



## EARNINGS MANAJEMEN DETERMINANTS: THE ROLE OF OWNERSHIP STRUCTURE AND FIRM AGE

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### ABSTRACT

**Purposes :** This research aims to provide empirical evidence related to the effect of ownership structure consisting of ownership concentration, managerial ownership, institutional ownership, and foreign ownership along with several other factors on real earnings management. Several other factors are profitability, firm size, leverage, and age company.

**Design/ Methodology/ Approach :** This research uses data from manufacturing companies that are consistently listed on the Indonesia Stock Exchange during 2019-2023 with a research period of 2021-2023. Sampling in this research used purposive sampling method. Data analysis in this research used multiple linear regression using the Statistical Package for the Social Sciences (SPSS) program.

**Findings:** The results of this research indicate that profitability and firm size have an effect on real earnings management. However, other independent variables such as ownership concentration, foreign concentration, managerial ownership, institutional ownership, leverage and age company have no effect on real earnings management.

**KEYWORDS -** Real Earnings Management, Ownership Concentration, Managerial Ownership, Institutional Ownership, Foreign Ownership, Profitability, Firm Size, Leverage, Age company.

### 1. INTRODUCTION

In carrying out its operational activities, a company must prepare and present financial statements that reflect its financial position and performance for stakeholders in decision-making. Stakeholders such as shareholders, investors, and the government use this information to make decisions related to operations, dividends, and investment (Sulistyanto 2008, 47). Therefore, financial statements must meet certain standards so that the information presented is of high quality and meets the needs of users.

One of the important pieces of financial statement information is profit, because profit reflects a company's performance and growth prospects (Dang et al. 2017). To attract stakeholders' interest, companies tend to present financial statements as favorably as possible, and one common way to do this is through earnings management practices (Susanto et al. 2017).

Real earnings management practices can give rise to conflicts of interest between management and shareholders, as management may exploit the discretion provided by accounting standards to manipulate earnings opportunistically, thereby distorting the reported results (Jiraporn et al. 2008). According to Supardi et al. (2022), effective earnings management can improve company quality, build financial stability, and create a positive relationship between firm value and real earnings management. Nevertheless, firm value may decline if opportunistic management uses resources for its own personal interests (Supardi et al. 2022).

Manipulating company earnings can occur in various countries, This earnings management practice served as the motivation for conducting research on real earnings management, a topic that remains an important current issue deserving discussion. This study is a replication of Akter et al. (2024), which analyzed the influence of ownership concentration, managerial ownership, institutional ownership, and foreign ownership on real earnings management, supplemented by profitability and firm size, as well as the independent variable leverage from Hussain et al. (2022) and company age from Kalbuana et al. (2022). The research objects are manufacturing companies listed on the Indonesia Stock Exchange (BEI) from 2019–2023, with the research period covering

2021–2023. The results of this study are expected to provide benefits for readers, particularly investors and creditors, in understanding the factors influencing real earnings management.

## 2. LITERATURE REVIEW AND HYPOTHESIS DEVELOPMENT

### 2.1 Agency Theory

Jensen and Meckling (1976) define agency theory as the interaction between principals (shareholders) and agents (management). Scott (2015) defines agency theory as a subfield of game theory that investigates the design of contracts to persuade rational agents to act on behalf of principals when the agents' interests conflict with those of the principals. Agency theory arises when shareholders cannot manage their companies themselves, so they must contract with company management to enable their firms to operate (Yosua P. and Aryancana 2015). According to Tran and Dang (2021), shareholders in joint-stock companies are the authorized parties who then seek representatives, namely management.

Agents may run the company for their own interests rather than those of the shareholders due to information asymmetry and uncertainty (Nguyen et al. 2021). Management is responsible for running the company and optimizing shareholder profits, both of which naturally affect the company's finances. However, management in companies often pursues its own ambitions and directs earnings adjustments that conflict with shareholders' potential to maximize their profits in the company (Tran and Dang 2021).

### 2.2 Real Earnings Management

According to Alghemary et al. (2023), real earnings management is a practice in which management plans transactions using actual operational activities to achieve specific financial goals. This differs from accrual-based earnings management is the act of maximizing or minimizing profit for a specific purpose (Utami et al. 2021). It is also considered a legitimate tool for managers to fulfill their responsibility in increasing company profits or returns (Utami et al. 2021).

