

**THE DETERMINANTS OF EARNINGS MANAGEMENT IN SHARIAH
ENTERPRISE**

**(Study on Company Listed in Indonesia Stock Exchange - Shariah Economic
Community State Owned Enterprises 2017-2021)**

A THESIS

**Presented as Partial Fulfillment of the Requirements
to Obtain the Bachelor's Degree in Accounting Department**



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YOGYAKARTA**

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A BACHELOR OF DEGREE THESIS



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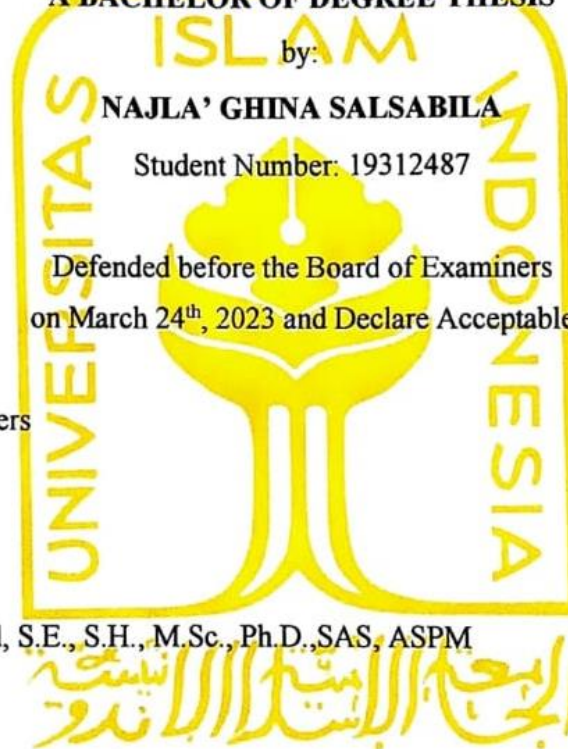
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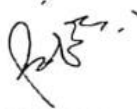
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DECLARATION OF AUTHENTICITY

Herein I declare the originality of the thesis; I have not presented anyone else's work to obtain my university degree, nor have I presented anyone else's words, ideas or expression without acknowledgment. All quotations are cited and listed in the bibliography of the thesis.

If in the future this statement is proven to be false, I am willing to accept any sanction complying with the determined regulation or its consequence.

Yogyakarta, March 7th, 2023



Najla' Ghina Salsabila

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TABLE OF CONTENTS

LEGALIZATION PAGE.....	i
APPROVAL PAGE.....	ii
DECLARATION OF AUTHENTICITY	iii
ACKNOWLEDGEMENTS	iv
LIST OF TABLES.....	ix
ABSTRACT	x
ABSTRAK	xi
CHAPTER I: INTRODUCTION	1
1.1 Study Background	1
1.2 Problem Formulation	6
1.3 Research Objectives.....	7
1.4 Research Contribution	8
1.5 Systematic Writing	1
CHAPTER II: THEORETICAL REVIEW	2
2.1 Theoretical Basis	2
2.1.1 Agency Theory.....	2
2.1.2 Earnings management.....	3
2.1.3 Discretionary Accrual.....	4
2.1.4 Deferred Tax Asset.....	5
2.1.5 Current Tax Expense	6
2.1.6 Tax Panning	7
2.1.7 Leverage.....	8
2.1.8 Firm Size	9
2.2 Previous Research.....	11
2.3 Hypothesis Development	15
2.3.1 The Effect of Discretionary Accrual on Earnings Management.....	15
2.3.2 The Effect of Deferred Tax Assets on Earnings Management	15
2.3.3 The Effect of Current Tax Expense on Earnings Management	16
2.3.4 The Effect of Tax Planning on Earnings Management	17
2.3.5 The Effect of Leverage on Earnings Management	18

