# EARNINGS MANAGEMENT PRACTICES IN TERMS OF FAMILY OWNERSHIP, BOARD GENDER DIVERSITY AND ASSET REVALUATION: A STUDY ON NON-FINANCIAL COMPANIES IN INDONESIA

Ana Puspita Sari<sup>1</sup>, Sayekti Endah Retno Meilani <sup>2</sup>

Departement of Sharia Accounting, Faculty of Islamic Economic and Bussines, UIN

Raden Mas Said Surakarta, Indonesia

Email correspondent: <a href="mailto:anapuspita0107@gmail.com">anapuspita0107@gmail.com</a>

ABSTRACT: Penelitian ini bertujuan untuk mengetahui pengaruh kepemilikan keluarga, ukuran dewan komisaris wanita, ukuran dewan direksi wanita, dan revaluasi aset terhadap manajemen laba dengan Return on Assets (ROA), leverage, dan umur perusahaan sebagai variabel kontrol. Penelitian ini menggunakan populasi seluruh perusahaan non keuangan yang terdaftar di Bursa Efek Indonesia periode 2022-2023. Data yang digunakan merupakan data sekunder berupa data laporan keuangan tahunan perusahaan. Teknik purposive sampling dipilih menjadi teknik pengambilan sampel. Sebanyak 148 perusahaan menjadi sampel akhir penelitian. Penelitian ini menggunakan teknik analisis regresi data panel dalam menguji hipotesis yang diajukan dengan menggunakan instrumen eviews 12. Hasil penelitian menunjukkan revaluasi aset berpengaruh negatif terhadap manajemen laba. Sedangkan kepemilikan keluarga, ukuran dewan komisaris wanita dan ukuran dewan direksi wanita tidak berpengaruh terhadap manajemen laba

**Keywords**: earnings management, family ownership, gender diversity, asset revaluation.

ABSTRACT: This study aims to determine the effect of family ownership, size of female board of commissioners, size of female board of directors, and asset revaluation on earnings management with Return on Assets (ROA), leverage, and firm age as control variables. This study uses a population of all non-financial companies listed on the Indonesia Stock Exchange for the period 2022-2023. The data used is secondary data in the form of the company's annual financial report data. The purposive sampling technique was chosen as the sampling technique. A total of 148 companies became the final sample of the study. This study uses panel data regression analysis techniques in testing the proposed hypotheses using the eviews 12 instrument. The results of the study indicate that asset revaluation has a negative effect on earnings management. While that family ownership, size of female board of commissioners and size of female board of directors have no effect on earnings management.

**Keywords**: earnings management, family ownership, gender diversity, asset revaluation.

## 1. INTRODUCTION

The company in running its business has the main objective of making a profit. The profit generated by the company can reflect how well the company manages its business. When the company earns high profits, the company will have good *credibility*, so that it can increase trust for shareholders and also attract investors to invest their capital (Mardianto & Chintia, 2022). The profit presented in the financial statements can be used as an alternative way for shareholders to see the value of the company.

## The 1st International Conference on Islamic Economics (ICIE) 2024

Performance assessment by companies based on profit shows the importance of profit for various parties (Widagdo et al, 2021). However, investors often only focus on finding information about company profits without observing the preparation process. Because of this condition, management often does not present profits based on actual conditions because financial reports are made to appear well managed and can attract investors to invest. This indicates earnings manipulation or earnings management (Widagdo et al., 2023)

Earnings management practices carried out by management can be caused by information asymmetry between agents (management) and principals (shareholders). Where management as an agent has more information about the company than the principal. Management utilizes the information asymmetry to manipulate the reports needed by stakeholders with the aim of increasing their compensation or managerial career (Widagdo et al., 2021). As a result, investors can make wrong decisions because they use financial information that has been intervened (Oktaviani & Rivandi, 2023)

Based on previous research data, it is found that there is still earnings management carried out by companies in Indonesia. The earnings management can be seen in the following table:

Table 1. Earnings Management Phenomenon in Indonesia

No.	Researcher	Sample	Average	Description
	Name	'	value of	•
			Profit	
			Management	
1.	Widagdo et		-0.067	Earnings
	al., (2023)	listed on the IDX for the		management
		period 2016-2019		practices are
				carried out by
				decreasing
				earnings
2.	Mardianto &	Companies listed on the	- 0,0516	Earnings
	Chintia,	IDX for the period 2016-		management
	(2022)	2020		practices are
				carried out by
				decreasing
			0.070	earnings
3.	Iqbal et al.,	Companies listed on the	- 0.070	Earnings
	(2023)	IDX and included in		management
		companies listed in the		practices are
		CGPI for the period 2015-2021		carried out by
		2021		decreasing
4.	Kusuma,	Companies listed on the	0.5095	earnings Earnings
4.	(2023)	IDX for the period 2016-	0.5095	management
	(2023)	2020		practices are
		2020		carried out by
				increasing profits
5.	Yispa,	Non-financial companies	0.094	Earnings
J.	(2022)	listed on the IDX for the	0.034	management
	(2022)	period 2016-2020		practices are
				carried out by
				increasing profits
				moreasing profits

Judging from the research results in Table 1, companies in Indonesia are still proven to practice earnings management with accrual techniques, both in increasing and decreasing profits. This phenomenon makes researchers interested in examining the factors that can influence earnings management practices in Indonesian companies.

Earnings management practices as in the above phenomenon can be minimized by ownership concentration as a component of corporate governance. However, ownership concentration can also trigger agency problems between shareholders. (Vernando & Ainy, 2022) Not many studies have focused on examining earnings management in family ownership because the focus of research studies is more on institutional ownership and managerial ownership. This is despite the fact that Indonesia is ranked first as a country where the majority of its business ventures are owned by families (Al-duais et al., 2019). Based on a survey conducted by PWC, businesses with family ownership, especially in Indonesia, have a high percentage rate of 95%. This means that the majority of business ventures in Indonesia are family-owned and family-controlled businesses. The *Indonesian* Institute Corporate and Directorship (IICD) also revealed that families own and control more than 95% of businesses in Indonesia. This shows that family businesses have strong implications in accounting practices including earnings management (Widagdo et al., 2023).

