

The Effect of Effective Tax Rate, Investor Sentiment, and ESG on Earnings Management (An Empirical Study of Healthcare Companies Listed on the Indonesian Stock Exchange in 2021-2024)

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Article Info	Abstract
Received : 2026-05-19 Accepted : 2026-09-30 Published : 2026-09-30	<i>Earnings management refers to opportunistic actions by management in preparing financial statements through the use of accounting discretion to potentially mislead stakeholders regarding reported earnings. This practice has become a critical issue, particularly in the post-pandemic healthcare sector, which faces pressures related to performance, reputation, and public trust. This study aims to analyze the effects of Effective Tax Rate (ETR), investor sentiment, and Environmental, Social, and Governance (ESG) on earnings management practices in healthcare sector companies listed on the Indonesia Stock Exchange (IDX) for the period 2021–2024. The study population consists of 34 healthcare sector companies listed on the IDX; using purposive sampling, 26 companies were selected as the research sample, yielding a total of 104 observations. The study used a quantitative approach with secondary data obtained from annual reports, sustainability reports, and capital market databases. The dependent variable of earnings management was measured using the Modified Jones Model of discretionary accruals, while the independent variables included the effective tax rate, investor sentiment based on market turnover, and the ESG Disclosure Index based on GRI. Data analysis utilized panel data regression with tests of classical assumptions and selection of the best model via the Chow, Hausman, and Lagrange multiplier tests. The results indicate that the effective tax rate does not significantly affect earnings management; investor sentiment has a significant positive effect on earnings management, while ESG does not significantly affect earnings management. These findings suggest that capital market pressures and investor expectations drive management to adjust earnings to make the company's performance appear stable, while ESG practices in the healthcare sector in Indonesia are still in the early stages of adoption and thus have not yet become an effective monitoring mechanism to limit opportunistic management behavior.</i>
Keywords: Earnings Management Practices, Effective Tax Rate, Investor Sentiment, Environmental, Social, and Governance (ESG), Healthcare Sector	

Introduction

Earnings management practice is a significant phenomenon in accounting literature, as it is directly related to the quality of earnings and the credibility of a company's financial statements. Earnings management is defined as the use of judgment in the recording of transactions and financial reporting to affect the perception of shareholders and the company's contractual partners

(Healy & Wahlen, 1999). From an agency theory perspective, this practice reflects opportunistic behavior by management due to information asymmetry between management and owners, giving managers an incentive to embellish financial statements for personal gain (Sulistyanto, 2014; Holthausen, 1990). However, from the perspective of efficient contracts, earnings management can also be viewed as a mechanism for contractual flexibility that minimizes agency costs and enhances decision-making efficiency (Scott, 2009; Holthausen, 1990). Therefore, earnings management has two sides: as opportunistic behavior and as a mechanism for contractual efficiency within a complex business environment.

The phenomenon of earnings management has been proven to occur in various large global companies. One of the most famous cases is the earnings management phenomenon at PT Kimia Farma Tbk (KAFF) that occurred from 2020 to 2023. Throughout 2023, PT Kimia Farma Tbk (KAFF) suffered a net loss of Rp1.82 trillion. One of the triggers for this increase in losses is suspected to be a violation of the integrity of financial reporting data provided by the subsidiary, PT Kimia Farma Apotek (KAFF), for the 2021–2022 period (CNNIndonesia, 2024). Another case is the earnings management case from the healthcare subsector involving PT Indofarma Tbk (INAF). PT Indofarma Tbk (INAF) and its subsidiaries are currently embroiled in a case involving indications of irregularities that have caused state losses amounting to Rp371.8 billion. The dramatic decline in financial performance (from profit to significant loss over several years) indicates abnormalities in revenue, expenses, and investment activities. Both cases demonstrate that earnings management can have serious consequences, including investor losses, legal sanctions, and significant damage to the company's reputation.

In this study, earnings management practices are viewed as a dependent variable influenced by several strategic factors: effective tax rate (ETR), investor sentiment, and environmental, social, and governance (ESG). From the ETR perspective, earnings management is often carried out by companies with the aim of reducing tax expense. One method used is to adjust the recognition of revenue and expenses, thereby reporting lower profits, which can reduce the amount of tax owed. The tax ratio known as the Effective Tax Rate (ETR) reflects the percentage of taxes paid relative to reported profit (Phillips et al., 2003). This ratio illustrates the proportion of profit used to pay taxes and can indicate how efficiently a company fulfills its tax obligations. A high ETR typically indicates that a company pays taxes commensurate with the profit generated, while a low ETR can indicate that the company's tax burden is relatively small compared to pre-tax profit, which may reflect the effectiveness of tax planning through the utilization of fiscal incentives, temporary and permanent differences, or the management of deferred taxes (Dyrenge et al., 2008). Research by Pardosi and Hutabarat (2022) showed that effective tax rate (ETR) management practices do not only occur at the general corporate level but are carried out by specific internal parties with authority over tax planning and financial reporting.

From a capital market perspective, high investor sentiment can increase pressure to meet market expectations, thereby encouraging managers to engage in earnings management to maintain stock prices and investor confidence. Investor sentiment can affect earnings management practices whereby investors expect significant earnings growth; managers may feel pressure to fulfill or exceed expectations (bullish) (Roychowdhury, 2006). However, when market sentiment is low or there are concerns about a company's performance, managers may attempt to conceal further bad news by engaging in downward earnings management (income smoothing or recognizing losses earlier) to avoid an even more severe market reaction (bearish). Research by Ali and Gurun (2009) showed that high investor sentiment, proxied by high stock turnover and other market sentiment indicators, drives an increase in discretionary accruals (Ali & Gurun, 2009).

Meanwhile, from a sustainability perspective, ESG is seen as a signal of the credibility of financial reporting and a governance mechanism that can reduce the risk of managerial opportunism and enhance reporting transparency. Companies with low ESG scores often face pressure to maintain a sustainable image among stakeholders (García-Sánchez & García-Meca, 2017). Companies with high ESG scores often gain a good reputation and greater trust from investors and stakeholders. This situation can reduce the level of strict external monitoring of financial statements, thereby providing management with the opportunity to use accounting discretion in managing reported profits. Unlike previous research abroad (Cook et al., 2008; Desai & Dharmapala, 2006; Dyreng et al., 2008), which generally examined the Effective Tax Rate (ETR) across sectors, particularly manufacturing and finance, in environments with relatively stable tax regimes, strong law enforcement systems, and high fiscal certainty, this study focuses on the healthcare sector within the Indonesian context, which features more volatile regulatory dynamics and fiscal policies (Dyreng et al., 2008).

Nevertheless, some empirical literature shows inconsistent results. Several research studies have found that investor sentiment increases earnings management practices as companies strive to fulfill the short-term expectations of the capital market. On the other hand, the relationship between ESG and earnings management shows mixed results; some research finds a negative effect as ESG improves corporate governance, while other research shows that ESG is often still symbolic and has not yet had a significant effect on financial reporting behavior. The inconsistency of these findings indicates a research gap, particularly in the context of developing countries and the healthcare sector, which are characterized by high regulation, significant reputational risk, and strong public trust pressures.

The novelty of this study lies in the simultaneous testing of three determinants, namely the effective tax rate, investor sentiment based on market turnover, and the GRI-based ESG disclosure index, on earnings management in healthcare sector companies listed on the IDX for the 2021–2024 period. Focusing on the post-pandemic period is crucial as healthcare companies face pressure to demonstrate stable financial performance, maintain investor confidence, and enhance sustainability transparency. This study does not test interaction effects but integrates tax factors, market behavior, and sustainability within a single empirical framework to explain earnings management practices in a highly regulated and socially sensitive sector.

