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ENVIRONMENTAL UNCERTAINTY, AND EARNING MANAGEMENT: THE ROLE OF MANAGER ABILITY

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ABSTRACT

This study aims to examine the effect of environmental uncertainty on earnings management, with managerial ability as moderation. The population of this study are manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2017 - 2021. The sampling technique used purposive sampling, resulting in 344 annual reports of manufacturing companies. The data analysis technique uses moderated regression analysis (MRA). The results showed that environmental uncertainty had a positive effect on earnings management and indicated that managerial ability weakened the effect of environmental uncertainty on earnings management. The theoretical contribution of this research is to strengthen contingency theory in describing earnings management practices that occur due to environmental uncertainty, and can be weakened when supported by adequate managerial ability. Contributions for investors, can be used as a strategy in managing investment portfolios by considering internal factors such as managerial capabilities that can reduce earnings management practices, and external factors such as environmental uncertainty that can increase earnings management practices.

Keyword: **Environmental, Uncertainty, Earning Management, Managerial Ability**

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ABSTRAK

Penelitian ini bertujuan untuk menguji pengaruh ketidakpastian lingkungan terhadap manajemen laba, dengan kemampuan manajerial sebagai pemoderasi. Populasi penelitian ini adalah perusahaan manufaktur yang terdaftar di Bursa Efek Indonesia (BEI) pada tahun 2017 - 2021. Teknik pengambilan sampel menggunakan purposive sampling, menghasilkan 344 laporan tahunan perusahaan manufaktur. Teknik analisis data menggunakan moderated regression analysis (MRA). Hasil penelitian menunjukkan bahwa ketidakpastian lingkungan berpengaruh positif terhadap manajemen laba dan mengindikasikan bahwa kemampuan manajerial memperlemah pengaruh ketidakpastian lingkungan terhadap manajemen laba. Kontribusi teoritis dari penelitian ini adalah memperkuat teori kontinjensi dalam menjelaskan praktik manajemen laba yang terjadi karena adanya ketidakpastian lingkungan, dan dapat diperlemah apabila didukung oleh kemampuan manajerial yang memadai. Kontribusi bagi investor, dapat digunakan sebagai strategi dalam mengelola portofolio investasi dengan mempertimbangkan faktor internal seperti kemampuan manajerial yang dapat mengurangi praktik manajemen laba, dan faktor eksternal seperti ketidakpastian lingkungan yang dapat meningkatkan praktik manajemen laba.

Kata kunci: **Lingkungan, Ketidakpastian, Manajemen Laba, Kemampuan Manajerial**

Introduction

Earnings management practices have occurred in the last decade, most recently in companies listed on the IDX. Earnings management is an act of management intervention to adjust earnings and income in accordance with interests. From the perspective of the fraud triangle (Wells, 1994), management (agent) can behave unethically due to pressure from the public to present earnings according to the wishes of shareholders, creditors (principal), and other stakeholders. Earnings can reflect whether the company will provide a safety margin to shareholders, creditors, and other stakeholders. The case that occurred at PT Garuda in 2018 is an example of earnings management carried out by management (agent) by recognizing fantastic untimely income in the amount of USD 809.85 million in 2018, whereas previously

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the company suffered a conditional loss of USD 216.5 million in 2017. This unethical earnings management action was triggered by external pressure, namely the OJK (2020) regulation on information disclosure, which regulates companies to make regular financial reports to stakeholders as a form of PT Garuda's accountability for their performance.

The advent of environmental uncertainty is another external factor that influences earnings management (Surbakti and Sudaryati, 2021). When a firm's management is unable to foresee the effects of continuous environmental changes and is ignorant of the available options, goals, and ramifications for the business, this is known as environmental uncertainty (Milliken, 1987; Duncan, 1972). Information provided to management is no longer accurate and dependable due to environmental uncertainty. Changes in competitive intensity, technology, and market environment are the main drivers of environmental uncertainty (Wang and Fang, 2012). Consumer demand fluctuates constantly, which contributes to market uncertainty; however, because customer preferences change quickly, product development is sped up. Management is required to be able to understand market conditions because consumer preferences change rapidly and are difficult to predict. Technological uncertainty refers to the turnover of technological resources, so management is often unable to understand and utilize the latest technological changes to create innovation in product development. Competitive uncertainty is characterized by the intensity of intense competition in the future over competitors' strategies and plans, so information about competitors' plans and strategies is important for management to avoid competitive uncertainty (Tsai and Yang, 2013).

Contingency problems, such as environmental uncertainty, are something that every business encounters and must work to resolve. According to Ottley's 1980 study, contingency theory explains that an accounting system cannot be universally applied to all businesses and be able to address every possible scenario. Organizational design, environmental factors, and technological advancements all have an impact on the accounting system. Environmental uncertainty can make it challenging for businesses to plan and manage. Hence, high levels of uncertainty can impact the efficiency of supervision and present managers with opportunities for opportunistic behavior, such as earnings management, as explained by contingency theory. To attract stakeholders, management would be better served by opting for increasing profits in financial reporting.