Roychowdhury (2006) states that organizations with earnings close to zero strategically manipulate real factors. These real factors consist of three activities: sales manipulation, overproduction, and reduction of discretionary expenditure. Sales manipulation is carried out to increase sales in the current period, overproduction is done to reduce cost of goods sold, and reduction of discretionary expenditure is used when the company is not generating significant profit. Ultimately, all three activities affect the company's earnings in the relevant period.

### 2.3 Ownership Concentration dan Real Earnings Management

According to Alzoubi (2016), high ownership concentration can lead to agency conflict. In countries with significant ownership concentration, protecting minority shareholders becomes a concern because major shareholders may falsify information and use company assets to maintain control of the company rather than improve profitability (Al-Jaifi 2017).

However, according to Mumu et al. (2021), high ownership concentration can reduce real earnings management practices in a company, which is in line with the view that concentrated ownership may strengthen monitoring and restrain opportunistic behavior. Based on the research findings, the hypothesis formulated is as follows.

**H<sub>1</sub>: Ownership concentration significant influences real earnings management**

### 2.4 Managerial Ownership and Real Earnings Management

Managerial ownership can increase real earnings management when the ownership stake is significant. However, when managerial share ownership is not significant, management tends to prioritize obtaining performance-based compensation rather than focusing on maximizing shareholder welfare (Jensen and Meckling 1976). Abubakar et al. (2020) and Kusumawati et al. (2015) support this view in their studies, showing that managerial ownership has a positive effect on real earnings management.

If a manager owns a significant portion of shares in the company, corporate decisions are likely to be influenced by the manager's interests in the firm's best interests. The manager is also motivated to achieve better quality and performance each year (Wimelda and Chandra 2018). Based on the inconsistency in previous findings, the hypothesis formulated is as follows.

**H<sub>2</sub>: Managerial ownership significant influences real earnings management**

### 2.5 Institutional Ownership and Real Earnings Management

Institutional ownership refers to shares owned by entities such as banks, insurance companies, mutual funds, pension funds, and other institutions that serve to monitor the company (Avelia and Tarigan 2017). According to Arilyn (2016), institutional ownership also includes shares held by other companies, both domestic and international, as well as shares owned by the government, both domestic and foreign.

Abubakar et al. (2020) and Akter et al. (2024) present a different view, arguing that institutional shareholders act as supervisors of opportunistic actions taken by the company. This is consistent with agency theory. Roodposhti and Chashmi (2011) also state that institutional shareholders are expected to monitor and prevent manipulative actions by management when they hold a larger proportion of shares. Based on the research findings, the hypothesis formulated is as follows.

**H3: Institutional ownership significant influences real earnings management**

## 2.6 Foreign Ownership and Real Earnings Management

Darsono and Faranita (2017) explain that foreign ownership includes all parties from overseas or non-Indonesian citizens. Anwar and Buvanendra (2019) add that foreign ownership often takes the form of mutual funds or foreign institutional investors. Research results supporting a positive relationship between foreign ownership and real earnings management were found by Almashaqbeh et al. (2019).

A high level of foreign ownership usually improves company performance and strengthens corporate governance (Imam and Malik 2007). In addition, foreign ownership helps increase transparency in information disclosure (Nguyen et al. 2021). Based on the research findings, the hypothesis formulated is as follows.

**H4: Foreign ownership significant influences real earnings management**

## 2.7 Profitability and Real Earnings Management

Profitability measures a business's ability to operate by generating net income (Yohana et al. 2021). Guna and Herawaty (2010) state that profitability is an indicator of management's performance in managing the company's wealth, as shown by the profits generated. Profit is often used as a measure of company performance; high profits indicate good performance, and vice versa (Saniamisha and Jin 2017). Therefore, management may be encouraged to engage in earnings management by choosing accounting methods that increase reported net income (Yuliana and Trisnawati 2015).

Rahayu (2018) argues that when a company's profitability is poor, management often engages in real earnings management to protect its reputation with shareholders. This means that management responds to low profitability by practicing real earnings management. Companies with good performance and greater growth opportunities tend not to engage in real earnings management (Ghaleb et al. 2021). Based on the research findings, the hypothesis formulated is as follows.

**H5: Profitability significantly influences real earnings management**

## 2.8 Firm Size dan Real Earnings Management

Large companies have more information than small companies, so information is more readily available (Sari and Khafid 2020). However, the operations of large companies are more complex, making it difficult for investors and other parties to understand the company's activities. This condition gives large companies the opportunity to engage in real earnings management (Khanh and Khuong 2018).