Literature Review

Agency Theory

Agency theory serves as the theoretical foundation for this study, focusing on the agency relationship between owners and managers (Jensen & Meckling, 1976). Owners are the parties who appoint agents to act on their behalf, and agents are the parties appointed by owners to manage the business. According to Eisenhardt (1989), agency theory can be defined as a study of the planning and supervision of managerial activities in a context where the principal (owner) has conflicting interests with the agent (manager). This theory explains that information asymmetry creates issues between owners and managers. Managers entrusted with authority are supposed to work for the owners but in reality work for their own interests. This conflict of interest forces management to try to improve company performance to get recognition from owners in the form of higher compensation.

In agency theory, the relationship between ETR and earnings management arises as taxes are a significant component in the determination of net income and can serve as a source of managerial discretion. Managers can utilize accounting and tax policies to balance the objective

of reporting to investors with the objective of tax efficiency. Therefore, ETR is positioned as an indicator of tax pressure and strategies that may be related to earnings quality.

Investor sentiment reflects market optimism or pessimism, which is not always entirely based on corporate fundamentals. When trading activity increases, management may perceive signals of market pressure to maintain earnings performance, leading to the use of accounting discretion to align reported earnings with investor expectations. ESG is viewed as a mechanism for transparency and legitimacy that can expand stakeholder oversight of the company. Credible ESG disclosures are expected to reduce information asymmetry and narrow the scope for managerial opportunism, particularly through the governance dimension, which is directly related to the quality of financial reporting.

Earnings Management

Management has an obligation to prepare financial information for external parties. The fact that management possesses in-depth knowledge of the company's business transactions, combined with investors viewing earnings as a measure of management performance, provides an incentive for managers to use managerial discretion to misrepresent financial statements through earnings management practices (Healy & Wahlen, 1999). Viewed from a positive perspective, it is an effort to appease shareholders and maximize corporate value. From a negative perspective, earnings management is management's attempt to maximize its utility through compensation contracts, debt contracts, and regulations (Hamzah et al., 2021). Earnings management is a technique used by management to smooth out profit fluctuations and to fulfill stock analysts' profit projections (Yuan et al., 2022). The use of judgment in structuring transactions and financial statements to affect shareholders and contracts is referred to as earnings management (Healy & Wahlen, 1999).

Effective Tax Rate

The Effective Tax Rate (ETR) refers to the actual tax rate charged to a company from its profits. The ETR reflects the real tax expense after taking into account various tax incentives, temporary and permanent differences, and the company's tax strategies. Generally, the ETR is calculated as the ratio of income tax expense to pre-tax profit. According to Hanlon & Heitzman (2010), the ETR is widely used in accounting and tax research as the main proxy for assessing corporate tax behavior and the effectiveness of tax planning. Meanwhile, Dyreng et al. (2008) defined ETR as an indicator reflecting the extent to which a company succeeds in reducing its tax expense through tax policies and strategies consistently applied over the long term.

Investor Sentiment

Investor sentiment is crucial for understanding financial market behavior. This term refers to the collective attitudes, views, or perceptions of investors toward a specific market or asset, which can affect a company's investment decisions. In line with research by Baker & Wurgler (2006), investor sentiment reflects optimism or pessimism, which is often not based on market fundamentals but rather influenced by psychological factors and subjective perceptions. This phenomenon often serves as a primary driver of market volatility, creating price fluctuations that do not always align with an asset's intrinsic value (Baker & Wurgler, 2006).

Environmental, Social, and Governance (ESG)

Sustainability has become a critical and rapidly evolving topic. One key issue related to sustainability is Environmental, Social, and Governance (ESG). ESG first gained prominence in 2004, when the United Nations Global Compact released the report "Who Cares Wins" in collaboration with twenty other financial institutions. The discussion's findings recommended that the financial industry pay greater attention to environmental, social, and governance factors,

known as ESG, in its financial analysis, management, and stock transactions (Angir & Weli, 2024). It can be concluded that the role of ESG was initiated by the financial industry and subsequently popularized by other sectors.

Conceptual Framework and Hypothesis Development

The Effect of Effective Tax Rate on Earnings Management Practices

The Effective Tax Rate (ETR) reflects a company's actual tax expense relative to pre-tax profit and is often used as an indicator of the intensity of tax planning and a company's fiscal compliance (Putri et al., 2025). In the context of earnings management, the ETR is important, as tax and accounting profit are closely interrelated. The difference in objectives between financial reports for investors and tax reports for fiscal authorities encourages management to make accrual adjustments to achieve desired levels of profit and tax expense. Research by Frank et al. (2009) showed that companies with low ETRs tend to be more aggressive in earnings management practices, particularly through the manipulation of discretionary accruals.

According to Agency Theory, the relationship between the Effective Tax Rate (ETR) and earnings management arises from potential conflicts of interest between managers and shareholders regarding tax efficiency and financial reporting objectives. Managers may exercise accounting discretion to manage reported earnings while attempting to minimize tax liabilities, reflecting the opportunistic behavior that can emerge from information asymmetry and the separation of ownership and control. Furthermore, managers may use accounting policies and judgments to balance tax-saving objectives with the need to maintain favorable financial performance in the eyes of shareholders. Therefore, the Effective Tax Rate may be associated with earnings management practices, as managers seek to balance corporate tax obligations, reported profitability, and shareholders' expectations.

Pressure to minimize tax liabilities may encourage management to use the flexibility of accounting standards to shift the recognition of revenue or expenses. In this context, the ETR is not merely the result of tax planning but also reflects strategic accounting decisions related to earnings management. Research by Zimmerman (1983) found that the differences between accounting profit and taxable profit (book-tax differences) that contribute to the ETR are associated with the level of accrual-based earnings management. This finding indicates that tax policies and financial reporting practices are often managed simultaneously.

Furthermore, companies with relatively low ETRs face an incentive to reduce accounting profits to lower taxes, particularly during periods when profitability increases significantly. According to Hanlon & Heitzman (2010), taxes are one of the primary determinants of earnings quality, as managers tend to balance tax-saving objectives with the need to maintain a positive image of financial performance in the eyes of investors. Therefore, variations in the ETR can reflect the degree of managerial discretion in earnings reporting.

The lower a company's Effective Tax Rate (ETR), the stronger the indication that the company engages in intensive tax planning. From an agency theory perspective, this condition may be related to increased managerial discretion in earnings reporting, as managers strive to balance accounting profit targets, tax efficiency, and investor expectations. Therefore, the proposed hypothesis is a negative relationship between ETR and earnings management.

H1: The lower the ETR, the higher the level of earnings management

The Effect of Investor Sentiment on Earnings Management Practices

Investor sentiment, which reflects investors' perceptions and expectations regarding a specific market or company, has been shown to have a significant effect on managerial decision-making. According to Baker and Wurgler (2007), when investor sentiment is high, management tends to

make decisions aligned with market expectations. One such practice is earnings management, which aims to maintain a positive corporate image in the eyes of investors. This is supported by research by Ali and Gurun (2009), which found that investor sentiment has a significant effect on the long-term earnings growth of companies listed on the Indonesia Stock Exchange. This study used linear regression analysis and showed that when investor sentiment increases, profit growth expectations also rise, which in turn can affect managerial decisions regarding profit management (Ali & Gurun, 2009).