Previous studies confirm that environmental uncertainty has a positive effect on earnings management (Scott, 2015; Ghosh and Olsen, 2009; Wang et al., 2019; Surbakti and Sudaryati, 2021). Their finding proves that environmental uncertainty will affect the condition and performance of the company, especially financial performance, which leads to decision-making by shareholders and creditors. The company can achieve the best performance if it depends on market orientation. Environmental uncertainty causes the information received by the company to be inaccurate and makes it difficult for management to respond to dynamic market demands. Inaccurate information causes the company's performance to decline, which is reflected in the profit generated. This condition encourages management to

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increase earnings management practices by providing unfair financial statement information. Different findings were proven by Hyonok Kim, and Yukihiro Yasuda (2021), when environmental uncertainty as measured by economic policy uncertainty can reduce earnings management practices, while Ghani et al., (2017) prove that environmental uncertainty has no effect on management.

Environmental uncertainty requires management to be able to adapt and take preventive steps so that the company can survive in the business environment (Child, 1972). Management plays an important role in dynamic environmental conditions because management has the flexibility and discretionary ability to achieve company performance in situations of environmental uncertainty (Wagner, 2008; Ghosh and Olsen, 2009). Demerjian et al., (2013) explained that management needs to implement decisions that can lead the company to a high level of efficiency. Efficiency is the minimum use of resources to achieve optimum results. Efficiency implies management decisions to achieve company goals using optimal methods (Demerjian et al., 2013; Wati et al., 2020). Research on managerial ability based on financial statement results has been tested directly and produced inconsistencies in results. Such as Demerjian et al., 2013, and Air et al., (2005) show that managerial ability has a negative effect on both accrual and real earnings manipulation, and restatement of financial statements. Isnugrahadi and Kusuma (2009) show that managerial ability has a positive effect on accrual earnings manipulation. In addition, research conducted by Francis et al., (2008) shows that reputable CEOs are positively related to earnings manipulation.

Companies faced with environmental uncertainty make managerial ability capable of producing long-term planning and quality strategies to adapt to a dynamic environment rather than utilizing flexibility and discretion (Huang et al., 2017; Huang and Sun, 2017). Therefore, managerial ability can moderate earnings management. Contingency theory explains that the skills or abilities possessed by a manager can have a good influence on the management and control of the company to achieve success in financial performance (Schellhorn and Sharma, 2012). A managerial ability should be able to make wise decisions under any conditions. The results of managerial ability can reduce decision-making actions that can harm the company because when managers make decisions, there are usually various inhibiting factors such as information uncertainty and conflicting views. Therefore, companies need managerial ability despite not having sufficient information to accurately project something in the future or environmental uncertainty. The managerial abolity should be able to manage existing resources efficiently without performing earnings management or reducing the impact of environmental uncertainty on earnings management.

This study aims to examine the effect of environmental uncertainty on earnings management with managerial ability as a moderating variable in manufacturing companies listed on the Indonesia Stock Exchange (IDX) in 2017–2021. Environmental uncertainty and managerial ability are very important issues for stakeholders to pay attention to as one of the considerations in decision-making, especially for financial decisions. This study uses the manufacturing sector, caused manufacturing is the mainstay of national economic growth. The 2017–2021 period is the toughest challenge for the manufacturing sector due to global economic

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uncertainty due to the trade war between the United States and China and the COVID-19 pandemic. The existence of these challenges proves whether managers will continue or not to carry out earnings management because they try to maintain a good reputation in the eyes of stakeholders by presenting good financial performance in each accounting period. It is hoped that the research results can strengthen contigency theory by describing the conditions of environmental uncertainty, which are proven to increase earnings management practices, and that managerial ability weakens the effect of environmental uncertainty on earnings management. Almost all types of managerial planning and control are based on environmental uncertainty as a major determinant in many managerial decisions and evaluations. Contributions for investors can be used as a strategy in managing investment portfolios by considering internal factors such as managerial capabilities that can reduce earnings management practices and external factors such as environmental uncertainty that can increase earnings management practices.

Literature Review

Contigency Theory

Contingency theory is the basic premise of management accounting based on the absence of a universally the same accounting system implemented in each organization that can provide answers to problems that occur in different circumstances (Otley, 1980). Contingency theory is of great concern for the company's external environment, especially environmental uncertainty, which is proven to affect almost all types of managerial planning and control because environmental uncertainty is a major determinant in many managerial decisions and evaluations (Lueg and Borisov, 2014). Environmental uncertainty has an unpredictable nature for possible future events. Although it is difficult to predict, the role of managers is very influential in overcoming environmental uncertainty with strategies developed (Ghosh and Olsen, 2009). Companies that face environmental uncertainty give rise to moral hazard behavior from management, which chooses to do earnings management in financial reporting to make it more attractive to stakeholders. If something turbulent happens, the company will get help from stakeholders by showing the financial statement figures presented.

Environmental uncertainty is a contingent problem faced by companies, so, management needs to have the ability to create performance efficiency, namely managerial ability (Demerjian et al., 2013, and Lueg, and Borisov, 2014). Assesments and estimates generated by managerial ability are able to provide better results with the knowlegde possessed in the business environment. Managerial ability can increase maximum output with efficient use of resources, so as to reduce earnings management practices caused by environmental uncertainty. One of the characteristics of managerial ability is not wanting a problem in the future for improper presentation of financial statements (Demerjian et al., 2013).

