Navigating Uncertainty: Earnings Management, Annual Report Sentiment, and Corporate Governance in Indonesia

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ARTICLE INFO

Article history:
Received Agustus 24, 2024
Revised February 14, 2025
Accepted May 06, 2025

JEL Classification:
G14, G32, G34, M41

Key words:
Annual Report Sentiment; Covid-19; Earnings Management; Governance

DOI:
10.14414/tiar.v16i2.4716

Check for updates

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ABSTRACT

This study investigates how companies managed their earnings during the COVID-19 pandemic, focusing on Indonesia from early 2020. The non-financial sample is drawn from the Indonesia Stock Exchange for 2018-2019, utilizing the ordinary least square model with fixed effects and a cluster approach. Coarsened exact matching in STATA 16.0 is employed for additional analysis. Findings reveal that during the pandemic, companies engaged in earnings management exhibited negative sentiment in their annual reports for the following year. Corporate governance, exemplified by independent commissioners and risk management committees, proves instrumental in mitigating sentiment issues. This study contributes significantly to corporate reporting research, offering vital insights for decision-makers shaping effective and country-specific policies amid the ongoing Covid-19 outbreak, particularly in emerging markets like Indonesia, where financial stability, transparency, and robust corporate governance are crucial for ensuring economic recovery, sustaining growth, maintaining investor confidence, and supporting long-term economic resilience, sustainable development, and future stability.

ABSTRAK

Studi ini menyelidiki bagaimana perusahaan mengelola laba mereka selama pandemi COVID-19, dengan fokus pada Indonesia sejak awal tahun 2020. Sampel non-keuangan diambil dari Bursa Efek Indonesia untuk periode 2018-2019, menggunakan model ordinary least square dengan efek tetap dan pendekatan kluster. Coarsened exact matching dalam STATA 16.0 digunakan untuk analisis tambahan. Temuan mengungkapkan bahwa selama pandemi, perusahaan yang terlibat dalam manajemen laba menunjukkan sentimen negatif dalam laporan tahunan mereka untuk tahun berikutnya. Tata kelola perusahaan, yang dicontohkan oleh komisaris independen dan komite manajemen risiko, terbukti berperan penting dalam mengatasi masalah sentimen. Studi ini memberikan kontribusi signifikan pada penelitian pelaporan perusahaan, menawarkan wawasan penting bagi para pembuat kebijakan dalam merumuskan kebijakan yang efektif dan spesifik untuk negara di tengah wabah Covid-19 yang sedang berlangsung, terutama di pasar berkembang seperti Indonesia, di mana stabilitas keuangan, transparansi, dan tata kelola perusahaan yang kuat sangat penting untuk memastikan pemulihan ekonomi, mempertahankan pertumbuhan, menjaga kepercayaan investor, serta mendukung ketahanan ekonomi jangka panjang, pembangunan berkelanjutan, dan stabilitas masa depan.

1. INTRODUCTION

Based on the opportunistic perspective, earnings management is regarded as a strategic process wherein managers manipulate results to serve their interests (Shoaib & Siddiqui, 2020). The primary objective of managers is to maximize their utility. Since Ross, Watts, and Zimmerman introduced political and contractual accounting theories in the late 1970s, opportunistic strategies have been extensively explored within academic literature (Zhao et al., 2022). These strategies have evolved into a prominent area of research in accounting. It is widely believed that companies demonstrating strong performance seek to highlight their advantages by providing clearer and more comprehensible disclosures amidst information asymmetry. Conversely, underperforming companies tend to obscure negative information through the use of complex and challenging language.

Therefore, companies can manipulate the content and presentation of information in various ways using the so-called "impression management" (Cüre et al., 2020; Kusuma, 2023). Through this approach, companies can manipulate oral information through easy-to-read operations (e.g., making the text difficult to read) or rhetorical methods/practices (e.g., using persuasive language). The readability manipulation method was used to conceal bad news.

Gu and Dodoo (2021) used the fog index and word count to estimate the readability when studying the relationship between annual report readability and income sustainability. He found a negative correlation between fog and income level. Likewise, the most extended files show low future incomes. The authors assert that when managers see a decline in the rate of return, they should try to conceal future earnings by increasing the complexity of the financial statements (Pajuste et al., 2020). In this case, these difficulties indirectly affect the quality of financial information (Landu et al. 2024).

Sentiment analysis, also known as opinion mining, is a comprehensive and multidisciplinary artificial intelligence technique employed in examining computational perspectives, sentiments, and emotions (Wankhade et al., 2022). This technique involves the identification and classification of opinions or sentiments through targeted sentiment analysis within specific domains. It is feasible to determine the impact of data domains on sentiment categorization (Ijaz et al., 2024). The form of sentiment analysis predominantly utilized in academic settings typically presents two challenges: classifying documents as either positive or negative in sentiment (Wankhade et al., 2022), and categorizing sentences or clauses as subjective or objective, with subjective sentences further classified as positive, negative, or neutral. Additionally, the information conveyed in annual reports can serve as a significant determinant for forecasting financial performance, thereby supporting the decision-making process (Myšková & Hájek, 2020).

Earnings management by a company often monitors agency problems (Flayyih & Khiari, 2023). Agency theory describes the relationship within a company between its shareholders (the principal) and its management (the agent). Agency theory began to develop studies to fulfill management's main objective of maximizing shareholder value. Agency theory states that management and stakeholders are distinct entities (Gagné & Hewett, 2024). This difference in interest can lead to agency costs (Schäuble, 2019). It is hoped that corporate governance will be one of the companies that can control agency costs (Tahir et al. 2021). Legitimacy Theory emphasizes the importance of an organization being perceived as legitimate by the public and its stakeholders (He 2022). In financial reporting, organizations manage sentiment through their financial reports to maintain or enhance their legitimacy in the eyes of stakeholders, demonstrating that they operate according to prevailing values and norms (Kuruppu et al., 2019; Zhong & Ren, 2022). Good Corporate Governance is a principle that underlies company processes and management based on regulatory and business ethics. Companies must ensure that corporate governance principles are applied to every aspect of the business and throughout the company (Chen, 2024). Independent commissioners and risk management committees are examples of corporate governance.