According to Agency Theory, investor sentiment can affect earnings management because managers may face pressure to meet shareholders' expectations and maintain confidence in the capital market. When investor sentiment is high, managers may be motivated to present favorable financial performance to protect the company's reputation and demonstrate their ability to manage the business effectively. Furthermore, information asymmetry allows managers to exercise greater discretion over financial reporting because investors have less access to internal corporate information than management. Consequently, managers may adjust accounting estimates or the timing of revenue and expense recognition to align reported earnings with market expectations, potentially increasing earnings management practices.

Investor sentiment is often measured through various indicators, one of which is market turnover. Market turnover is considered a key indicator of market sentiment, where increased volume can reflect investor interest and confidence in a particular stock. According to research (Baker & Wurgler, 2006), high market turnover tends to be associated with positive sentiment among investors, which in turn can affect managerial decisions regarding earnings management. When market turnover increases, management feels more optimistic about planning the company's earnings strategy, thanks to positive market support.

Positive investor sentiment can also encourage management to engage in income-increasing earnings management, particularly when the company aims to maintain a profit growth trend or fulfill analyst targets. The pressure not to disappoint investors leads management to utilize accounting discretion, for example, by timing revenue recognition or adjusting accrual estimates, so that earnings appear higher without having to directly improve operational performance (Firdaus, 2021). Therefore, the proposed hypothesis is a positive relationship between investor sentiment and earnings management.

H₂: The higher the investor sentiment, the higher the earnings management.

The Effect of Environmental, Social, and Governance (ESG) on Earnings Management Practices

The implementation of Environmental, Social, and Governance (ESG) has become a key concern for investors in assessing a company's sustainability and governance quality. From the perspectives of agency theory, stakeholder theory, and legitimacy theory, credible ESG practices can expand stakeholder oversight, enhance transparency, and reduce information asymmetry. Therefore, companies with higher ESG scores are expected to have fewer opportunities to perform earnings management.

According to Agency Theory, Environmental, Social, and Governance (ESG) disclosure can serve as a monitoring mechanism that helps reduce conflicts of interest between managers and shareholders. Higher-quality ESG disclosure can improve corporate transparency and accountability, reduce information asymmetry, and enable shareholders to evaluate managerial decisions more effectively, thereby limiting opportunities for opportunistic earnings management. Furthermore, strong ESG practices, particularly those related to governance and transparency, may strengthen external monitoring and encourage managers to act in the interests of shareholders

rather than pursuing personal benefits. Therefore, higher ESG disclosure is expected to be associated with lower earnings management because greater transparency and accountability can constrain managerial discretion in financial reporting.

The relationship between ESG and earnings management practices emphasizes the importance of transparency in financial statements. Companies with high ESG scores tend to be more open in disclosing financial and non-financial information to stakeholders. This level of transparency not only strengthens investor confidence but also reduces the possibility of earnings management practices. The higher a company's GRI ESG score, the lower the tendency for earnings management, as Environmental, Social, and Governance (ESG) practices reflect a commitment to transparency, accountability, and good governance.

Research conducted by Angir and Weli (2024) showed that the disclosure of ESG-related information can reduce the incentive for management to engage in earnings management. When companies proactively report their sustainability performance, this creates additional pressure to ensure accuracy in financial statements. Therefore, the proposed hypothesis is a negative relationship between ESG and earnings management.

H₃: The higher the ESG score, the lower the earnings management.

The relationship between these variables can be illustrated in the research model as follows:

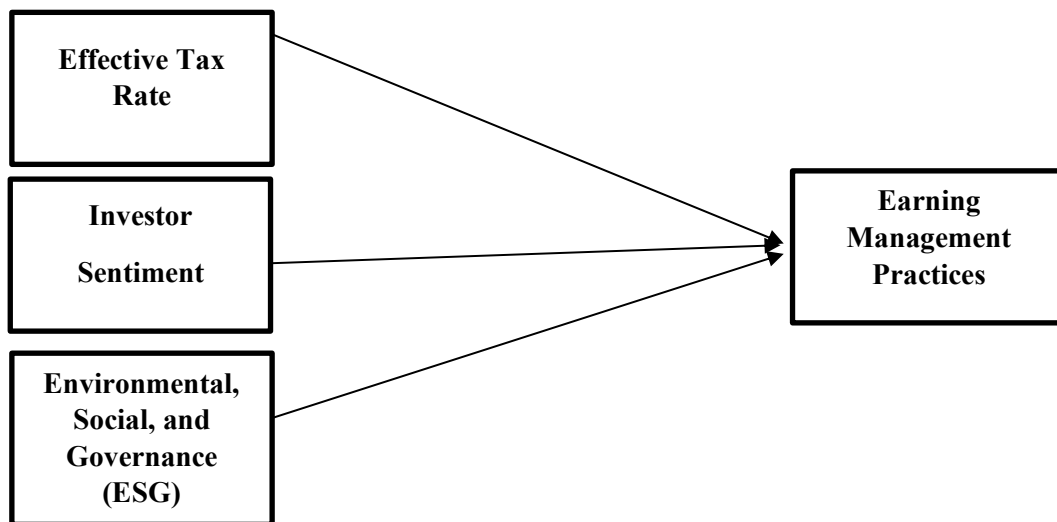


Figure 1. Research Model

Methodology

The research methodology in this study used a quantitative approach with a causal research design to examine the relationship between the Effective Tax Rate (ETR), investor sentiment, and Environmental, Social, and Governance (ESG) factors on earnings management practices. The study population consists of 34 healthcare sector companies listed on the Indonesia Stock Exchange, with the sample selected using purposive sampling based on the following criteria: 1. Healthcare sector companies that have not submitted consecutive sustainability reports for the 2021–2024 period. 2. Healthcare sector companies that are not listed consecutively on the

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Indonesia Stock Exchange during the 2021–2024 period, totaling 26 companies. The data used consists of secondary data obtained from company annual reports, sustainability reports, and relevant capital market databases. The dependent variable, earnings management, is measured using discretionary accruals, while the independent variables consist of the effective tax rate as a proxy for GAAP ETR, investor sentiment reflecting market turnover, and the ESG score depicting the company's sustainability performance using GRI-based content analysis.

Data analysis was conducted using panel data regression to test the effect of each independent variable on earnings management. Before testing the hypotheses, the study performed classical assumption tests, including tests for normality, multicollinearity, heteroscedasticity, and autocorrelation, to ensure the validity of the regression model. Subsequently, the best model was selected using the Chow, Hausman, and Lagrange multiplier tests to determine the most appropriate fixed-effect, random-effect, or common-effect model. Hypothesis testing was conducted by examining the regression coefficients, significance levels, and the coefficient of determination to assess the model's ability to explain variations in earnings management within healthcare sector companies.

