Corporate Governance and Real Earnings Management: Evidence from Indonesian Fraudulent and Non-Fraudulent Listed Companies

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ABSTRACT

Corporate governance mechanisms provide a framework to mitigate managerial misbehaviour, including the manipulation of earnings. Despite their intended functions, the persistence of earnings management practices remains, ultimately contributing to instances of financial reporting fraud. Thus, this study aimed to examine how corporate governance attributes may affect the occurrence of earnings management, in particular real earnings management among Indonesian fraudulent and non-fraudulent listed companies. Using 192 firm-year observations, in the span of 2012-2021, the findings showed that educational background of the board of commissioners and board of directors significantly affected real earnings management practices. Nevertheless, this study failed to find a significant relationship between real earnings management and other corporate governance attributes, including changes in the board of commissioners (BOC), changes in the board of directors (BOD), the independence of BOC, the size of the audit committee, and the occurrence of auditor change. The findings of this study provide preliminary evidence on the importance of board education to influence real earnings management practices.

Keywords: Corporate Governance, Real Earnings Management, Indonesian-listed Companies

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INTRODUCTION

The concept of earnings management (EM), as defined by Healy and Wahlen (1999), pertains to the strategic discretion exercised by managers in the domains of financial reporting and transaction structuring. Its fundamental purpose is to manipulate financial statements, thereby leading specific stakeholders astray concerning the company's true economic performance, or influencing contractual consequences hinging on the reported accounting figures. Furthermore, Dechow and Skinner (2000) asserted that earnings management is a significant issue given its extensive utilisation and the potential for it to significantly influence financial statements.

Indeed, as asserted by Naz et al. (2023), the matter of earnings management has attracted substantial international attention due to its detrimental implications for financial reporting and, consequently, for the global financial markets. This is particularly pronounced in subsequent years marked by high-profile financial scandals. According to the research carried out by Nasir et al. (2018), it was found that companies engaged in fraudulent activities linked to financial statements often resorted to additional tactics for manipulating their earnings. In particular, their findings suggested that when it comes to fraudulent companies, management demonstrates a heightened level of assertiveness in manipulating financial statements through the implementation of real earnings management techniques, in contrast to non-fraudulent counterparts.

Effective corporate governance plays a pivotal role in constraining real earnings management within organisations including listed companies. By establishing robust oversight mechanisms and accountability structures, corporate governance practices discourage management from engaging in manipulative tactics aimed at distorting financial statements. The effective functioning of corporate governance can be achieved by the application of accountability, responsibility, fairness, and transparency (Indarto & Ghozali, 2016). A review of existing literature provides a substantial body of evidence supporting the effectiveness of corporate governance in overseeing earnings management practices (Azzam, 2020; Chatterjee & Rakshit, 2023; Mangala & Singla, 2023; Mensah & Boachie, 2023; Mersni & Ben Othman, 2016; Naz et al., 2023). Moreover, Mangala and Singla (2023) emphasised that corporate governance significantly enhances accounting quality and the transparency of financial information. It serves as a cautionary signal to investors, advising against placing undue reliance solely on reported outcomes, particularly when the potential for manipulation exists. Given that, this study aimed to investigate the impact of corporate governance effectiveness in mitigating real earnings management among Indonesian fraudulent and non-fraudulent listed companies.

This study chose Indonesia as a research setting as the corporate governance landscape in the country is marked by significant weaknesses that impede its effectiveness. Concentrated ownership and family-controlled enterprises often blur the lines between ownership and management, potentially side-lining minority shareholders' interests. Regulatory standards have historically been less stringent compared to international benchmarks, permitting practices inconsistent with good governance, such as inadequate financial disclosure and related-party transactions. The independence of boards and audit committees is compromised by affiliations with management or major shareholders, undermining impartial decision-making. In addition, weak enforcement mechanisms and limited institutional investor engagement further contribute to an environment where robust governance practices struggle to take root, affecting transparency, accountability, and investor confidence. Based on the results of a survey conducted by the Asian Corporate Governance Association (ACGA, 2020) spanning 12 countries in the Asia Pacific region, it became apparent that Indonesia held the least favourable position in terms of market performance for both 2018 and 2020. Moreover, the sustainability reports related to environmental, social, and governance dimensions in Indonesia for the years 2017 and 2018 were regarded as insufficient when compared to other markets within the Asia Pacific region. Additionally, it was evident that there was a significant variability in the quality of investor stewardship reporting, even within a single market. These observations collectively suggested an ongoing state of weak corporate governance in Indonesia

This study makes valuable contributions to the existing body of knowledge on earnings management and corporate governance in several ways. This study focussed on Indonesian listed companies including firms that had faced penalties from the Indonesia Security Commission due to breaches in their financial reporting practices. Furthermore, this study employed real earnings management as a method for quantifying earnings manipulation, considering data from a span of four years (year t, year t-1, year t-2, and year t-3).

