

## The Influence of Board Diversity on Earnings Management in Non-Financial Companies in 2020-2023

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### ABSTRACT

This research aims to investigate the impact of gender diversity, age diversity, independence, educational background diversity, and tenure diversity on earnings management in non-financial companies listed on the Indonesia Stock Exchange from 2020 to 2023. The sample includes non-financial companies listed before 2020 and remaining listed during the observation period. The sample selection was conducted using simple random sampling with Slovin's formula, resulting in 88 companies and 723 observations. The analysis shows that gender, age, independence, educational background, and tenure diversity reduce earnings management in non-financial companies listed on the Indonesia Stock Exchange from 2020 to 2023. These results imply that board diversity should be considered in shaping decisions and practices related to earnings management. Policies supporting diversity should be integrated into corporate governance strategies to enhance transparency, accountability, and reduce harmful earnings management practices.

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## INTRODUCTION

Financial reporting involves presenting financial data through various components, the income statement, the financial position report, the equity changes statement, and the detailed notes accompanying the financial statements (SAK, 2012). The primary purpose of financial reporting is to provide information that meets public interest by presenting an accurate representation of a company's financial state. One of the primary users of financial reports is investors. According to data from the Indonesia Stock Exchange, the total number of investors in the Indonesian capital market reached 12.16 million by 2023, marking an 18% increase (or an increase of 1.85 million individuals) compared to 2022, which recorded 10.31 million investors. Additionally, the IDX reported that this 2023 milestone represents an 11-fold increase since 2017. The number of annually active investors in 2023 reached 1.43 million. Performance can be measured through the profit and loss report, which is a measurement of profit information obtained by the company's current period (Fischer & Rosenzweig, 1995).

About earnings management, agency theory Jensen & Meckling (1976) explains that the conflict that occurs is due to friction in earnings management where the selection of accounting obligations must follow applicable standards because it will later affect the company's internal policies (Watriani & Serly, 2021). de Carvalho & Kalatzis (2018) makes management able to reduce the credibility of the presentation figures in the desired company. Zalata et al. (2022) said that increasing profit is an opportunistic opportunity that can be taken if the manager has the authority. Management influences the increase in profit, revealing the economic benefits experienced and even the company's reduction. In addition, there is earnings management, the emergence of reporting cases that are attempted in revising the financial statements made because of the trust factor if it is known that doing so requires high trust so that it can generate public trust.

A common phenomenon that often occurs in a company and is difficult to avoid is financial statement engineering; several cases related to financial statement engineering have occurred domestically and abroad (Alves, 2023). Interestingly, the decline in capital market manipulation regarding the company's financial profit reporting is reflected in the reduced occurrence of unexpected returns. As a result, since December 1, 2020, The IDX has temporarily suspended PT ENVY shares. In addition, there is profit management, the emergence of reporting cases that are attempted in revising the financial statements made because of the trust factor if it is known that doing so requires high trust so that it can create public trust. The phenomenon of profit management that occurs on the Indonesia Stock Exchange, among others, this can be observed in Table 1 below.

Table 1. The Phenomenon of Earnings Management

No.	Company	Case
1.	Sinar Mas Group	Committing a violation of failure to announce to the public material information in the form of signing a settlement agreement with its creditors, not

No.	Company	Case
		announcing annual financial reports, and not informing Bapepam regarding trade receivables lawsuits in a sufficiently material amount.
2.	Indomobil	Komisi Pengawasan Persaingan Usaha (KPPU) decided that the company's share tender offering contained unfair business competition practices carried out by the tender holder in collaboration with sellers, financial advisors and tender assistants.
3.	Kimia Farma	The company is suspected of marking up its financial report, which inflated its profit by Rp 32,668 billion. This case dragged the KAP that audited the company even though this KAP was the one who initiated the overstatement.
4.	Lippo Bank	The company released three different versions of its financial statements simultaneously: the financial statements published in the mass media, the financial statements provided by public accountants to the company's management, and another version. Furthermore, the company was accused of carelessly including audit opinions in its reports.

