustments, such as accelerating revenue recognition or deferring expense recognition, to avoid financial and reputational consequences. This tendency is particularly pronounced in manufacturing firms, which generally require substantial funding for operational activities and long-term investments. In line with previous empirical studies, these findings confirm that leverage is a key determinant of financial reporting policy, with earnings management serving as a managerial strategy to preserve credibility and maintain access to external financing under conditions of heightened external pressure.

The Relationship between Managerial Ownership and Earnings Management

The findings indicate that managerial ownership is not significantly associated with earnings management practices, despite theoretical arguments suggesting that managerial share ownership aligns the interests of agents and principals, as proposed in agency theory. The lack of empirical support for this relationship suggests that under certain conditions—such as debt contract pressure, earnings targets, or the need to maintain corporate image—managers may still engage in earnings management regardless of their ownership stakes. This result is further supported by descriptive evidence showing that managerial ownership levels in the sample are generally low, implying that managers function primarily as operational professionals rather than strategic owners. Moreover, although the long-term risks associated with earnings manipulation may limit its sustainability, relatively small

managerial ownership stakes are insufficient to serve as an effective control mechanism. Consequently, the divergence between these findings and some prior studies can be explained by the empirical context, where managerial decisions are more strongly influenced by external pressures and incentives than by ownership considerations. As a result, managerial ownership does not exhibit a significant relationship with earnings management in this study.

CONCLUSION

Based on the results of the data analysis and discussion presented in the preceding sections, the conclusions of this study are as follows.

1. The study fails to provide empirical evidence supporting a positive relationship between managerial overconfidence and earnings management. Instead, the findings reveal a negative relationship, indicating that higher levels of managerial overconfidence are associated with a lower tendency to engage in earnings management. This outcome can be attributed to the characteristics of the sample, in which most firms do not exhibit excessive investment expansion, resulting in relatively low external pressure on management. Overconfident managers tend to place greater trust in the firm's actual performance rather than manipulating reported earnings. They also recognize that manipulative earnings management practices may generate cumulative long-term risks that undermine future performance targets. Accordingly, these findings suggest that overconfidence is not always synonymous with opportunistic behavior, as traditionally assumed in agency theory.
2. The study provides strong evidence that leverage is positively associated with earnings management. This finding indicates that higher corporate debt ratios increase the likelihood of earnings adjustments. The result supports the debt covenant hypothesis, which posits that managers are motivated to ensure that financial ratios remain within acceptable thresholds set by creditors. In practice, pressure arising from debt repayment obligations and the need to maintain financial reputation encourages managers to present more stable earnings figures, even when such figures do not fully reflect the firm's underlying economic condition. Therefore, leverage functions as a key driving factor of earnings management in this study.
3. The study does not support the hypothesis that managerial ownership is negatively associated with earnings management. Instead, the results indicate no significant relationship between managerial ownership and earnings management practices. This outcome can be explained by the relatively low proportion of shares held by managers in the sample; in many cases, managers do not hold any shares at all, positioning them more as operational professionals than as owners. Furthermore, regardless of ownership status, managers may still be incentivized to engage in earnings management when facing specific pressures or motivations, such as debt contracts, majority shareholder influence, or other external demands. Consequently, share ownership alone does not necessarily constrain opportunistic behavior. In some cases, even managers with ownership stakes may prioritize immediate pressure fulfillment over long-term firm value preservation. These findings indicate that managerial ownership is not a dominant factor in influencing earnings management decisions.

when external pressures or incentives are unevenly distributed or insufficiently captured within the sample.

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