Table 1. Operationalization of Research Variables

No	Variable	Definition	Indicator	Scale
1	Earnings Management Practices	Earnings management refers to the use of accounting discretion to affect earnings reported. In this study, earnings management is measured using absolute discretionary accruals based on the Modified Jones Model.	$EM_it = DA_it $	Ratio
2	Effective Tax Rate	The effective tax rate (ETR) refers to a company's income tax expense relative to its pre-tax earnings and is often used as an indicator of the intensity of tax planning and a company's tax compliance (Pardosi & Hutabarat, 2022)	$ETR_it = \text{Total income tax expense_it} / \text{Profit before tax_it}$	Ratio
3	Investor Sentiment	Investor sentiment refers to shareholder behavior in the capital market regarding information relevant to stock prices (Baker & Wurgler, 2006)	$IS_it = \text{Total volume of shares traded_it} / \text{Total number of shares outstanding_it}$	Ratio
4	Environmental, Social, and Governance	The GRI-based ESG disclosure index calculated through content analysis of	$ESGDI_it = (0,30 \times EDI_it) + (0,30 \times SDI_it) + (0,40 \times GDI_it)$	Ratio

	(ESG) Disclosure Index	annual reports and sustainability reports.		
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Source: Data Processed, 2026

Results And Discussion

Results

Descriptive Statistical Test

Descriptive statistical tests were conducted to provide a summary of the variables related to this study. As explained in the previous chapter, this study involves 3 (three) independent variables, effective tax rate, investor sentiment, and ESG (Environmental, Social, and Governance) and 1 (one) dependent variable, namely earnings management.

The population in this study consisted of healthcare sector companies listed on the Indonesia Stock Exchange during the 2021–2024 period. The population was 34 companies identified. The sample was determined using purposive sampling, based on the established criteria, and consisted of 26 companies for the 2021–2024 period. By using data aggregation methods, the dataset comprised 26 companies multiplied by 4 years, resulting in 104 data observations.

Using the EViews software, statistical outputs were generated to describe the data, including minimum, maximum, mean, and standard deviation values. These were then explained individually for the variables in this study, both independent and dependent variables, allowing for a statistical description as shown in the following table.

Table 2. Descriptive Statistical Test Results for the Healthcare Sector

Variable	N	Minimum	Maximum	Mean	Std. Dev
Earnings Management (Y)	104	-0,3879	0,9300	0,1185	0,1814
Effective Tax Rate (X1)	104	-7,8424	5,2825	0,1741	1,0570
Investor Sentiment (X2)	104	0,0000	6,0207	0,5125	0,9801
ESG Index (Environmental, Social, and Governance) (X3)	104	0,0000	87,5000	54,3808	19,3414

Source: Processed Data, 2026

Table 2 shows the descriptive statistics for each variable as a whole. The negative minimum value for earnings management indicates that this output still uses signed discretionary accruals (signed DA). If the study uses $EM = |DA|$ as the main variable, as explained in Chapter III, then the descriptive statistics and regression must be recalculated using the absolute value of DA. Therefore, this table can be retained as information on the direction of earnings management, while the main test should use the absolute value to measure the level of earnings management.

Table 3. Descriptive Statistical Test Results for the Healthcare Supplies Sector

Variable	N	Minimum	Maximum	Mean	Std. Dev
Earnings Management (Y)	24	-0,0638	0,7455	0,2098	0,2400
Effective Tax Rate (X1)	24	-2,2652	0,6024	0,1053	0,5213
Investor Sentiment (X2)	24	0,0000	3,1180	0,5034	0,8417
ESG Index (Environmental, Social, and Governance) (X3)	24	26,2500	73,9600	46,7178	18,1732

Source: Processed Data, 2026

Table 3 shows the descriptive statistics results for each variable in the study as a whole. The results of the descriptive statistics test for variable Y, as the dependent variable, yielded a minimum value of -0.0638 and a maximum value of 0.7455, with a mean of 0.2098 and a standard deviation of 0.2400. A standard deviation value greater than the mean indicates that variable Y has relatively high variation, so the data tends to be widely dispersed and shows differences in characteristics among observations. The results of the descriptive statistical test on variable X1 as the independent variable show a minimum value of -2.2652 and a maximum value of 0.6024, with a mean of 0.1053 and a standard deviation of 0.5213.

A standard deviation significantly greater than the mean indicates that the data for variable X1 has a high variance and a wide distribution, indicating strong heterogeneity in that variable. The results of the descriptive statistical test on variable X2 as the independent variable show a minimum value of 0.0000 and a maximum value of 3.1180, with a mean of 0.5034 and a standard deviation of 0.8417. A standard deviation value greater than the mean indicates that variable X2 has high data variation, meaning that the values between observations are quite diverse and not concentrated around the mean. The results of the descriptive statistical test for variable X3 as an independent variable show a minimum value of 26.25 and a maximum value of 73.96, with a mean of 46.72 and a standard deviation of 18.17. A standard deviation smaller than the mean indicates that the data for variable X3 is relatively more centered around the mean, so the level of data variation is more moderate and tends to be more stable compared to the other variables.

Table 4. Descriptive Statistical Test Results for the Hospital Healthcare Sector

Variable	N	Minimum	Maximum	Mean	Std. Dev
Earnings Management (Y)	44	-0,0290	0,3590	0,1092	0,0747
Effective Tax Rate (X1)	44	-7,8424	0,5975	0,0148	1,2237
Investor Sentiment (X2)	44	0,0000	3,6987	0,5306	0,7543
ESG Index (Environmental, Social, and Governance) (X3)	44	0,0000	76,6300	55,8588	19,7959

Source: Processed Data, 2026

Table 4 shows the overall descriptive statistics results for each variable in the study. The results of the descriptive statistical test for variable Y, as the dependent variable, yielded a minimum value of -0.0290, a maximum value of 0.3590, a mean of 0.1092, and a standard deviation of 0.0747. A standard deviation lower than the mean indicates that variable Y has relatively low variation, meaning the data tends to cluster around the mean. The results of the descriptive statistical test on variable X1 as the independent variable show a minimum value of -7.8424 and a maximum value of 0.5975, with a mean of 0.0148 and a standard deviation of 1.2237. A standard deviation that is significantly larger than the mean indicates that the data for variable X1 has a very high level of variation and a wide spread, indicating strong heterogeneity in that variable. The results of the descriptive statistical test for variable X2 as the independent variable show a minimum value of 0.0000 and a maximum value of 3.6987, with a mean of 0.5306 and a standard deviation of 0.7543. A standard deviation value greater than the mean indicates that variable X2 has high data variation, meaning that the values between observations are quite diverse and not concentrated around the mean. The results of the descriptive statistical test for variable X3 as an independent variable show a minimum value of 0.00 and a maximum value of 76.63, with a mean of 55.86 and a standard deviation of 19.79. A standard deviation smaller than the mean indicates that the data for variable X3 is relatively more centered around the mean, so the level of data variation is more moderate and tends to be more stable compared to the other variables.

Table 5. Descriptive Statistical Test Results for the Healthcare Pharmacy Sector

Variable	N	Minimum	Maximum	Mean	Std. Dev
Earnings Management (Y)	36	-0,3879	0,9300	0,0689	0,2093
Effective Tax Rate (X1)	36	-0,2973	5,2825	0,4146	1,0840
Investor Sentiment (X2)	36	0,0000	6,0207	0,4965	1,2890
ESG Index (Environmental, Social, and Governance) (X3)	36	22,8500	87,5000	57,9608	18,8898

Source: Processed Data, 2026

Table 5 shows the descriptive statistical results of the study for each variable as a whole. The results of the descriptive statistical test for variable Y, as the dependent variable, yielded a minimum value of -0.3879 and a maximum value of 0.9300, with a mean of 0.0689 and a standard deviation of 0.2093. A standard deviation value greater than the mean indicates that variable Y has relatively high variation, meaning the data tends to be widely dispersed and shows differences in characteristics among observations. The results of the descriptive statistical analysis of variable X1 as the independent variable show a minimum value of -0.2973 and a maximum value of 5.2825, with a mean of 0.4146 and a standard deviation of 1.0840. The standard deviation, which is significantly larger than the mean, indicates that the data for variable X1 exhibit a very high level of variation and a wide spread, indicating strong heterogeneity in that variable. The results of the descriptive statistical test for variable X2 as the independent variable show a minimum value of 0.0000 and a maximum value of 6.0207, with a mean of 0.4965 and a standard deviation of 1.2890. A standard deviation value that is larger than the mean indicates that variable X2 has high data variation, so the values between observations are quite diverse and not concentrated around the mean value. The results of the descriptive statistical analysis of variable X3 as the independent variable show a minimum value of 22.85 and a maximum value of 87.5, with a mean of 57.96 and a standard deviation of 18.89. A standard deviation smaller than the mean indicates that the data for variable X3 is relatively more concentrated around the mean, so the level of data variation is more moderate and tends to be more stable compared to other variables.