According to Beuren et al. (2016), a family company or business is a business that is managed and run by family members, where some family members sit on the board of directors and ownership of the company can be passed on to the family's descendants. Studies on family businesses show that family involvement can provide advantages and disadvantages. Disadvantages often arise due to conflicts of interest between minority shareholders and the family, as well as the tendency to prioritize the family's personal interests. This can lead to poor corporate governance and family businesses often do not survive. However, family businesses also play an important role in the Indonesian economy, contribute significant revenue, and have advantages such as quick decisions, high motivation, and family relationships that understand and trust each other (Widagdo et al., 2023).

The results of research conducted by (Widagdo et al., 2021) and Lisboa, (2017) shows the result that family ownership has a positive effect on earnings management. Where these results indicate that companies owned by families tend to carry out earnings management more often. Meanwhile, research by Wanda et al., (2022) and (Dwiyanti & Astriena, 2018) obtained the results of family ownership having a negative effect on earnings management. This is because the greater the control exercised by family members, the less likely it is to be involved in earnings management. However, this research contradicts the results of research by Widagdo et al., (2023), Mardianto & Chintia, (2022) and Valeria & Karina, (2022) found that family ownership has no effect on earnings management. This means that family ownership does not direct its influence on earnings management actions in the company.

Gender diversity is also a factor of corporate governance that can also affect earnings management (Rakrismawati & Butar, 2023). Gender diversity on boards is receiving increasing attention, with global calls for the presence of women on corporate boards as a means for decision-making and corporate governance. Some countries have even adopted legislative changes that require the involvement of female directors on corporate boards. For example, Norway and Spain require the involvement of 40% women on corporate boards (Zalata et al., 2022). This shows that women can also lead a company.

Companies that have gender diversity in leadership, especially the board of commissioners and the board of directors, can improve company performance. Female leaders are considered to have a higher prudence and pay more attention to norms, so that their presence as leaders or company boards can minimize the occurrence of earnings management (Rakrismawati & Butar, 2023). According to Law of the Republic

of Indonesia Number 40 of 2007 concerning Limited Liability Companies, the board of commissioners is tasked with overseeing the performance of the board of directors and providing advice in accordance with the company's articles of association. Research by Widagdo et al., (2023) related to the presence of a female board of commissioners in the company shows a negative influence on earnings management. Companies that have more women on the board of commissioners can reduce the occurrence of earnings manipulation practices. This research contradicts the research of Rakrismawati & Butar, (2023) who found that the gender diversity of the board of commissioners has no effect on earnings management.

Meanwhile, the board of directors has the duty to be fully responsible for the management and represent the company in accordance with the articles of association, both inside and outside the court. Brahma, (2021) states that diversity in the board of directors is important to maintain resources such as human capital, advice, communication, and legitimacy. In this case, diversity provides the board with various points of view, enriching discussions and decision making, thereby strengthening the board's ability to manage and lead the company (Salsabilla & Diantimala, 2024).

Research results by Widagdo et al., (2023) found that female directors have a negative effect on earnings management. This result is supported by Orazalin, (2020) who conducted research on companies listed on the Kazakhstan Stock Exchange stated that gender diversity on the board reduces information asymmetry and reduces managerial incentives aimed at manipulating profits. However, research by Mardianto & Susanti, (2022) shows the result that the presence of female directors has no effect on earnings management. This happens because the presence of female directors has a limited number, so they do not have enough power or influence, especially in terms of policies related to corporate earnings management. This research is supported by the findings of (Razak & Helmy, 2020) who found the same results, namely that female directors had no significant effect on earnings management.

The novelty of this research is the addition of the asset revaluation variable which is the independent variable. The asset revaluation method is a revaluation of the company's fixed assets based on fair value. The asset revaluation variable has an urgency to be studied because it is considered to have a relationship with earnings management, although there is still limited evidence regarding whether the accounting choice to revalue fixed assets is associated with managerial opportunistic behavior (Hu et al., 2015). The method of revaluing assets based on market value can provide opportunities for company managers to obtain personal benefits or to maintain the continuity of the company.

Empirical evidence from Australian research by Hu et al. (2015) with a sample of 300 companies listed on the Australian Stock Exchange (ASX) shows that asset revaluation is positively related to earnings management. In this study, the fair value measurement of non-financial assets is often considered unreliable because it is based on subjective estimates and judgments. This opens up opportunities for managers to manipulate financial statements for personal gain. As a result, a conflict of interest arises between managers and shareholders, referred to as agency costs.

Likewise with research conducted by Mohammadrezaie (2020) empirical evidence from Iran with a sample of 913 companies listed on the Tehran Stock Exchange (TSE) shows that asset revaluation has a positive and significant relationship with earnings management. This means that companies that use the asset revaluation method have more earnings management actions compared to companies that do not use the asset revaluation method. In this case, asset revaluation allows managers to increase the value of assets in the financial statements without changes in cash flow. With assets not being depreciated, the company's equity increases without additional depreciation costs. Managers take advantage of this to improve performance image and artificially increase profits for personal interests. The results of this study contradict

research by Rakrismawati & Butar, (2023) with the object of non-financial companies in Indonesia, stating that asset revaluation has a significant negative effect. This means that companies that revalue assets tend to have a lower level of earnings management compared to companies that do not revalue.

Based on the description above, researchers are interested in conducting research again related to the factors that relate to and influence earnings management, where these factors have been identified in previous studies. The research conducted in this study is a development of research from Widagdo et al., (2023) by adding an independent variable, namely the asset revaluation method which is predicted to have a relationship with earnings management. The variable asset revaluation method in relation to earnings management is still rarely studied. In addition, departing from previous research examining the same variables shows research results that still provide a research gap. Thus this study aims to review the effect of family ownership, the size of the female board of commissioners, the size of the female board of directors and asset revaluation on earnings management. This study uses the variables return on assets (ROA), leverage and firm age as control variables.

The object of research is non-financial companies in Indonesia listed on the Indonesia Stock Exchange in 2022-2023. The selection of research objects is based on the importance of the role played by non-financial companies because it covers many company sectors and generally has complex operational activities. These complex operational activities can trigger fraudulent manipulation of financial statements. So it is hoped that this study can examine the variables that have been determined and can find results whether by using the object of non-financial companies these variables are related to earnings management or not. Thus this study is entitled "Earnings Management Practices in Term of Family Ownership, Board Gender Diversity and Asset Revaluation: A Study on Non-Financial Companies in Indonesia"

### Literature Review

### **Agency Theory**

Agency theory was first proposed by Jensen and Meckling in 1976. Agency theory is defined as a theory that describes the relationship between principals and agents, where principals are investors and agents are managers. In this agency relationship, the owner hires managers with the aim of giving them the authority to make decisions including in carrying out corporate governance (Jensen & Meckling, 1976). If the agent is able to manage the company well, the agent will get an intensive or compensation from the principal (Lestari et al., 2022). This compensation causes a misalignment of interests between the principal who wants to increase profitability, while agents are more focused on fulfilling their financial needs, which will lead to moral hazard and adverse selection (Widagdo et al., 2023). This conflict is also caused because managers have more information than shareholders so that managers have the opportunity to manipulate financial statements.

