

Audit Quality and Real Earnings Management: Insights from Indonesia

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ABSTRACT

This paper investigates the relationship between audit quality (AQ) and real earnings management (REM) within manufacturing firms listed on the Indonesia Stock Exchange (IDX) between 2017 and 2021. REM is assessed through an index comprising abnormal operating cash flows, discretionary costs, and production costs. AQ is represented by audit firm size (ASZ), auditor industry specialization (ASP), and auditor tenure (ATEN). Data was collected from 102 companies, totaling 510 observations via purposive sampling. Findings indicate that ASZ and ATEN negatively impact REM, while ASP has a positive effect. Specifically, ASZ positively influences operating cash flow REM, but negatively affects discretionary expenses and production costs REM. Conversely, ASP positively affects all three forms of REM. Additionally, ATEN negatively affects operating cash flow and production costs REM, yet has no effect on discretionary expenses REM. This research enriches existing literature by providing comprehensive insights using three REM measurement approaches and three AQ proxies.

Keywords: Real earnings management, audit quality, auditor size, industry-focused auditor, auditor tenure.

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1. INTRODUCTION

This research investigates the impact of audit quality, represented by auditor size, tenure, and specialization, on real earnings management within firms listed on the Indonesia Stock Exchange during the period 2017-2021. The results of this study hopefully can contribute substantially to the existing of literature on earnings management, particularly within the contexts of various jurisdictions and emerging markets in other country. Audit quality encompasses audits subject to oversight by audit institutions and requires meticulous attention from initiation through report provision and recommendations. The study is motivated by the managerial practice of employing real earnings management to attain targeted earnings levels (Roychowdhury, 2006). Chen et al. (2011) and Inaam et al. (2012) demonstrate that audit quality, represented by auditor size and tenure, constrains accrual earnings management. Consequently, firms seeking to engage in earnings management may shift from accrual to real earnings management strategies (Lisic et al., 2011). This transition aligns with prior findings indicating a positive association between

auditor size and real earnings management (Inaam et al., 2012; Lisic et al., 2011). The present study aims to delve deeper into the impact of audit quality on real earnings management, offering a more comprehensive and detailed analysis. It employs three measures of audit quality—audit firm size, auditor industry specialization, and auditor tenure—and four measures of real earnings management: aggregate REM, operating cash flow REM, discretionary costs REM, and production costs REM.

Real earnings management (REM) incurs significant long-term costs, leading to adverse impacts on future cash flows and ultimately diminishing the company's value (Cohen & Zarowin, 2010; Roychowdhury, 2006). Cohen et al. (2008) elucidate that firms resort to REM primarily to evade detection by auditors and regulators. REM poses a greater challenge for detection due to its close resemblance to the company's operational activities. Prior studies have established that managers manipulate a company's earnings through the application of either accrual or real earnings management techniques (Cohen et al., 2008; Roychowdhury, 2006). Both types of earnings management models prioritize meeting current earnings targets. Real earnings management typically imposes higher long-term costs on shareholders compared to accrual earnings management.

External auditors, acting as independent entities, offer assurances regarding adherence to accounting standards in financial statements through audit reports. Their presence serves to mitigate conflicts of interest arising from information asymmetry between principals and agents, given that agents typically possess greater insight into financial transactions (Jensen & Smith, Jr., 2005). While high audit quality is inversely associated with accrual earnings management, it exhibits a positive correlation with real earnings management (Nimpi & Jantarakolica, 2021). Improved audit quality constrains the manipulation of accruals, prompting managers to resort to real earnings management techniques (Lisic et al., 2011).

Prior investigations into the correlation between audit quality and real earnings management have produced conflicting results. Some studies suggest that audit quality, as represented by audit firm size, positively influences real earnings management (Cohen & Zarowin, 2010; Danyu, 2014; Inaam et al., 2012; Lisic et al., 2011), while others assert a negative relationship (Debnath et al., 2022). Alternatively, when audit quality is measured by auditor industry specialization, it exhibits a negative impact on real earnings management (Anissa & Anastasia Petronila, 2019; Hsu & Liao, 2023), with certain studies suggesting no significant effect (Debnath et al., 2022). Similarly, using auditor tenure as a proxy for audit quality yields mixed findings: some studies indicate a positive association with real earnings management (Cohen & Zarowin, 2010; Lisic et al., 2011), while some others find no substantial impact (Nugrahanti & Puspitasari, 2018).