Table 6. Comparison of Descriptive Statistical Test Results Across Sectors

	Variable	N	Mean	Std. Dev
Supplies	Earnings Management (Y)	24	0,2098	0,2400
	Effective Tax Rate (X1)	24	0,1053	0,5213
	Investor Sentiment (X2)	24	0,5034	0,8417
	ESG Index (Environmental, Social, and Governance) (X3)	24	46,7178	18,1732
Hospital	Earnings Management (Y)	44	0,1092	0,0747
	Effective Tax Rate (X1)	44	0,0148	1,2237
	Investor Sentiment (X2)	44	0,5306	0,7543
	ESG Index (Environmental, Social, and Governance) (X3)	44	55,8588	19,7959
Farmasi	Earnings Management (Y)	36	0,0689	0,2093
	Effective Tax Rate (X1)	36	0,4146	1,0840
	Investor Sentiment (X2)	36	0,4965	1,2890
	ESG Index (Environmental, Social, and Governance) (X3)	36	57,9608	18,8898
Healthcare	Earnings Management (Y)	104	0,1185	0,1814

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Variable	N	Mean	Std. Dev
Effective Tax Rate (X1)	104	0,1741	1,0570
Investor Sentiment (X2)	104	0,5125	0,9801
ESG Index (Environmental, Social, and Governance) (X3)	104	54,3808	19,3414

Source: Processed Data, 2026

The earnings management variable (Y) in the healthcare sector data has a lower mean than the supplies sector. This indicates that companies in the supplies sector tend to engage in higher levels of earnings management practices compared to the overall sample. Additionally, the larger standard deviation in the supplies sector indicates that the level of earnings management among companies within that sector is more variable or less stable compared to the healthcare sector.

The earnings management variable (Y) in the healthcare sector data has a higher average value than the hospital sector. This suggests that the level of earnings management in the hospital sector is relatively lower compared to the overall sample. Furthermore, the significantly smaller standard deviation in the hospital sector indicates that earnings management practices among companies in this sector are more stable and homogeneous compared to the healthcare sector.

The earnings management variable (Y) in the healthcare sector data has a higher average value than in the pharmaceutical sector. This suggests that pharmaceutical companies tend to engage in lower levels of earnings management compared to the overall sample. However, the higher standard deviation indicates that earnings management practices in this sector vary more significantly across companies.

The ETR variable (X1) in the healthcare sector data has a higher average value than in the supplies sector. This result indicates that, in general, companies in the overall sample (healthcare sector) have a higher tax rate compared to the supplies sector. On the other hand, the larger standard deviation in the healthcare sector indicates that the variation in ETR levels across companies is higher, reflecting more diverse tax policies compared to the supplies sector.

The ETR variable (X1) in the healthcare sector data has a higher average value than the hospital sector. This result indicates that companies in the hospital sector tend to have lower tax payment rates compared to the overall sample. However, the higher standard deviation indicates that ETR variation within the hospital sector is greater, suggesting significant differences in tax policies among companies.

The ETR variable (X1) in the healthcare sector data has a lower average value than the pharmaceutical sector. This result indicates that companies in the pharmaceutical sector tend to have higher tax payment rates compared to the overall sample. Additionally, the slightly higher standard deviation value suggests that ETR variation among companies in the pharmaceutical sector is also relatively greater.

The investor sentiment variable (X2) in the healthcare sector data has a higher average value than in the supplies sector. The difference in average values between the two groups is relatively small, so it can be said that investor sentiment toward companies in both groups tends to be similar. However, the higher standard deviation in the healthcare sector indicates that investor perceptions of companies are more diverse compared to the suppliers' sector, which is relatively more homogeneous.

The investor sentiment variable (X2) in the healthcare sector data has a lower average value than the hospital sector. This indicates that investor sentiment toward companies in the hospital sector tends to be slightly more positive compared to the overall sample. Additionally, the lower standard deviation suggests that investor perceptions of this sector are relatively more consistent and do not vary significantly.

The investor sentiment variable (X2) in the healthcare sector data has a higher average value than in the pharmaceutical sector. This indicates that investor sentiment toward pharmaceutical companies tends to be slightly lower compared to the overall sample. Furthermore, the higher standard deviation suggests that investor perceptions of this sector are more diverse or uneven.

The ESG variable (X3) in the healthcare sector data has a higher average value than that in the supplies sector. This suggests that, in general, companies in the overall sample have better ESG performance compared to companies in the supplies sector. Additionally, the slightly higher standard deviation in the healthcare sector indicates that the level of ESG performance varies more widely among companies than in the supplies sector.

The ESG variable (X3) in the healthcare sector data has a lower average value than the hospital sector. This indicates that companies in the hospital sector have slightly better ESG performance compared to the overall sample. However, the relatively similar standard deviation values suggest that the variation in ESG performance among companies in both groups is not significantly different.

The ESG variable (X3) in the healthcare sector data has a lower mean value than the pharmaceutical sector. This indicates that companies in the pharmaceutical sector have better ESG performance compared to the overall sample. However, the slightly lower standard deviation value suggests that the variation in ESG performance among companies within this sector is relatively more homogeneous.

Panel Data Regression Analysis

There are three approaches to panel data: the common effects, fixed effects, and random effects approaches. The fixed effects model accounts for constant differences across units, even with the same regression coefficients. The random effects model overcomes the limitations of the fixed effects model, which relies on dummy variables, by incorporating a random effects residual term that captures both time- and unit-specific variations. There are several approaches that can be used to estimate regression models using panel data, including:

a. Common Effect Model (CEM)

The simplest technique for estimating panel data is simply to combine time series and cross-sectional data. By simply combining this data without considering differences across time and individuals, we can use the Ordinary Least Squares (OLS) method to estimate the panel data model. This method is known as the common effect estimation. In this approach, neither the individual nor the time dimension is considered. The results of the analysis using the common effect model are as follows:

Table 7. Panel Data Regression Results for the Common Effect Model (CEM)

Variable	Coefficient	T-Statistic	Significance
C	0,1182	1,9090	0,0591
Effective Tax Rate (X1)	0,0092	0,5211	0,6034
Investor Sentiment (X2)	-0,0006	-0,0339	0,9729
ESG Index (Environmental, Social, and Governance) (X3)	-1,83E-05	-0,0181	0,9856
R-Square	: 0,0028		
F- Statistic	: 0,0938		
Significance (F- Statistic)	: 0,9632		

Source: Processed Data, 2026

b. Fixed Effect Model (FEM)