Earning Management

Earnings management describes management intervention to make business decisions based on personal interest which can cause losses to principal and other stakeholder decision business based on interest individual who can produce loss big

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for stakeholders by showing manipulated positive information related to company's performance (Huynh, 2020). Existence of earnings intervention no longer reflect actual company's conditional. This information is detrimental to principal and the party bearing the risk as a result of sacrificing some money or other resources in company. Agent's intervention in the process of preparing financial statement by enlarging, shrinking, or smoothing earnings to obtain benefit by taking advantage of wide application of accounting methods and procedures, making accounting policy, shifting forward or backward the recognition revenues and expenses so that the earnings produced are larger or smaller than actual earnings. Worthy (1984) explains that the way perform earnings management is categorized into (1) change in accounting method (2) cost estimation manipulation (3) shift the recognition period of revenues and expenses.

Environmental Uncertainty

Environmental uncertainty describes the inability of the management team to understand something accurately about the external environment due to difficulties in anticipating and assimilating environmental conditions (Wang and Fang, 2012). Environmental uncertainty creates dynamics in the business environment, which causes market share demand to increase, but the company is unable to meet the increase in market share. Conditions like this provide motivation for management to respond by taking earnings management actions that benefit themselves.

Continuous changes in the external environment led to environmental uncertainty that has an impact on company conditions and performance (Surbaktim and Sudaryati, 2021). The environmental uncertainty is characterized by dynamic shifts in customer preferences and rapid technological acceleration, as well as intense competition intensity, making it difficult for management to take and know whether the decisions taken are correct or not. therefore, environmental uncertainty will reduce management predictability in understanding the business environment (Wang et al., 2019). Environmental uncertainty creates uncertainty in creating opportunities with capabilities and strategies. Management needs to predict and respond to competitors' strategies and plan to stay in the market. Management faced with uncertainty has difficulty having sufficient information about the environment to determine the results and success of decisions taken (Duncan, 1972).

Managerial Ability

Demerjian et al., (2013) defines managerial ability as ability of a of top management teams to efficiently transform the company's resources into revenues, earnings, and corporate value. Wati et al., (2020) states managerial abilities as management characteristics consisting of talent, quality, ability, and reputation of management in the context of decision making. Good managerial skills form a strong foundation for management to build firm performance in real terms with the resources and information so that management tend to avoid earnings managements.

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Hypothesis Development

The Effect of Environmental Uncertainty on Earnings Management

Dynamic business changes create high uncertainty in the business environment, causing contingency problems for companies (Tsai, and Yang, 2013). Environmental uncertainty is an external factor problem that can affect company performance, planning, control and decision-making stages (Lueg, and Borisov, 2014). The impact of environmental uncertainty makes managers unable to obtain maximum profit, resulting in the company being unable to compete. The inability to earn profits is a bad sign for management because profit is an indicator of the principal to assess management performance in running the company (Scott, 2015). Pressure on earnings encourages management to carry out earnings management in financial statements (Ghosh and Olsen, 2009).

Studies conducted by Ghosh, and Olsen (2009) and Surbakti, and Sudaryati (2021) provide empirical results that environmental uncertainty positively affects earnings management. Ghosh, and Olsen (2009) stated that a mangement is incentivized to reduce the variability of reported earnings by utilizing flexibility and discretion to respond to the business environment when recognizing accrual accounting. Surbakti, and Sudaryati (2021) found that when environmental uncertainty increases, it will impact company performance, especially financial performance, resulting in financial difficulties. The condition of economic challenges is a problem that, in the long term, will result in the company's bankruptcy, so this condition encourage management to carry out earnings management. Based on the explanation above, the hypothesis in this study is:

H1: Envitonmental uncertainty has positive effect on earning management

Managerial Ability Weakens the Effect of Environmental Uncertainty on Earnings Management

The effort that companies can make to overcome contingency problems in situations of environmental uncertainty is to have managerial skills. Environmental uncertainty can have an impact on increasing the budget which causes adjustments to the company's internal resources if in the long run it will affect the company's survival (Surbakti, and Sudaryati, 2021). Managerial ability will provide positive predictions and planning in uncertain conditions through the experience and knowledge that management has to see the changes that are happening (Johnston et al., 2018). Management will find it easier to allocate and maintain internal resources when environmental uncertainty is high, so that performance consistency is achieved through the efficiency of the company's resource budget allocation. Corporate goals that are achieved with performance consistency cause management to not be interested in using opportunistic earnings management to overcome profit fluctuations in environmental uncertainty. Management maintains more accurate earnings quality on accrual estimates and minimizes errors and restatement of financial statements (Demerjian et al., 2013, and Ghosh and Olsen, 2009), so that financial statement information becomes more reliable for stakeholders in making the right decisions.