As COVID-19 spread globally, firms' primary concerns related to the collapse of demand, increased uncertainty, and disruption in supply chains (Hassan et al., 2020). Other significant concerns are capacity reduction, closure, and employee welfare. In the context of the COVID-19 crisis, companies manage earnings to present stable or positive financial performance, aiming to maintain trust in investors and stakeholders. Market volatility and high risk during the pandemic encouraged the use of earnings management to mitigate adverse impacts on market sentiment (Khan et al., 2023). Government policies and incentives, such as financial aid, influence these decisions. However, these strategies raise concerns about transparency and integrity, underscoring the need for stricter oversight and regulation to ensure the accuracy of financial reporting (Nahar & Mohamad, 2022).

Previous research has shown mixed findings, with some studies indicating that companies with aggressive profit management tend to use more positive language in their annual reports to cover up the practice (Elshandidy & Kamel, 2024), while other studies have shown that sentiment in annual reports does not necessarily reflect the level of profit management because of the influence of external factors such as regulation and report readability (Soepriyanto et al., 2021). In addition, research comparing cross-institutional contexts is still limited, especially in emerging markets such as ASEAN, where regulations and financial transparency can affect these relationships differently (Garcia & Orsato, 2020).

The crisis caused by COVID-19 further complicates this dynamic, as high economic uncertainty encourages companies to be more strategic in preparing financial reports and communicating with stakeholders (Lassoued & Khanchel, 2021). The pandemic has forced many companies to implement profit management to maintain financial stability and investor confidence (Utami & Amelia, 2024).

Additionally, pressure from governments and regulators for financial transparency during crises can affect the relationship between earnings management and annual report sentiment (Modani et al., 2023). Furthermore, managerial and corporate governance factors, such as board characteristics and supervisory structures, are often overlooked in this study, even though they can influence how companies structure language in annual reports to mitigate or strengthen the impact of earnings management, especially in uncertain conditions such as the COVID-19 pandemic (Ulfah et al., 2022).

This study conducts an analysis of the sentiment conveyed in corporate reports utilizing tools established in prior research by □ and □. It aims to to determine whether earnings management by companies is reflected in the sentiment expressed within their annual reports, with particular emphasis on the period during COVID-19. Although Indonesia commenced its response in early 2020, companies ought to have anticipated this issue considering its proliferation in other nations. Additionally, the study explores the moderating effects of independent commissioners and risk management committees on earnings management and the sentiment of annual reports.

We used non-financial samples listed on the Indonesian Stock Exchange for the 2018–2019 period. The hypotheses in this study are analyzed using the ordinary least squares model with year and industry fixed effects and coarsened exact matching as a robustness test. We also examine the moderating role of corporate governance in the relationship between earnings management and annual report sentiment. The components of corporate governance used in this study are independent commissioners and risk management committees.

This study will provide a better understanding of the link between earnings management and a company's sentiment during the COVID-19 outbreak. This study contributes to the corporate reporting literature. This study informs decision-makers responsible for developing country-specific policies to rise from the COVID-19 outbreak.

For academics, this study contributes to the financial and accounting literature by identifying the relationship between profit management and annual report sentiment. Regulators can use these findings to increase oversight of covert *earnings management* practices through the use of language in annual reports and design policies that promote corporate transparency and accountability, for example, by establishing stricter information disclosure guidelines or developing AI-based analytics tools to detect suspicious language patterns. Meanwhile, for investors, this study provides insight into how companies use language in their annual reports to influence market perceptions of their financial performance, thus helping them identify potential profit manipulation and develop smarter investment strategies by considering linguistic indicators as part of fundamental analysis.

The remainder of this article is organized as follows. The following section (Section 2) presents an explanation of the literature review and hypotheses. Section 3 explains the research methods used, including the samples, definitions of operational variables, and research methods. Section 4 presents the results and discussion of the study. Finally, Section 5 explains the limitations of this study.

2. THEORETICAL FRAMEWORK AND HYPOTHESES

Companies use both quantitative and qualitative information to communicate with stakeholders. Sentiment in the annual report is essential for describing management's optimism, prudence, or confidence in the company's financial condition and prospects (Chebbi et al., 2024). Agency theory explains that conflicts of interest between shareholders and management encourage managers to manage stakeholder perceptions through profit-management. With information asymmetry, managers are incentivized to manipulate financial statements to present a better image, especially under unfavorable conditions (Jensen & Meckling, 1976). Elshandidy and Kamel (2024) found that companies with lower levels of profit manipulation tended to use a pessimistic tone in their annual reports, while companies with high profit manipulation more often used optimistic language to create better performance perceptions.

Profit manipulation is performed through numbers and language in the annual reports. Luo and Zhou (2020) stated that managers have more flexibility in managing qualitative information because words are more elastic than numbers and less tightly regulated than IFRS. When financial performance deteriorates, managers can use complex language to obscure negative information, reflecting agency conflicts to maintain shareholders' trust (Li et al., 2022).