This study adopts a perspective on real earnings management acknowledging that: (1) its detection by auditors is challenging due to its resemblance to routine business operations (Kim et al., 2010), (2) it affords management greater flexibility (Graham et al., 2005), and (3) it is evaluated using three distinct metrics—abnormal operating cash flow, abnormal discretionary costs, and abnormal production costs—which are likely to yield divergent insights. Therefore, the research problem is formulated as follows:

RQ1: Does the quality of auditors affect the practice of real earnings management in companies listed on the Indonesia Stock Exchange for the period 2017– 2021?

2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

2.1 Agency Theory

This research adopts agency theory as a framework due to the pervasive nature of earnings management as a classic issue within the principal-agent relationship paradigm. Originating from the seminal work of Alchian and Demsetz (1972), agency theory has undergone further refinement by scholars such as Jensen and Meckling (1976). Central to agency theory is the delineation and prediction of interactions between principals (shareholders) and agents. Shareholders, as principals, delegate operational responsibilities to agents with the expectation of value maximization, thus initiating a scenario where divergent interests emerge, leading to conflicts of interest. Investors seek returns on their invested capital, while management aims to boost profits (Brahmono & Purwaningsih, 2022). This misalignment of interests between principals and agents often escalates into conflicts, particularly when anticipated benefits from the agency relationship fail to materialize as expected. Beyond self-serving actions by managers, a critical concern arises from their inclination towards presenting incomplete accounting data or manipulating earnings to obfuscate factual information, thereby exacerbating information asymmetry. Consequently, information asymmetry and opportunistic behaviors furnish principals with compelling rationales to harbor distrust towards agents.

2.2 Earnings Management

Scott (2015) and Rahmawati & Krismiaji (2021) state that earnings management pertains to the adoption of accounting policies or tangible maneuvers executed by managerial entities to impact earnings with the aim of attaining predetermined objectives. This practice encompasses two distinct forms: accrual earnings management (AEM) and real earnings management (REM). Graham et al. (2005) conducted an extensive examination of cash flow from operating activities (CFOs), revealing a managerial inclination towards real earnings management over accrual earnings management. This preference arises from the perceived emphasis placed by auditors and other relevant parties on accruals rather than tangible transactions in determining selling or production prices. Furthermore, the adoption of real earnings management is motivated by the higher risk associated with manipulating accrual transactions. scholarly exploration into the nexus between audit quality and real earnings management remains scant, particularly in developing countries (e.g., Alhadab & Clacher, 2018; Lisic et al., 2011; Sitanggang et al., 2020). The majority of studies examining audit quality and earnings management have predominantly focused on accrual earnings management (e.g., Alzoubi, 2018; Houqe et al., 2017; Krishnan, 2005; Lisic et al., 2011). Consequently, there exists an avenue for further investigation into the association between audit quality and real earnings management, employing contemporary data on companies listed on the Indonesia Stock Exchange.

Cohen et al. (2008), Cohen & Zarowin (2010), Gunny (2010), Li (2019), and Roychowdhury (2006) argue that real earnings management (REM) is the separation of earnings management from conventional accrual-based earnings management. The income statement is structured to manipulate current year earnings by altering specific operational information. REM aids in adjusting operational cash flow by implementing policies like reducing prices or extending credit terms to boost current revenue. Nevertheless, long-term income stability becomes uncertain with expanded credit terms, increasing receivables and the risk of cash shortages. In addition, REM involves abnormally reducing discretionary spending, diminishing the link between present earnings and future cash flows (Li, 2019).