2.3.6 The Effect of Firm Size on Earnings Management.....	18
2.4 Research Framework	20
CHAPTER III: RESEARCH METHOD	21
3.1 Population and Sample	21
3.2 Data Collection Techniques	22
3.3 Data Collection Results	23
3.4 Research Variables	24
3.4.1 Independent Variable	24
3.4.2 Dependent Variable.....	27
3.5 Data Analysis Method	28
3.5.1 Descriptive Statistics	28
3.5.2 Classical Assumptions Test	28
3.5.3 Panel Data Regression Model.....	31
3.5.4 Panel Data Regression Model Selection	33
3.5.5 Model Feasibility Test.....	35
CHAPTER IV: RESEARCH RESULTS AND DISCUSSION	38
4.1 Research Result	38
4.1.1 Overview of Research Objects	38
4.1.2 Data Analysis	44
4.2 Discussion of Research Results.....	67
4.2.1 Effect of Discretionary Accrual on Earnings management	67
4.2.2 Effect of Deferred Tax Asset on Earnings management	68
4.2.3 Effect of Current Tax Expense on Earnings management	70
4.2.4 Effect of Tax Planning on Earnings management	71
4.2.5 Effect of Leverage on Earnings management.....	73
4.2.6 Effect of Firm Size on Earnings management	74
CHAPTER V: CONCLUSIONS.....	76
5.1 Conclusions	76
5.2 Limitations	78
5.3 Suggestion.....	78
REFERENCES	80
APPENDICES	85

LIST OF TABLES

Table 4. 1 Descriptive Statistic Results	44
Table 4. 2 Normality Test Results	48
Table 4. 3 Multicollinearity Test Before Correction Results	48
Table 4. 4 Multicollinearity Test After Correction Results	49
Table 4. 5 Heteroscedasticity Test Results.....	50
Table 4. 6 Autocorrelation Test Before Correction	51
Table 4. 7 Autocorrelation Test After Correction	52
Table 4. 8 Common Effect Model Results	54
Table 4. 9 Fixed Effect Model Results	55
Table 4. 10 Random Effect Model Results	56
Table 4. 11 Chow Test Results.....	58
Table 4. 12 Hausman Test Results	59
Table 4. 13 Lagrange Multiplier Test Results	59
Table 4. 14 Results of Coefficient Determination (R^2).....	61
Table 4. 15 t Test Results.....	61
Table 4. 16 F Test Results.....	63
Table 4. 17 Multiple Linear Regression Results	64
Table 4. 18 Hypothesis Testing Results.....	67

ABSTRACT

This study aims to analyze the effect of Discretionary Accrual, Deferred Tax Asset, Current Tax Expense, Tax Planning, Leverage and Firm Size towards Earnings management at Companies Listed in Indonesia Stock Exchange- Shariah Economic Community State Owned Enterprises (IDX-MES BUMN) for the period of 2017 until 2021. This research used a quantitative method with secondary data obtained from Indonesian Stock Exchange websites. The data analysis technique was carried out by using Eviews 10 software. The sample for this study was collected using a purposive sampling method from 13 companies. The results show that Discretionary Accrual, Deferred Tax Asset, Current Tax Expense, Tax Planning, Leverage and Firm Size has a negative and insignificant effect on Earnings management.

Keywords: Discretionary Accrual, Deferred Tax Asset, Current Tax Expense, Tax Planning, Leverage, Firm Size, Earnings management



ABSTRAK

Penelitian ini bertujuan untuk menganalisis pengaruh Akrua Diskresioner, Aset Pajak Tangguhan, Beban Pajak Kini, Perencanaan Pajak, *Leverage* dan Ukuran Perusahaan terhadap Manajemen Laba pada Perusahaan yang Terdaftar di Bursa Efek Indonesia-Masyarakat Ekonomi Syariah Badan Usaha Milik Negara (IDX-MES BUMN) periode 2017 sampai dengan 2021. Penelitian ini menggunakan metode kuantitatif dengan data sekunder yang diperoleh dari website Bursa Efek Indonesia. Teknik analisis data dilakukan dengan menggunakan software EViews 10. Sampel untuk penelitian ini dikumpulkan dengan menggunakan metode *purposive sampling* dari 13 perusahaan. Hasil penelitian menunjukkan bahwa Akrua Diskresioner, Aset Pajak Tangguhan, Beban Pajak Kini, Perencanaan Pajak, *Leverage* dan Ukuran Perusahaan berpengaruh negatif dan tidak signifikan terhadap Manajemen Laba.