According to Sari and Khafid (2020), internal relationship monitoring conducted by large companies is stricter than that of small companies. Large companies tend to want to be well known, so information availability is higher. Based on this, the likelihood of management acting against the company's interests becomes smaller. The studies by Li et al. (2021) and Khanh and Khuong (2018) provide empirical evidence that firm size has a negative effect on real earnings management. Based on the research findings, the hypothesis formulated is as follows.

**H6: Firm size significant influences real earnings management**

## 2.9 Leverage and Real Earnings Management

Leverage is a financial ratio that shows the relationship between a company's long-term debt and its capital or assets (Arifin and Destriana 2016). Leverage is the use of debt to finance company assets in carrying out its operations (Puspita and Wijaya 2022). According to Hussain et al. (2022), an increase in a company's leverage can motivate management to use real earnings management techniques.

According to Jensen and Meckling (1976), an increase in leverage can reduce real earnings management by management. This happens because debt payments reduce the funds available for managers to spend on less ideal purposes, while debt financing is monitored and its expenditures are restricted by lenders. Based on the research findings, the hypothesis formulated is as follows.

**H7: Leverage significant influences real earnings management**

### 3.0 Age Company and Real Earnings Management

According to Indracahya and Faisol (2017), company age does not affect earnings management.

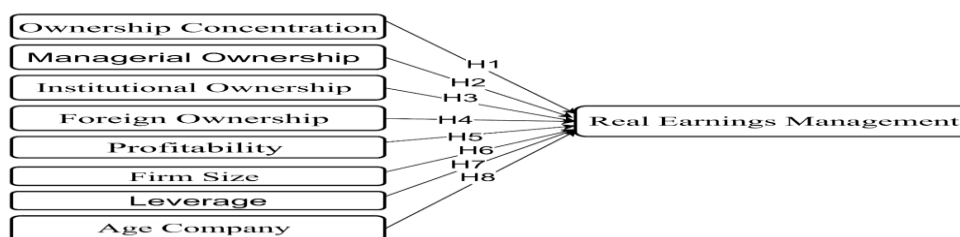
This is because older companies have stable funding, so their focus is more on retaining investors and improving performance in line with expectations. This finding is supported by Monica and Sufiyati (2019), who show that differences in internal conflict and earnings management strategies across companies cause company age to have no effect on managerial actions in earnings management. Chandra and Djashan (2019) also support this view, showing that performance and auditor independence have a greater effect on earnings management than company age.

Bangun and Syafira (2021) found that company age has a positive effect on earnings management.

Rahmawati and Destriana (2019) also support this finding, stating that the longer a company has existed, the greater the incentive to engage in earnings management. Companies that have existed for a long time demonstrate strength and experience in business, as well as the ability to design strategies that increase profits and compete with other companies, both new and established. Based on the research findings, the hypothesis formulated is as follows.

*H8: Age Company significant influences real earnings management.*

Research model



Sources: Figure 1 research model

### 3. METHODOLOGY RESEARCH

The research object used in this study is manufacturing companies listed on the Indonesia Stock Exchange (IDX) during 2019–2023, with the research period covering 2021–2023. The sample in this study was selected using the purposive sampling method.

**Tabel 1 Sample Selection Results**

Sampel Criteria	Number of companies	Numbers of data
1. Manufacturing companies that were consistently listed on the Indonesia Stock Exchange (IDX) during 2019–2023.	160	480
2. Manufacturing companies that did not consistently end their financial reporting period on December 31 during 2019–2023.	(2)	(6)
3. Manufacturing companies that did not consistently use the Indonesian Rupiah in presenting their financial statements during 2019–2023.	(26)	(78)
4. Manufacturing companies that did not consistently generate profits during 2021–2023.	(55)	(165)
5. Manufacturing companies that did not consistently disclose the number of shares owned by managerial, institutional, and foreign shareholders during 2021–2023.	(9)	(27)
<b>Number of research samples</b>	<b>68</b>	<b>204</b>

Source: Data Collection Results

The sample in this study was selected using the purposive sampling method. From a total of 160 manufacturing companies listed on the IDX, 2 companies did not consistently meet the criteria of ending their financial reporting period on December 31, and 26 companies did not consistently use the Indonesian Rupiah in presenting their financial statements during 2019–2023. In addition, 55 companies were not consistently profitable, and 9 companies did not consistently disclose ownership information. The shares owned by managerial, institutional, and foreign shareholders during 2021–2023 were considered. Based on the sample criteria presented in Table 1, it can be concluded that the research sample consists of 68 out of 160 manufacturing companies listed on the Indonesia Stock Exchange during 2019–2023, with the research period covering 2021–2023. Therefore, the total number of manufacturing companies used as the sample is 68, and when multiplied by 3 years, the total number of observations is 204.