Meanwhile, the theory of legitimacy highlights that companies must maintain social legitimacy in the eyes of stakeholders by adjusting their communication strategies (Debenedetti et al., 2020). The challenge of preserving legitimacy is even more significant during crises such as the COVID-19 pandemic. Goodman (2019) states that companies tend to be more careful in their communication to avoid causing market panic. Bostan et al. (2020) found that companies facing economic pressure often use optimistic language in their annual reports to maintain stakeholders' trust.

In the context of profit management, using positive tones in annual reports mitigates the negative impact of poor financial performance, maintains a company's image, and ensures legitimacy. Li et al. (2023) showed that companies under high external pressure often increase their use of optimistic tones to manage stakeholder expectations. The sentiment in the annual report reflects the company's financial condition and results from the managerial strategy. Therefore, we hypothesize that

H1: Earnings management is related to annual report sentiment in the following year.

The existence of an independent board is a key element of strong corporate governance and plays an essential role in reducing profit management practices and increasing the transparency of financial statements (Rostami & Rezaei, 2021). In agency theory, an independent board acts as a supervisory mechanism to reduce conflicts of interest between managers and shareholders. This conflict arises because managers are incentivized to manipulate financial statements to present a better image and maintain investor confidence, even though the company's condition is not optimal (Jensen & Meckling, 1976). With independent commissioners, the supervision of managerial decisions becomes more effective, thereby reducing the tendency of managers to use positive sentiment excessively in annual reports to cover profit management practices.

In addition to reducing agency conflicts, independent councils play a role in ensuring social legitimacy (Mio et al., 2020). Companies with more independent boards tend to have a higher level of transparency, as independent directors and commissioners have no personal interest in financial statements and are more focused on corporate accountability (Nel et al., 2020). In this case, the independent commissioner can control the narrative used in the annual report, thereby reducing sentiment manipulation aimed at masking actual financial conditions.

During crises, challenges to corporate governance and communication with stakeholders become more intense. Agency theory states that under stressful conditions, managers have greater incentives to engage in profit management and present more optimistic financial statements to avoid panic among investors and stakeholders (Brown et al., 2022). However, the presence of an independent board can be a counterweight that maintains the integrity and transparency of financial disclosures, especially when companies face external pressure (Meiryani et al., 2023).

From the legitimacy theory perspective, independent boards ensure that financial disclosures remain in line with stakeholder expectations, even if companies face market pressures or economic uncertainty (Bassyouny et al., 2020). With stronger oversight from independent commissioners, the sentiment in annual reports becomes more realistic and not exaggerated in describing the company's condition. This reduces the relationship between profit management and yearly report sentiment, as the independent board prevents the use of overly optimistic language to cover the actual financial condition. Therefore, we propose the following hypothesis:

H2: Independent commissioner weakens the relationship between earnings management and sentiment of the annual report in the following year

Independent commissioners and risk management committees are essential for reducing conflicts of interest between managers and shareholders. Managers are incentivized to conduct profit management to maintain a positive image of the company and investor confidence, especially in conditions of crisis full of uncertainty (Jensen & Meckling, 1976). However, a risk management committee (RMC) and independent commissioners can be effective oversight mechanisms to curb such practices and ensure that the information in annual reports remains accurate and transparent.

Various economic events and financial crises have highlighted the weaknesses in a company's internal control system and governance practices. Ineffective risk management often leads to financial instability and a decline in investor confidence, ultimately threatening a company's sustainability. Financial scandals and unexpected business failures have increased awareness of the importance of risk management in maintaining public trust and stability (Larasati et al., 2019). Therefore, companies with strong risk management committees have a greater chance of effectively managing risk and ensuring that the sentiment in the annual report reflects actual conditions rather than mere managerial manipulation.

During periods of crisis, the effectiveness of risk management becomes increasingly crucial as market uncertainty magnifies the challenges companies face. Agency theory shows that managers have more incentives to perform profit management to maintain stock price stability and shareholder trust (Arnaudova et al., 2024). However, the existence of a risk management committee can reduce these incentives by increasing oversight of profit management practices and preventing sentiment manipulation in annual reports.

From the legitimacy theory perspective, companies with risk management committees tend to be better able to maintain transparency and accountability in financial reporting, which contributes to increased stakeholder trust (Myšková & Hájek, 2020). With tighter scrutiny, companies can reduce the relationship between profit management and sentiment in annual reports, as the narratives used will be more realistic and reflect actual conditions rather than strategies to maintain a positive corporate image. Therefore, we propose the following hypothesis:

H3: The existence of RMC weakens the relationship between earnings management and sentiment of the annual report in the following year

3. RESEARCH METHOD

Sample and Sources of Data

The sample of this study consists of non-financial companies listed on the Indonesia Stock Exchange in the 2018-2019 period. This study excludes companies in the financial industry (SIC 6). Sample selection was performed using purposive sampling by setting specific criteria. The final sample in this study differs for each earnings management proxy. The JONES proxy has the largest research sample, with 373 observations. LARCKER has 371 observations in total. Thus, MODIFJONES has a sample of 367 observations. Finally, the proxy with the smallest sample is KOTHARI, with 357 observations.

This study used secondary data from various databases and company report. Sentiment annual report data were obtained from the company's annual report. Financial data used to calculate earnings management, return on assets, loss, firm size and leverage were obtained from the ORBIS database. Data on the number of independent commissioners, risk management committees, and board size were obtained from the financial statements.