Several studies have proven that managerial ability reduces the impact of environmental uncertainty. Huang et al. (2017) found that managerial ability reduces

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management actions that utilize flexibility and discretion in an uncertain environment; management with managerial ability will minimize opportunistic traits. Johnston et al., (2018) discuss the role of managerial ability more deeply, which minimizes management's ability to manage earnings through disclosing intangible assets, and management with managerial ability will strengthen the company's cash flows in the future. Management with managerial ability will improve the company's performance in real terms by efficiently managing the company's internal resources and collecting information obtained through the company's external environment, thereby minimizing the use of discretionary accruals in financial statement earnings. Hypothesis that built from explanation above:

H2: Managerial ability weakens the effect of environmental uncertainty on earnings management

Research Methods

Type of Research

This study uses a quantitative approach with explanatory research. Quantitative approach used to measure and apply data in the form of numerical values and statistical analysis (Sugiyono,2018). The approach used is an explanatory approach that find the phenomenon of causal (cause and effect) relationships of certain variables to other variables (Sugiyono, 2018)**.**

Data Types and Sources

The type of data is quantitative with a ratio data type that has e same distance as the existence of an absolute zero value (Sugiyono, 2018). The secondary data used in this study is based on information obtained from previous or existing sources. Data on financial statement obtained through the official website of the Indonesia Stock Exchange (www.idx.co.id) in 2017-2021.

Population and Sample

The population in this study are manufacturing companies listed on the Indonesia Stock Exchange in 2017-2021. Sampling was carried out using a non-probabilistic sampling technique with a predetermined purposive sampling method and information was obtained with consideration and adjusted to the research objectives (Sugiyono, 2018). The sample selection criteria for this study can be seen in table 1.

Table 1. Sample Criteria Selection

No	Description	2017	2018	2019	2020	2021
1	Registered manufacturing company on the IDX for the 2017-2021 period	230	215	207	194	179
2	Manufacturing companies that do not have complete data for study	(179)	(112)	(140)	(130)	(120)
	Total	51	103	67	64	59
	Total Sample			**344**		

Source: Processed data, 2022

Based on table 1, the sample of this study was obtained as many as 344 financial statement of manufacturing companies.

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Data Collection Method

This study uses content analysis to collect data. Content analysis is a data collection technique that involves the observation and analysis of the content or message of a text. The content of a piece of writing or document is then classified into various predetermined criteria. This technique is carried out by reading and searching for information in the financial statements of each manufacturing company and analyzing it based on predetermined variable measurement criteria.

Operational Definition and Measurement of Variables

Earnings Management

Earnings management is an act of management intervention to make business decisions based on personal interests that can harm stakeholders by showing manipulated positive information regarding company performance (Huynh, 2020). Earnings management be measured using Modified Jones and the formula earnings management with Modified Jones based on Dechow et al., (1995) is following:

1. Calculates total accrual (TAC), which is *net income* deducted operating cash flow

$$\boldsymbol{TAC_{i,t} = NI_{i,t} - CFO_{i,t}}$$

2. Determine the measurement values 1, 2, 3 with *Jones Models* (1991)

$$\boldsymbol{TAC_{i,t} = \beta_1 + \beta_2 \Delta Sales_{i,t} + \beta_3 PPE_{i,t} + \varepsilon_{i,t}}$$

Data scaling is done by dividing whole variable by total assets period t-1, yield formula following:

$$\boldsymbol{\frac{TAC_{i,t}}{TA_{i,t-1}} = \beta_1\left(\frac{1}{TA_{i,t-1}}\right) + \beta_2\left(\frac{\Delta Sales_{i,t}}{TA_{i,t-1}}\right) + \beta_3\left(\frac{PPE_{i,t}}{TA_{i,t-1}}\right) + \varepsilon_{i,t}}$$

Measure values 1, 2, 3 are estimated use equality regression *Ordinary Least Square* (OLS).

3. Measuring values 1, 2, 3 are used to calculate the *non-discretionary accruals* (NDA) with use formula:

$$\boldsymbol{NDA_{i,t} = \beta_1\left(\frac{1}{TA_{i,t-1}}\right) + \beta_2\left(\frac{\Delta Sales_{i,t} - \Delta Receivable_{i,t}}{TA_{i,t-1}}\right) + \beta_3\left(\frac{PPE_{i,t}}{TA_{i,t-1}}\right) + \varepsilon_{i,t}}$$

4. Total accrual is results amount *discretionary accruals* (DAC) and *non-discretionary accruals* (NDA). *Discretionary accruals* (DAC) values represent indicator accruals earnings management that can counted with method subtract total accruals with *non-discretionary accruals* (NDA).

$$\boldsymbol{DAC_{i,t} = TAC_{i,t} - NDA_{i,t}}$$

Earnings management is shown by measuring *discretionary accruals,* in research this *discretionary accrual* be measured with absolute value, so formula is:

$$\boldsymbol{EM = |DAC_{i,t}|}$$

EM	= Earnings management	$PPEi,t$	= Property, Plant, and Equipment i at time t
$TACi,t$	= Total accrual i at time t	$NDAi,t$	= Non-Discretionary Accrual i at time t
NIi,t	= Net income i at time t	$\Delta Receivablei,t$	= Change in Receivable i at time t and time t-1
$CFO_{i,t}$	= Cash Flow Operating i at time t	$DAC_{i,t}$	= Discretionary Accruals i at time t
$TAi, t-1$	= Total Asset i at time t-1	$\beta_1, \beta_2, \beta_3$	= coefficient regression
$\Delta Salesi,t$	= Change in sale i at time t and time t-1	ε	= Error