The second step involves data analysis using the fixed-effects model (FEM) approach to compare it with the common-effects model (CEM). The fixed effect model is a technique for estimating panel data by using dummy variables to capture differences in intercepts. The concept of fixed effects is based on the presence of differing intercepts. Additionally, this model assumes that the regression coefficients (slopes) remain constant across firms and over time. The results of the analysis using the fixed-effects model are as follows:

Table 8. Panel Data Regression Results for Fixed Effect Model (FEM)

Variable	Coefficient	T-Statistic	Significance
C	0,1143	1,3897	0,1687
Effective Tax Rate (X1)	0,0183	1, 0549	0,2948
Investor Sentiment (X2)	0,0630	2,6257	0,0105
ESG Index (Environmental, Social, and Governance) (X3)	-0,0005	-0,3978	0,6919
R-Square	: 0,4523		
F- Statistic	: 2,2120		
Significance (F- Statistic)	: 0,0034		

Source: Processed Data, 2026

c. Random Effects Model (REM)

The random effects model is a method for estimating panel data regression models based on the assumption of constant slopes and varying intercepts across time and across individuals. This model is also often referred to as the error component model. The appropriate method used to estimate random effects is Generalized Least Squares (GLS) as the estimator because it improves the efficiency of the least squares estimation. The results of the analysis using the random effects model are as follows:

Table 9. Panel Data Regression Results for Random Effect Model (REM)

Variable	Coefficient	T-Statistic	Significance
C	0,1017	1,6071	0,1112
Effective Tax Rate (X1)	0,0137	0,8528	0,3958
Investor Sentiment (X2)	0,0189	0,9599	0,3394
ESG Index (Environmental, Social, and Governance) (X3)	8,59E-05	0,0835	0,9336
R-Square	: 0,0197		
F- Statistic	: 0,6706		
Significance (F- Statistic)	: 0,5720		

Source: Processed Data, 2026

Panel Regression Model Selection

The selection of the panel regression model is performed by comparing the regression results from the three-model test to determine which regression model is best suited for the panel data.

a. Chow Test

The Chow test is used to choose between the common effects model (CEM) and the fixed effects model (FEM). This test is used to compare the F-statistic values for significance. If the F-statistic probability value is < 0.05 , then H_0 is rejected, and the selected model is the FEM rather than the

CEM. Conversely, if the F-statistic probability value is > 0.05 , then H_0 is accepted, and the selected model is the CEM, which is better than the FEM.

The Chow test hypotheses are as follows:

H_0 : Common Effect Model

H_1 : Fixed Effect Model

Table 10. Chow Test Results

Effect Test	Probability
Cross-section F	0,0015
Cross-section Chi-square	0,0000

Source: Processed Data, 2026

From Table 10 above, the cross-sectional F-statistic probability is $0.0015 < 0.05$; therefore, the appropriate panel data model between the Common Effects Model and the Fixed Effects Model is the Fixed Effects Model (FEM), as the F-statistic probability is less than the significance level α (5%), so H_0 is rejected. Furthermore, if the Chow test concludes that the FEM should be selected, then a subsequent test must be conducted, namely the Hausman test, to choose between the Fixed Effects Model and the Random Effects Model.

b. Hausman test

The Hausman test is used to select the most appropriate model between the fixed effects model (FEM) and the random effects model (REM). This test is used to compare the chi-square probability value and the significance level. If the chi-square probability value is < 0.05 , H_0 is rejected, and the selected model is the FEM rather than the REM. Conversely, if the chi-square probability value is > 0.05 , H_0 is accepted, and the REM is selected over the FEM.

The hypotheses for the Hausman test are as follows:

H_0 : Random Effects Model

H_a : Fixed Effects Model

Table 11. Hausman Test Results

Test Summary	Probability
Cross-section random	0.0051

Source: Processed Data, 2026

Based on the Hausman test shown in Table 11 above, the probability value for cross-sectional randomness is 0.0051 (less than 0.05). Therefore, H_0 is rejected and H_1 is accepted statistically; thus, the appropriate estimation model to use in panel data regression is the fixed effects model (FEM). The regression results using the fixed-effects model (FEM) are as follows:

Table 12. Fixed Effects Model (FEM) Regression Results

Variable	Coefficient	T-Statistic	Significance	Decision
C	0,1143	1,3897	0,1687	
Effective Tax Rate (X1)	0,0183	1, 0549	0,2948	Rejected
Investor Sentiment (X2)	0,0630	2,6257	0,0105	Accepted
ESG Index (Environmental, Social, and Governance) (X3)	-0,0005	-0,3978	0,6919	Rejected

Source: Processed Data, 2026

Based on the fixed effects model (FEM) regression results shown in Table 12 above, the regression equation between the dependent variable and the independent variables (ETR, SI, ESG, ERM) is as follows:

$$\text{ERM} = 0.1143 + 0.0183 \text{ ETR} + 0.0630 \text{ SI} - 0.0005 \text{ ESG}$$

Information:

ERM : Earnings Management
ETR : Effective Tax Rate
SI : Investor Sentiment
ESG : Environmental, Social, and Governance

Based on the regression equation above, the following can be explained:

- a. Based on the equation above, the constant is 0.1143. This indicates that if the independent variables (ETR, SI, and ESG) are 0, the probability of earnings management occurring is 0.1143.
- b. The ETR coefficient is 0.0183 and is positive. Since the significance level for ETR is greater than 0.05, this result does not provide sufficient empirical evidence that ETR affects earnings management. Therefore, the direction of the coefficient should not be substantively interpreted as a significant effect.
- c. The investor sentiment coefficient is 0.0630 and is positive. This indicates that a one-unit increase in market turnover is associated with a 0.0630 increase in earnings management, assuming all other variables are constant, and this effect is statistically significant.
- d. The ESG coefficient value of -0.0005 indicates a negative direction but is not statistically significant. Therefore, there is currently insufficient empirical evidence to suggest that an increase in ESG is associated with a decrease in earnings management in this study's sample.

Classical Assumption Tests

Normality Test Results

The normality test is intended to determine whether the standardized residuals in the regression model are normally distributed or not. A failure to meet normality is generally caused by the analyzed data being non-normally distributed due to the presence of extreme values in the collected data. These extreme values can occur due to sampling errors, data entry errors, or data characteristics that are significantly far from the mean (Suliyanto, 2011). Determining whether data is normally distributed can be done using the Jarque-Bera Test (JB). The Jarque-Bera test is a statistical tool to determine if data is normally distributed. If the probability value is greater than 5%, the data is considered normally distributed (Winarno, 2015). The results of the normality test can be seen in the following figure:

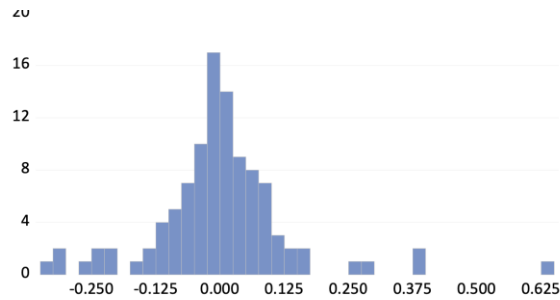


Figure 2. Normality Test Results

Figure 2 shows a probability value of 0.625, which is greater than α ($0.625 > 0.05$). This result indicates that the data is normally distributed or has passed the normality test.

Multicollinearity Test Results

The multicollinearity test aims to determine whether there is any correlation among the independent variables in this regression. One way to detect multicollinearity is by using the variance inflation factor (VIF) and tolerance. The decision criteria based on tolerance and VIF values are as follows: if tolerance ≥ 0.10 or VIF ≤ 10 , then multicollinearity does not occur.