Variables

The annual report sentiment (SENTIMENT) in this study was used as the dependent variable. This study analyzes the sentiment of company reports using tools developed in previous studies by Loughran (2011) and Loughran and McDonald (2014). SENTIMENT was obtained by dividing the total number of negative words by the total number of negative and positive words. The negative word list proposed by Loughran (2011) has been widely used in accounting and finance literature to measure sentiment in financial documents, newspaper articles, analyst reports, and revenue conference call transcripts (Gandhi et al., 2019; Loughran & McDonald, 2014). Gandhi et al. (2019) stated that the latest version of the proposed word list by Loughran and McDonald is 2,355 negative words. They also mentioned that the negative words by Loughran (2011) that most often appear in annual reports are loss, losses, claims, impairment, against, adverse, and restated words. Similar to Gandhi et al. (2019), we only focused on negative words to measure annual report sentiment because previous research by Loughran (2011) found limitations for other categories, such as positive words.

Four proxies for earnings management were used as independent variables in this study. We used the absolute value of earnings management for the four proxies. The four proxies for earnings management are the Jones model (Jones), which refers to the research of Jones (1991); the modified Jones model (MODIFJONES) by Dechow et al. (1995), Kothari's model Kothari et althe Larcker), and the Larcker model by Holthausen et al. (1995).

We also used several control variables in our research model. Independent commissioner (INDCOM) was obtained from the percentage of independent commissioners in the company. The Risk Management Committee (RMC) is a dummy variable, which has a value of 1 if there is an Risk Management Committee within the company and 0 if there is no Risk Management Committee within the company (Larasati et al., 2019; Rahayu et al., 2021). Board size (LNBSIZE) is obtained from the natural logarithm of the number of members of the board of directors and board of commissioners in the company. Return on assets (ROAEAT) is the value of net income divided by the total assets (Rahayu et al., 2021). Loss (LOSS) is a dummy variable. A value of 1 is assigned if the profit is positive and 0 otherwise (Roiston & Harymawan, 2022). Firm size (FIRMSIZE) is measured as the natural logarithm of total assets at the end of the year (Larasati et al., 2019; Rahayu et al., 2021). Meanwhile, leverage (LEVERAGE) is the total debt divided by the total assets (Rahayu et al., 2021). Table 1 presents a summary of the variable definitions used in this study.

Table 1
Variable Definition

Variables		Definition	Source
Dependent Variable:			
Annual Report Sentiment	SENTIMENT	Total negative words divided by total negative and positive words	Annual Report
Independent Variable:			
Earnings Management	JONES	The absolute value of earnings management using the Jones Model	ORBIS
	MODIFJONES	The absolute value of earnings management using the Modified Jones Model	ORBIS
	KHOTARI	The absolute value of earnings management using the Khotari Model	ORBIS
	LARCKER	The absolute value of earnings management using the Larcker Model	ORBIS
Control Variable:			
Independent Commissioner	INDCOM	Percentage of the independent commissioner in the company	Financial Report
Risk Management Committee	RMC	Dummy variable, 1 if there is a Risk Management Committee within the company and 0 if there is no Risk Management Committee within the company	Financial Report
Board Size	ln BSIZE	Natural logarithm of the number of members of the board of directors and board of commissioners in the company	Financial Report
Return on Assets	ROA	Net income divided by total assets	ORBIS
Loss	LOSS	Dummy variable, 1 if the profit was positive and 0 otherwise	ORBIS
Firm Size	FIRMSIZE	Natural logarithm of total assets at the end of the year	ORBIS
Leverage	LEVERAGE	Total debt divided by total assets	ORBIS

Research Design

We use an ordinary least square regression analysis model with year and industry fixed effects using STATA 16.0 software to test our hypothesis. We also used a cluster approach to reduce the likelihood of heteroscedasticity in our model (Gagné & Hewett, 2024). Model (1) is used to test Hypothesis 1, which shows the relationship between earnings management and annual report sentiment. As an additional analysis, we also include a robustness test in this study using a coarsened exact matching approach to test the robustness and reliability of the research model. Model (2) is used to test Hypothesis 2, showing the interaction between earnings management, independent commissioners, and annual report sentiment. Model (3) is used to test Hypothesis 3, showing the interaction between earnings management, risk management committees, and annual report sentiment.

$$\begin{aligned}\mathrm{SENTIMENT}_{i,t+1} = {} & \beta_0 + \beta_1\mathrm{JONES}_{i,t} + \beta_2\mathrm{MODIFJONES}_{i,t} + \beta_3\mathrm{LARCKER}_{i,t} + \beta_4\mathrm{KOTHARI}_{i,t} \\ & + \beta_5\mathrm{RMC}_{i,t} + \beta_6\mathrm{INDCOM}_{i,t} + \beta_7\mathrm{LNBSIZE}_{i,t} + \beta_8\mathrm{ROEEAT}_{i,t} + \beta_9\mathrm{LOSS}_{i,t} \\ & + \beta_{10}\mathrm{FSIZE}_{i,t} + \beta_{11}\mathrm{LEV}_{i,t} + \beta_{12}\mathrm{INDUSTRY}_{i,t} + \beta_{13}\mathrm{YEAR}_{i,t} + \varepsilon \end{aligned} \tag{1}$$

$$\begin{aligned}\mathrm{SENTIMENT}_{i,t+1} = {} & \beta_0 + \beta_1\mathrm{JONESINDCOM}_{i,t} + \beta_2\mathrm{MODIFJONESINDCOM}_{i,t} + \beta_3\mathrm{LARCKERINDCOM}_{i,t} \\ & + \beta_4\mathrm{KOTHARIINDCOM}_{i,t} + \beta_5\mathrm{JONES}_{i,t} + \beta_6\mathrm{MODIFJONES}_{i,t} + \beta_7\mathrm{LARCKER}_{i,t} \\ & + \beta_8\mathrm{KOTHARI}_{i,t} + \beta_9\mathrm{RMC}_{i,t} + \beta_{10}\mathrm{INDCOM}_{i,t} + \beta_{11}\mathrm{LNBSIZE}_{i,t} + \beta_{12}\mathrm{ROEEAT}_{i,t} \\ & + \beta_{13}\mathrm{LOSS}_{i,t} + \beta_{14}\mathrm{FSIZE}_{i,t} + \beta_{15}\mathrm{LEV}_{i,t} + \beta_{16}\mathrm{INDUSTRY}_{i,t} + \beta_{17}\mathrm{YEAR}_{i,t} + \varepsilon \end{aligned} \tag{2}$$