The emergence of these problems can be reduced by good corporate governance (Widagdo et al., 2023). In this case, family ownership and gender diversity are part of corporate governance. In addition, the use of asset revaluation based on fair value in financial statements can also reduce information asymmetry with shareholders (Martini & Kurniawati, 2018), (Hu et al., 2015). Because the fixed asset information listed is accurate and relevant information to be used for decision making (Rakrismawati & Butar, 2023).

## **Earnings Management**

According to Sulistyanto, (2008) earnings management is a managerial action that aims to influence and intervene in financial reports to suit certain objectives. Financial information that is intervened by management with the aim of taking advantage of itself will have an impact on financial reports that are misleading to users of financial statements. The act of manipulating earnings by company managers is explained in agency theory where managers have more information than users of financial statements (investors) so that they have an incentive to act in the manager's personal interest.

In theory, earnings management is carried out by manipulating the accrual component in the financial statements, because accruals are the part that is easily changed according to the wishes of those who record transactions and prepare reports. This happens because the accrual component does not require physical evidence in the form of cash, so manipulation of the size of accruals can be done without involving the company's cash receipts or expenditures. Most earnings management models measure earnings engineering activities using the discretionary accruals component, which is considered an accrual component that can be manipulated through managerial policies (Sulistyanto, 2008). Discretionary accruals (DA) as a proxy for earnings management are calculated using the Modified Jones Model (Widagdo et al., 2023).

## **Hypothesis Development**

## The effect of family ownership on earnings management

Companies with a concentration of family ownership are companies in which most of the shares are owned by family members. In agency theory, conflicts between managers and shareholders are rare in family companies because the family that owns the majority of shares also controls management (Wanda et al., 2022). So that with the increase in family ownership in the company, the more control is exercised and can reduce the risk of earnings management. Research results by Wanda et al., (2022) found that family ownership has a negative effect on earnings management. The greater the function and role of family members in the company, the smaller the level of earnings management. The role of family members in the company has a long-term orientation for the company to survive, so they have a tendency to carry out tighter supervision. The results of this study are in line with the results of research Dwiyanti & Astriena, (2018) which shows that family ownership has a negative effect on earnings management. These findings are supported by research Widagdo, Rahmawati, Djuminah, & Ratnaningrum, (2021) which shows that family ownership has a negative effect on earnings management., Alzoubi, (2016) which concluded the same result. Based on the description above, the hypothesis that can be proposed is as follows:

## H<sub>1</sub>: Family ownership has a negative effect on earnings management

## The Effect of Female Board of Commissioners Size on Earnings Management

The board of commissioners is an individual in charge of supervising the policies and advising the board of directors in the company. The board of commissioners has an independent nature, is not involved in managing the company and is objective in carrying out its functions so that its existence has a very important role in corporate governance (Widagdo et al., 2023). As representatives of shareholders, the board of commissioners not only oversees policies but also ensures the realization of corporate accountability (Rakrismawati & Butar, 2023). In the perspective of agency theory, companies that have a large number of boards of commissioners are perceived to reduce opportunistic accrual earnings management actions.

Trisanti, (2021) stated that female commissioners are more thorough in overseeing the business and advising directors, which will indirectly improve the quality

of earnings reports and influence financial reporting policies. In addition Enofe et al., (2017) added that women are considered too strict in terms of transparency to engage in manipulation. With these characteristics, a female board of commissioners is predicted to increase the supervision of company directors and can reduce agency conflicts.

Empirical evidence from (Widagdo et al., 2023) who conducted research in Indonesia found that the size of the female board of commissioners had a negative effect on earnings management. Research from Saona et al., (2018) reported the same results. Based on the description above, the hypothesis that can be proposed is as follows:

 $H_2$ : The size of the female board of commissioners has a negative effect on earnings management.

## The Effect of Female Board Size on Earnings Management

The Board of Directors consists of a group of individuals who lead and are responsible for the company's operations. Salsabilla & Diantimala, (2024) stated that gender diversity can strengthen the supervisory function, encourage creativity, critical thinking, reduce bias, and improve problem-solving abilities. The presence of female directors is expected to reduce the level of earnings management, because they are considered more ethical, meticulous, and more careful in taking risks compared to men and can prevent opportunistic behavior by management (Mardianto & Susanti, 2022). Based on agency theory, opportunistic behavior can arise due to differences in interests between management and shareholders where management has an incentive to act in accordance with their interests. Therefore, the characteristics of these women can prevent earnings manipulation.

Women on the board are believed to change the behavior of the boardroom. Female directors are more ethical and prudent than their male counterparts. (Orazalin, 2020). Saona, (2020) stated that a greater proportion of female board members will improve the quality of board discussions and increase the board's ability to better oversee the company's financial disclosure and reporting. Umer et al., (2020) in their research also found that the presence of women on the board of directors resulted in fewer financial statement misstatements. This statement is supported by the results of research from Widagdo et al., (2023) which concluded that female directors have a negative effect on earnings management in Indonesia description above, the hypothesis that can be proposed is as follows:

H<sub>3</sub>: Female board size has a negative effect on earnings management

### The Effect of Asset Revaluation on Earnings Management

In accordance with the 2014 revision of the Statement of Financial Accounting Standards (PSAK) 16, there are two methods for the valuation of fixed assets, namely the cost method and the revaluation method. Fixed assets are tangible assets that are owned for use in the production or provision of goods or services and are projected to be used for administrative purposes or leased to other parties. The cost method is a revaluation of fixed assets based on the acquisition price minus accumulated depreciation. While the asset revaluation method is a method used to revalue fixed assets recorded in the company's books based on the fair value that applies at the time of revaluation. In this case, initially the company's assets will be valued at cost, then after the initial recognition of fixed assets can determine the cost method or revaluation method (Martini & Kurniawati, 2018).