Kata kunci: Akrua Diskresioner, Aset Pajak Tangguhan, Beban Pajak Kini, Perencanaan Pajak, *Leverage*, Ukuran Perusahaan, Manajemen Laba

CHAPTER I

INTRODUCTION

1.1 Study Background

Financial statements can directly reflect a company's profitability in its performance evaluation. The earnings data is used by connected parties in one firm to decide what action to take to maintain the company's operations. The corporation must compete fiercely to stay afloat in the worldwide market, particularly in Indonesia's Shariah Stock Index. One of the foundations to compete vigorously, companies are required to have competitive advantages over other companies. This circumstance frequently motivates managers to engage in "earnings management," deviant conduct in presenting and reporting financial information.

Based on Financial Services Authority (OJK) Regulation No. 17/POJK.04/2015 concerning the Issuance and Requirement of Shariah Securities in Shares by Shariah Issuers or Shariah Public Companies, the companies included in the category of Indonesia Shariah Stock Index determined by the shares issued simultaneously with the effective registration statement of the firm conducting the first public offering. Considering Shariah Public Companies is a company-based on shariah principles which means this companies do not justify the existence of engineering actions. By understanding the determining elements that will influence the making of financial statements, it will also be possible to determine whether the managers of these Shariah Listed Companies have engaged in earnings

management or not.

Earnings or profit management is any effort made by management to intervene in processing, compiling, and presenting profits in financial reports to benefit themselves or the firm. Makar, Alam, & Pearson (2000) defined earnings management as a deliberate error or omission in the preparation of financial statements regarding significant facts and accounting information, which results in misrepresentation when all available information is used to form an opinion or make a decision. The techniques of income smoothing, bathing, income reduction, income maximization, timing revenue, and expense recognition can be used to explain earnings management. One of the earnings management concepts can be described using the agency theory approach. Based on this idea, the stakeholders (principal) and management (agent), who manage interests, have a conflict of interest that affects how earnings management is practiced. This conflict arises when each party seeks to achieve the desired level of prosperity.

Earnings management action is not merely the fault of management. This is because Financial Accounting Standard (IFRS) allows management to choose various alternative accounting methods to manage a company's profit. However, it cannot be denied that this manipulation makes the financial statement irrelevant to create an economic decision. This caused information in earning value to be adjusted with the manager's interest. The earning value manipulation, which is done by management, is hard to detect by users of financial statements. In contrast, this management action can bring a negative impact on all sorts of parties. Therefore, financial statement users should have an understanding and knowledge

about various indicators that can predict managers to do earnings management. As a result, the possibility of a false financial statement can be noticed. There are some earnings management predictors that can be identified in the financial statements, they are discretionary accrual, deferred tax assets, current tax expense, tax planning, leverage, and firm size (Wu et al., 2018).

SFAS No. 1 about Financial Statements Presentation should put an entity in making a financial statement based on accrual concept, except cash flow statement. The idea of accrual can be divided into discretionary accrual and nondiscretionary accrual. Discretionary accrual and nondiscretionary accrual are two ways to separate the accrual. Nondiscretionary accrual recognizes fair profit, which is governed by generally accepted accounting principles. On the other hand, discretionary accrual is the process of recognizing accrued income or expense, which is not regulated and is decided by management policy (Pindiharti, 2017). Accounting policies related to accrual can be used to create a discretionary accrual, but it is subjective and depends on the situation. Research by Sisdianto et al. (2019) concluded that there is a significant positive effect on earnings management of discretionary accruals. However, different results are shown by other researchers. Results of research conducted by Siladjaja (2019) showed that discretionary accruals do not significantly affect earnings management.