Companies can also exercise cost control by deferring research and development expenses (Gunny, 2010; Li, 2019; Roychowdhury, 2006). Reductions in research and

development, advertising, sales, and administrative costs aim to bolster short-term earnings. Managers' readiness to trim expenses enables meeting current year earnings targets. Graham et al. (2006), Mizik & Jacobson (2007), and Baber et al. (1991) discovered that firms often realize higher earnings through below-average marketing expenditures, indicative of cost control to enhance immediate earnings. Moreover, reduced cost of goods sold due to high production efficiency further impacts current earnings enhancement. Brahmono and Purwaningsih (2022) assert that effective earnings management positively influences future company performance, contrasting with detrimental effects of opportunistic earnings management. Empirical evidence demonstrates adverse outcomes of earnings management practices on company performance, suggesting opportunistic tendencies in Indonesian contexts. Fraditya and Purwaningsih (2023) reveal that accrual earnings management negatively impacts earnings quality, while company size positively influences it. Liquidity, as a control variable, positively affects earnings quality.

2.3. Hypothesis Development

Real earnings management (REM) represents a departure from standard business practices aimed at manipulating reported earnings (Roychowdhury, 2006). REM is quantified through three metrics: abnormal cash flow, abnormal discretionary costs, and abnormal production costs (Cohen, 2008). Agency theory (Jensen & Meckling, 1976) posits that the primary issue in agency relationships is the managerial incentive to present incomplete accounting information or manipulate earnings to serve personal interests.

High audit quality serves to limit agents engaging in earnings management. The negative correlation between audit quality and accrual earnings management underscores this limitation. Conversely, when companies resort to real earnings management tactics, a positive association emerges between audit quality and earnings management. However, the implementation of new financial accounting standards has imposed limitations, curbing other material misstatements and managerial discretion. Consequently, firms resort to real earnings management to manipulate earnings (Cohen, 2008; Ewert & Wagenhofer, 2005). Some research indicates that audit quality, as proxied by audit firm size, positively influences real earnings management (Cohen & Zarowin, 2010; Danyu, 2014; Inaam et al., 2012; Lisic et al., 2011), while others suggest a negative impact of audit quality on real earnings management (Debnath et al., 2022).

An indicator of audit quality is the size of the audit firm, categorized as Big 4 and non-Big 4. Big 4 auditors exhibit superior audit quality and greater credibility compared to non-Big 4 auditors. They also demonstrate a more conservative approach in safeguarding their reputations (Basu et al., 2001). Prior studies have documented a positive association between auditor size and real earnings management (Chowdhury & Eliwa, 2021; Cohen & Zarowin, 2010; Danyu, 2014; Hassan et al., 2023; Inaam et al., 2012; Lisic et al., 2011). However, recent research by Debnath et al. (2022) and Zgarni & Chikhaoui (2022) contradicts this, indicating a negative impact of audit firm size on real earnings management.

A second indicator of audit quality lies in auditor industry specialization. Previous studies examining the relationship between audit quality and earnings management yield mixed results. Lisic et al. (2011) assert that auditor industry specialization positively impacts real earnings management, whereas Anissa & Anastasia Petronila (2019) contend the opposite. However, Debnath et al. (2022) discover no discernible relationship between

industry-specific auditors and real earnings management. Nonetheless, Alqadasi et al. (2022) demonstrate that companies employing specialist auditors are less inclined to engage in REM. Finally, Hsu & Liao (2023) uncover evidence indicating a negative correlation between auditor industry specialization and production cost earnings management.

The third indicator of audit quality pertains to the auditor's tenure, defined as the duration of the auditor's engagement with the company (Myers et al., 2003). Longer tenure equates to a deeper understanding of the company, enhancing the auditor's ability to identify earnings management practices. Consequently, transitions from accrual to real earnings management become more challenging to discern. While Cohen & Zarowin (2010), Lisic et al. (2011), and Sitanggang et al. (2020) assert a positive correlation between auditor tenure and real earnings management, Nugrahanti et al. (2018) contend otherwise, suggesting no impact of auditor tenure on real earnings management.

Drawing from prior research, despite variations in findings within and across real earnings management metrics, which mirror the traits of real earnings management and parallel typical operational endeavors, we posited the following hypothesis:

H1: Audit quality positively affects real earnings management

3. RESEARCH METHODS

The study's population comprises all companies listed on the Indonesia Stock Exchange (IDX). Purposive sampling techniques were employed to select samples meeting specific criteria: (1) public companies listed on the IDX between 2017 and 2021, (2) operating in the manufacturing sector, and (3) having publicly accessible information. Data were sourced from the companies' websites and the capital market database (www.idx.co.id). The unit of analysis utilized was the firm year.