The multiple regression equation model used in this study is as follows.

$$REM = \alpha + \beta_1 OWC + \beta_2 MOW + \beta_3 IOW + \beta_4 FOW + \beta_5 ROA + \beta_6 SIZE + \beta_7 LEV + \beta_8 AGE + e$$

Keterangan:

REM	: Real earnings management
$\alpha$	: Konstanta
$\beta_1, \beta_2, -\beta_n$	: Koefisien regresi
OWC	: Ownership concentration
MOW	: Managerial ownership
IOW	: Institutional ownership
FOW	: Foreign ownership
ROA	: Profitability
SIZE	: Firm size
LEV	: Leverage
AGE	: Age Company

### 3.1 Real Earnings Management

According to Alghemary et al. (2023), real earnings management is a practice in which management plans transactions by using actual operating activities to achieve certain financial objectives. The real earnings management variable in this study uses a ratio scale, in which three formulas described by Akter et al. (2024) and Roychowdhury (2006) are used to estimate the value of real earnings management (REM), namely abnormal cash flow from operations (ACFO<sub>it</sub>), abnormal production costs (APC<sub>it</sub>), and abnormal discretionary expenses (ADEXP<sub>it</sub>).

#### 1. Abnormal cash flow from operations

$$\frac{CFO_{it}}{TAS_{i,t-1}} = \beta_0 + \beta_1 \left( \frac{1}{TAS_{i,t-1}} \right) + \beta_2 \left( \frac{S_{it}}{TAS_{i,t-1}} \right) + \beta_3 \left( \frac{\Delta S_{it}}{TAS_{i,t-1}} \right) + \varepsilon_{it}$$

#### 2. Abnormal production costs

$$\frac{PC_{it}}{TAS_{i,t-1}} = \beta_0 + \beta_1 \left( \frac{1}{TAS_{i,t-1}} \right) + \beta_2 \left( \frac{S_{it}}{TAS_{i,t-1}} \right) + \beta_3 \left( \frac{\Delta S_{it}}{TAS_{i,t-1}} \right) + \beta_4 \left( \frac{\Delta S_{it-1}}{TAS_{i,t-1}} \right) + \varepsilon_{it}$$

#### 3. Abnormal discretionary expenses

$$\frac{DEXP_{it}}{TAS_{i,t-1}} = \beta_0 + \beta_1 \left( \frac{1}{TAS_{i,t-1}} \right) + \beta_2 \left( \frac{S_{it}}{TAS_{i,t-1}} \right) + \varepsilon_{it}$$

Keterangan:

CFO <sub>it</sub>	: operating cash flow from <i>i</i> at the end of period <i>t</i>
PC <sub>it</sub>	: the sum of cost of goods sold and the change in inventory of firm <i>i</i> at the end of period <i>t</i>
DEXP <sub>it</sub>	: The sum of a company's selling, general and administrative expenses, advertising expenses, and research and development expenses of firm <i>i</i> at the end of period <i>t</i> .
TAS <sub>it-1</sub>	: Total assets of firm <i>i</i> at the end of period <i>t</i> – 1.
S <sub>it</sub>	: Net sales of firm <i>i</i> at the end of period <i>t</i> .
ΔS <sub>it</sub>	: The change in net sales of firm <i>i</i> from period <i>t</i> – 1 to period <i>t</i> .
ΔS <sub>it-1</sub>	: The change in net sales of firm <i>i</i> from period <i>t</i> – 2 to period <i>t</i> – 1.
$\beta_0$	: constanta
$\beta_1, \beta_2, -\beta_n$	: koefisien regresion
$\varepsilon_{it}$	: Error

Akter et al. (2024) used the model in this study to obtain REM by summing the annual standardized residuals of abnormal cash flow from operations multiplied by -1, abnormal production costs, and abnormal discretionary expenses also multiplied by -1. The equation can be written as follows.

$$REM = ACFO_{it}(-1) + APC_{it} + ADEXP_{it}(-1)$$

Description :