LITERATURE REVIEW

Healy and Wahlen (1999) stated that the primary aim of earnings management is to mislead stakeholders, or a specific subset of stakeholders, regarding the true economic performance of the organisation. Managers engage in earnings management for a variety of reasons rooted in their desire to influence the perception of their organisation's financial performance. For example, earnings management allows them to meet or exceed market expectations, thereby enhancing stock prices and securing investor confidence. This practice can also affect executive compensation, as performance-related bonuses and stock options are often tied to reported earnings. Additionally, managers might utilise earnings management to avoid violating debt covenants or regulatory requirements, preventing potential negative consequences. Moreover, maintaining consistent earnings patterns can bolster a company's reputation and creditworthiness. However, excessive earnings manipulation can distort the true financial health of an organisation, potentially leading to long-term negative repercussions. Nevertheless, Stolowy (2004) asserted that the act of earnings management is considered permissible as long as it adheres to the principles outlined in Generally Accepted Accounting Principles (GAAP). Despite its permissible practices, Rezaee (2005) asserted that this practice can escalate into significant fraudulent activity, resulting in the creation of highly deceptive financial reports.

In general, there are two types of earnings management, namely discretionary accruals and real earnings management. Discretionary accruals refer to the discretion of management to time revenues, expenses, write-offs, and reserves opportunistically without violating GAAP (Markmann & Ghani, 2019). Whereas, real earnings management is defined by Roychowdhury (2006) as management actions that deviate from standard business practices and take place with the primary objective of reaching certain earnings thresholds. Real earnings management occurs when a company makes actual economic decisions that influence cash flows in order to generate the desired earnings (Dechow & Schrand, 2004). Example of real earnings management include excessive sales discounts, research and development, increased production to report a reduced cost of goods sold and share repurchase (Nasir et al., 2018; Rahman et al., 2018). Dechow et al. (1998) established three primary techniques used in real earnings management (REM), including cash flow from operations (CFO), production cost (PC), and discretionary expenditure (DE). The residuals observed between actual results and estimated normal levels is known as abnormal cash flow from operations (Nasir et al., 2018; Roychowdhury, 2006), abnormal production cost (Nasir et al., 2018; Roychowdhury, 2006), and abnormal discretionary expenses (Roychowdhury, 2006; Zamri et al., 2013) signal the earnings management practices of the firms.

Recently, real earnings management is often more prevalent than discretionary accruals due to its potential to create immediate and tangible effects on a company's financial performance. Further, as this approach allows managers to influence earnings without relying solely on accounting estimates or judgments, making it harder to detect and differentiate from legitimate business decisions. While discretionary accruals involve manipulating accounting estimates, they are subject to greater scrutiny and regulatory oversight, making them riskier for managers to employ. As a result, the relative opacity and potential immediate impact of real earnings management make it a more attractive option in certain situations.

The Agency Theory, initially introduced by Jensen and Meckling (1979), suggests that corporate governance acts as a check and balance system that reduces the incentives and opportunities for earnings management by ensuring transparency, accountability, and ethical behaviour within organisations. Corporate governance constitutes a structure encompassing regulations, standards, and processes that guide the supervision and management of corporations. For example, independent boards, particularly with directors possessing financial expertise, can critically evaluate financial reports, reducing the likelihood of opportunistic earnings management. Transparent financial reporting practices, coupled with robust board committees, such as audit committees, ensure thorough scrutiny of financial statements and enhance the reliability of financial information. Additionally, the role of external auditors, shareholder activism, and regulatory compliance further contribute to the corporate governance framework, collectively working to foster a culture of integrity and ethical financial reporting.

Hypotheses Development

The Board of Commissioners (BOC) and the Board of Directors (BOD) have contributed to the practice of earnings management through essential roles in supervising the organisation's financial activities, making significant decisions, providing ethical guidance, and establishing the overall corporate culture. A change in the composition of the board has the potential to create pressures and inadvertently promote earnings management under certain circumstances. For instance, if the new directors are closely aligned with the management team or lack expertise in financial matters, they might be more inclined to accept management's accounting choices without thorough scrutiny. Additionally, if the board is dominated by executive directors or those with conflicts of interest, they may prioritise short-term financial targets over long-term sustainability, leading to the adoption of aggressive accounting methods. On the other hand, the introduction of new directors, particularly those who possess a higher degree of independence, diverse expertise, and active engagement, tends to enhance the board's ability to scrutinise financial reporting rigorously and challenge potentially manipulative tactics. This change can create an environment of increased accountability, ethical behaviour, and transparency, thereby discouraging managers from engaging in earnings manipulation and fostering an atmosphere conducive to accurate and reliable financial reporting. Pamungkas et al. (2018) stated that the change in the board has the potential to initiate a period of stress, necessitating adaptation and adjustment, hence creating opportunities for unethical behaviour such as cheating. Given the varied viewpoints regarding the effects of board changes on earnings management, this study formulated the following hypotheses:

H1: BOC change significantly affects real earnings management.
H2: BOD change significantly affects real earnings management.