To overcome the problems between agents and owners, good corporate management is needed in implementing the GCG concept to facilitate performance monitoring. One of the problems related to board diversity is demographics and cognitive (Milliken & Martins, 1996). Various literature states that many factors influence earnings management, such as board diversity (Bryan & Mason, 2020; Machado et al., 2022; Alves, 2023; Komal et al., 2023), company size (Ruwanti et al., 2019; ElRabat et al., 2023; Nalarreason et al., 2019; Rakshit & Paul, 2020), ownership structure (Siraji & Nazar, 2021; Zalata et al., 2022; Mwangi & Nasieku, 2022), leverage (Tulcanaza-Prieto et al., 2020; Saputra & Zulfikar, 2023; Al-Shattarat, 2024), profitability (Almansoori & Yasser, 2022; El-Moayed et al., 2024), and auditor reputation (Mwangi & Nasieku, 2022; Jameel et al., 2024). This study, concentrates on different dimensions of board diversity that impact earnings management, including gender diversity, age diversity, independence, educational background, and tenure. This study will examine gender diversity as one form of board diversity.

Alves (2023) studied the impact of gender diversity on earnings management in non-financial EU companies from 2011 to 2020, finding a negative relationship between the presence of female directors and earnings management. Another study by Ibrahim & Hamza (2022) examined the influence of female directors and international directors, representing board diversity as the independent variable, on earnings management, measured through discretionary accruals. A study on Nigerian oil and gas companies found that female and international directors significantly reduced earnings management. The following form of board diversity studied in this study is age diversity. Age

is a determinant that influences the activities of directors because the more mature a person is, the more experience they gain. It usually encourages them to be more careful in managing company earnings. In addition to the diversity emphasized in earnings management, commissioners must supervise the company's operational activities in countries that adopt common law. In using the system, these countries must review the ideas used by introducing suitable governance components.

Abdullah et al. (2020) studied IDX-listed companies from 2014-2015, finding that independent commissioners moderated the relationship between company size and earnings management but did not affect related party transactions. Conversely, Triyonowati et al. (2022) showed that board diversity reduced the impact of ownership concentration on earnings management in IDX-listed companies during 2019-2020.

The analyzed studies highlight variations in findings related to the influence of board diversity on earnings management, especially in terms of gender diversity and the international backgrounds of directors. While some research identifies a negative relationship, others report no significant link or even a positive effect. The role of independent commissioners in moderating this relationship is still poorly understood, especially in Indonesia. Thus, a research question arises about how board diversity affects earnings management in Indonesian companies lately. To answer this question, further research involves samples of companies from various industries and countries, including Indonesia. This research seeks to resolve these inconsistencies by offering a comprehensive understanding of the connection between board diversity and earnings management, as well as assessing the degree to which board diversity impacts earnings management practices. This study will update the following: The author wants to develop research from (Goel & Kapoor, 2022; Huang et al., 2021; Komal et al., 2023; Roy & Alfian, 2022; Alves, 2023; Ibrahim & Hamza, 2022; Alves, 2023; Efenyumi et al., 2023) indicating that there is an impact on earnings management. The distinction between this study and the previous research by (Ibrahim & Hamza, 2022; Bagh et al., 2023; Kim & Yoon, 2022) is as follows: first, research Ibrahim & Hamza (2022) gender-based development on earnings management, the author develops four proxies, namely the influence of gender, age, independence, educational background, and tenure on earnings management. This study addresses a research gap identified in the work of Bagh et al. (2023) on board diversity and company performance, and Kim & Yoon (2022) on board diversity and company value, by examining the impact of board diversity on earnings management. Unlike Ibrahim & Hamza (2022), who focused on Nigerian oil and gas companies, this research targets non-financial companies listed on the Indonesia Stock Exchange (IDX) from 2020 to 2023. The differing results in previous studies highlight the need for further investigation, especially into how gender, age, independence, educational background, and tenure diversity influence earnings management.

This study applies multiple linear regression analysis using SPSS version 21 to examine the negative impact of gender diversity, age diversity, independence, educational background, and tenure on earnings management in non-financial

companies listed on the Indonesia Stock Exchange. The research is significant in the field of financial accounting, particularly in auditing. It also offers valuable insights for practitioners, policymakers, and investors by addressing the issue of delays in earnings management.