$$\begin{aligned} \text{SENTIMENT}_{i,t+1} = {} & \beta_0 + \beta_1\text{JONESRMC}_{i,t} + \beta_2\text{MODIFJONESRMC}_{i,t} + \beta_3\text{LARCKERRMC}_{i,t} \\ & + \beta_4\text{KOTHARIRMC}_{i,t} + \beta_5\text{JONES}_{i,t} + \beta_6\text{MODIFJONES}_{i,t} + \beta_7\text{LARCKER}_{i,t} \\ & + \beta_8\text{KOTHARI}_{i,t} + \beta_9\text{RMC}_{i,t} + \beta_{10}\text{INDCOM}_{i,t} + \beta_{11}\text{LNBSIZE}_{i,t} + \beta_{12}\text{ROEEAT}_{i,t} \\ & + \beta_{13}\text{LOSS}_{i,t} + \beta_{14}\text{FSIZE}_{i,t} + \beta_{15}\text{LEV}_{i,t} + \beta_{16}\text{INDUSTRY}_{i,t} + \beta_{17}\text{YEAR}_{i,t} + \varepsilon \end{aligned} \quad (3)$$

4. DATA ANALYSIS AND DISCUSSION

Descriptive Statistics

Table 2 presents the descriptive statistics of the study sample, including the mean, median, minimum, and maximum values for each variable. The SENTIMENT variable, which represents the sentiment score derived from the textual analysis of annual reports, ranges from 0.000 to 1.000, indicating the full spectrum of sentiment variations in the sample. A value closer to 1.000 indicates a highly positive sentiment, whereas 0.000 represents a negative sentiment.

Earnings management is measured using four proxies: JONES, MODIFJONES, LARCKER, and KOTHARI. These proxies capture discretionary accruals using various methodologies. The mean values for these proxies ranged from 0.045 to 0.048, reflecting the extent of earnings management by the sample firms.

The Risk Management Committee (RMC) variable has a mean of 0.076, indicating that only 7.6% of the firms in the sample have a risk management committee (RMC). This suggests that risk oversight is not widely adopted among Indonesian non-financial firms (Ayuningtyas and Harymawan, 2022). Similarly, the Independent Commissioner (INDCOM) variable has a mean of 0.384, meaning that 38.4% of the firms have independent commissioners on their boards, which is a key component of corporate governance mechanisms.

Other control variables include LNBSIZE (log of board size), which ranges from 0.693 to 3.045 and captures variations in governance structure across firms. ROEEAT (Return on Equity after Tax) shows a highly dispersed range from -375.400 to 255.450, reflecting differences in the firm's financial performance. The LOSS variable indicates that 21.6% of the companies in the sample reported losses. Firm size (FSIZE) varies from 14.583 to 26.566, and leverage (Meiryani et al.) ranges from 0.003 to 22.607, suggesting significant differences in capital structure across the samples.

Table 3 presents the correlation matrix, indicating a negative correlation between RMC and ROEEAT and SENTIMENT, suggesting that companies with a risk management committee and higher returns exhibit lower sentiments. Conversely, LOSS and LEV are positively correlated with SENTIMENT, indicating that companies experiencing losses and those with higher leverage levels tend to have more positive sentiments in their annual reports, possibly to mitigate the market's negative perceptions.

Table 2
Descriptive Statistics

	Mean	Median	Minimum	Maximum
SENTIMENT	0.509	0.514	0.000	1.000
JONES	0.046	0.042	0.000	0.590
MODIFJONES	0.048	0.045	0.002	0.468
LARCKER	0.045	0.041	0.000	0.606
KOTHARI	0.048	0.044	0.000	0.589
RMC	0.076	0.000	0.000	1.000
INDCOM	0.384	0.333	0.000	3.000
LNBSIZE	2.101	2.079	0.693	3.045
ROEEAT	4.631	5.830	-375.400	255.450
LOSS	0.216	0.000	0.000	1.000
FSIZE	21.282	21.280	14.583	26.566
LEV	0.645	0.484	0.003	22.607