Board independence is recognized as a powerful governance mechanism for effectively monitoring and preventing unethical earnings management activities (Naz et al., 2023). Moreover, independent directors play an essential role in protecting the rights of shareholders. Hence, the independent board is more likely to ensure that financial reports are accurate and not manipulated to make the company appear to be doing better financially than it actually is. Azzam (2020) posited that companies with a board consisting of a significant proportion of independent boards exhibit decreased managerial discretion. It is implied that there is a correlation between the BOC independence and the practice of earnings management. As such, this study suggested the following hypothesis:

H3: Independence of BOC significantly affects real earnings management.

A larger size of the audit committee has been found to enhance the effectiveness of monitoring activities and mitigate the occurrence of earnings management (Mangala & Singla, 2023). The larger audit committee size can contribute to a reduction in earnings management because the committee's supervision and scrutiny protect against the manipulation of financial data. The presence of a larger committee has the potential to mitigate earnings management practices in an effective way. Thus, the next hypothesis was:

H4: Audit committee size significantly affects real earnings management.

The relationship between auditor changes and earnings management is intricately linked, as auditor changes often serve as a critical mechanism for both detecting and preventing earnings management practices within a company. When a new auditor takes over, there is typically increased scrutiny, greater independence, and a fresh risk assessment, making it more challenging for management to manipulate earnings without detection. Moreover, the prospect of an auditor change can act as a deterrent to earnings management, as companies are less likely to engage in manipulative practices when they anticipate heightened scrutiny during the transition. Indarto and Ghozali (2016) argued that the identification of fraudulent activities perpetrated within a corporation is anticipated to be accomplished by the newly hired auditor. Given that, a company that frequently engages in auditor rotation exhibits a reduced inclination toward engaging in earnings management. Hence, the next hypothesis was:

H5: Auditor change significantly affects real earnings management.

There are limited studies that have examined the impact of board education on earnings management practices. Nevertheless, prior studies document how board education affects various of corporate operations including corporate innovation (Abtahi et al., 2023), firm performance

(Alalwani & Al Hadi, 2021; Boshnak et al., 2023; Hatane et al., 2023), and corporate social responsibility (Katmon et al., 2019). In general, board director education significantly influences earnings management practices within companies by enhancing financial literacy, promoting ethical oversight, enabling effective monitoring, fostering professional scepticism, and facilitating strategic decision-making. Directors with strong educational backgrounds are better equipped to understand complex financial reporting principles, identify red flags of earnings manipulation, and challenge management practices that may compromise the integrity of financial statements. Their expertise reduces information asymmetry, enhances board diversity, and contributes to the effectiveness of audit committees, collectively discouraging short-term earnings management in favour of transparent, sustainable, and long-term value creation. The present study aimed to extend prior research by investigating the impact of board education on the practice of real earnings management. Given that, this study hypothesised that:

H6: BOC education significantly affects real earnings management.
H7: BOD education significantly affects real earnings management.

Figure 1 presents the research framework of this study.

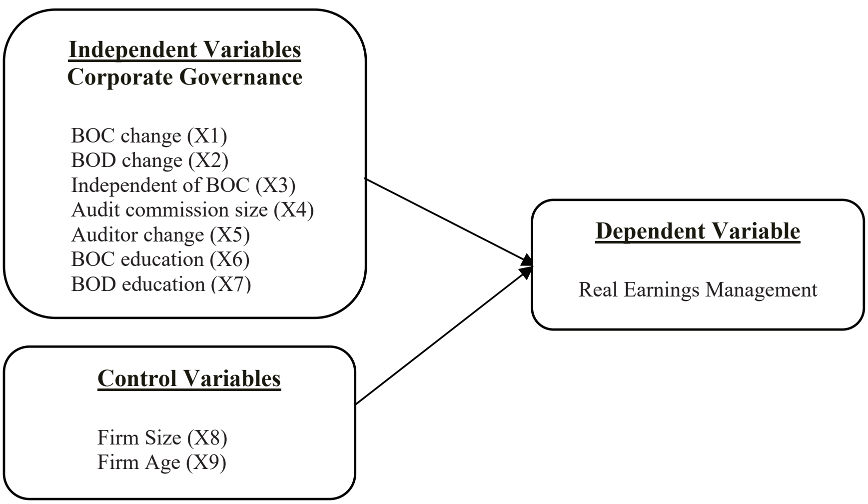

Figure 1: Research Framework

METHODOLOGY

Population and Sample

The research sample comprised of 48 companies listed on Indonesian Stock Exchange (IDX) over the period spanning from 2012 to 2021. Among these firms, 24 were classified as fraudulent companies, while the remaining 24 were classified as non-fraudulent companies. The researchers employed a purposive selection method to identify the sample companies for the study. Fraudulent companies referred to the listed companies that the Indonesia Security Commission had sanctioned for contravening the provisions outlined in the Law of Bapepam (Capital Market Supervisory Board) No.VIII.G.7 The matching technique was employed to ensure comparability between fraudulent and non-fraudulent companies is known as the matched-pair design. This design paired a fraudulent company with a non-fraudulent company based on specific criteria such as fiscal year, industry classification, and company size. This approach has been discussed and utilised in various studies (Girau et al., 2022; Beasley et al., 2010; Perols & Lougee, 2011). Therefore, the final sample of the study included 48 observations of companies that were selected based on the aforementioned criteria. The data was collected for the fiscal year in which the companies were involved in earnings management practices three years prior to the occurrence of fraudulent activities. Hence, the temporal interval between the observations encompasses a duration of four years, consisting of the first year (t) and the three prior years (t-1 to t-3). The duration of the research period spans four years, during which a total of 192 data observations were collected.