ACFO<sub>it</sub> : *Abnormal cash flow from operations*

APC<sub>it</sub> : *Abnormal production costs*

ADEXP<sub>it</sub> : *Abnormal discretionary expenses*

### 3.2 Ownership Concentration

Ownership concentration refers to major shareholders, whether individuals or institutions, whose share ownership is equal to or greater than 5% (Tran and Dang, 2021; Akter et al., 2024). The variable is measured on a ratio scale, and the formula used in Alhadab et al. (2020) is as follows.

$$OWC = \frac{\text{Number of Shares Owned by Individual or Institutions}}{\text{Number of Shares Outstanding}}$$

### 3.3 Managerial Ownership

Managerial ownership is the share ownership of a company held by the board of commissioners and the board of directors, and this ownership can affect decision-making and company performance (Prahesti and Abundanti, 2015). In this study, the managerial ownership variable is measured on a ratio scale, and the formula used is as follows.

$$MOW = \frac{\text{Number of Shares Owned by Management}}{\text{Number of Shares Issued}}$$

### 3.4 Institutional Ownership

Institutional ownership is the share ownership of a company held by local or foreign institutions such as banks, insurance companies, investment firms, and others (Arifin and Destriana, 2016). According to Akter et al. (2024), the formula for the institutional ownership variable, which is measured on a ratio scale, is as follows.

$$IOW = \frac{\text{Number of Shares Owned by Institution}}{\text{Number of Shares Outstanding}}$$

### 3.5 Foreign Ownership

Foreign ownership is the share ownership held by foreign parties, either individuals or institutions from abroad (Rachmayanti and Jonathan, 2022). According to Tran and Dang (2021) and Akter et al. (2024), the variable is measured on a ratio scale, and the formula is as follows.

$$FOW = \frac{\text{Number of Shares Owned by Foreign}}{\text{Number of Shares Issued}}$$

### 3.6 Profitability

Profitability refers to a company's ability to generate profit over a certain period of time (Putri, 2020). According to Akter et al. (2024) and Majumder et al. (2023), profitability is a ratio-scale variable that can be measured using return on assets (ROA). The formula for the profitability variable is as follows.

$$ROA = \frac{\text{Net Income}_t}{\text{Total Asset}_t}$$

### 3.7 Firm Size

According to Damayanti and Krisnando (2021), firm size is a metric that describes the scale of a company, as reflected by the figures in the balance sheet. This variable is measured on a ratio scale, and Akter et al. (2024) measured it using the logarithm of total assets.

$$SIZE = \text{Ln } A_{it}$$

### 3.8 Leverage

According to Ramadhani and Kuswantoro (2018), leverage refers to the ratio that measures the amount of debt used by a company to run its operations. According to Hussain et al. (2022), the leverage variable can be measured using the debt-to-asset ratio. The formula for calculating leverage is as follows.

$$LEV = \frac{\text{Total Liabilities}_{it}}{\text{Total Asset}_{it}}$$

### 3.9 Age Company

Company age, abbreviated in this study as **AGE**, refers to the length of time a company has been established (Bassiouny, 2016). In theory, investors tend to trust long-established firms more than newly founded ones, because older firms are considered capable of generating greater profit margins (Kalbuana et al., 2022). AGE is measured on a nominal scale, and the proxy adapted from Kalbuana et al. (2022) is:

$$AGE = \text{Year of research} - \text{Year of firm establishment}$$

## 4. RESEARCH FINDINGS

**Tabel 2 Statistik Deskriptif**

<i>Variable</i>	<i>N</i>	<i>Minimum</i>	<i>Maximum</i>	<i>Mean</i>	<i>Standard Deviation</i>
<b>REM</b>	201	-,1684	0,1657	0,007602	0,0601140
<b>OWC</b>	201	0,3014	0,9943	0,750851	0,1515477
<b>MOW</b>	201	0,0000	0,6489	0,072562	0,1404164
<b>IOW</b>	201	0,0003	0,9979	0,790832	0,2560741
<b>FOW</b>	201	0,0000	0,9821	0,256228	0,3033256
<b>ROA</b>	201	0,0013	0,3130	0,077959	0,0607308
<b>SIZE</b>	201	25,1610	33,7306	28,882918	1,7036714
<b>LEV</b>	201	0,0327	0,7950	0,346108	0,1597896
<b>AGE</b>	201	7	94	40,56	15,290

*Source: Data processing results. IBM SPSS 25*

Table 2 presents descriptive statistics for each dependent and independent variable used in this study. Descriptive statistics are a technique for presenting data in the form of tables, graphs, and numbers (Anderson et al., 2014, p. 14).