Table 13. Multicollinearity Test Results

	VIF
ETR_X1	1.330680
IS_X2	1.489498
ESG_3	1.535061

Source: Processed Data, 2026

Based on Table 13, it can be seen that the VIF values for each variable are less than 10. It can be concluded that the data in this study does not have a multicollinearity issues. To verify the presence or absence of multicollinearity, a Pearson correlation test can also be conducted. The criterion for this test is that if the correlation coefficient is less than 0.8, it is concluded that there is no multicollinearity. The following are the results of the Pearson correlation test.

Table 14. Pearson Correlation Test Results

	ERM_Y	ETR_X1	IS_X2	ESG_3
ERM_Y	1,0000			
ETR_X1	0,0528	1,0000		
IS_X2	0,0100	0,2431	1,0000	
ESG_3	-0,0041	-0,0674	-0,2667	1,0000

Source: Processed Data, 2026

Based on the test results in Table 14 above, it is evident that the correlation coefficients between variables are less than 0.8. This aligns with the test criteria, indicating that the results show no occurrence of multicollinearity or that the data is free from it.

Autocorrelation Test Results

The Wooldridge test is recommended for autocorrelation testing on panel data. The Durbin-Watson results in the following table are retained as preliminary information; however, it is recommended to use robust or clustered standard errors for the final inference to ensure more reliable conclusions from the t-test.

Table 15. Autocorrelation Test Results

Test Summary	Value
Durbin-Watson stat	1.526172

Source: Processed Data, 2026

Based on Table 15, a Durbin-Watson value of 1.526172 provides an initial indication of the absence of severe autocorrelation. However, since the study uses panel data, the autocorrelation conclusion should be reconfirmed using the Wooldridge test or reported alongside robust standard errors.

Heteroscedasticity Test Results

The heteroscedasticity test aims to assess whether the residual variance is constant across observations. For panel data regression, formal tests such as the modified Wald test or the Breusch-Pagan test are more appropriate than simply examining the scatterplot pattern. If heteroscedasticity is detected, the regression results should be reported using robust or clustered standard errors.

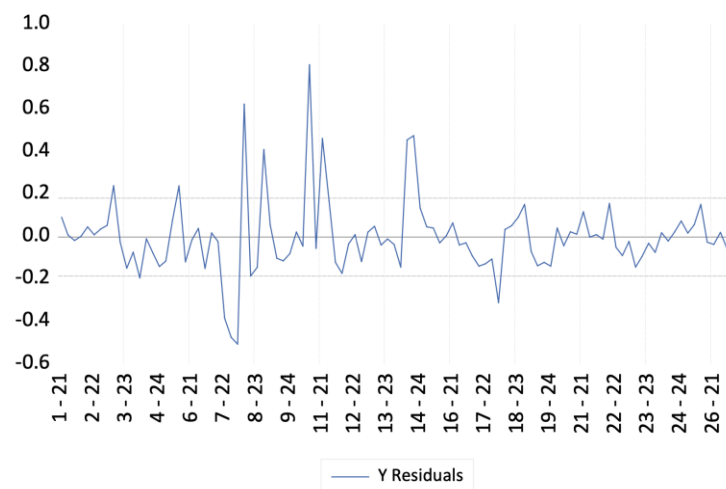


Figure 3. Heteroscedasticity Test Results

Statistical Hypothesis Testing Results

Coefficient of Determination Test Results (R^2)

The coefficient of determination (R^2) is used to indicate the proportion of variation in the dependent variable explained by the variation in the independent variable. The coefficient of determination ranges from 0 to 1. The closer the value is to 1, the better the regression line, as it better explains the actual data. The closer it is to 0, the poorer the regression line. The following are the results of the coefficient of determination test:

Table 16. Coefficient of Determination (R^2) Test Results

Test Summary	Value
Adjusted R-Squared	0,247831

Source: Processed Data, 2026

Based on Table 16 above, it can be seen that the adjusted R-squared value is 0.247831, or 24.78%. This indicates that the independent variable, which includes the effective tax rate, investor sentiment, and Environmental, Social, and Governance (ESG), explains 24.78% of the dependent

variable (earnings management). Meanwhile, the remaining 75.22% is affected by other variables not included in the research model.

T-Test Results

The t-test is used to determine the magnitude of the individual influence of independent variables on the dependent variable (Ghozali, 2013). The criteria for accepting or rejecting the hypothesis are as follows: if the calculated t-value is greater than the critical t-value, it indicates a significant effect. Conversely, if the calculated t-value is less than the critical t-value, it implies no effect. Based on the significance level, the criteria are as follows: if the significance level is > 0.05 , the hypothesis is rejected, meaning the independent variable does not affect the dependent variable; whereas if the significance level is < 0.05 , the hypothesis is accepted, meaning the independent variable affects the dependent variable. The results of the t-test can be seen in the following table:

Table 17. t-Test Results

Variable	Coefficient	T-Statistic	Significance	Decision
C	0,1143	1,3897	0,1687	
Effective Tax Rate (X1)	0,0183	1, 0549	0,2948	Rejected
Investor Sentiment (X2)	0,0630	2,6257	0,0105	Accepted
ESG Index (Environmental, Social, and Governance) (X3)	-0,0005	-0,3978	0,6919	Rejected

Source: Processed Data, 2026

Based on the statistical test results in Table 17 above, the hypotheses can be interpreted as follows:

1. The first hypothesis (H1) states that the lower the ETR, the higher the earnings management. The test results show a t-statistic value of 1.054923 with a probability of 0.2948 (> 0.05), so H1 is not supported. Therefore, there is insufficient empirical evidence that the Effective Tax Rate has a negative effect on earnings management practices.
2. The second hypothesis (H2) states that the higher the investor sentiment, the higher the earnings management. The test results show a t-statistic value of 2.625756 with a probability of 0.0105 (< 0.05), so H2 is supported. Therefore, investor sentiment has a significant positive effect on earnings management practices.
3. The third hypothesis (H3) states that the higher the ESG score, the lower the earnings management. The test results show a t-statistic value of -0.397857 with a probability of 0.6919 (> 0.05), so H3 is not supported. Therefore, there is currently insufficient empirical evidence that ESG has a negative effect on earnings management practices.

Simultaneous Significance Test Results (F-Statistic Test)

This test aims to determine whether all independent variables included in the regression have a significant effect on the dependent variable simultaneously (Ghozali, 2016). If the calculated F-value is greater than the critical F-value, then all independent variables have a simultaneous effect on the dependent variable. Meanwhile, the probability test indicates that if the probability value is < 0.05 , the model is accepted. The following is the table of the F-test:

Table 18. F-Test Results

Test Summary	Value
F-Statistic (Count)	2,212047
F-Table (k=3)	2,1189
Prob (F-Statistic)	0,003482

Source: Processed Data, 2026

Based on Table 18 above, it can be seen that the calculated F-value is $2.212047 > 2.1189$ and the probability (F-statistic) is 0.003482. This probability value of $0.003482 < 0.05$, meaning that the variables effective tax rate, investor sentiment, and ESG simultaneously affect earnings management.

DISCUSSION

The Effect of Effective Tax Rate on Earnings Management Practices

Based on the results of the data analysis, the effective tax rate (ETR) variable does not have a significant effect on earnings management in healthcare sector companies listed on the Indonesia Stock Exchange for the 2021–2024 period. This finding contradicts the agency theory perspective of Jensen and Meckling (1976), which predicts that a low ETR weakens the alignment of interests between the principal (shareholders) and the agent (management), thereby increasing information asymmetry and opportunities for opportunism through adjustments to tax accruals or book-tax differences.