Measurement of Instruments

The variables used for measurement in this study are shown below.

Table 1: Measurement Variable

Variable	Measurement	Description
Dependent Variable		
Earnings management	Real earnings management $REM_{it} = ACFO_{it} + APROD_{it} + ADISEXP_{it}$	The three primary techniques employed in real earnings management
Independent Variable		
BOC change (X_1)	BOCCHANGE = Where: 1 = there is a change of commissioner 0 = otherwise	The change in the board of commissioners in two years before fraud occurrence
BOD change (X_2)	BODCHANGE = Where: 1 = there is a change of directors 0 = otherwise	The change in board of directors in two years before fraud occurrence
Independent of Board of Commissionaire (X_3)	INDBOC = % of Independent Board of Commissionaire	Percentage of the number of independent members in the board of commissioners
Audit committee size (X_4)	AUDCOMSIZE	Number of members on the audit committee
Auditor change (X_5)	AUDCHANGE	Change of company's auditor
BOC education (X_6)	BOCEDU = a dummy variable for BOC education Where: 1 = BOC with accounting or financial or business degree 0 = otherwise	Number of members in the board of commissionerswith an accounting/finance/ business degree
BOD education (X_7)	BODEDU = a dummy variable for BOD education Where: 1 = BOD with accounting or financial or business degree 0 = otherwise	Number of members in the board of directors with an accounting/finance/business degree
Control Variable		
Size	ASSETS	The total assets of the company
Age	AGE	The duration of the company's existence since its establishment

Hypothesis Testing

This study employed panel regression analysis to test the stated hypothesis and examine the relationship between BOC change, BOD change, Independent of BOC, Audit commission size, Auditor change, BOC education, and BOD education on real earnings management. The model was been designed as follows.

$$REM_{it} = \alpha + \beta_1\ BOCCHANGE_{it} + \beta_2\ BODCHANGE_{it} + \beta_3\ INDBOC_{it} + \beta_4\ AUDCOMSIZE_{it} + \beta_5\ AUDCHANGE_{it} + \beta_6\ BOCEDU_{it} + \beta_7\ BODEDU_{it} + \beta_8\ TOTASSETS_{it} + \beta_9\ AGE_{it} + \varepsilon$$

Where,

REM_{it} was real earnings management in period "t: for year "i". $BOCCHANGE_{it}$ was Board of Commissionaires change in period "t" for year "i". BODCHANGE was Board of Directors change in period "t" for year "i". $INDBOC_{it}$ was the Independent Board of Commissionaires in period "t" for year "i". AUDCOMSIZE was Audit Committee Size in period "t" for year "i". AUDCHANGE was Audit change in period "t" for year "i". $BOCEDU_{it}$ was Board of Commissionaires education in period "t" for year "i". BODEDUit was Board of Directors education in period "t" for year "i". TOTASSETSit was total assets in period "t" for year "i". $AGE_{it}$is the age of the company in period "t" for year "i".

RESULT AND DISCUSSION

Descriptive Statistic

The existing body of literature asserts that there are several assumptions that need to be satisfied before undertaking regression analysis. The assumptions encompassed in this study consisted of normality, no multicollinearity, homoscedasticity, and no serial correlation. The assessment of normality can be conducted by several procedures, including the examination of skewness and kurtosis measures. Certain variables, however, exhibit elevated levels of skewness and kurtosis, indicating an alteration from the normal distribution. Certain transformations have been applied to variables that exhibit non-normal distribution. The Variance Inflation Factors (VIFs) for the predictor variables consistently exhibit values below 10. None of the predictors exhibited a significant issue of multicollinearity in the estimate process. Upon conducting the homoscedasticity test on the dataset, the findings indicated that the presence of heteroscedasticity was absent. The correlation finding showed that the errors in the observations that cannot be seen were not related to each other. This study employed the random effect model (REM) to investigate the relationship between corporate governance characteristics and real earnings management.

Table 2: Mean, Minimum, and Maximum for Independent Variable

Variable	Fraudulent Company Observation			Non fraudulent Company Observation			t-test
	Mean	Min	Max	Mean	Min	Max	p-value
INDBOC	0.380	0.250	0.870	0.418	0.160	0.670	0.002
AUDITCOMSIZE	3	0	4	3	2	6	0.001

Based on the data presented in Table 2, it was evident that the average values of fraudulent firms for the independent BOC were comparatively lower than those of non-fraudulent firms. Conversely, the mean audit committee size for fraudulent firms was equivalent to that of non-fraudulent firms. The results obtained from the independent t-test analysis indicated that the independent BOC and audit commission size being examined displayed a p-value below 0.05. The statistical evidence presented indicated that there was a lack of significant disparity in the values of these variables when comparing firms engaged in fraudulent activities with firms not involved in fraudulent activities.