3.1 Research variables

The independent variable used in this research is real earnings management (REM), measured using a model initiated by Roychowdhury (2006). There are three models to measure real earnings management: abnormal operating cash flow, abnormal production costs, and abnormal discretionary costs. The employed models are outlined below.

$$\text{CFO}_t/\text{A}_{t-1} = \alpha_0 + \alpha_1(1/\text{A}_{t-1}) + \beta_1(\text{S}_t/\text{A}_{t-1}) + \beta_2(\Delta\text{S}_t/\text{A}_{t-1}) + \epsilon_t \quad (1)$$

$$\text{PROD}_t/\text{A}_{t-1} = \alpha_0 + \alpha_1(1/\text{A}_{t-1}) + \beta_1(\text{S}_t/\text{A}_{t-1}) + \beta_2(\Delta\text{S}_t/\text{A}_{t-1}) + \beta_3(\Delta\text{S}_{t-1}/\text{A}_{t-1}) + \epsilon_t \quad (2)$$

$$\text{DISEXP}_t/\text{A}_{t-1} = \alpha_0 + \alpha_1(1/\text{A}_{t-1}) + \beta(\text{S}_{t-1}/\text{A}_{t-1}) + \epsilon_t \quad (3)$$

Where:

$\text{CFO}_t/\text{A}_{t-1}$: Operating cash flow of the t -year divided by total assets of the $t-1$ year.

$\alpha_1(1/\text{A}_{t-1})$: The intercept is divided by total assets $t-1$ year.

$\text{S}_t/\text{A}_{t-1}$: Sales revenue year t divided by total assets year $t-1$.

$\Delta\text{S}_t/\text{A}_{t-1}$: $t-1$ year sales revenue minus $t-1$ year sales revenue divided by total assets of the $t-1$ year.

- $PROD_t/At-1$: t -year production costs divided by total year assets $t-1$, i.e., $PROD_t = COGSt + \Delta INV_t$
 $\Delta St-1/At-1$: Changes in $t-1$ year sales revenue are divided by total assets $t-1$ year.
 $DISEXP_t/At-1$: The cost of discretion of the t -year is divided by the total assets of the $t-1$ year.
 $St-1/At-1$: $t-1$ year sales revenue is divided by total asset $t-1$ year.
 ϵ_t : Error term year t .

The regression equations (1), (2), and (3) yield normal operating cash flow, normal production costs, and normal discretionary costs, respectively. However, this study requires abnormal measures of operating cash flow, production costs, and discretionary costs. Therefore, the abnormal value in real earnings management (REM) is calculated as the difference between total and normal values, where abnormal operating cash flow equals total operating cash flow minus normal operating cash flow, abnormal discretionary costs equal total discretionary costs minus normal discretionary costs, and abnormal production costs equal total production costs minus normal production costs. The aggregate residual (abnormal values) from these equations constitutes the REM figure, serving as the dependent variable for hypothesis testing.

The independent variable under scrutiny is audit quality, which can be measured through various metrics such as audit firm size (Big4 or non-Big4), audit fees, auditor tenure, and auditor specialization. In this study, authors opted for commonly utilized variables: firm audit size, auditor specialization, and auditor tenure. Additionally, several control variables were incorporated, aligning with prior studies (Vichitsarawong & Pornupatham, 2015). The first control variable, company size (SIZE), is measured using the natural logarithm of total assets. SIZE serves to control variations in company size, a pivotal factor impacting diverse aspects of company operations. The second control variable, the debt-to-asset ratio (LEV), is computed by dividing total debt by total assets. LEV functions as a control variable due to its association with heightened financial vulnerability in companies with high debt ratios, consequently affecting the level of earnings management.