## LITERATURE REVIEW

### *Gender Diversity, Age Diversity, Independent Diversity, Educational Background Diversity, Tenure Diversity, Earnings Management*

Studies by Machado et al. (2022), Alves. (2023), Ibrahim & Hamza (2023) indicate that gender diversity negatively influences earnings management. According to Alves (2023), there is a negative correlation between the presence of female directors and earnings management. Furthermore, the research highlights that when a board includes three or more female directors, their ability to voice opinions significantly increases, this can contribute to a reduction in earnings management. Based on the theory that clearly describes the company, there is a conflict between managers so that each has an interest in increasing profits, which are considered in reporting by conditions, resulting in opportunities for manipulation. Based on the explanation provided above, the following hypothesis is proposed:

*H<sub>1</sub>: Gender Diversity has a negative effect on Earnings Management*

Bryan and Mason (2020) identified that a higher proportion of independent directors with limited reputation incentives was associated with a decline in accrual quality. Additionally, they observed that a higher presence of these directors correlated with higher audit fees, as auditors viewed them as presenting a higher risk. Additionally, the research highlighted the influence of the CEO/CFO's reputation and the personal characteristics of directors, including gender, age, and education, on the quality of financial reporting. Similarly, Komal et al. (2023) found a negative correlation between the age diversity of financial audit committee members and earnings management, with younger members proving more effective in reducing earnings management compared to older members. Based on these results, the following hypothesis is proposed:

*H<sub>2</sub>: Age Diversity has a negative effect on Earnings Management*

Efenyumi et al. (2023) found that various gender diversity attributes of corporate boards such as female financial board expertise, female board nationality, and female board independence collectively have a significant impact on earnings management in NXG-listed companies. Goel and Kapoor (2022) found that female directors are more effective in monitoring earnings management, while independent directors alone don't guarantee strong corporate governance. Similarly, Abdullah et al. (2020) showed that independent commissioners influenced the relationship between company size and earnings management but did not mediate the impact of related party transactions. Based on these findings, the following hypothesis is proposed:

*H<sub>3</sub>: Independent Diversity has a negative effect on Earnings Management*

Ibrahim and Hamza (2022) studied the link between board diversity and earnings management in Nigerian oil and gas companies, emphasizing the role of diverse educational backgrounds in reducing earnings management. Similarly, Roy & Alfian (2022) concluded that agency theory alone doesn't fully explain how board characteristics like independence, size, and the absence of CEO duality help reduce earnings management. However, their research revealed that gender diversity and the educational background of board members, particularly in independent director roles and board membership, contribute to lowering earnings management levels. Agency theory posits that monitoring mechanisms enhance the alignment between managerial and shareholder interests, thereby reducing opportunistic behavior. To mitigate risks such as fraud, mismanagement, and financial liabilities, many large companies rely on their audit committees. An independent audit committee is essential for effectively fulfilling its oversight function. Moreover, audit committees are recognized for their role in improving the quality of financial reporting and curbing earnings management practices (Zgarni et al., 2016). Based on these insights, the following hypothesis is proposed:

*H<sub>4</sub>: Educational Background Diversity has a negative effect on Earnings Management*

Huang et al. (2021) found that earnings management has a limited impact on a company's efficiency, with inconsistent results regarding its interaction with other factors. The study found that in the context of earnings management, factors like extended director tenure, greater female representation on the board, and more frequent board meetings help improve company efficiency. These findings suggest that various aspects of board diversity, such as tenure, an increased representation of female directors, and more frequent meetings, can improve company performance despite the existence of earnings management practices. Triyonowati et al. (2022) proved that board diversity could reduce behavior in caring management. The top management team in the office is determined by the background with functional objectives of values to ensure the performance is produced by the applicable objectives so that the reason for verifying ownership is right on the desired objectives. Based on the explanation above, the following hypothesis can be formulated:

*H<sub>5</sub>: Tenure Diversity has a negative effect on Earnings Management*

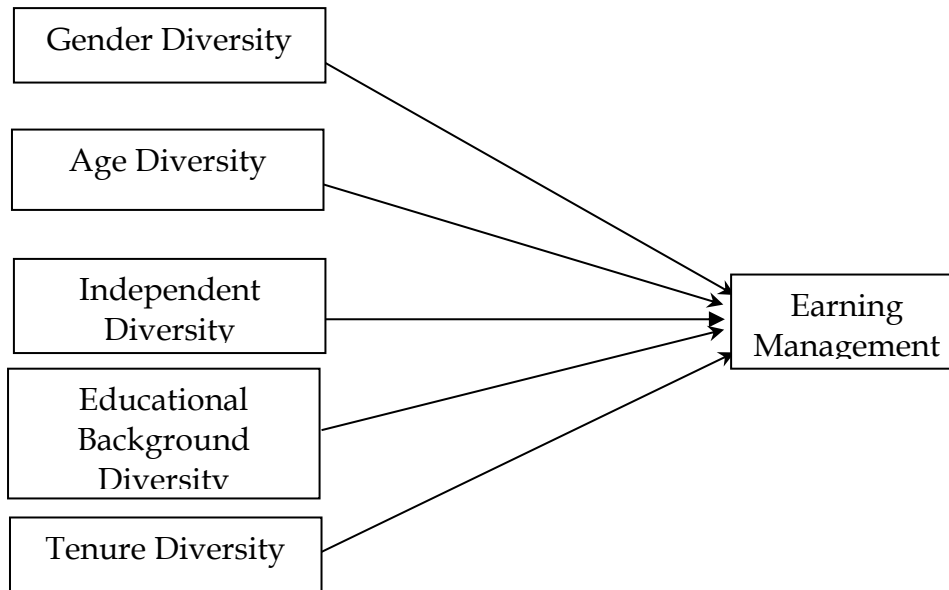


Figure 1. Conceptual Framework

## METHODOLOGY

The study examines non-financial companies listed on the Indonesia Stock Exchange (IDX) from 2020 to 2023, with financial statements in rupiah and a reporting period ending on December 31, covering 723 firms. The sample size, calculated using the Slovin formula, requires at least 88 companies. The sample companies are selected using a simple random sampling approach. This technique is chosen due to its minimal bias and superior generalization capability compared to other sampling methods.

The study situation is not regulated by a minimum level of intervention, where researchers only collect data from companies without intervening in their activities. This study employs the census method, which involves including the entire population as the subject of research (Teguh, 2005).

Statistical Package for the Social Sciences (SPSS) (SEM) - Partial Least Square will be used to assess the secondary data collected for this study. Using this analysis method, testing is conducted by examining the Indicator Weight Value, VIF Value, and Model Fit Criteria. Each variable in the WarpPLS software will be standardized without eliminating its overall characteristics. Thus, the equation does not include constant parameters. The regression equation applied in the SEM-PLS study is as follows:

$$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + e$$

Information:

- Y : Earnings Management
- X<sub>1</sub> : Gender Diversity
- X<sub>2</sub> : Age Diversity
- X<sub>3</sub> : Independent Diversity
- X<sub>4</sub> : Educational Background Diversity
- X<sub>5</sub> : Tenure Diversity

- a : Constanta  
 b : Regression parameter  
 e : Error term

## RESEARCH RESULT

Descriptive statistics provide an overview of the characteristics of the variable data utilized in this study. The table below presents the descriptive statistics for each variable.

Table 2. Descriptive Statistic

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Earnings Management	352	-0.089	0.118	-0.00434	0.051629
Gender Diversity	352	0.111	0.429	0.20807	0.059241
Age Diversity	352	0.571	0.900	0.79005	0.093285
Independent Diversity	352	0.333	0.571	0.43625	0.058671
Educational Background Diversity	352	0.556	1.143	0.76198	0.116410
Tenure Diversity	352	0.429	0.900	0.76321	0.111086
Valid N (listwise)	352				

Source: Processed Secondary Data, 2024

Based on the results of descriptive statistics (Table 2), it is known that earnings management in all research samples reveals an average value of -0.00434. The range of earnings management values shows significant variation, with the values range from a minimum of -0.089 to a maximum of 0.118. These results reflect the diversity of earnings management by various non-financial sector companies in the research sample. The standard deviation is 0.051629, which is lower than the mean value of -0.00434, indicates that data on earnings management tends to be homogeneous and concentrated around the average. The interpretation is that most companies in the sample have a relatively uniform level of earnings management. Although there are variations in values, this statistical analysis provides an overview that most non-financial sector companies in this study have a consistent level of earnings management. Gender diversity has an average of 0.20807. The range of gender diversity includes significant variation, with the lowest value is 0.111, and the highest value is 0.429. These results reflect the diversity of gender diversity in the research sample, indicating significant variation in gender diversity focused on earnings management. The standard deviation of gender diversity is 0.059241; although greater than the average of 0.20807, the difference is not too significant, indicating that the variation in gender diversity data is relatively the same or uniform. It can be interpreted that most companies in the sample have relatively uniform gender diversity, although there is still a fairly large difference between the lowest and highest values.



The analysis of the age diversity variable among all non-financial sector companies in the sample reveals an average value of 0.79005, indicating that these companies have implemented age diversity at a level of 79%. The standard deviation of 0.093285, which is smaller than the average of 0.571, suggests a high level of data homogeneity, meaning that most companies exhibit a similar degree of age diversity. Despite some variations in values, this statistical analysis demonstrates that the majority of non-financial sector companies in this study maintain a consistent level of age diversity.