Table 3: Frequency for Dichotomous Independent Variables

Variable			Fraudulent Company Observation		Non fraudulent Company Observation	
			Frequency	Percentage	Frequency	Percentage
BOCCHANGE	1	Firms that had a change of Board of Commissionaires in the two years before fraud occurrence	69	72%	67	70%
	0	Firms that had no change of Board of Commissionaires in the two years before fraud occurrence	27	28%	29	30%

Variable			Fraudulent Company Observation		Non fraudulent Company Observation	
			Frequency	Percentage	Frequency	Percentage
BODCHANGE	1	Firm that had the change of Board of Directors in the two years before fraud occurrence	74	77%	65	68%
	0	Firm that had no change of Board of Directors in the two years before fraud occurrence	22	23%	31	32%
AUDCHANGE	1	Firms that had an auditor change in the two years preceding the fraud	32	33%	46	48%
	0	Firms that had noauditor change in the two years preceding the fraud	64	67%	50	52%
BOCEDU	1	Firms that had the Board of Commissionaires with an accounting or financial or business degree	82	85%	91	95%
	0	Firm that had noBoard of Commissionaires with an accounting or financial or business degree	14	15%	5	5%
BODEDU	1	Firms that had a Board of Directors with an accounting or financial or business degree	94	98%	96	100%
	0	Firms that had noBoard of Director with an accounting or financial or business degree	2	2%	0	0

It is worth noting that a considerable majority, specifically 72% of the whole sample, experienced changes in their Board of Commissioners within the two-year timeframe preceding the occurrence of fraudulent actions, as indicated in Table 3. Among the companies in the sample that were not involved in fraudulent activities, which accounted for 70% of the total sample, there were nonetheless notable impacts resulting from changes in their Board of Commissioners. Moreover, a notable proportion of the sample, specifically 28%, did not make any changes to their Board of Commissionaire. A notable finding from the study was that 30% of the sample population did not report any discernible changes in their Board of Commissioners. The results indicated that fraudulent companies experienced a higher rate of Board of Commissionaire turnover in the two years leading up to fraud occurrences, in comparison to non-fraudulent companies.

As demonstrated in Table 3, 39% of the total number of companies experienced Board of Director changes during the two-year period. In contrast, a significant proportion of the total sample, 68%, had notable Board of Directors changes. Similar to the procedure for terminating the Board of Commissioners, the general meeting of shareholders may remove the Board of Directors if sufficient justifications are provided. This finding suggests that a relatively increased proportion of both fraud and non-fraudulent companies had Board of Director changes within the specified time frame. The results of this study indicated that a greater proportion of fraudulent firms experienced Board of Director changes than non-fraudulent firms.

As shown in Table 3, a significant proportion, specifically 33%, of the whole sample of fraudulent firms had reported instances of auditor changes, as indicated by the variable AUDCHANGE. A total of 48% of non-fraudulent companies within the subset chose to change their auditors. In contrast, a majority of fraud-related companies, specifically 67%, demonstrated a tendency to maintain their existing auditors and abstained from pursuing an alteration in their auditing structures. A majority of 52% of the non-fraudulent companies within the subgroup made the decision to maintain their existing auditors and refrained from making any changes in their selection of auditors. The examination of the accessible data indicated a notable correlation between fraudulent firms and non-fraudulent firms in terms of the substitution of public accountants over the observed year. The results of the study suggested that fraudulent companies exhibited a preference for maintaining their existing public accountants, while non-fraudulent companies were more inclined to choose the replacement of their public accountants.

The prevalence of BOC education in accounting or finance is depicted in Table 3 for both fraud firms and non-fraud firms. Observations indicated that, of the total number of fraud firms, 85% of the sample had BOC with accounting or finance-related academic credentials. In contrast, within the subset of non-fraud firms, 95% displayed the presence of BOC with a background in accounting or finance.

A comparison of two groups—fraud firms and non-fraud firms—showed the predominance of BOD education backgrounds in accounting or finance. The data revealed that a substantial majority of 98% of the sampled fraudulent firms had members on their Board of Directors who held educational qualifications in the disciplines of accounting or finance. In contrast, it is worth noting that all non-fraudulent firms in the subset had BOD consisting of individuals with educational backgrounds in accounting or finance.