**Table 3 Correlation analysis results.**

<i>Model</i>	<i>R</i>
1	0,391

*Source: Data processing results. IBM SPSS 25*

**Table 4 Coefficient of determination analysis results.**

<i>Model</i>	<i>R<sup>2</sup></i>
1	0,118

*Source: Data processing results. IBM SPSS 25*

The correlation analysis results show that the R value is 0.391. This indicates that the relationship between real earnings management (REM) and ownership concentration (OWC), managerial ownership (MOW), institutional ownership (IOW), foreign ownership (FOW), profitability (ROA), firm size (SIZE), leverage (LEV), and company age (AGE) is moderately strong and positive, which is consistent with the interpretation presented in Ananda and Fadhli (2018, p. 213).

The coefficient of determination analysis shows that the R-squared value is 0.153. This indicates that 15.30% of the variation in the dependent variable, real earnings management (REM), can be explained by the independent variables ownership concentration (OWC), managerial ownership (MOW), institutional ownership (IOW), foreign ownership (FOW), profitability (ROA), firm size (SIZE), leverage (LEV), and company age (AGE), while the remaining 84.70% is explained by other variables not included in the regression model.

**Table 5 F-test results.**

Variabel	F	Sig
<i>Regression</i>	<b>4,405</b>	0,000

*Source: Data processing results. IBM SPSS 25*

The F-test results show a Sig. value of 0.000, which is less than 0.05. This indicates that all independent variables—ownership concentration, managerial ownership, institutional ownership, foreign ownership, profitability, firm size, leverage, and company age—jointly have a significant effect on the dependent variable, real earnings management. Therefore, the regression model in this study is considered fit.

**Table 6 T-test results.**

<i>Variable</i>	<b>B</b>	<b>Sig.</b>	<b>Conclusion of the research results</b>
<b>OWC</b>	-0,005	0,809	H <sub>1</sub> not significant
<b>MOW</b>	-0,009	0,763	H <sub>2</sub> not significant
<b>IOW</b>	0,008	0,663	H <sub>3</sub> not significant
<b>FOW</b>	-0,011	0,344	H <sub>4</sub> not signifikan
<b>ROA</b>	0,124	0,022	H <sub>5</sub> signifikan
<b>SIZE</b>	-0,006	0,006	H <sub>6</sub> signifikan
<b>LEV</b>	0,028	0,170	H <sub>7</sub> not significant
<b>AGE</b>	0,000	0,124	H <sub>8</sub> not signifikan

*Source: Data processing results. IBM SPSS 25*

The ownership concentration (OWC) variable has a significance value of 0.809, which is greater than the alpha value of 0.05. This indicates that H<sub>1</sub> is rejected, meaning there is no effect of ownership concentration on real earnings management. This t-test result is consistent with the studies by Ghaleb et al. (2021) and Almashaqbeh et al. (2019).

The managerial ownership (MOW) variable has a significance value of 0.763, which is greater than the alpha value of 0.05. This leads to the conclusion that H<sub>a2</sub> is rejected, meaning that managerial ownership does not affect real earnings management. This t-test result is consistent with the studies by Al-Duais et al. (2022), Prabowo and Pangestu (2021), Yopie and Erika (2021), and Swai and Mbogela (2016).

The institutional ownership (IOW) variable has a significance value of 0.663, which is greater than the alpha value of 0.05. This indicates that H<sub>a3</sub> is rejected, meaning that institutional ownership does not affect real earnings management. This result is consistent with the studies by Prabowo and Pangestu (2021) and Abubakar et al. (2020).

The foreign ownership (FOW) variable has a significance value of 0.344, which is smaller than the alpha value of 0.05. This leads to the conclusion that H<sub>4</sub> is rejected, meaning that foreign ownership does not affect real earnings management. This t-test result is consistent with the studies by Akter et al. (2024), Rachprilani et al. (2021), and Al-Haddad and Whittington (2019).