3.2 Model Specification

This research employs equation (4) to test the hypothesis,

$$REM_{it} = \alpha_{it} + \beta_1 ASZ_{it} + \beta_2 ASP_{it} + \beta_3 ATEN_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \epsilon_{it}. \quad (4)$$

In this equation, REM represents real earnings management, ASZ denotes audit firm size, ASP refers to auditor industry specialization, ATEN signifies auditor tenure, SIZE represents company size and serves as a control variable, LEV indicates leverage (the ratio of debt to assets) and acts as another control variable, and ϵ represents the residual error term. Subsequently, equation (4) is decomposed into three models, each focusing on a specific aspect of REM:

$$REMC_{it} = \alpha_{it} + \beta_1 ASZ_{it} + \beta_2 ASP_{it} + \beta_3 ATEN_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \epsilon_{it}. \quad (5)$$

$$REMD_{it} = \alpha_{it} + \beta_1 ASZ_{it} + \beta_2 ASP_{it} + \beta_3 ATEN_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \epsilon_{it}. \quad (6)$$

$$REMP_{it} = \alpha_{it} + \beta_1 ASZ_{it} + \beta_2 ASP_{it} + \beta_3 ATEN_{it} + \beta_2 SIZE_{it} + \beta_3 LEV_{it} + \epsilon_{it}. \quad (7)$$

5. DATA ANALYSIS AND DISCUSSION

5.1 Univariate Analysis

Drawing from the sampling process, this study acquired data from 102 manufacturing companies spanning 2017 to 2021, amassing observations from a total of 510 firm years. Table 1 provides descriptive statistics of the sample data, revealing considerable variation across all variables utilized in the scoring model. On average, sampled companies exhibit positive real earnings management (REM), except for REMP, indicating engagement in manipulating real earnings above a neutral threshold. REM spans from -11.09 to 28.81, with a mean of 0.03, a median of 0.15, and a standard deviation of 2.61. Subcomponents of REM, namely REMC, REMD, and REMP, demonstrate mean (median) values of 0.02 (-0.11), 0.02 (-0.11), and -0.08 (0.09), respectively. The positive mean values suggest a prevalent direction of real earnings management, barring REMP, which exhibits a negative trend. Furthermore, Table 1 illustrates significant variation in company size, ranging from 4.12 to 8.66, with a mean (median) of 6.23 (6.13). In contrast, financial leverage (LEV) displays broader variation, ranging from 0.04 to 7.65, with a mean (median) of 0.62 (0.51).

Table 1. Descriptive Statistics

	Min	Max	Mean	Median	Std.Dev
REM	- 11.09	28.81	0.03	- 0.15	2.61
REMC	- 0.35	14.13	0.02	- 0.11	1.23
REMD	- 0.76	14.22	0.02	- 0.11	1.19
REMP	- 10.39	2.94	- 0.08	0.09	1.08
LEV	0.04	7.65	0.62	0.51	0.68
SIZE	4.12	8.66	6.23	6.13	0.73
ASZ	0.00	1.00	0.40	0.00	0.49
ASP	0.00	1.00	0.29	0.00	0.45
ATEN	1.00	5.00	2.68	3.00	1.40

5.2 Bivariate Analysis

Pearson correlations among variables are computed and displayed in Table 2. Examination of the correlation matrix for independent variables in Table 2 reveals no correlation coefficient surpassing 0.8, indicating the absence of multicollinearity issues. Notably, Table 2 highlights a significant positive correlation between ASZ and REMC at the 1% significance level, as well as a similarly significant positive correlation between ASP and REMC at the 1% significance level. Additionally, while the correlation between ATEN and REMC is positive, it does not attain statistical significance.

The correlation between ASZ and REMD is positively significant at the 5% level, while the correlation between ASP and REMD is positively significant at the 1% level. Conversely, the correlation between ATEN and REMC is positive but lacks significance. Regarding REMP, the correlation between ASZ and REMP is negative and insignificant, whereas the correlation between ASP and REMP is positive yet insignificant. Notably, the correlation between ATEN and REMP is negative and significant at the 5% level. Furthermore, a positive and significant correlation exists between REM and ASZ at the

5% significance level, and between REM and ASP at the 1% significance level. In contrast, the correlation between REM and ATEN is negative and insignificant. These findings suggest that audit quality, as indicated by the variables ASZ, ASP, and ATEN, exhibits varied correlations with real earnings management, represented by REM, REMC, REMD, and REMP. Nevertheless, more comprehensive testing will be conducted through regression analysis.