Table 3
Correlation Matrix

Panel A: From Variables SENTIMENT to RMC						
	(1)	(2)	(3)	(4)	(5)	(6)
(1) SENTIMENT	1.000					
(2) LARCKER	0.021	1.000				
	(0.654)					
(3) KOTHARI	-0.019	0.967***	1.000			
	(0.683)	(0.000)				
(4) JONES	0.006	0.992***	0.972***	1.000		
	(0.897)	(0.000)	(0.000)			
(5) MODIFJONES	0.027	0.978***	0.958***	0.983***	1.000	
	(0.557)	(0.000)	(0.000)	(0.000)		
(6) RMC	-0.058*	-0.019	-0.018	-0.030	-0.038	1.000
	(0.096)	(0.652)	(0.671)	(0.482)	(0.377)	
(7) INDCOM	0.003	-0.033	-0.046	-0.034	-0.026	-0.077**
	(0.937)	(0.459)	(0.310)	(0.433)	(0.559)	(0.027)
(8) LNBSIZE	-0.037	-0.037	0.002	-0.035	-0.018	0.245***
	(0.336)	(0.407)	(0.960)	(0.423)	(0.686)	(0.000)
(9) ROEEAT	-0.129***	0.073*	0.117***	0.082*	0.088**	0.092***
	(0.000)	(0.092)	(0.008)	(0.055)	(0.044)	(0.004)
(10) LOSS	0.146***	-0.055	-0.128***	-0.074*	-0.084**	-0.050
	(0.000)	(0.193)	(0.003)	(0.080)	(0.049)	(0.100)
(11) FSIZE	-0.053	-0.065	-0.045	-0.064	-0.068	0.308***
	(0.148)	(0.147)	(0.327)	(0.150)	(0.133)	(0.000)
(12) LEV	0.165***	0.093**	0.097**	0.082*	0.088*	-0.025
	(0.000)	(0.037)	(0.034)	(0.066)	(0.053)	(0.446)
Panel B: From Variables INDCOM to LEV						
	(7)	(8)	(9)	(10)	(11)	(12)
(7) INDCOM	1.000					
(8) LNBSIZE	0.035	1.000				
	(0.323)					
(9) ROEEAT	-0.010	0.153***	1.000			
	(0.780)	(0.000)				
(10) LOSS	0.008	-0.229***	-0.444***	1.000		
	(0.813)	(0.000)	(0.000)			
(11) FSIZE	0.051	0.646***	0.089***	-0.166***	1.000	
	(0.169)	(0.000)	(0.007)	(0.000)		
(12) LEV	0.043	-0.030	-0.087***	0.200***	-0.114***	1.000
	(0.244)	(0.410)	(0.009)	(0.000)	(0.000)	

Earnings Management and Annual Report Sentiment

Table 4 presents the results of the ordinary least squares (OLS) regression, which examines the relationship between earnings management and annual report sentiments. The findings indicate a significant positive relationship between earnings management and annual report sentiment in subsequent years. This result is consistent across the three proxies (JONES, MODIFJONES, and LARCKER) but not with the KOTHARI proxy.

The analysis results show that the JONES proxy has a coefficient of 0.116 and a t-value of 1.94, which is significant at the 10% significance level. The MODIFJONES proxy shows a coefficient of 0.203 and a t-value of 2.75, which is significant at the 1% significance level. The LARCKER proxy has a coefficient of 0.115 and a t-value of 2.03, which is significant at the 5% significance level.

The insignificant result for the KOTHARI proxy suggests that this method of estimating discretionary accruals does not capture the same earnings management patterns as the other three models.

We conducted Coarsened Exact Matching (CEM) to ensure robustness by controlling for sample differences by assigning observations to treatment and control groups. Table 5 shows the CEM test results, which are consistent with those in Table 4. A significant positive relationship between earnings management and annual report sentiment persists. The analysis results show that the JONES proxy has a coefficient of 0.123 with a t-value of 2.06, which is significant at the 5% significance level. Meanwhile, the LARCKER proxy shows a coefficient of 0.118 with a t-value of 1.86, which is significant at the 10% significance level. The KOTHARI proxy has a coefficient of 0.221 with a t-value of 2.72, which is significant at the 1% significance level.

These results support Hypothesis 1 (H1), which posits that firms engaging in earnings management tend to exhibit more optimistic sentiment in their annual reports to obscure a negative financial reality. This aligns with Elshandidy and Kamel (2024), who found that firms engaging in earnings management tend to use more positive narratives to influence stakeholder perceptions.

Table 4
Regression Results from Earnings Management and Annual Report Sentiment

	(1) $SENTIMENT_{t+1}$	(2) $SENTIMENT_{t+1}$	(3) $SENTIMENT_{t+1}$	(4) $SENTIMENT_{t+1}$
JONES	0.116*			
	(1.94)			
MODIFJONES		0.203***		
		(2.75)		
LARCKER			0.115**	
			(2.03)	
KOTHARI				0.103
				(1.64)
RMC	-0.035**	-0.037**	-0.035**	-0.035**
	(-2.36)	(-2.35)	(-2.33)	(-2.25)
INDCOM	-0.045***	-0.045***	-0.046***	-0.040**
	(-2.61)	(-2.60)	(-2.63)	(-2.23)
LNBSIZE	0.033	0.037*	0.034	0.034
	(1.57)	(1.73)	(1.63)	(1.59)
ROEEAT	-0.000*	-0.000*	-0.000*	-0.000*
	(-1.75)	(-1.85)	(-1.81)	(-1.66)
LOSS	0.034**	0.034**	0.033**	0.032**
	(2.31)	(2.27)	(2.20)	(2.11)
FSIZE	-0.002	-0.003	-0.002	-0.002
	(-0.50)	(-0.55)	(-0.52)	(-0.44)
LEV	0.013	0.010	0.011	0.020
	(0.51)	(0.37)	(0.41)	(0.73)
Industry	Included	Included	Included	Included
Year	Included	Included	Included	Included
_cons	0.531***	0.528***	0.532***	0.517***
	(6.52)	(6.25)	(6.53)	(6.03)
r2	0.082	0.086	0.083	0.080
r2_a	0.041	0.044	0.042	0.037
N	373	367	371	357

t statistics in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Table 5
Regression Results from Earnings Management and Annual Report Sentiment