The profitability (ROA) variable has a significance value of 0.000, which is smaller than the alpha value of 0.05. This leads to the conclusion that H<sub>5</sub> is accepted, meaning that return on assets has an effect on real earnings management. The unstandardized coefficient (B) for ROA is -0.011, indicating a negative relationship between profitability and real earnings management. This means that when a company's profitability is high, it tends not to engage in real earnings management; conversely, when profitability is low, the company tends to engage in real earnings management.

Roychowdhury (2006) stated that companies are not motivated to engage in real earnings management when their financial performance is stable, because there is no pressure to meet earnings targets. Ghaleb et al. (2021) also argued that companies with good performance are less likely to engage in real earnings management because they have greater growth opportunities. This t-test result is consistent with the studies



by Akter et al. (2024), Al-Duais et al. (2022), Zgarni and Chikhaoui (2022), Ghaleb et al. (2021), Li et al. (2021), Siraji and Nazar (2021), Almashaqbeh et al. (2019), and Swai and Mbogela (2016).

The firm size (SIZE) variable has a significance value of 0.006, which is smaller than the alpha value of 0.05. This leads to the conclusion that H6 is accepted, meaning that firm size has an effect on real earnings management. The unstandardized coefficient (B) for SIZE is -0.006, indicating a negative relationship between firm size and real earnings management. This means that the larger the company size, especially for publicly listed firms, the less likely the company is to engage in earnings management because it is more closely monitored by investors and regulators, its financial statements are audited by public accounting firms, and transparency is higher audited financial statements on the Indonesia Stock Exchange (IDX). Conversely, smaller companies tend to engage in earnings management practices more often because they have more flexibility to manage earnings, and their financial control systems are not as strong as those of larger companies. Supervision of small companies is also more limited because their shares are not widely owned by the public.

Real earnings management practices can be carried out more easily by large companies because they have more room to control costs and shift revenues (Roychowdhury, 2006). In addition, larger companies have more complex operating activities that are difficult for users to understand. This situation increases the opportunity for large companies to engage in real earnings management (Khanh and Khuong, 2018). This t-test result is consistent with the studies by Akter et al. (2024), Al-Duais et al. (2022), Ghaleb et al. (2021), Siraji and Nazar (2021), Abubakar et al. (2020), and Rasheed et al. (2019).

The leverage (LEV) variable has a significance value of 0.170, which is greater than the alpha value of 0.05. This leads to the conclusion that H7 is rejected, meaning that leverage does not affect real earnings management. This t-test result is consistent with the studies by Siraji and Nazar (2021), Adi et al. (2020), Rasheed et al. (2019), Al-Haddad and Whittington (2019), and Khanh and Khuong (2018).

The age company (AGE) variable has a significance value of 0.124, which is greater than the alpha value of 0.05. This leads to the conclusion that H8 is rejected, meaning that age company does not affect real earnings management. This t-test result is consistent with the studies by the studies conducted by Indracahya and Faisol (2017), Monica and Sufiyati (2019), and Chandra and Djashan (2019).

## 5. CONCLUSIONS

The results of the study using 201 observations show that profitability and firm size have an effect on real earnings management. Meanwhile, ownership concentration, managerial ownership, institutional ownership, foreign ownership, leverage, and company age do not have an effect on real earnings management.

The implications of this research are that profitability and firm size influence real earnings management. The existing empirical evidence can be used by investors in making investment decisions in a company, particularly by considering profitability and firm size. For the government and the Financial Services Authority (OJK), it can serve as a basis for supervision, especially for small companies, and for establishing strict reporting standards. This research is expected to provide additional information for academics and future researchers to develop further studies on the topic of real earnings management.

Some limitations in this research are: (1) the research object is limited due to the relatively short research period of 3 years (2021-2023) and covers only the manufacturing sector, so it cannot be generalized to other sectors; (2) the minimum value of the managerial ownership variable is 0.0000, meaning managers have no direct interest in the company, leading to a tendency to engage in earnings management practices; (3) heteroskedasticity issues occur in the profitability and firm size variables; (4) the dependent variable can only be explained by the variation in independent variables in this research by 15.30%.

Recommendations that can be considered by future researchers to address the limitations in this study are: (1) extending the research period to 5 years or more so that the research object becomes broader, for example, the banking sector; (2) measuring the managerial ownership variable using a nominal scale; (3) addressing heteroskedasticity issues by applying logarithmic transformation to the variables exhibiting heteroskedasticity; and (4) replacing or adding independent variables that influence real earnings management, such as information asymmetry, corporate governance, board size, audit committee independence, and other independent variables.

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