In Indonesia, an entity or business entity is obliged to pay income tax from the acquisition of a year of operation, which in calculating the amount of profit on tax payable uses a separate provision. Therefore, management performs a reconciliation of taxable income based on tax regulations obtained from the

commercial income statement, which is then subject to positive or negative corrections. This is to determine how much tax payable should be deposited into the state treasury or what is often known as current tax expense. The difference between accounting earnings and taxable income can cause difficulties in determining the amount of profit. It can affect the financial statements and cause an imbalance in the final balance. Therefore, it is necessary to adjust the balance between accounting profit and fiscal reconciliation. Temporary differences between accounting earnings and profits give rise to deferred tax expense.

The Statement of Financial Accounting Standards (PSAK 46, 2010) related to tax accounting stated that since deferred tax assets and deferred tax expense are used differently, firm management is permitted to choose accounting procedures to determine how much of each is recorded. Due to the favorable effects of temporary adjustments, there is taxable profit that is higher than accounting profit, which results in deferred tax. If there is a taxable profit that is higher than the commercial profit, it will have an effect on the postponement of tax payments in the coming period. The research conducted by Fajarwati et al. (2020) found that deferred tax assets have no positive on earnings management, and current tax expenses also have no positive effect on earnings management. On the other hand, different results were shown in the research of Bunaca and Nuryadi (2019). They stated that it has a positive effect on earnings management toward deferred tax assets.

Tax planning or tax sheltering are common terms used to describe actions taken to reduce the tax burden through euphemism. According to Pohan (2013),

tax planning is the act of setting up the taxpayer business of the individual and the business entity in such a way by leveraging numerous opportunities that the company can take advantage of in the legal loopholes (corridor provisions) of the tax code. Generally, tax planning is done by engineering the business and payment transactions so that the tax debt is at a minimum amount but does not violate applicable tax regulations. Therefore, tax planning is a legal action during the corridor of the relevant tax laws in Indonesia. One of the most significant tax sectors that the country gets is income tax. For financial statement tax accounting, every company in Indonesia making financial statements is required to follow the rules of the Financial Accounting Standards (IFRS) to produce credible and informative financial reports to investors and creditors. In addition, the company is also required to prepare an income statement based on tax rules. Bunaca and Nuryadi (2019) stated that tax planning has a significant influence on earnings management but has a significant influence on a company's profitability.

Leverage is the degree of using debt as a source of corporate financing. The higher the leverage means the company has more outstanding debt than capital or assets of the company. Hence, managers attempt to increase company profits to signal investors and creditors positively. Companies with a relatively large size, especially monopolists or those controlling the public needs of many people, usually have a high political cost because it becomes subject to government and general observation. Watts and Zimmerman (1986) suggested that large companies with a high political price are more likely to choose the method of accounting to reduce reported earnings compared to small companies. The influence of leverage

and firm size variable has been investigated by Nalarreason et al. (2019), who found that leverage and firm size have a positive and significant influence on earnings management. However, the result of research by Ghofir & Yusuf (2020) showed there was no importance of firm size and leverage towards earnings management.

Various background descriptions and previous research results provide empirical evidence of contradictory factors that will influence earnings management. Some elements can be categorized as follows: discretionary accrual, deferred tax asset, current tax expense, tax planning, leverage, and firm size. The problem formulation that the researcher used in this study was "The Determinants of Earnings Management in Shariah Enterprise (Study on Company Listed in Indonesia Stock Exchange - Shariah Economic Community State Owned Enterprises 2017-2021)."