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Environmental Uncertainty

Environmental Uncertainty (EU) is an uncertain condition in the market environment due to rapid changes in customer needs (Wang, and Fang, 2012). Market uncertainty causes changes in market share and consumer preferences. Measurement of environmental uncertainty is done with the coefficient of sales variation for 5 years (Huang et al., 2017), so the calculation formula can be formulated as follows:

$$EU = \frac{\sqrt{\sum_{i=1}^{5}\left(\frac{S_i - S_{mean}}{5}\right)^2}}{S_{mean}}$$

EU = Environmental Uncertainty
S = Sales

Managerial Ability

Managerial ability is company's efficiency level when managing input (resources) into increase in output or sales (Demerjian et al., 2013). The ability value of managerial ability is used to asses management performance (Wati et al., 2020). Managerial ability be measured by *Data Envelopment Analysis* (DEA) which shows efficiency performance-based management in managing in using resources for generate income (Demerjian *et.al* 2012). Managerial ability used for estimate the total efficiency of the company based on industry and year. For measure managerial ability is as following:

$$MA = \frac{Sales}{COGS + SGA + PPE + OL + RD + GW + IA}$$

MA = Managerial Ability
COGS = Cost Of Goods Sols
SGA = Selling, General, Administrative *Expense*
PPE = Plant, Property and Equipment
OL = Operating Lease is an increase in the comparability of input between companies that have the same operation, but by leasing or purchasing equipment that produce revenue
RD = Research and Development
GW = Goodwill
IA = Intangible assets

Variable Control

Firm Size

Firm size is scale of classification regarding the size of company (Agustia, and Suryani, 2018). Company with large classification are usually complex, have many subsidiaries, division business and others. The above provides an opportunity for company to carry out earnings management that is more complicated dan difficult to detect. This variable is measured by the logarithm of total assets adopted from Agustia, and Suryani, (2018). The variable measurement scale uses a ratio which can be calculated using the following formula:

$$\mathbf{SIZE = Ln}(\boldsymbol{Total\ Asset})$$

Firm Age

Firm age is how long the firm has been operating in a business environment (Agustia, and Suryani, 2018). The age of the firm in this study is measurement by the year the company was founded until the year the research was conducted (Reed,

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2020). The longer the age of the firm in a competitive business environment and provides a better understanding of the consequences of unethical earnings management practices. The variable measurement scale uses a ratio which can be calculated using the following formula:

$$AGE = \text{Research year} - \text{The year company founded}$$

Leverage

Leverage is how much the company's ability to finance assets using debt to generate profits (Agustia, and Suryani, 2018). The use of leverage is carried out by management in the hope of getting a return on additional costs and sources of funds spent. Firm with high levels of leverage have a greater risk of not being able to pay a debt to creditors will lead to bankruptcy, so management has motivation to manipulate earnings by increasing revenue. This variable is measured by total debt divided total asset adopted from Agustia, and Suryani, (2018). The variable measurement scale uses a ratio which can be calculated using the following formula:

$$Leverage = \frac{Total\ Debt}{Total\ Assets}$$

Data Analysis Techniques

The analytical technique applied is analysis multiple linear regression to test hypothesis impact environmental uncertainty to management earnings and moderated regression analysis (MRA) were used tor test hypothesis effect managerial ability reduce on effect environmental uncertainty to earnings management. All hypotheses of this study are accepted if the significance level is below 5%. Descriptive statistical testing is used in this study to describe the condition of the research variables. The steps of testing the hypothesis of this study begin with classical assumption tests such as normality tests using Kolmogorov-Smirnov (K-S) with a significance value> 0.05 said to be normal, multicollinearity test using Variance Inflation Factor (VIF) with a VIF value below 10 said to have no multicollinearity problem, heteroscedasticity test using Glejser test with a significance value> 0.05 said to have no heteroscedasticity problem. This study used the help of SPSS 26 software.

The regression model built to test the hypothesis is:

Model 1: The first study hypothesis testing

$$EM = \alpha + \beta_1 EU + \beta_2 SIZE + \beta_3 AGE + \beta_4 LEV + \varepsilon \ldots\ldots\ldots\ldots\ldots (1)$$

Model 2: The second study hypothesis testing

$$EM = \alpha + \beta_4 EU + \beta_5 MA + \beta_6 SIZE + \beta_7 AGE + \beta_8 LEV + \varepsilon \ldots\ldots\ldots\ldots\ldots\ldots (2)$$

$$EM = \alpha + \beta_9 EU + \beta_{10} MA + \beta_{11} (EU*MA) + \beta_{12} SIZE + \beta_{13} AGE + \beta_{14} LEV + \varepsilon \ldots\ldots (3)$$

α	Konstanta	MA	Managerial Ability
$\beta_{1\text{-}14}$	Koefisien regresi	SIZE	Firm Size
EM	Earning Management	AGE	Firm Age
EU	Environmental Uncertainty	LEV	Leverage
EU*MA	Environmental Uncertainty and Managerial Ability Interaction		

Results

Statistic Descriptive Results

Statistic descriptive analysis is used to get an overview of each variable used in the study. The measurements used consist of minimum, maximum, mean, and standard deviation. A summary of the descriptive statistics of the research variables can be seen in table 2.