The selection of revaluation model will require the company to revalue fixed assets regularly to ensure that at the end of the period the carrying value is not materially different from the fair value. If the carrying value of property and equipment increases due to revaluation, the difference will be recognized in other comprehensive income and accumulated as revaluation surplus (Salman et al., 2020). This means that asset revaluation can cause an increase and decrease in the value of assets based on

fair/market value. If fixed assets increase due to revaluation, it will have an impact on the increase in depreciation value and decrease in company profits. Meanwhile, if the value of the company's assets decreases due to revaluation, it will have an impact on the decrease in depreciation and the increase in company profits (Rakrismawati & Butar, 2023).

In the context of agency theory, asset revaluation can reduce the problem of information asymmetry between managers and shareholders (Hu et al., 2015). It is perceived that managers can provide more transparent information about the fair value of fixed assets so as to reduce information asymmetry for shareholders. Research by Rakrismawati & Butar, (2023) found a significant negative relationship between asset revaluation and earnings management. Companies that use asset revaluation based on fair value have a smaller level of earnings management than those that do not revalue assets. Companies that apply asset revaluation based on fair value have a tendency not to do earnings management.

Based on the description above, the hypothesis can be proposed as follows:

H<sub>4</sub>: The asset revaluation method has a negative effect on earnings management.

#### 2. METHOD

## 2.1 Population, Sample and Sampling Technique

The population in this study are all non-financial companies listed on the Indonesia Stock Exchange in 2022-2023. The sample used is the entire company sector except the financial sector, where the data source comes from the *website* <a href="www.idx.co.id">www.idx.co.id</a> and the official website of each company. Sampling technique using <a href="purposive sampling">purposive sampling</a> technique. This technique determines the number of samples using certain considerations and criteria (Sugiyono, 2018). The criteria used in this study are 1) Companies listed on the IDX in 2022-2023. 2) All non-financial companies that publish annual report data and have audited financial statements consistently in 2022-2023. 3) Companies that have complete data needed for research in 2022-2023. The number of samples available and can be tested is 148 companies as presented in Table 3.

Table 3. Sample Selection and Research Data

No.	Description	Total				
1.	Non-financial companies listed on the IDX in 2022-	721 companies				
	2023	•				
2.	Companies that do not publish annual reports and	(126) company				
	financial statements consecutively 2022-2023					
3.	The company has no family ownership	(401) company				
4.	Number of company samples	194 companies				
5.	Number of sample outliers	(46) company				
Fina	Final sample size 148 companies					
Fina	l total observation data 2022-2023 (148 x 2)	296 data				

## 2.2 Variable Measurement

## **Dependent Variable**

### **Earnings management**

Earnings management is a term that refers to the efforts of business entity management to change transactions or financial information so that the financial statement information made is not transparent (Dwiyanti & Astriena, 2018). Earnings management as the dependent variable is measured by discretionary accrual using the

## The 1st International Conference on Islamic Economics (ICIE) 2024

Modified Jones Model. The following are the steps to calculate discretionary accruals (Wanda et al., 2022):

1) Calculating the value of total accruals

 $TA_{it} = NI_{it} - CFO_{it}$ 

2) Calculating regression coefficient parameter values to obtain ß1, ß2, ß3 using Ordinary Least Square (OLS).

TA  $/A_{itit}$  -1 =  $\beta$ 1 (1  $/A_{it}$  -1) +  $\beta$ 2 ( $\triangle$ REV<sub>t</sub>  $/A_{it}$  -1) +  $\beta$ 3 (PPE<sub>t</sub>  $/A_{it}$  -1) + e

3) Calculating non-discretionary accruals from the regression equation above

NDA it =  $\beta 1 (1 / A_{it} - 1) + \beta 2 (\triangle REV_t / A_{it} - 1 - \triangle RECt / A_{it} - 1) + \beta 3$ (PPE<sub>t</sub> / A<sub>it</sub> - 1)

4) Calculating the value of discretionary accruals

DAit  $=TAit/A_{it} - NDA_{it}$ 

# **Description:**

DA<sub>it</sub> = Discretionary accruals for business entity i in period t

Tait = Total accruals for business entity i in period t

NDA<sub>it</sub> = Non-discretionary accruals in the business entity in period t

NI<sub>it</sub> = Net income at company i in period t

CFO<sub>it</sub> = Cash from operating activities of company i in period t

A<sub>it</sub> = Total assets in business entity i in period t

 $\Delta REV_t$  = Change in revenue of business entity i in period t

PPE<sub>t</sub> = Fixed assets of business entity i in period t

 $\Delta$ RECt = Change in receivables of business entity i in period t

β1- β3 = Jones Model regression coefficients

e = error

## **Independent Variable**

### **Family Ownership**

Family ownership or companies are commercial businesses whose decision-making has the influence of several generations in a family, who are related by blood or marriage or adopted children, and can influence the company's vision and certain goals. In this study, family ownership is measured based on the percentage of family shares that exceed 5% (Widagdo et al., 2023). Family relationships can be seen from the affiliation of the board of directors and commissioners and the similarity of names, while the amount of ownership is measured based on share capital (Sanjaya, 2017). Family ownership can be calculated by comparing the ratio of shares owned by family members to the total shares outstanding (Wanda et al., 2022)..

Family ownership =  $\frac{Jumlah \ saham \ yang \ dimiliki \ keluarga}{Total \ saham \ yang \ beredar}$ 

#### **Female Board of Commissioners Size**

The board of commissioners is a corporate organ consisting of people who work together to supervise, provide advice to directors, and ensure that business ventures implement good governance (Sumanto et al., 2014). The size of the female board of commissioners describes the presence of women in the company. This variable is measured by comparing the number of female commissioners with the number of board members (Rakrismawati & Butar, 2023).

Female Board of Commissioners Size =  $\frac{\textit{Jumlah komisaris wanita}}{\textit{Jumlah anggota dewan komisaris}}$ 

## **Female Board Size**

The board of directors is an important corporate governance mechanism that has the duty and authority to lead and direct the organizational entity and secure each stakeholder's interests (Orazalin, 2020). The board of directors is appointed by the company to manage the company in accordance with predetermined goals. In other words, the board of directors plays a role in being responsible for the company's operational activities. The size of the female board of directors is measured by the ratio of the number of female directors to the total number of board members in the company (Mardianto & Susanti, 2022).