For the independent diversity variable, the descriptive analysis across all non-financial sector companies in the sample shows an average value of 0.43625, signifying that governance disclosures stand at 43.6%. Independent diversity values range from 0.333 to 0.571, indicating different levels of governance disclosure in earnings management. The standard deviation of 0.0587, smaller than the mean, suggests a homogenous data set, with most companies showing similar independent diversity levels.

The descriptive results of the educational background diversity variable in all research samples of non-financial sector companies show an average value of 0.76198, meaning that non-financial sector companies have a diversity of 76.1%. The range of educational background diversity values varies from the values range from a low of 0.556 to a high of 1.143, indicating a significant diversity in the disclosure of earnings management practices. The standard deviation of 0.116410, being lower than the average, indicates that the data on educational background diversity tends to be homogeneous and concentrated around the average value. This statistical analysis implies that most companies in the sample have a relatively uniform educational background diversity.

The tenure diversity in non-financial sector companies has an average of 76.3%, with values ranging from 0.429 to 0.9, reflecting varying practices of earnings management disclosure. The standard deviation of 0.111086, which is lower than the average, suggests that the data is relatively homogeneous and clustered around the mean. This statistical analysis implies that most companies in the sample have the same tenure.

Table 3. Normality Test Results

		Unstandardized Residual
N		352
Normal Parameters <sup>a,b</sup>	Mean	0,0000000
	Std. Deviation	0,04952843
Most Extreme Differences	Absolute	0,170
	Positive	0,170
	Negative	-0,109
Test Statistic		0,170
Asymp. Sig. (2-tailed)		0,054 <sup>c</sup>

Source: Processed Secondary Data, 2024

Table 3 explains that the significance value is 0.054, indicating that the data is normally distributed in the research residuals.

Table 4. Multicollinearity Test Results

Independent Variable	Tolerance	VIF	Result
Gender Diversity	0,672	1,488	No Multicollinearity
Age Diversity	0,953	1,050	No Multicollinearity
Independent Diversity	0,937	1,067	No Multicollinearity
Educational Background Diversity	0,658	1,087	No Multicollinearity
Tenure Diversity	0,646	1,244	No Multicollinearity

Source: Processed Secondary Data, 2024

As presented in Table 4, there is no evidence of multicollinearity, as indicated by the tolerance value exceeding 0.1 and the VIF value being below 10.

Heteroscedasticity testing is conducted to examine whether there are variations in the dispersion (variance) of residuals within the regression model. The results of this test, which utilized the Glejser method, are presented in Table 5.

Table 5. Heteroscedasticity Test Results

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	0,026	0,041		0,641	0,522
Gender Diversity	-0,223	0,232	-0,217	1,996	0,102
Age Diversity	-0,113	0,322	-0,236	2,923	0,411
Independent Diversity	-0,268	0,219	0,244	1,702	0,090
Educational Background Diversity	-0,312	0,312	0,291	1,702	0,060
Tenure Diversity	-0,333	0,218	0,211	3,209	0,101

Source: SPSS Output, 2024

The values for each independent variable in Table 5, all significance values > 0.05. Therefore, based on the established criteria (significance value > 0.05), it is concluded that there is no indication of heteroscedasticity.

Table 6. Results of Multiple Linear Regression Analysis Test

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	0,026	0,041		0,641	0,522
Gender Diversity	-0,503	0,312	-0,477	-1,996	0,047
Age Diversity	-0,433	0,222	-0,836	-2,923	0,004
Independent Diversity	-0,308	0,109	0,312	1,702	0,090
Educational Background Diversity	-0,291	0,202	0,271	1,702	0,000
Tenure Diversity	-0,430	0,168	0,340	3,209	0,001
R <sup>2</sup>	0,380				
F-sig	0,000				

Source: Processed Secondary Data, 2024

Table 6 shows an R<sup>2</sup> value of 0.611, indicating that 61.1% of the variation in earnings management practices among non-financial companies listed on the Indonesia Stock Exchange from 2020 to 2023 can be explained by diversity in gender, age, independence, educational background, and tenure. The remaining 38.9% is due to other unexamined factors.