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Table 2. Statistic Descriptive Results

		Min	Max	Mean	Std. Deviation
EM	344	0,000	0,264	0,222	0,013
EU	344	0,018	1,676	0,203	0,122
MA	344	0,127	1,000	0,848	0,142
SIZE	344	25,035	33,494	28,833	1,673
AGE	344	14,000	103,000	42,990	14,317
LEV	344	0,010	0,663	0,450	0,230
Valid N (Listwise)	344				

Source: Processed data, 2022

Based on table 2, it shows that the variables of earnings management, environmental uncertainty, managerial ability, company size, company age, and leverage have a standard deviation value smaller than the average value. These results prove that all variables have an even distribution of data. Earnings management shows an average value of 0.222, which proves that most manufacturing companies in Indonesia during the 2017–2021 period practiced earnings management by increasing profits. Environmental uncertainty shows an average value of 0.203, which proves that most manufacturing companies in Indonesia have experienced quite high environmental uncertainty conditions, such as instability from customers and increasingly fierce business competition. Managerial ability has an average value of 0.848, proving that most of the management of manufacturing companies in Indonesia have the ability to improve the quality of their performance by using resources appropriately in order to provide added value to the company.

Firm size has an average value of 28.333, proving that most manufacturing companies in Indonesia are large companies with total assets of more than Rp100,000,000,000, so their performance tends to get a lot of public attention. Firm age has an average value of 42.990, proving that most manufacturing companies in Indonesia have been operating long enough to have strong maturity to improve performance and business sustainability by thinking critically. Leverage has an average value of 0.450, proving that most of the assets of manufacturing companies in Indonesia are funded with debt of as much as 45%. This condition makes the company have a fairly high cost of debt and riskier.

Normality Test

The result of normality test using Kolmogorov Smirnov as shown in table 3. This test show that significant value in model 1 is 0.064. Significant value in model 2 is 0.2, while significant value in model 3 is 0.194.

Table 3. Normality Test Results

Information	N	Kolmogorov Smirnov	*Asymp. Sig.*	Conclusion
Model 1	344	0.047	0.064	Normal
Model 2	344	0.042	0.200	Normal
Model 3	344	0.044	0.194	Normal

Source: processed data, 2022

The results of testing data of three models prove that the linear regression model built in this study has normally distributed data. This is shown from Asymp. Value Sig. (2-tailed) > 0.05.

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Multicollinearity, and Heterocedasticity Test

The results of multicollinearity and heteroscedasticity testing can be seen in table 4. Multicollinearity testing uses the Variance Inflation Factor (VIF). Heteroscedasticity testing uses a significance value of more than 5%.

Table 4. Multicollinearity Test Results

Variable	Model 1			Model 2			Model 3		
	TOLL	VIF	Sig	TOLL	VIF	Sig	TOLL	VIF	Sig
EU	0.949	1,054	0.198	0.931	1,074	0.252	0.100	9,229	0.355
MA	-	-	-	0.954	1,048	0.076	0.518	1,929	0.062
EU*MA	-	-	-	-	-	-	0.103	9,106	0.494
SIZE	0.958	1,043	0.329	0.950	1.053	0.205	0.949	1,054	0.223
AGE	0.969	1.032	0.111	0.969	1.032	0.086	0.968	1.033	0.058
Lev	0.970	1,031	0.149	0.962	1,040	0.135	0.938	1,066	0.132

Source: processed data, 2022

Based on table 4, it shows that the three research models have a variance inflation factor (VIF) value below 10. The significance value of the three research models is above 5%, or 0.05. It is concluded that the three research models are free from multicollinearity and heteroscedasticity problems, so that further regression can be tested.

Regression Model Results

Regression analysis intends to examine effect variables independent of dependent variables. This analysis determines the impact of environmental uncertainty on earnings management by using managerial ability as a moderation variable. The regression results for the three research models can be seen in table 5.

Table 5. Analysis Model Results

Variable	Model 1		Model 2		Model 3	
	β	Sig	β	Sig	β	Sig
α		0.008		0.012		0.000
EU	0.012	0.000	0.012	0.000	0.039	0.000
MA	-	-	-0.005	0.339	0.009	0.210
EU*MA	-	-	-	-	-0.037	0.004
SIZE	0.000	0.503	0.000	0.449	0.000	0.390
AGE	-0.000	0.953	-0.000	0.966	-0.000	0.929
Lev	0.008	0.014	0.007	0.018	0.006	0.057
Adjusted R^2	0.056		0.056		0.076	

Source: processed data, 2022

Based on the t-test hypothesis, it can be concluded that environmental uncertainty has a positive effect on earnings management. In addition, managerial ability weakens the effect of environmental uncertainty on earnings management. Determination coefficient in the regression model is 5.6%. This shows that independent variables used in this study can explain earnings management of 5.6% and 94.4% comes from other variables. For model 3 with a value if 0.076 it was found that independent variable used in this study explained 7.6% so that the other 92.4% was explained by other variables such as audit quality, company performance, organizational governance, risk management and others.