(Mardianto & Susanti, 2022). Female Board Size =  $\frac{Jumlah\ dewan\ direksi\ wanita}{Jumlah\ anggota\ dewan\ direksi}$ 

#### Asset Revaluation

Asset revaluation is a valuation of fixed assets by conducting a revaluation in accordance with the current market value (Firmansyah et al., 2017). In this study, the asset revaluation method is measured using a dummy variable, if the company applies the method, it will be coded as number 1 and if the company does not use revaluation but the cost method, it will be coded as number 0 (Rakrismawati & Butar, 2023).

#### Control Variables

ROA (Return on Asset) is a ratio that describes the return on the company's assets. ROA is calculated by comparing net profit after tax with total assets. The higher the ROA, the better the level of effectiveness of a company's management in generating profits so that it will attract investors to invest their capital (Yispa, 2022).

$$ROA = \frac{Net \ income}{Total \ aset}$$

Leverage is the ratio of the company's ability to fulfill its responsibilities (debt) (Widagdo et al., 2023) or in other words, leverage is the level of liability an organization uses to fund its assets in carrying out its operations. In this study, leverage is measured using the Debt Equity Ratio (DER) ratio, namely total debt divided by total equity. This ratio shows that if the company experiences bankruptcy, the first thing used to pay off debt is from the company's capital (Febria, 2020).

$$DER = \frac{Total\ utang}{Total\ ekuitas}$$

Firm age is defined as the amount of time that has passed since the establishment of the company until the company has the ability to operate effectively. Companies that have been around for a long time tend to be more trusted by investors because they are considered more stable and able to generate higher profits. Agustia & Suryani, (2018). New companies, on the other hand, often have difficulty attracting funds from the capital market and rely more on their own capital. Firm age is measured by calculating the time since the company was founded until now (in years) (Wanda et al., 2022).

Firm age = Year of research - Year the company was founded

## 2.3 Data Analysis Technique

This study uses panel data regression analysis techniques in testing the hypothesis to be proposed. The instrument used to perform data analysis is eviews 12. The panel data regression model is used to assess the strength and direction of the relationship between the independent variable and the dependent variable. In this study, the regression equation formula can be written as follows:

 $EM_{it} = \beta +_0 \beta_1 FO1 + \beta_{it 2} FemKom + \beta_{it 3} FemDir + \beta_{it 4} RA_{it} + B_5 ROA + \beta_{it 6} Lev + \beta_{it 7} Age + \epsilon_{it it}$ 

## **Description:**

EMit : Earnings management of company i in period t

ßO : Intercept

ß1FOit : Family ownership of company i in period t

\$\mathbb{G}\_2\$ FemKomit : Size of the board of commissioners of company i in period t

 $\ensuremath{\mathtt{\beta_3}}$  FemDir  $_{it}$   $\ :$  Size of the board of directors of company i in period t

ß<sub>4</sub> RA<sub>it</sub> : Revaluation of company i's assets in period t

B<sub>5</sub> ROA<sub>it</sub> : ROA of company i in period t
 β<sub>6</sub> Lev<sub>it</sub> : Leverage of company i in period t
 β<sub>7</sub> Age<sub>it</sub> : Age of company i in period t

Ei : Error

### 3. RESULT AND DISCUSSION

## 3.1 Descriptive Statistical Analysis

Descriptive statistics are used to provide an overview of general information about the data in this study. Descriptive statistics include the characteristics of the research variables, namely the number of samples, maximum value, minimum value, average value (mean), and standard deviation. The results of the descriptive statistics of this study can be seen in Table 3.

Table 3. Descriptive Statistics Test Results

	EM	FO	FemKom	FemDir	RA	ROA	Lev	Age
Mean	0.008159	0.517122	0.162740	0.167963	0.260135	0.046947	0.634479	33.99324
Median	0.007645	0.572300	0.000000	0.105500	0.000000	0.043036	0.517083	34.00000
Maximum	0.164560	0.924580	0.750000	0.667000	1.000000	0.507215	5.637124	77.00000
Minimum	-0.178850	0.052320	0.000000	0.000000	0.000000	-0.393293	-28.69319	6.000000
Std. Dev.	0.058843	0.245269	0.205139	0.192747	0.439451	0.089913	2.041101	14.90671
Skewness	-0.164419	-0.415786	0.920173	0.751855	1.093505	-0.182665	-10.24593	0.065345
Kurtosis	3.392136	2.007119	2.615150	2.347085	2.195754	9.551644	147.0292	2.405706
Jarque-Bera	3.230156	20.68699	43.59811	33.14513	66.96787	531.0426	261026.7	4.566604
Probability	0.198875	0.000032	0.000000	0.000000	0.000000	0.000000	0.000000	0.101947
Sum	2.414920	153.0680	48.17100	49.71700	77.00000	13.89622	187.8059	10062.00
Sum Sq. Dev.	1.021443	17.74629	12.41422	10.95969	56.96959	2.384878	1228.998	65551.99
Observation s	296	296	296	296	296	296	296	296

Source: Eviews (2024)

## 3.2 Regression Analysis

Based on Table 6. can be seen the value of the coefficient of determination (R<sup>2</sup>) and the feasibility test of the model (F test). The coefficient of determination (R<sup>2</sup>) is measured to determine the percentage of influence of the independent variable on changes in the dependent variable. In Table 4. below, the adjusted R<sup>2</sup> value is 0.386122

or 38%. This means that family ownership, female board size, female board size, and asset revaluation are able to influence earnings management by 38%, the remaining 62% is explained by other variables outside the model.

Table 4. Regression Analysis Results

Dependent Variable: EM Method: Panel Least Squares Date: 09/24/24 Time: 09:18 Sample: 2022 2023 Periods included: 2

Cross-sections included: 148

Total panel (balanced) observations: 296

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.465440	0.188163	-2.473597	0.0146
FO FemKom	-0.087445 0.004698	0.070814 0.065610	-1.234843 0.071612	0.2189 0.9430
FemDir RA	0.072255 -0.164492	0.069789 0.065451	1.035337 -2.513203	0.3023 0.0131
ROA	0.288256	0.003431	2.784724	0.0061
Lev	-0.004950	0.003294	-1.502693	0.1352
Age	0.015836	0.005484	2.887568	0.0045

**Effects Specification** 

Cross-section fixed (dummy variables)						
Root MSE Mean dependent var S.D. dependent var Akaike info criterion Schwarz criterion Hannan-Quinn criter. Durbin-Watson stat	0.031820 0.008159 0.058843 -3.010144 -1.077692 -2.236428 3.973154	R-squared Adjusted R-squared S.E. of regression Sum squared resid Log likelihood F-statistic Prob(F-statistic)	0.706587 0.386122 0.046104 0.299704 600.5013 2.204881 0.000001			

Source: Eviews (2024)

Furthermore, the model feasibility test (F test) is used to determine whether the regression model used in the study is feasible to use. In table 6, the probability value is 0.000001 which means that f < 0.05, meaning that family ownership, the size of the female board of commissioners, the size of the female board of directors, and asset revaluation are simultaneously able to influence earnings management.