	(1) $SENTIMENT_{t+1}$	(2) $SENTIMENT_{t+1}$	(3) $SENTIMENT_{t+1}$	(4) $SENTIMENT_{t+1}$
JONES	0.123**			
	(2.06)			
MODIFJONES		0.100		
		(1.53)		
LARCKER			0.118*	
			(1.86)	
KOTHARI				0.221***
				(2.72)
RMC	-0.050***	-0.050***	-0.049***	-0.052***
	(-2.83)	(-2.84)	(-2.77)	(-2.87)
INDCOM	-0.039	-0.036	-0.041	-0.034
	(-1.03)	(-0.95)	(-1.09)	(-0.90)
LNBSIZE	0.041*	0.044**	0.037*	0.043**
	(1.90)	(2.02)	(1.65)	(1.99)
ROEEAT	-0.000	-0.001*	-0.001	-0.000
	(-1.62)	(-1.90)	(-1.61)	(-1.50)
LOSS	0.022	0.019	0.021	0.020
	(1.32)	(1.07)	(1.20)	(1.12)
FSIZE	-0.004	-0.005	-0.003	-0.004
	(-0.88)	(-0.91)	(-0.61)	(-0.81)
LEV	0.025	0.020	0.018	0.033
	(0.92)	(0.71)	(0.63)	(1.17)
Industry	Included	Included	Included	Included
Year	Included	Included	Included	Included
_cons	0.553***	0.552***	0.541***	0.541***
	(6.57)	(6.23)	(6.16)	(5.95)
r2	0.076	0.082	0.075	0.082
r2_a	0.031	0.036	0.029	0.035
N	345	339	341	327

t statistics in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

We also use Coarsened Exact Matching (CEM) for all models in this study as a robustness test. This was done to ensure that the assignment of observations to the treatment and control groups was random. We set each covariate into three strata, which caused the sample in the study to change. We test earnings management with annual report sentiment using the JONES proxy with 345 observations. The other three proxies only use 339 observations (MODIFJONES), 341 observations (Holthausen et al.), and 327 observations (Kothari et al.). Table 5 summarizes the results of the CEM test. The CEM test results were consistent with those shown in Table 4. The proxies show a significant positive relationship between earnings management and annual report sentiment for JONES (coefficient = 0.123, t = 2.06), LARCKER (coefficient = 0.118, t = 1.86), and KOTHARI (coefficient = 0.221, t = 2.72). The results were significant at the 5%, 10%, and 1% levels. This means that companies that carry out earnings management tend to produce annual reports with negative sentiment. These results support the existing hypothesis, and H1 is accepted.

Our findings show a significant positive relationship between earnings management and sentiment in annual reports. This means that the earnings management actions taken by the company are reflected in the negative sentiment presented in the annual report (Shauki & Oktavini, 2022). (D'Augusta & DeAngelis, 2020) found that companies with lower revenue manipulation, lower cost of capital, high conservatism, and high growth have a more pessimistic tone in their annual report narratives.

Earnings Management, Independent Commissioner, and Annual Report Sentiment

Table 6 examines the moderating effect of independent commissioners (INDCOM) on the relationship between earnings management and annual report sentiment. Before the interaction term, all earnings management proxies showed a significant and positive relationship with annual report sentiment. However, when interacting with INDCOM, the relationship becomes negative but statistically insignificant ($p > 0.10$).

This finding supports Hypothesis 2 (H2), suggesting that independent commissioners play a role in moderate optimistic bias in annual report sentiment. Bassyouny et al. (2020) found that firms with more muscular corporate governance structures, particularly independent boards, tend to exhibit less positive sentiment in their financial disclosures. In line with agency theory, independent commissioners are a monitoring mechanism that reduces managerial discretion in manipulating earnings-related sentiments (Mardjono & Chen, 2020). However, the lack of statistical significance suggests that the effect is not sufficiently strong to counteract managerial incentives. From the legitimacy theory perspective, independent commissioners help companies maintain credibility by promoting more transparent financial reporting practices, especially during crises (Desoky 2024).

Table 6
Regression Results from Earnings Management, Independent Commissioner, and Annual Report Sentiment

	(1) $SENTIMENT_{t+1}$	(2) $SENTIMENT_{t+1}$	(3) $SENTIMENT_{t+1}$	(4) $SENTIMENT_{t+1}$
JONESINDCOM	-0.142			
	(-0.31)			
MODIFJONESINDCOM		-0.074		
		(-0.13)		
LARCKERINDCOM			-0.200	
			(-0.47)	
KOTHARIINDCOM				-0.425
				(-0.96)
JONES	0.143^{*}			
	(1.94)			
MODIFJONES		0.217^{**}		
		(2.19)		
LARCKER			0.153^{**}	
			(2.14)	
KOTHARI				0.187^{**}
				(2.24)
RMC	-0.035^{**}	-0.036^{**}	-0.035^{**}	-0.034^{**}
	(-2.32)	(-2.33)	(-2.29)	(-2.19)
INDCOM	-0.036	-0.040	-0.032	-0.011
	(-0.91)	(-0.87)	(-0.86)	(-0.28)
LNBSIZE	0.033	0.037^{*}	0.035	0.035
	(1.56)	(1.73)	(1.63)	(1.61)
ROEEAT	-0.000^{*}	-0.000^{*}	-0.000^{*}	-0.000^{*}
	(-1.76)	(-1.86)	(-1.84)	(-1.71)
LOSS	0.034^{**}	0.034^{**}	0.033^{**}	0.031^{**}
	(2.27)	(2.24)	(2.17)	(1.99)
FSIZE	-0.002	-0.003	-0.002	-0.002
	(-0.50)	(-0.55)	(-0.52)	(-0.45)
LEV	0.013	0.010	0.011	0.019
	(0.50)	(0.37)	(0.41)	(0.70)
Industry	Included	Included	Included	Included
Year	Included	Included	Included	Included
_cons	0.529^{***}	0.527^{***}	0.529^{***}	0.511^{***}
	(6.55)	(6.29)	(6.54)	(6.01)
r2	0.082	0.086	0.083	0.081
r2_a	0.039	0.041	0.039	0.035
N	373	367	371	357

t statistics in parentheses

* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

Earnings Management, Risk Management Committee, and Annual Report Sentiment

Table 7 assesses whether the Risk Management Committee (RMC) moderates the relationship between earnings management and annual report sentiment. Similar to the results for independent commissioners, earnings management shows a significantly positive relationship with sentiment before interacting with the RMC variable. However, after incorporating the interaction term, this relationship remained positive but statistically insignificant.