Correlation Analysis

Table 4: Correlation Matrix

Correlation Probability	REM	BOC CHANGE	BOD CHANGE	IND BOC	AUD COMSIZE	AUD CHANGE	BOC EDU	BOD EDU	SIZE	AGE
REM	1									
BOCCHANGE	-0.035	1								
BODCHANGE	-0.038	0.475*	1							
INDBOC	-0.086	0.024	-0.015	1						
AUDCOMSIZE	-0.019	0.155*	0.163*	0.200*	1					
AUD CHANGE	-0.087	0.067	0.203*	-0.042	0.042	1				
BOCEDU	0.162*	0.094	0.107	0.042	0.386*	-0.066	1			
BODEDU	0.601*	-0.065	-0.063	-0.014	-0.018	-0.118	0.137	1		
SIZE	0.136	-0.035	0.083	-0.061	0.194*	-0.286*	0.124	0.016	1	
AGE	-0.084	-0.047	-0.154*	-0.145*	-0.029	-0.180*	-0.039	0.081	0.318*	1

*$\rho < 0.05$

The primary objective of correlation analysis is to gain insight into the characteristics and extent of the association between variables under investigation in a research study. Table 4 displays the pairwise correlation coefficients pertaining to the variables examined in the study. The Pearson pairwise correlation coefficients suggested that there was a positive and statistically significant relationship between BOC education ($r = 0.162$; $\rho < 0.05$) and BOD education ($r = 0.601$; $\rho < 0.05$) with REM. The correlation between size ($r = 0.136$; $\rho < 0.05$) and REM was positive and not statistically significant. The correlation coefficients between BOC change ($r = -0.035$; $\rho < 0.05$), BOD change ($r = -0.038$; $\rho < 0.05$), Independent BOC ($r = -0.086$; $\rho < 0.05$), Audit committee size ($r = -0.0191$; $\rho < 0.05$), Audit change ($r = -0.087$; $\rho < 0.05$), and Age ($r = -0.084$; $\rho < 0.05$) with REM indicated a negative relationship and not statistically significant.

Result

The results of the hypothesis testing developed during this research are presented in Table 5.

Table 5: Hypothesis Testing

	Variable	Coefficient	Sig	Result
X_1	BOCCHANGE	-0.011685	0.8427	Rejected
X_2	BODCHANGE	0.017178	0.7925	Rejected
X_3	INDBOC	0.433866	0.2356	Rejected
X_4	AUDCOMSIZE	-0.072653	0.8001	Rejected
X_5	AUDCHANGE	0.065749	0.2470	Rejected
X_6	BOCEDU	0.536088	0.0000	Accepted
X_7	BODEDU	2.651752	0.0000	Accepted

Table 5 presents empirical evidence suggesting that there was not a statistically significant relationship between the change in the board of commissioners and the practice of real earnings management. This conclusion was supported by a p-value of 0.8427 and a ß coefficient of -0.011685. Consequently, the hypothesis H1was not supported. The findings suggested that the replacement of the board of commissioners had a limited impact on the extent of real earnings management carried out by management. The findings align with the research conducted by Harman and Bernawati (2021).

The findings also indicated that changing the composition of the board of directors has no statistically significant impact on real earnings management. This conclusion was supported by the ß coefficient of 0.017178 with a p-value of 0.7925. Therefore, it can be concluded that hypothesis H2 was not supported. This finding aligns with the research conducted by Harman and Bernawati (2021). As per the regulations outlined in Article 105(1) of Indonesian Law No. 40 of 2007, the general meeting of shareholders declares the authority to change the acts of the Board of Directors and the Board of Commissioners, subject to the condition that substantiated justifications are presented. Hence, it is a prevalent occurrence for corporations to have turnover within their Board.

Based on the results presented in Table 5, there was not a statistically significant relationship between the presence of an independent BOC and the practice of real earnings management. The coefficient value for ß was 0.433866 and the p-value was 0.2356. As a result, it can be concluded that hypothesis H3 was not supported. The finding is consistent with the findings reported by Abata and Migiro (2016), Azzam (2020), and Indarto and Ghozali (2016).

The size of the audit committee did not significantly impact on real earnings management, as indicated by the ß coefficient of -0.072653 and a p-value of 0.8001 (see Table 5 for reference). Therefore, it can be concluded that hypothesis H4 was not supported. The result is consistent with the research conducted by Abata and Migiro (2016), Feng and Huang (2021), Mangala and Singla (2023), and Mersni and Othman (2016).

The hypothesis analysis results in Table 5 demonstrated that the change of auditor dids not significantly impact real earnings management. The result showed the ß coefficient of 0.065749 and the p-value of 0.2470. Thus, it can be inferred that hypothesis H5 was also not supported. The findings align with the research carried out by Harman and Bernawati (2021), and Omukaga (2020).

The impact of the board of commissioners' education on real earnings management was found to be statistically significant, as indicated by the ß coefficient of 0.536088 and a p-value of 0.0000 (see Table 5 for details). Consequently, the hypothesis H6 was supported.