#### 3.3 Discussion

# The effect of family ownership on earnings management

From the regression test, it is known that the probability level of the family ownership variable (FO) is known to have a p-value of 0.2189 (p> 0.05) with a regression coefficient value of -0.087445, it can be concluded that family ownership has no effect on earnings management. The first hypothesis (H1) states that family ownership has a negative effect on earnings management. However, after testing, family ownership has no effect on earnings management practices in non-financial companies listed on the IDX. The large number of family shares in the company is unable to reduce earnings management practices. So that the first hypothesis (H1) is rejected.

Based on agency theory, family ownership can reduce agency conflicts due to family involvement in management. However, the results showed that the existence of family

share ownership cannot guarantee that companies reduce or increase earnings management practices. This is because the strong control of family shareholders and company management in maintaining the sustainability of the company will automatically guarantee the transparent presentation of financial statements. This treatment is the same as what will also be done by external shareholders, which will also ensure that the financial statements are presented as they are (Cherif et al., 2020). This means that family companies prioritize business stability and family reputation without explicitly focusing on improving the quality of financial reporting. Thus, the small number of shares owned by the family in the company cannot be certain that it will affect earnings management practices. Both family companies and non-family companies have the same potential for earnings management (Valeria & Karina, 2022).

The results of this study support research conducted by Widagdo et al., (2023), Mardianto & Chintia, (2022), and Dewi et al., (2018) who found the same results. Family companies are considered to be in control and maintain business continuity, and will ensure that financial reports are presented as they are.

### The effect of female board of commissioners size

Testing from the regression above shows that the probability level of the variable size of the female board of commissioners (FemKom) p-value is 0.9430 (p> 0.05) with a regression coefficient value of 0.004698, it can be concluded that the size of the female board of commissioners has no effect on earnings management. The second hypothesis (H2) states that the size of the female board of commissioners has a negative effect on earnings management. So that the second hypothesis (H2) is rejected. Based on agency theory, female commissioners can provide strict supervision of the business through their thoroughness so as to improve the quality of earnings reports (Trisanti, 2021).

The results of this study indicate that the presence of female commissioners in the company has no effect on earnings management. Many and few female commissioners are unable to reduce earnings management practices. This happens because the core tasks of the board of commissioners, both men and women, are actually the same. Differences between men and women in social or gender roles do not come from their nature, but are the result of social and cultural construction. This means that gender-associated roles and behaviors, such as how men and women act in the professional world, are formed through a process of habituation, socialization, and culture inherited from birth, and are influenced by time and place factors (Suryadi et al., 2004), (Fitroni & Feliana, 2022).

In addition, the lack of effect of the size of the female board of commissioners on earnings management may also be due to the fact that the company has few women serving on the board of commissioners. Judging from Table 3. descriptive statistical results, the number of female commissioners (FemKom) in the research sample amounted to 16% of the total board of commissioners. So it is possible that the companies in the research sample cannot take advantage of the gender diversity of women to reduce earnings management practices and this influence is not sufficiently visible in the research results.

The results of research on the female board of commissioners have no effect on earnings management support the results of research by Rakrismawati & Butar, (2023), (Razak & Helmy, 2020) which reports that the presence of female commissioners cannot hinder earnings management practices within the company.

## The effect of female board size on earnings management

The regression test results show that the probability level of the female board size variable (FemDir) p-value is 0.3023 (p> 0.05) with a regression coefficient value of 0.072255, it can be concluded that the size of the female board of directors has no effect on earnings management. The third hypothesis (H3) reads that the size of the female

board of directors has a negative effect on earnings management. So that the third hypothesis (H3) is rejected. This means that the presence of a female board of directors in the company has no impact on earnings management actions. This happens because the presence of female directors in the research sample companies has a limited number of female directors, and there are even companies that do not have female directors. So it is possible that the lack of women on the board makes female leaders not have enough power or influence, especially in terms of policies related to corporate earnings management.

In addition, women in the company focus more on good governance compliance rather than being directly involved in management strategy. In addition, men are more often involved in corporate decision-making because they have more experience than women because they have different perspectives on decision-making. According to Fitriani, (2015) women in decision making must learn more from men. So that the presence of women on the board of directors does not prove an influence that can reduce earnings management.

The results of this study support research from Salsabilla & Diantimala, (2024), Mardianto & Chintia, (2022), (Razak & Helmy, 2020) who found that the female board of directors in the company had no effect on earnings management.

## The effect of asset revaluation on earnings management

Testing of the regression shows the probability level of the asset revaluation variable (RA) p-value 0.0131 (p < 0.05) with a regression coefficient value of -0.164492, it can be concluded that asset revaluation has a negative effect on earnings management. The fourth hypothesis (H4) states that asset revaluation has a negative effect on earnings management. So that the fourth hypothesis (H4) is accepted. The test results show the direction of the negative regression coefficient, it can be stated that earnings management in companies that apply asset revaluation has a smaller level of earnings management compared to companies that do not apply asset revaluation.

Based on agency theory, information asymmetry problems can be reduced by asset revaluation (Hu et al., 2015). This happens because asset revaluation is valued based on fair value, which is perceived to provide a clearer and more accurate picture of the true value of the company's assets. That way, shareholders have better access to information, so managers cannot easily manipulate profits. In this context, asset revaluation is beneficial in providing financial information that is both relevant and reflective of actual conditions. Consequently, agency conflicts can be minimized.

The results of this study support research from Rakrismawati & Butar, (2023) which states that asset valuation with asset revaluation is used for strategic and relevant decision-making purposes. This means that the information presented in the financial statements is what it is. The application of asset revaluation in the company is based on the motive to adjust the value of fixed assets based on market value so that the financial statements prepared are useful for decision making.