These findings reject Hypothesis 3 (H3), indicating that having a risk management committee does not significantly alter the relationship between earnings management and sentiment. Although RMCs are expected to enhance risk oversight and corporate governance, their role in mitigating earnings management-driven sentiment manipulation is limited in this regard. Gutterman (2020) suggests that effective risk management committees focus on operational risks rather than directly influencing financial reporting.

From an agency theory perspective, RMCs may have a limited influence on constraining managerial opportunism in qualitative disclosures such as sentiment. Legitimacy theory suggests that firms with RMCs aim to signal strong governance structures; however, this does not necessarily translate into substantive changes in financial reporting sentiments.

Table 7
Regression Results from Earnings Management, Independent Commissioner, and Annual Report Sentiment

	(1) $SENTIMENT_{t+1}$	(2) $SENTIMENT_{t+1}$	(3) $SENTIMENT_{t+1}$	(4) $SENTIMENT_{t+1}$
JONESRMC	0.175			
	(0.28)			
MODIFJONESRMC		0.762		
		(0.93)		
LARCKERRMC			0.098	
			(0.18)	
KOTHARIRMC				0.016
				(0.03)
JONES	0.111*			
	(1.84)			
MODIFJONES		0.189**		
		(2.56)		
LARCKER			0.113**	
			(1.98)	
KOTHARI				0.103
				(1.63)
RMC	-0.043	-0.071*	-0.039	-0.035
	(-1.52)	(-1.92)	(-1.53)	(-1.16)
INDCOM2	-0.046***	-0.046***	-0.046***	-0.040**
	(-2.63)	(-2.71)	(-2.64)	(-2.22)
LNBSIZE	0.033	0.038*	0.035	0.034
	(1.58)	(1.78)	(1.63)	(1.58)
ROEEAT	-0.000*	-0.000*	-0.000*	-0.000*
	(-1.73)	(-1.82)	(-1.80)	(-1.66)
LOSS	0.035**	0.035**	0.033**	0.032**
	(2.35)	(2.36)	(2.23)	(2.12)
FSIZE	-0.002	-0.003	-0.002	-0.002
	(-0.51)	(-0.56)	(-0.52)	(-0.44)
LEV	0.013	0.009	0.011	0.020
	(0.49)	(0.34)	(0.40)	(0.72)
Industry	Included	Included	Included	Included
Year	Included	Included	Included	Included
_cons	0.532***	0.530***	0.533***	0.518***
	(6.49)	(6.26)	(6.49)	(5.99)
r2	0.083	0.087	0.083	0.080
r2_a	0.039	0.043	0.039	0.034
N	373	367	371	357

t statistics in parentheses
* $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$

5. CONCLUSION, IMPLICATION, SUGGESTION, AND LIMITATIONS

We identified whether management earnings were made by companies that were listed in their annual reports. These governance mechanisms influence the impact of earnings management on report sentiment. Despite the pandemic's specific context, the study's insights into governance's role in shaping financial reporting practices remain highly relevant, especially in the post-pandemic era, where transparency and financial integrity are under increased scrutiny. We used non-financial samples listed on the Indonesia Stock Exchange for the 2018-2019 period. We predict a positive relationship between earnings management and annual report sentiment. Our findings are consistent with our predictions. We find that annual reports in the following year show negative sentiment when companies engage in earnings management. This finding is robust, as evidenced by the results of the coarsened exact matching test on the same model. This aligns with the current global trend, in which stakeholders and regulatory bodies are more concerned with corporate transparency. Regulators such as the OJK and SEC are increasingly scrutinizing profit manipulation, often seen as an attempt to cover up financial pressures. The cases of Evergrande (2021-2022) and Garuda Indonesia (2020-2021) show how profit management triggers a crisis of trust and regulatory intervention.

These findings underscore the need for decision-makers to consider the implications of earnings management on report sentiment, as it reflects corporate transparency and integrity, particularly during crises. An enhanced understanding and oversight of earnings management practices can aid in developing more effective policies and frameworks to ensure accurate reporting and build stakeholder trust.

In addition, our results are also under the direction prediction in the hypothesis, where there is a positive but not significant relationship between earnings management and annual report sentiment in the following year when the company has a higher proportion of the risk management committee. Otherwise, the relationship between earnings management and annual report sentiment in the following year is negative but not significant when the company has a higher proportion of independent commissioners than the average. Corporate governance in the form of a risk management committee and an independent commissioner did not significantly moderate the relationship between earnings management and annual report sentiment.

As with other studies, our study had some limitations. One of the limitations of this study is that the research sample is still limited to non-financial companies listed on the Indonesia Stock Exchange in the 2018-2019 period, so the research sample used is still limited. In addition, limitations exist in the corporate governance proxies used, which are still limited to independent commissioners and risk management committees. Future research can develop and enhance this study by increasing the population and years of research to generalize the findings to various industrial sectors. Future research can also use other proxies for corporate governance that affect the relationship between earnings management and annual report sentiment.

Given the evolving corporate landscape, future studies should investigate how sentiment in annual reports changes when earnings management occurs before, during, and after the COVID-19 outbreak. With heightened investor awareness and regulatory demands for transparency, understanding these dynamics is crucial for policymakers and corporate leaders aiming to foster long-term financial stability and enhance stakeholder confidence.

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