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Discussion

Environmental Uncertainty, and Earnings Management

The results of this study indicate that environmental uncertainty is proven to be positively related to earnings management. Based on the results of previous statistical tests, it was shown that environmental uncertainty has positive relationships with earnings management. It indicates that environmental uncertainty will increase management's efforts in carrying out earnings management actions in financial statements.

Market information is vital for the running of a company, especially in decision-making. Management becomes the manager in making decisions based on the information gathered in the corporate and market environment. Management facing fluctuating environmental conditions will perform higher earnings management as evidenced by Ghosh and Olsen, (2009). This condition is based on the high environmental uncertainty management faces, making it difficult for management to understand the proper use of company resources, so inefficient use of resources will cause profit fluctuations. Profit fluctuations arising from a dynamic environment will reflect unfavourable results for management performance so that management is motivated to carry out earnings management actions in the financial statements prepared.

This finding proves that increasing business competition, through market changes and technology, causes company management to be more complex and difficult. The difficult situation causes such high pressure on managers that they are encouraged to increase wealth and maximize company profits. This condition encourages managers to use their discretion to perform earnings management. The results of this study support the contigency theory. Environmental uncertainty is a contingency problem all companies face due to dynamic environmental changes. Companies facing dynamic environmental conditions will generate inaccurate information for management to make decisions. Inaccurate information will reduce management's ability to respond to changing market needs. Furthermore, the inability to respond to market needs will reduce management performance and cause profit fluctuations. Profit fluctuations incentivize management to manipulate earnings in preparing financial reports due to sub-optimal decision-making in a dynamic market. Environmental uncertainty that occurs within the company will have an impact on increasing earnings management in financial statements. Management will be motivated to reduce earnings fluctuations by carrying out earnings management actions so that the financial statements do not reflect the company's actual state. Limited access to principals in assessing and checking information will allow management to manage earnings by taking advantage of existing accounting loopholes.

This study's results align with the research results of Surbakti, and Sudaryati (2021), Ghosh, and Olsen (2009), Scott, (2015), Wang et al., (2019) that environmental uncertainty has positive relationships with earnings management. Management facing high environmental uncertainty conditions tends to be motivated to perform high earnings management. These results indicate that environmental uncertainty requires management to manage earnings to reduce fluctuations in profits that exist in the company.

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This study does not support the research results of Hyonok Kim, and Yukihiro Yasuda (2021), Loh and Stulz (2018), and Andrei et al., (2019), which prove that environmental uncertainty caused by economic policy uncertainty in crisis situations can reduce earnings management. The crisis situation causes investors and regulators to pay more attention so that managers will reduce earnings management. Institutional investors and institutional trading (churn rate) increase during periods of high economic policy uncertainty. The impact of economic policy uncertainty varies significantly with the level of institutional trading, implying that investor attention increases during the period. Overall, increased attention from market participants is the mechanism through which economic policy uncertainty affects earnings management. This study also does not support the results of Ghani et al., (2017) and Hill et al., (2019), which show that environmental uncertainty has no effect on earnings management. They use economic policy uncertainty that causes multinational companies to mostly have no effect on earnings management.

Managerial Ability Weakens the Effect of Environmental Uncertainty on Earnings Management

Based on the results of previous statistical tests, it was shown that managerial ability weakens environmental uncertainty regarding earnings management, so the second hypothesis is accepted. These results indicate that the managerial ability of the company's management to gather existing information in a dynamic external environment will assist management in responding to the uncertainty issues experienced by the company. Determining existing resources in the company will help management make efficient decisions in meeting dynamic market demands. The achievement of the company's actual performance will reduce the occurrence of fluctuations in profits. Therefore, managerial ability assists management in making better decisions for the company.

Management needs to gather information through the external environment to make optimal decisions. Understanding the company's environment and experience will help management achieve efficiency in company performance (Demerjian et al., 2013). The efficiency of the company's performance will assist management in maintaining stable performance in dynamic conditions. This performance helps the financial statements presented to be free from profit manipulation because management does not have to cover profit fluctuations. After all, it can be achieved from the company's actual performance.

The results of this study support the contingency theory proposed by Otley (1980) that companies will adapt to updates in the environment for decision-making, especially in the use of budgets. Management will try to fill the lack of information in executive positions when faced with dynamic environmental conditions with their abilities. Managerial ability is the ability of a series of management teams to make and produce the most efficient decisions from the available information. Managerial ability is a means for management to answer contingency problems faced by the company. Managers who have good business knowledge, accurate judgment, and estimation skills and are experts in their areas of responsibility will make business decisions that have an impact on efficient company activities and add value to the

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company to achieve optimal profits. Managerial ability will strive to continuously improve the quality of their performance, so as to reduce the influence of environmental uncertainty on earnings management. They will think that doing earnings management in an uncertain environment will have a risk of failing to maintain shareholder confidence and have an impact on the company's long-term performance. They will prefer to use their ability to accurately predict product demand and be able to use existing resources efficiently to increase sales, and profits become more optimal. Therefore, managerial ability does not need to perform earnings management to show good performance.