## 4. CONCLUSION

The purpose of this study was to determine the effect of family ownership, the size of the female board of commissioners, the size of the female board of directors and asset revaluation on earnings management with Return on Assets (ROA), leverage, and firm age as control variables in non-financial companies listed on the Indonesia Stock Exchange in 2022-2023. Based on hypothesis testing and data analysis, the results show that family ownership, female board size, and female board size have no effect on earnings management. Meanwhile, asset revaluation has a negative effect on earnings management.

The limitation of this study is the use of a relatively short research period, so the results obtained may not be able to generalize the findings and do not fully describe comprehensive long-term trends. In addition, future researchers can include other variables that can better reflect their influence on earnings management.

## 5. REFERENCES

- Agustia, Y. P., & Suryani, E. (2018). Pengaruh Ukuran Perusahaan, Umur Perusahaan, Leverage dan Profitabilitas Terhadap Manajemen Laba: Studi pada Perusahaan Pertambangan yang Terdaftar di Bursa Efek Indonesia Periode 2018-2020. El-Mal: Jurnal Kajian Ekonomi & Bisnis Islam, 10(1), 63–74. https://doi.org/https://doi.org/10.17509/jaset.v10i1.12571
- Al-duais, S., Malek, M., Ali, M., & Hamid, A. (2019). Arbmsv15\_N1\_P53\_60. 1(1), 53–60.
- Alzoubi, E. S. S. (2016). Ownership Structure And Earnings Management: Evidence From Jordan. International Journal Of Accounting And Information Management, 24(2), 135–161. https://doi.org/10.1108/IJAIM-06-2015-0031
- Beuren, I., Politelo, L., Augusto, J., & Martins, S. (2016). Influence of Family Ownership on the Companies Performance. International Journal of Managerial Finance, 12(5), 12.
- Brahma, S. (2021). Board gender diversity and firm performance: The UK evidence. June 2020, 5704–5719. https://doi.org/10.1002/ijfe.2089
- Cherif, Z. F., Ayadi, S. D., & Hamad, S. B. Ben. (2020). The Effect Of Family Ownership On Accrual- Based And Real Activities Based Earnings Management: Evidence From The French Context. 19(2), 283–310. https://doi.org/http://dx.doi.org/10.24818/jamis.2020.02004
- Dewi, P. P., Mendonca, C., Rego, D., & Bonus, K. (2018). Kompensasi Bonus, Kepemilikan Keluarga Dan Manajemen Laba. Jurnal Ilmiah Akuntansi, 3(1), 71–81. http://journal.undiknas.ac.id/index.php/akuntansi/%0A
- Dwiyanti, K. T., & Astriena, M. (2018). Pengaruh Kepemilikan Keluarga Dan Karakteristik Komite Audit Terhadap Manajemen Laba. Jurnal Riset Akuntansi Dan Bisnis Airlangga, 3(2). https://doi.org/10.31093/jraba.v3i2.123
- Enofe, A. O., C., I., & O., E. J. (2017). Board Ethnicity, Gender Diversity and Earnings Management: Evidence From Quoted Firms In Nigeria. V(6), 78–90.
- Febria, D. (2020). Pengaruh Leverage, Profitabilitas Dan Manajemen LABA. 8301, 65–77. https://doi.org/10.37531/sejaman.v3i2.568
- Firmansyah, D., Ahmad, N., & Mulyadi, J. (2017). Pengaruh leverage, ukuran, likuiditas, dan arus kas operasi terhadap revaluasi aset tetap. Jurnal Ilmiah Manajemen Bisnis, 3(1).
- Fitriani, A. (2015). Dosen Tetap Non PNS Fakultas Ushuluddin IAIN Raden Intan Lampung. Jurnal Tapis: Jurnal Teropong Aspirasi Politik Islam, 11(2). https://doi.org/http://dx.doi.org/10.24042/tps.v11i2.845
- Hu, F., Percy, M., & Yao, D. (2015). Asset Revaluations and Earnings Management: Corporate Ownership & Control, 13(1), 930–939.
- Iqbal, S., Andriani, F., & Hariadi, B. (2023). Does Good Corporate Governance (Gcg) Moderate the Sustainability Report Disclosure and Earnings Management Relationship? ASSETS Jurnal Akuntansi Dan Pendidikan, 12(2), 174–187. http://doi.org/10.25273/jap.v12i2.15979
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of Financial Economics, 3(4). https://doi.org/https://doi.org/10.1016/0304-405X(76)90026-X
- Kusuma, M. (2023). Can the Reclassification of Other Comprehensive Income Narrow the Opportunities for Creative Accounting: Earnings Management and Income