Table 2. Pearson Correlation

	REMC	REMD	REMP	REM	LEV	SIZE	ASZ	ASP
REMD	.869**							
REMP	.034	.033						
REM	.881**	.878**	.446**					
LEV	-.024	-.038	.112*	.018				
SIZE	.155**	.098*	.118**	.166**	-.026			
ASZ	.123**	.102*	-.030	.092*	-.074	.352**		
ASP	.153**	.138**	.087	.171**	.004	.212**	.731**	
ATEN	.030	.029	-.097*	-.013	.003	.177**	.149**	.115**

** , * . Correlation is significant at the 0.01 level and 0.05, respectively

5.3 Multivariate Analysis

The Model 4 column in Table 3 shows notable findings. ASZ, representing firm audit size, and ATEN, indicating auditor tenure, exhibit negative and significant coefficients at the 1% level. Conversely, ASP, denoting auditor industry specialization, demonstrates a positive and significant coefficient at the 1% level. Thus, the study verifies the hypothesis suggesting a positive relationship between audit quality and real earnings management when audit quality is measured by auditor industry specialization (ASP). However, when audit quality is assessed through firm audit size (ASZ) and auditor tenure (ATEN), further validation of the hypothesis is required.

Table 3. Regression Analysis

REM _{it}	=	α _{it}	+	β ₁ ASZ _{it}	+	β ₂ ASP _{it}	+	β ₃ ATEN _{it}	+	β ₄ SIZE _{it}	+	β ₅ LEV _{it}	+	ε _{it} .	(4)
REMC _{it}	=	α _{it}	+	β ₁ ASZ _{it}	+	β ₂ ASP _{it}	+	β ₃ ATEN _{it}	+	β ₄ SIZE _{it}	+	β ₅ LEV _{it}	+	ε _{it} .	(5)
REMD _{it}	=	α _{it}	+	β ₁ ASZ _{it}	+	β ₂ ASP _{it}	+	β ₃ ATEN _{it}	+	β ₄ SIZE _{it}	+	β ₅ LEV _{it}	+	ε _{it} .	(6)
REMP _{it}	=	α _{it}	+	β ₁ ASZ _{it}	+	β ₂ ASP _{it}	+	β ₃ ATEN _{it}	+	β ₄ SIZE _{it}	+	β ₅ LEV _{it}	+	ε _{it} .	(7)
		Model 4		Model 5		Model 6		Model 7							
Variable		Coefficient		Coefficient		Coefficient		Coefficient							
Intercept		-1.964	***	-0.423	***	-0.307	***	-1.212	***						
ASZ		-0.465	***	0.015	***	-0.093	***	-0.349	***						
ASP		0.057	***	0.020	***	0.360	***	0.357	***						
ATEN		-0.063	***	-0.006	**	0.009		-0.667	***						
LEV		0.040		-0.001		-0.081	***	0.132	***						

SIZE	0.319	***	0.053	***	0.047		0.207	***
Adj. R ²	0.156		0.144		0.090		0.220	
F-statistic	19.788	***	18.237	***	1.989	***	29.725	***

***, **, * Coefficient is significant at the 0.01 level, 0.05, and 0.10, respectively

Subsequently, the real earnings management proxy is disaggregated into REM of operating cash flow (REMC), REM of discretionary expenses (REMD), and REM of production costs (REMP) to obtain a comprehensive understanding of the impact of audit quality on real earnings management. Testing REMC, REMD, and REMP is conducted using equation models (5), (6), and (7), respectively. Model 5 column in Table 3 reveals that ASZ, representing audit firm size, and ASP, representing earnings, yield positive and significant coefficients at the 1% level. These results confirm the research hypothesis. However, the ATEN variable, representing auditor tenure, exhibits a negative and significant coefficient at the 5% level, thus refuting the research hypothesis. Consequently, ASZ and ASP positively affect REMC, while ATEN negatively affects REMC.

In Table 3, Model 6 columns indicate noteworthy findings: ASZ exhibits a negative and significant coefficient at the 1% level, contradicting the research hypothesis. Conversely, ASP displays a positive and significant coefficient at the 1% level, confirming the research hypothesis. However, ATEN demonstrates a positive but insignificant coefficient, failing to confirm the research hypothesis. Consequently, ASZ negatively influences REMD, ASP positively impacts REMD, and ATEN has no significant effect on REMD.