Based on the results shown in Table 5, a statistically significant correlation existed between the board of directors' education and earnings management. The coefficient value of ß was 2.651752, indicating a statistically significant relationship, as evidenced by a p-value of 0.0000. As a result, the hypothesis H7 was supported. The results suggested that Board members with accounting and finance educational backgrounds may be more inclined to engage in real earnings management. According to the Agency Theory, there exists a principal-agent relationship between shareholders (the principals) and the management team (the agents). In this context, board members act as representatives of shareholders and are entrusted with the responsibility of maximizing shareholder wealth. However, conflicts of interest may arise between shareholders and management, as the latter may prioritize their own interests or short-term goals over the long-term interests of shareholders.

Board members with accounting and finance backgrounds, while possessing expertise that can enhance financial stewardship, may succumb to the agency problem. The pressure to meet short-term financial targets, maintain stock prices, and demonstrate positive performance might drive them to employ real earnings management tactics. This could be a result of their financial acumen allowing them to identify loopholes within accounting standards that enable manipulation of financial reports. In doing so, they may seek to align their interests with those of shareholders, especially when executive compensation is tied to financial performance metrics.

CONCLUSION

Managers have the ability to use the disparity in information between those within the organisation and external investors in order to conceal a true measure of financial success. This is achieved through the practice of earnings management, which serves the purpose of enhancing their remuneration and ensuring job stability. Corporate governance mechanisms serve as an opportunity to restrict managerial actions aimed at manipulating a company's earnings. Therefore, it is necessary to examine the potential impact of corporate governance characteristics on the practice of real earnings management. This study presents findings that suggest a significant relationship between the educational backgrounds of the board of commissioners and board of directors, and the practice of real earnings management. However, there was no significant correlation between real earnings management and variables such as a change in the BOCBOD, independence of BOC, audit committee size, and auditor change.

This study is subject to some limitations. The sample size of this study was rather small, consisting of only 192 observations. Moreover, it should be noted that the study sample exclusively comprised of listed firms in Indonesia. This selection criterion restricts the generalisation of findings to non-listed firms and firms originating from different countries. Subsequent investigations ought to employ an expanded sample size and broaden the scope of inquiry to encompass companies from additional emerging nations.

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REFERENCES

Abata, M. A., & Migiro, S. O. (2016). Corporate governance and management of earnings: Empirical evidence from selected Nigerian-listed companies. *Investment Management and Financial Innovations, 13(2), 189–205*. https://doi.org/10.21511/imfi.13(2-1).2016.07

Abtahi, Z., Chkir, I., & Benkraiem, R. (2023). Board diversity and corporate innovation: New evidence from the Canadian context. *Finance Research Letters, 55(February). https://doi.org/10.1016/j.frl.2023.103826*

ACGA. (2020). *Future promise: Aligning governance and ESG in Asia.* In CLSA.

Alalwani, Z. A., & Al Hadi, M. E. (2021). *Is appointing board members with a high level of education enhance firm performance? 2021 International Conference on Decision Aid Sciences and Application,* DASA 2021, 1099–1102. https://doi.org/10.1109/DASA53625.2021.9682281

Azzam, M. (2020). The association between corporate governance reform and earnings management: Empirical evidence from a unique regulatory environment. *International Journal of Accounting, Auditing and Performance Evaluation, 16(2–3), 149–199.* https://doi.org/10.1504/IJAAPE.2020.112716

Beasley, M. S., Hermanson, D. R., Carcello, J. V, & Neal, T. L. (2010). Fraudulent Financial Reporting: 1998-2007: An Analysis of U.S. Public Companies. *In the Committee of Sponsoring Organizations of the Treadway Commission (pp. 1–87).*

Boshnak, H. A., Alsharif, M., & Alharthi, M. (2023). Corporate governance mechanisms and firm performance in Saudi Arabia before and during the COVID-19 outbreak. *Cogent Business and Management, 10(1).* https://doi.org/10.1080/23311975.2023.2195990

Chatterjee, R., & Rakshit, D. (2023). Association Between Earnings Management and Corporate Governance Mechanisms: A Study Based on Select Firms in India. *Global Business Review, 24(1), 152–170.* https://doi.org/10.1177/0972150919885545

Dechow, P. M., Kothari, S. P., & Watts, R. L. (1998). The relation between earnings and cash flows. *Journal of Accounting and Economics, 25(2), 133–168.*

Dechow, P. M., & Schrand, C. M. (2004). *Earnings quality.* In The Research Foundation of CFA Institute.

Dechow, P. M., & Skinner, D. J. (2000). Earnings management: Reconciling the views of accounting academics, practitioners, and regulators. *Accounting Horizons, 14(2), 235–250.* https://doi.org/10.2308/acch.2000.14.2.235

Feng, Z. Y., & Huang, H. W. (2021). Corporate governance and earnings management: A quantile regression approach. *International Journal of Finance and Economics, 26(4), 5056–5072.* https://doi.org/10.1002/ijfe.2054

Girau, E. A., Bujang, I., Paulus Jidwin, A., & Said, J. (2022). Corporate governance challenges and opportunities in mitigating corporate fraud in Malaysia. *Journal of Financial Crime, 29(2), 620–638.* https://doi.org/10.1108/JFC-02-2021-0045