1.2 Problem Formulation

Based on the background explanation, the problem formulations are as follow:

1. Does Discretionary Accrual positively affect Earnings Management in companies listed in Shariah Economic Community State Owned Enterprises?
2. Does Deferred Tax Assets positively affect Earnings Management in companies listed in Shariah Economic Community State Owned Enterprises?

3. Does Current Tax Expense negatively affect Earnings Management in companies listed in Shariah Economic Community State Owned Enterprises?
4. Does Tax Planning positively affect Earnings Management in companies listed in Shariah Economic Community State Owned Enterprises?
5. Does Leverage positively affect Earnings Management in companies listed in Shariah Economic Community State Owned Enterprises?
6. Does Firm Size positively affect Earnings Management in companies listed in Shariah Economic Community State Owned Enterprises?

1.3 Research Objectives

Related to the research problem above, the research objectives are as follow:

1. To analyze if there is a positive effect of Discretionary Accrual on Earnings Management in companies listed in Shariah Economic Community State Owned Enterprises
2. To analyze if there is a positive effect of Deferred Tax Assets on Earnings Management in companies listed in Shariah Economic Community State Owned Enterprises
3. To analyze if there is a negative effect of Current Tax Assets on Earnings Management in companies listed in Shariah Economic Community State Owned Enterprises

4. To analyze if there is a positive effect of Tax Planning on Earnings Management in companies listed in Shariah Economic Community State Owned Enterprises
5. To analyze if there is a positive effect of Leverage on Earnings Management in companies listed in Shariah Economic Community State Owned Enterprises
6. To analyze if there is a positive effect of Firm Size on Earnings Management in companies listed in Shariah Economic Community State Owned Enterprises

1.4 Research Contribution

This research is conducted with the expectation of giving additional benefits to the following parties:

1. Practically Contribution

- a. Companies

These research findings may help companies improve financial statements by using earnings management factors that will contribute better to decision-making. By improving the company's performance in financial statements, the increased company's ability to earn more profit will have a bigger advantage in attracting investors.

- b. Investors

Investors can use the result of this research to look at earnings to determine the attractiveness of a particular stock. Companies with

poor earnings prospects will typically have lower share prices than those with good prospects because the company's ability in the future plays a very important role in determining a stock's price.

2. Theoretically contribution

a. Academicians

This research is expected to be useful for academics as a reference to increase their knowledge regarding the factors that will influence earnings management in making financial statements, such as discretionary accrual, deferred tax asset, current tax expense, tax planning, leverage, and firm size.

b. Researchers

The study case of this research can be useful as the basic reference for the next researcher to provide additional information about factors that will have a significant aspect on earnings management in the accounting field.

1.5 Systematic Writing

This research consists of five chapters, where each one has its focus and purpose. The description of each chapter in detail is as follows:

Chapter I: Introduction

This chapter contains the research background, problem formulation, research objective, research contribution, and systematic writing.

Chapter II: Theoretical Review

This chapter contains theoretical foundations regarding the theories and variables used in the research, previous research that becomes the basis for the research hypotheses, and frameworks.

Chapter III: Research Methods

This chapter contains the population and research samples, research variables such as independent and dependent variables and the method of data analysis.

Chapter IV: Data Analysis

This chapter contains the procedures and outcomes of the data previously obtained and analyzed the data using descriptive statistics, panel data regression, classical assumption test, and feasibility test model.

Chapter V: Conclusion

This chapter contains conclusions from the results of the research in the previous chapter, limitations of the study, and suggestions for future similar studies.

CHAPTER II

THEORETICAL REVIEW

2.1 Theoretical Basis

The theoretical basis of this research included the extended data and several results from the theoretical background based on the former studies, literature, professional experience, and institution regarding the concept of this research variable. The variables that were covered in this section contain the dependent and the independent variables. The dependent variable used in this research was earnings management. While the independent variables were discretionary accrual, deferred tax assets, current tax expense, tax planning, leverage, and firm size. The researcher conducted this research in order to analyze each of the factors in the independent variables that would affect earnings management in financial statement-making.