In table 3, Model 7 columns indicate notable results: ASZ and ATEN both exhibit negative and significant coefficients at the 1% level, contradicting the research hypothesis. Conversely, ASP displays a positive and significant coefficient at the 1% level, confirming the study's hypothesis. Thus, ASZ and ATEN negatively influence REMP, while ASP positively impacts REMP.

5.4 Discussion

1. **Aggregate Real Earnings Management.** Statistical testing on the impact of audit quality on aggregate real earnings management reveals that firm audit size exhibits a negative and significant coefficient at the 1% level. These findings corroborate the research of Debnath et al. (2022) and Zgarni & Chikhaoui (2022), which noted a negative influence of firm audit size on REM. However, they contradict the results of Chowdhury & Eliwa (2021); Cohen & Zarowin (2010); Danyu (2014); Hassan et al. (2023); Inaam et al. (2012); and Lisic et al. (2011), who reported a positive relationship between firm audit size and REM. Moreover, auditor tenure displays a negative and significant coefficient at the 1% level, contrary to previous findings by Cohen & Zarowin (2010); Lisic et al. (2011); Sitanggang et al. (2020), and Nugrahanti et al. (2018), which suggested a positive or non-effect of audit tenure on REM. Lastly, the industry specialization of auditors exhibits a positive and significant coefficient at the 1% level, aligning with the findings of Lisic et al. (2011), which highlighted a positive impact of industry specialization on REM.

Operating Cash Flow Real Earnings Management. The statistical testing results on the impact of firm audit size on real earnings management of operating cash flow

(abnormal operating cash flow) show a positive and significant coefficient at the 1% level. These findings support previous research conducted by Alhadab & Clacher (2018) and Chowdhury & Eliwa (2021), indicating a positive influence of firm audit size on REM of operating cash flows. However, they do not align with the findings of Sitanggang et al. (2020), who concluded that the size of the firm audit has no effect on the REM of operating cash flow, and Lisic et al. (2011), who observed a negative impact of firm audit size on REM of operating cash flow. Additionally, auditor tenure displays a negative and significant coefficient at the 5% level, confirming prior research by Lisic et al. (2011), which reported a negative effect of auditor tenure on REM of operating cash flow.

2. Nonetheless, these results do not corroborate the findings of Sitanggang et al. (2020), who concluded that auditor tenure does not impact real earnings management of operating cash flow. Conversely, the latest findings reveal that auditor industry specialization exhibits a positive and significant coefficient of 1%. These results confirm previous research by Lisic et al. (2011), which reported that auditor industry specialization positively affects REM (national).
3. ***Real Earnings Management of Discretionary Costs.*** The statistical testing results on the impact of audit firm size on real earnings management of discretionary costs reveal a negative and significant coefficient at the 1% level. These findings validate prior research by Alhadab & Clacher (2018), Chowdhury & Eliwa (2021), and Lisic et al. (2011), indicating that firm size audits negatively influence REM of discretionary costs. Moreover, the results indicate that auditor tenures do not affect REM of discretionary costs, aligning with the research by Sitanggang et al. (2020), which found no impact of auditor tenure on REM of discretionary costs. However, these results diverge from the findings of Lisic et al. (2011), which suggested a negative effect of auditor tenures on REM of discretionary costs. Lastly, the findings demonstrate that auditor industry specialization exhibits a positive and significant coefficient of 1%, consistent with previous research by Lisic et al. (2011), highlighting a positive influence of auditor industry specialization on discretionary REM (national).
4. ***Real Earnings Management of Production Costs.*** The statistical analysis of the impact of audit firm size on real earnings management of production costs reveals a negative and significant coefficient at the 1% level. These findings support previous research by Lisic et al. (2011) and Chowdhury & Eliwa (2021), indicating that audit firm size positively influences REM of production costs. Furthermore, auditor tenure displays a negative and significant coefficient at the 1% level, requiring confirmation from previous research by Zgarni & Chikhaoui (2022), which reported a negative effect of tenure on REM of production costs. Nevertheless, these results diverge from the findings of Lisic et al. (2011), who observed a positive relationship between the two variables, and Sitanggang et al. (2020), who reported that audit tenure does not impact REM of production costs. Lastly, auditor industry specialization exhibits a positive and significant coefficient of 1%, consistent with previous research by Lisic et al. (2011), demonstrating that the industry specialization of auditors positively influences REM of production costs (cities).