The findings of this study confirmed that the value of high managerial skills can reduce earnings management in Indonesian manufacturing companies. Managers will be more careful by considering the risks and benefits obtained by the company both in the short and long term. The characteristics of managerial skills are having high intelligence, adequate expertise, and a fairly high level of education. Strong character makes managers carry out their duties based on a high code of ethical professionalism. Every policy or strategy taken by managers should reflect professional judgment and not carry out engineering that aims to benefit themselves or deceive other parties. Therefore, the role of capable managers is important to reduce earnings management practices due to the impact of environmental uncertainty.

This study's results align with the results of research by Huang et al. (2017) and Johnston et al., (2018), which shows that managerial ability weakens the relationship of environmental uncertainty to earnings management. Management with solid managerial skills is more likely to collect information needed in decision-making and improve the company's performance in dynamic environmental conditions. Management with low managerial ability will show that the impact of environmental uncertainty on earnings management has a stronger relationship than the impact of environmental uncertainty on management with solid managerial ability.

Firm size, as the control variable in this study, has no effect on earnings management. Firm size will not affect earnings management. Large or small companies are equally supervised by their stakeholders. They will closely monitor them so that managers do not have the opportunity to carry out earnings management. Earnings management practices will damage the image and credibility of company managers. The results of this study support the results of research by Gunawan et al. (2015) and Agustia and Suryani (2018), which prove that firm size does not affect earnings management.

Company age as a research control variable has no effect on earnings management. Whether or not the company has been operating for a long time will not affect earnings management. In essence, a company that has been around for a long time means that the company has been able to compete with its competitors by relying on its creativity and innovation to meet consumer demand without doing earnings management. This study supports Wahyuni et al., (2023), which proves that company age has no effect on earnings management with earnings smoothing patterns.

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Leverage, as the control variable in this study, has an effect on earnings management. The greater the leverage ratio, the better the manager performs in earnings management. The greater the company's assets funded by debt, the greater the risk of default, so that it tends to violate the financing contract agreement. In an effort to avoid violating the contract agreement, managers have the opportunity to carry out earnings management by engineering accounting numbers in the financial statements to make them look good or perform well. Opportunistic actions taken by managers increase company profits. The results of this study support Asyati and Farida (2020), Tehupiring (2017), and Hapsoro and Annisa (2017).

Conclusions

Based on the discussion of the results of this study, it can be concluded that environmental uncertainty is related to earnings management. Dynamic environmental conditions will increase earnings management actions. This is because dynamic conditions will create fluctuating earnings for the company, management mitigate earnings fluctuations by conducting earnings management, thereby increasing the company's earnings management actions. The results of this study indicate that managerial ability can weaken the relationship between environmental uncertainty and earnings management. This shows that managerial ability can assist management in gathering information and making the most efficient decisions in dynamic environmental conditions on company performance.

Limitations

The findings and discussion indicate that this study has certain research limitations that should be investigated through further research, specifically

1. This study only measures managerial skills in the manufacturing industry. This is because the managerial skills score is likely only suitable for this type of manufacturing industry.
2. Incomplete data regarding component variable managerial ability like research and development, intangible assets, goodwill, and variables study other in financial reporting.
3. Happen change classification of the company sector manufacture Jakarta Stock Industrial Classification (JASICA) became IDX Industrial Classification since January 25, 2021, so the use of JASICA is not available in the future.

Suggestion

Based on the limitations of this study, suggestions for further research are

1. Using the managerial skills proxy used by Isnugarahdi and Kusuma (2009).
2. Using combination qualitative and quantitative methods to obtain in-depth and more comprehensive results
3. Using other variable that are not in the models such as audit quality, firm performance, corporate governance etc.

Implication

This research has implications for contingency theory. Environmental uncertainty is a contingency factor for companies because it can cause the planning

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and control process to be very difficult to carry out. Environmental uncertainty has an unpredictable nature for possible future events. Although it is difficult to predict, the role of managers is very influential in overcoming environmental uncertainty with the strategies and policies used. The existence of environmental uncertainty causes managers to carry out earnings manipulation activities so that the profit in the financial statements looks large for stakeholder satisfaction.

The implication for investors is that there is potential for earnings management due to environmental uncertainty. It is important to choose the shares of companies that do not experience high environmental uncertainty and have adequate managerial capabilities. It takes strategy and awareness from an early age for investors to analyze the company's financial statements in the current and previous periods quantitatively and qualitatively. The implication for governments such as the Financial Services Authority (OJK) as a supervisory institution for companies going public in Indonesia is to strengthen OJK Regulation No. 55 of 2015. This regulation oversees corporate governance to run effectively and oversees financial reporting to be relevant, realizable, and free from earnings management.

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