The Effective Tax Rate (ETR) is conceptually defined as the ratio of income tax expense to pre-tax accounting profit, which includes temporary differences (e.g., accelerated fiscal depreciation) and permanent differences (tax incentives such as tax holidays for the healthcare industry). In the healthcare context, the ETR is affected by unique characteristics such as the deferred recognition of BPJS health insurance revenue and estimates of insurance receivables, which should create room for profit engineering. However, these findings suggest that ETR functions more as an indicator of legal tax efficiency, such as the utilization of PMK No. 18/2021 regarding healthcare tax facilities, rather than an instrument of manipulation, with a focus on strengthening the internal control system and transparency in annual reporting (Frank et al., 2009).

This study aligns with the research by Maulana et al. (2024), which found that although tax expenses currently do not affect earnings management, specific tax planning variables are not always the dominant single determinant of earnings management in healthcare companies listed on the IDX. Research by Phillips et al. (2003) in the healthcare sector indicates that earnings management is more affected by stock performance fluctuations than by tax strategies. Specifically, the earnings management variable proxied by discretionary accruals does not significantly affect stock performance in healthcare companies listed on the Indonesia Stock Exchange during 2021–2024.

This study contradicts Desai and Dharmapala (2006), who found that a significantly low effective tax rate (ETR) facilitates earnings management through the manipulation of book-tax differences in sectors with lax regulation. Similarly, Rego (2003) revealed that companies with a low ETR tend to increase discretionary accruals to optimize tax shields, particularly when facing profitability pressures.

The Effect of Investor Sentiment on Earnings Management Practices

Based on the results of the data analysis, the investor sentiment variable has a significant positive effect on earnings management in healthcare sector companies listed on the Indonesia Stock Exchange during the 2021–2024 period. This finding indicates that the higher the investor sentiment, the greater the tendency for management to engage in earnings management practices to fulfill market expectations and maintain stock price stability (Simpson, 2013).

These results are consistent with the agency theory, which explains that capital market pressures lead managers to maximize personal interests through financial statement manipulation when information asymmetry exists between management and investors (Eisenhardt, 1989). In conditions of optimistic market sentiment, managers have a strong incentive to maintain the perception of positive performance to keep the company's valuation high (Tetlock, 2007). In

Indonesia's post-pandemic healthcare sector, investor sentiment is heavily affected by the dynamics of health policies and demand for pharmaceutical products and hospital services, as well as the volatility of the global supply chain. These conditions create significant reputational pressure, potentially driving management to engage in income-increasing earnings management to maintain the image of performance stability.

This study aligns with Ali & Gurun (2009), who found that high sentiment (proxied by turnover) significantly drives income-increasing earnings management in U.S. small-cap firms. Similarly, research by Simpson (2013) revealed that companies with high trading turnover are 20% more vulnerable to opportunistic earnings management, particularly during market euphoria. This difference can be explained by the Indonesian market context, where the healthcare sector faces dual oversight from the Indonesia Stock Exchange (IDX) and the Ministry of Health, reducing managerial incentives compared to the liberal U.S. market.

This study contrasts with the research by Brown and Cliff (2005), which found that investor sentiment does not significantly affect abnormal returns or discretionary accruals in developed markets; this finding reinforces the argument that sentiment affects short-term valuations more than earnings management practices. Research by Formiga et al. (2018) in the Brazilian context also concluded that high sentiment actually reduces accruals under strong analyst coverage, similar to conditions at the IDX where analyst coverage of the healthcare sector reaches 85% of the sample.

The Effect of ESG on Earnings Management Practices

Based on the results of data testing, ESG variables do not have a significant effect on earnings management in healthcare sector companies listed on the Indonesia Stock Exchange for the 2021–2024 period. This finding indicates that high or low ESG scores cannot yet statistically explain variations in earnings management practices. In other words, the presence of ESG activities and disclosures has not yet become a main factor affecting managerial decisions regarding earnings management in this sector.

This finding contradicts Jensen and Meckling's (1976) agency theory, which suggests that the oversight mechanisms expected to emerge through ESG practices have not yet been effective in reducing information asymmetry between management and shareholders. Although ESG is conceptually expected to strengthen governance, transparency, and accountability, in practice, ESG has not been strong in limiting management's opportunistic behavior regarding the use of accrual discretion. This suggests that internal factors such as financial performance pressure, profit targets, and the need to maintain operational stability remain more dominant in affecting earnings management practices than pressure from sustainability aspects. Conceptually, ESG should serve as a mechanism to improve reporting quality through enhanced transparency and stakeholder oversight. However, in the context of developing countries, ESG implementation is often still in the early stages of adoption and tends to be symbolic or compliance-based (García-Sánchez & García-Meca, 2017).

This study aligns with research by Velte (2017), which specifically examined the relationship between ESG and earnings management in Europe. The results indicate that this relationship is weak and inconsistent and depends on the institutional context and the quality of a country's governance. Research by Almubarak et al. (2023) found that ESG disclosure in emerging markets remains in its early stages and thus has not yet had a significant effect on corporate practices. The research by Dmuchowski et al. (2023) found that ESG does not directly affect the quality of earnings but is more affected by governance factors and regulatory pressure. This study contradicts the research by Ricipito (2024), Prayogo et al. (2025), and Gabriela and

Prabowo (2024), which found a relationship between ESG and earnings management or financial performance in specific contexts.

Conclusions And Recommendations

Conclusions

From the research conducted on the effects of the effective tax rate, investor sentiment, and Environmental, Social, and Governance (ESG) on earnings management in the healthcare sector listed on the Indonesia Stock Exchange for the 2021–2024 period, the following conclusions can be drawn: first, the effective tax rate does not have a significant effect on earnings management. This finding indicates that tax strategies have not yet become the primary determinant of discretionary accrual practices in healthcare sector companies during the 2021–2024 period. Second, the sentiment investors have a significant effect on earnings management. The capital market pressures and investor expectations may drive management to adjust reported earnings to make the company's performance appear stable and align with market perceptions. Third, the GRI-based ESG Disclosure Index does not have a significant effect on earnings management. This finding suggests that ESG disclosures have not yet been sufficiently robust to serve as a monitoring mechanism that limits earnings management practices in healthcare sector companies during the study period.

Suggestions

There are several limitations in this study; therefore, the author offers the following suggestions for future research conducting similar studies: Future research could expand the study sample to include all companies listed on the Indonesia Stock Exchange (IDX) and extend or broaden the study period. For future research, it is recommended to include control variables such as SIZE, ROA, LEV, CFO, GROWTH, LOSS, audit quality, and ownership structure. For future research, it is recommended to use alternative measures and sensitivity tests, such as Cash ETR or book-tax differences for tax variables, $\ln(1 + \text{turnover})$ for investor sentiment, commercial ESG scores as a benchmark, and a comparison of signed DA and absolute DA for earnings management.

Limitations

The limitations of this study are as follows: This study focuses only on healthcare sector companies listed on the Indonesia Stock Exchange during the 2021–2024 period. The selection of a specific sector limits the generalizability of the research findings. The research model has not included a number of control variables that commonly influence earnings management, such as firm size, profitability, leverage, operating cash flow, sales growth, loss conditions, audit quality, and ownership structure. This study uses specific proxies to measure investor sentiment, ESG, and earnings management.

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