Harman, S. A., & Bernawati, Y. (2021). Determinant of Financial Statement Fraud: Fraud Pentagon Perspective in Manufacturing Companies. *Review of International Geographical Education Online, 11(4), 554–566.* https://doi.org/10.33403/rigeo.800671

Hatane, S. E., Winoto, J., Tarigan, J., & Jie, F. (2023). Working capital management and board diversity towards firm performances in Indonesia's LQ45. *Journal of Accounting in Emerging Economies, 13(2), 276–299.* https://doi.org/10.1108/JAEE-11-2018-0130

Healy, P. M., & Wahlen, J. M. (1999). A Review of the Earnings Management Literature and Its Implications of Standard Setting. *Accounting Horizons, 13(4), pp.365-383.* http://www.aaajournals.org/doi/abs/10.2308/acch.1999.13.4.365

Indarto, S. L., & Ghozali, I. (2016). Fraud diamond: Detection analysis on fraudulent financial reporting. *Risk Governance and Control: Financial Markets and Institutions, 6(4 Continued 1), 116–123. https://doi.org/10.22495/rcgv6i4c1art1*

Jensen, M. C., & Meckling, W. H. (1979). Rights and Production Functions: An Application to Labor-Managed Firms and Codetermination. *The Journal of Business, 52*(4), 469–506. https://doi.org/10.4159/9780674274051-008

Katmon, N., Mohamad, Z. Z., Norwani, N. M., & Farooque, O. Al. (2019). Comprehensive Board Diversity and Quality of Corporate Social Responsibility Disclosure: Evidence from an Emerging Market. *Journal of Business Ethics, 157*(2), 447–481. https://doi.org/10.1007/s10551-017-3672-6

Mangala, D., & Singla, N. (2023). Do corporate governance practices restrain earnings management in the banking industry? Lessons from India. *Journal of Financial Reporting and Accounting, 21*(3), 526–552. https://doi.org/10.1108/JFRA-02-2021-0060

Markmann, A., & Ghani, W. (2019). Business Ethics and Financial Reporting: Earnings Management During Periods of Economic Recessions. *Journal of Forensic and Investigative Accounting, 11*(1), 64–81.

Mensah, E., & Boachie, C. (2023). Corporate governance mechanisms and earnings management: The moderating role of female directors. *Cogent Business and Management, 10*(1). https://doi.org/10.1080/23311975.2023.2167290

Mersni, H., & Ben Othman, H. (2016). The impact of corporate governance mechanisms on earnings management in Islamic banks in the Middle East region. *Journal of Islamic Accounting and Business Research, 7*(4), 318–348. https://doi.org/10.1108/JIABR-11-2014-0039

Nasir, N. A. M., Ali, M. J., Razzaque, R. M. R., & Ahmed, K. (2018). Real earnings management and financial statement fraud: evidence from Malaysia. *International Journal of Accounting and Information Management, 26*(4), 508–526. https://doi.org/10.1108/IJAIM-03-2017-0039

Naz, A., Krošláková, M. N., Farheen, I., Čvirik, M., & Michálková, A. (2023). Nexus between corporate governance and earnings management in family and non-family firms. *E a M: Ekonomie a Management, 26*(2), 42–57. https://doi.org/10.15240/tul/001/2023-2-003

Omukaga, K. O. (2020). Is the fraud diamond perspective valid in Kenya? *Journal of Financial Crime*. https://doi.org/10.1108/JFC-11-2019-0141

Pamungkas, I. D., Ghozali, I., Achmad, T., Khaddafi, M., & Hidayah, R. (2018). Corporate Governance Mechanisms in Preventing Accounting Fraud: A Study of Fraud Pentagon Model. *Journal of Applied Economic Sciences, 13*(2), 549–560.

Perols, J. L., & Lougee, B. A. (2011). The relation between earnings management and financial statement fraud. *Advances in Accounting, 27*(1), 39–53. https://doi.org/10.1016/j.adiac.2010.10.004

Rahman, R. A., Normah, H. O., Asheq, R., & Ruhaini, M. (2018). Islamic ethical values of corporate top leadership and real earnings management. *International Journal of Law and Management, 60*(3), 869–884.

Rezaee, Z. (2005). Causes, consequences, and deterrence of financial statement fraud. *Critical Perspectives on Accounting, 16*(3), 277–298. https://doi.org/10.1016/S1045-2354(03)00072-8

Roychowdhury, S. (2006). Earnings management through real activities manipulation. *Journal of Accounting and Economics, 42*(3), 335–370. https://doi.org/10.1016/j.jacceco.2006.01.002

Stolowy, H. (2004). Accounts manipulation: A literature review and proposed conceptual framework. *Review of Accounting and Finance, 3*(2), 5–92.

Zamri, N., Rahman, R. A., & Isa, N. S. M. (2013). The Impact of Leverage on Real Earnings Management. *Procedia Economics and Finance, 7*(Icebr), 86–95. https://doi.org/10.1016/s2212-5671(13)00222-0