- Smoothing? Jurnal Akuntansi Dan Keuangan, 25(1), 25–38. https://doi.org/10.9744/jak.25.1.25-38
- Lestari, F. W., Bagus, H., & Advenda, D. (2022). Pengaruh Kepemilikan Institusional dan Kepemilikan Manajerial Terhadap Manajemen Laba sehingga dapat menaikkan atau menurunkan laba akuntansi sesuai kepentingan ( Scott , 2015 ). Governance didasarkan pada teori agensi . sendiri . Pemegang saham sebagai p. 14, 61–70.
- Lisboa, I. (2017). Impact Of Financial Crisis And Family Control On Earning. European Journal Of Family Business, 6(2), 118–131. https://doi.org/10.1016/j.ejfb.2017.06.002
- Mardianto, M., & Chintia, C. (2022). Analisis Karakteristik Dewan Direksi dan Struktur Kepemilikan terhadap Manajemen Laba Perusahaan di BEI 2016-2020. Owner, 6(1), 269–281. https://doi.org/10.33395/owner.v6i1.556
- Mardianto, & Susanti, D. (2022). Pengaruh Direksi Wanita Terhadap Manajemen Laba Mardianto. Jurnal Akuntansi Bisnis, 20(2), 221–234.
- Martini, R., & Kurniawati, K. (2018). Faktor Faktor Yang Mempengaruhi Pemilihan Model Revaluasi Sebagai Model Pengukuran Aset Tetap Dan Dampaknya Terhadap Manajemen Laba. Jurnal Akuntansi Bisnis, 10(2), 104–123. https://doi.org/10.30813/jab.v10i2.990
- Mohammadrezaie, F. (2020). Asset Revaluation and Earnings Management. 7(2), 31–61. https://doi.org/10.30479/jfak.2020.12762.2636
- Oktaviani, F., & Rivandi, M. (2023). Ukuran Perusahaan Dan Leverage Terhadap Manajemen Laba Pada Perusahaan Transportasi Tahun 2019 2021. Jurnal Mahasiswa Manajemen Dan Akuntansi, 2(1), 22–30. https://doi.org/10.30640/jumma45.v2i1.939
- Orazalin, N. (2020). Board Gender Diversity, Corporate Governance, And Earnings Management: Evidence From An Emerging Market. Gender In Management, 35(1), 37–60. https://doi.org/10.1108/GM-03-2018-0027
- Rakrismawati, G., & Butar, S. B. (2023). Pengaruh Metode Valuasi Aset, Independensi Dewan Komisaris, Diversitas Gender, dan Kepemilikan Institusional Terhadap Manajemen Laba. Jurnal Akuntansi Bisnis, 21(2), 92–103. https://doi.org/10.24167/jab.v21i2.10207
- Razak, B., & Helmy, H. (2020). Pengaruh Dewan Direksi Wanita, Dewan Komisaris Wanita Dan Kualitas Pengungkapan Corporate Social Responsibility Terhadap Manajemen Laba. Jurnal Eksplorasi Akuntansi, 2(4), 3434–3451. https://doi.org/10.24036/jea.v2i4.294
- Salman, I., Firmansyah, A., & Widyaningrum, M. R. (2020). Peran Leverage Sebagai Pemoderasi: Revaluasi Aset Tetap, Kebijakan Dividen, Nilai Perusahaan. Jurnal Magister Akuntansi Trisakti, 7(2), 171–190. https://doi.org/10.25105/jmat.v7i2.7810
- Salsabilla, D., & Diantimala, Y. (2024). Board Gender Diversity, CEO Characteristics, And Earning Management In The Banking Sector. 28(02), 340–356.
- Sanjaya, F. B. (2017). Pengaruh Auditor Spesialisasi Industri, Ukuran Kap,. Jurnal Akuntansi Bisnis, 15(2), 263–289.
- Saona, P. (2020). How Do The Ownership Structure And Board Of Directors 'Features Impact Earnings Management? The Spanish Case \*. June 2019, 98–133. https://doi.org/10.1111/jifm.12114
- Saona, P., Muro, L., & San Marttn, P. (2018). Board of Director Gender Diversity and Its Impact on Earnings Management: An Empirical Analysis for Selected European Firms. SSRN Electronic Journal, 25(4), 634–663. https://doi.org/10.2139/ssrn.3190506
- Sugiyono. (2018). Metode Penelitian Kuantitatif. Alfabeta.
- Sulistyanto, S. (2008). Manajemen Laba (Teori & Model Empiris). Grasindo.
- Sumanto, B., Asori, & Kiswanto. (2014). Pengaruh Kepemilikan Institusional dan Ukuran Dewan Komisaris Terhadap Manajemen Laba. Aaj, 44(1), 44–52.

- http://journal.unnes.ac.id/sju/index.php/aaj
- Suryadi, Suryadi, I., Ace, & Idris, E. (2004). Kesetaraan Gender dalam Bidang Pendidikan. PT. Genesindo.
- Trisanti, T. (2021). Do Companies with Female on the Board have Effects on the Earning Management? Evidence Indonesia Manufacturing Listed Firms. 1(1), 19–25.
- Umer, R., Abbas, N., & Hussain, S. (2020). The Gender Diversity and Earnings Management Practices: Evidence from Pakistan. City University Research Journal, 10(2), 342–357. https://www.cusitjournals.com/index.php/CURJ/article/view/426
- Valeria, & Karina, R. (2022). Pengaruh Independensi Komite Audit Dan Kepemilikan Keluarga Terhadap Manajemen Laba Di Perusahaan Bursa Efek Indonesia. Jurnal Akuntansi Dan Ekonomi, 7(3). https://doi.org/10.29407/jae.v7i3.18739
- Vernando, A., & Ainy, R. N. (2022). Perusahaan Keluarga dan Manajemen Laba. Reviu Akuntansi Dan Bisnis Indonesia, 6(2), 114–124. https://doi.org/10.18196/rabin.v6i2.15856
- Wanda, W., Zulhawati, Rusmin, & Astami, E. W. (2022). Pengaruh Kepemilikan Keluarga dan Tata Kelola Perusahaan terhadap Praktik Manjamen Laba. Jurnal Akuntansi Dan Bisnis, 21(1), 1–16.
- Widagdo, A. K., Rahmawati, Djuminah, Arifah, S., Goestjahjanti, F. S., & Kiswanto. (2023). The Impact of Ownership Characteristics and Gender on Earnings Management: Indonesian Companies. Journal of Risk and Financial Management, 16(1). https://doi.org/10.3390/jrfm16010017
- Widagdo, A. K., Rahmawati, Murni, S., & Ratnaningrum. (2021). Corporate Governance, Family Ownership, and Earnings Management: A Case Study in Indonesia. Journal of Asian Finance, 8(5), 679–0688. https://doi.org/10.13106/jafeb.2021.vol8.no5.0679
- Widagdo, A. K., Rahmawati, R., Djuminah, D., & Ratnaningrum. (2021). Institutional Ownership, Family Firms, Leverage, and Earnings Management. Jurnal Akuntansi Dan Bisnis, 21(2), 252. https://doi.org/10.20961/jab.v21i2.702
- Widagdo, A. K., Rahmawati, R., Murni, S., Wulandari, T. R., & Agustiningsih, S. W. (2021). Corporate Governance, Audit Quality, Family Ownership and Earnings Management. KnE Social Sciences, 2021, 519–534. https://doi.org/10.18502/kss.v5i5.8839
- Yispa, I. (2022). Pengaruh Total Pajak Penghasilan, Independensi Dewan Komisaris, Struktur Kepemilikan, dan Kualitas Audit Terhadap Manajemen Laba. Jurnal Akuntansi Bisnis, 20(2).
- Zalata, A. M., Ntim, C. G., Alsohagy, M. H., & Malagila, J. (2022). Gender diversity and earnings management: the case of female directors with financial background. In Review of Quantitative Finance and Accounting (Vol. 58, Issue 1). Springer US. https://doi.org/10.1007/s11156-021-00991-4