## DISCUSSION

The analysis of the first hypothesis shows a negative regression coefficient for the gender diversity variable. This suggests that a higher number of female board members is linked to a reduced likelihood of earnings management in non-financial companies listed on the Indonesia Stock Exchange from 2020 to 2023. These results align with the findings of Machado et al. (2022), which suggests that gender diversity on boards negatively impacts total and executive remuneration, with 11% to 20% female participation on the board reducing earnings management. Although this does not directly influence CEO turnover, gender diversity helps mitigate the explanatory power of ROA. The study suggests that gender diversity enhances the effectiveness of the monitoring function, although the impact may be delayed when considering other governance factors. Alves (2023) identified a negative relationship between female directors and earnings management, noting that having three or more women on the board enhances decision-making. Likewise, Ibrahim and Hamza (2023) found that female and international directors significantly reduced earnings management in Nigerian oil and gas companies.

The second test shows a negative relationship between age diversity and earnings management in non-financial companies listed on the Indonesia Stock Exchange from 2020 to 2023. Greater age diversity helps reduce earnings

management. This finding is consistent with Bryan & Mason (2020), who noted that independent directors without strong reputation incentives are linked to lower accrual quality. They also noted that such directors correlated with higher audit fees, indicating higher perceived risk by auditors. Additionally, Komal et al. (2023) showed that younger audit committee members were more effective in reducing earnings management compared to older members. The third hypothesis also shows a negative regression coefficient for independent diversity. This implies that greater diversity among independent commissioners, particularly in their supervisory role over financial reporting during the 2020-2023 period, is linked to better earnings quality. The high number of independent commissioners also predicts a strong push for good corporate governance, which will reduce possible earnings management activities.

Efenyumi et al. (2023) found that aspects of gender diversity, such as female financial expertise, nationality, and independence, notably affect earnings management in NXG-listed companies. Goel & Kapoor (2022) emphasized sectoral variations in earnings management and found that female directors play a crucial role in monitoring it, whereas simply having independent directors does not guarantee effective corporate governance.

The analysis of the fourth hypothesis reveals a negative regression coefficient for the age diversity variable. A diverse educational background on the board improves decision-making and reduces earnings management in non-financial companies listed on the Indonesia Stock Exchange from 2020 to 2023. Ibrahim & Hamza (2022) found that in Nigerian oil and gas companies, the audit committee moderates the relationship between board diversity and earnings management, indicating the importance of prioritizing educational background diversity. Roy & Alfian (2022) concluded that agency theory fails to fully explain how board characteristics like independence, size, and the separation of CEO and chairman roles can reduce earnings management. However, their study highlighted that gender diversity and the educational backgrounds of independent directors help in reducing earnings management. Agency theory posits that effective monitoring systems can harmonize the goals of managers and shareholders, ensuring that both parties' interests are aligned, reducing the potential for opportunistic behavior. Many large companies leverage their audit committees to safeguard against fraud, mismanagement, and financial liabilities. The audit committee must be independent of management to function effectively. Zgarni et al. (2016) highlight its crucial role in improving financial reporting quality and reducing earnings management.

The analysis of the fifth hypothesis shows a negative regression coefficient for the tenure diversity variable. Longer tenure on the board, reflecting greater experience, improves the board's ability, confidence, and adaptability, reducing the likelihood of earnings management in non-financial firms listed on the Indonesia Stock Exchange from 2020 to 2023. Huang et al. (2021) noted that earnings management had a minimal impact on company efficiency, with inconsistent results regarding its relationship with board characteristics. Nevertheless, the study emphasized that factors such as director experience, tenure, a higher proportion of female directors, and more frequent board

meetings can improve company efficiency, even in the context of earnings management. This suggests that board diversity, especially in terms of tenure, gender, and meeting frequency, can improve company performance despite earnings management practices. Similarly, Triyonowati et al. (2022) found that while ownership concentration negatively impacts earnings quality, board diversity, particularly in tenure and independence, moderates this effect, reducing the impact of ownership concentration on earnings management.

## CONCLUSIONS AND RECOMMENDATIONS

This study aims to examine the effect of gender diversity, age diversity, independence diversity, educational background diversity, and tenure diversity on earnings management in 88 non-financial companies listed on the Indonesia Stock Exchange from 2020 to 2023. The results indicate that all these forms of diversity gender, age, independence, educational background, and tenure negatively affect earnings management.

## ADVANCED RESEARCH

This study acknowledges several limitations that should be considered for future research to achieve more comprehensive results. The limitations include the relatively short observation period from 2020 to 2023, the exclusion of certain aspects of board diversity, and the focus on only independent and dependent variables. Additionally, the study is limited to non-financial sector companies. Despite these limitations, this research offers valuable contributions to the field of accounting, particularly in the areas of finance and auditing.

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