These findings imply that clients of prominent audit firms are less inclined to engage in earnings management. The results from the aggregate REM analysis (Model Column 4) align consistently with discretionary cost REM (Model 6 Column) and REMP (Model 7 Column). Large audit firms demonstrate thoroughness and capitalize on their

expertise, thus mitigating management's inclination towards earnings management practices. Moreover, these firms prioritize safeguarding their reputation by delivering high-quality services. However, these findings exhibit inconsistency concerning REMC (Model Column 5). This incongruity can be elucidated as follows: Companies achieving earnings targets through genuine operational activities aim to minimize information asymmetry and signify organizational growth. Disclosure of earnings information, managerial proficiency, and auditor selection allow financially robust companies to convey financial information to the market transparently, without manipulating future value and cash flow. In essence, such companies may resort to real earnings management of operating cash flows. Furthermore, the breadth of audits may constrain the detection of real earnings management due to the necessity for clearer guidance in audit standards.

The findings consistently demonstrate that auditor industry specialization positively influences REM across aggregate REM (Model 4 Column), operating cash flow REM (Model 5 Column), discretionary cost REM (Model 6 Column), and REM of production cost (Model 7 Column). Previous literature has highlighted that industry-specialized auditors enhance audit quality, thereby enhancing the credibility of financial reporting. Industry-specialized auditors typically charge higher audit fees, leading companies audited by specialists to receive higher evaluations due to improved disclosure quality.

The auditor's tenure refers to the duration during which the auditor has been engaged by the company. Extended engagement periods enhance the auditor's familiarity with the company, facilitating the detection of earnings management practices. As per Regulation of the Minister of Finance Number 17/PMK.01/2008 on Public Accountant Services, audit firms are permitted to provide general audit services for a maximum of six consecutive financial years, while individual auditors are limited to three consecutive financial years. Surprisingly, the results reveal a negative correlation between auditor tenure and aggregate real management (Model 4 column), REM of operating cash flow (Model 5 column), and REM of production costs (Model 7 column). This finding suggests that prolonged audit tenure may constrain REM, contrary to the notion that REM is challenging to detect over time.

However, findings from the Model 6 column indicate that auditor tenure does not impact the REM of discretionary costs. Scholars posit two potential explanations for these results. Firstly, it is conceivable that the client company requires discretionary cost REM, thereby minimizing the influence of auditor tenure. Secondly, audit firms often rotate auditors assigned to client companies to adhere to regulatory mandates. Consequently, prolonged auditor tenure may not be indispensable for enhancing the auditor's comprehension of the client company, especially considering the complexity and scale of companies, such as those in the financial sector. A brief audit tenure does not necessarily compromise auditor independence, as the existence of professional codes of ethics and auditing standards ensures independence regardless of tenure length. (Puspaningsih & Syarifa, 2021).

6. CONCLUSION

This study delves into the impact of audit quality on real earnings management, employing firm audit size, auditor tenure, and industry specialization auditor as proxies for audit quality. Real earnings management is measured both in aggregate (REM) and through individual components, including operating cash flow, discretionary expenses,

and production costs. The findings present a nuanced picture. While the size of the audit firm and auditor tenure exhibit a negative influence, industry specialization auditor positively affects REM. However, when REM is disaggregated into operating cash flow, discretionary costs, and production costs, some discrepancies emerge compared to aggregate REM. Specifically, in REM of operating cash flow, firm audit size and audit specialization have a positive impact, while auditor tenure demonstrates a negative impact. In REM of discretionary costs, firm audit size negatively affects REM, whereas audit specialization positively influences it, with no discernible impact from auditor tenure. Lastly, in REM of production costs, both the audit firm's size and auditor tenure exert negative effects, while audit specialization positively affects REM.

The results of this study contribute substantially to the existing of literature on earnings management, particularly within the contexts of various jurisdictions and emerging markets in other country. This research enhances the discourse surrounding earnings management by offering a nuanced elucidation of the heterogeneous relationships observed between audit quality and real earnings management.

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