2.1.1 Agency Theory

According to Jensen and Meckling (1976), agency relation is a contract between managers (agents) and investors (principals). The agent is the party in charge of the principal's interests, and the principal is the party that hires agents to carry out activities on its behalf. In organizations where ownership is divided between the principal and the agent, there is often an agency conflict between the two.

According to the Agency Theory, when a company is performing poorly, managers can act opportunistically by increasing accounting profit to conceal poor performance, and when a company is performing well, managers can act opportunistically by reducing their accounting earnings to defer good performance (Suyudi, 2009). The principal may evaluate, measure, and monitor the extent to which

the agent works to increase its welfare and as a foundation for agent compensation using the financial accounts produced by the agency as accountable for performance.

However, there are typically two issues with the agency relationship in practice. The first issue is the potential for information asymmetry. The second one is a conflict of interest or one involving the interests of an agent and a principal. The issues mentioned above are brought about by disparities in the aims of the agent and the principal. Their shared objective is to improve profitability to achieve welfare that satisfies both psychological and material requirements. This can be done through earnings management.

2.1.2 Earnings management

Profit information included in financial statements is frequently the focus of manipulation through opportunistic management decisions to maximize its potential, although it can hurt shareholders or investors. To arrange the company's earnings in accordance with the wishes, opportunistic action is taken by selecting a certain accounting strategy; this management behavior is known as earnings management.

The technique of managing earnings can be viewed from two different angles: as a bad (negative) action and as something that management should undertake (positive). When management acts opportunistically to maximize their utility in the face of contract agreements, debt repayments, and political costs, earnings management is said to be negative. While effective earnings management is characterized as good since it allows management flexibility to safeguard the business themselves in the case of unforeseen events for the benefit of the contract's parties.

Moses in Gunawan et al. (2017) implied that larger organizations have a greater motivation to perform income smoothing (a type of earnings management) compared to small enterprises since they have higher political expenses. Political expenses result from the company's strong profitability, which might grab the public's and media's attention. According to Albretch and Richardson in Gunawan et al. (2017), larger companies are more likely than smaller ones to benefit from income smoothing because investors are more likely to investigate and evaluate them rigorously.

2.1.3 Discretionary Accrual

In accounting, it is known as the accrual basis and cash basis. A frequent approach used is the accrual approach. Accrual accounting is considered better than accounting cash basis because accrual is a method of calculating income and expenses in a sense income which is recognized when it is earned, and expenses are recognized when they are payable (Muljono, 2009).

The accrual accounting system provides an opportunity for management to manipulate earnings or accounting income (De Angelo, 1986). Such accrual accounting can be divided into two, namely discretionary accruals and non-discretionary accruals. Draft of discretionary accruals gives the sense that management can manipulate income accruals and is usually used to achieve the desired income. De Angelo (1986) added that managers have the ability to control the accruals in the short term. He also explained that the components of non-discretionary accruals are determined by other factors that cannot be controlled by the manager.

In this research, earnings management calculations use the Jones Model, namely the appropriate discretionary accruals with performance (performance-matched discretionary accruals). According to Kothari et al. (2005), the measurement of performance-matched discretionary accruals is more specific and powerful than any other measure of discretionary accruals. Performance balancing is intended to reduce the effects of internal performance evaluation on discretionary accruals and performance-matched discretionary accruals can be used as a substitute in earnings management studies.

2.1.4 Deferred Tax Asset

According to Waluyo (2008), if a time difference occurred in deferred tax assets, it caused a positive correction where this distinction has the effect of making the statutory tax burden greater than the commercial tax. A correction is necessary to determine how likely it is that the deferred tax asset will be realized once the deferred tax has been recorded. The emergence of deferred tax assets is attributed to time differences; thus, positive correction is required (Wiyadi, Trisnawati, Sasongko & Fauzi, 2015).

If the taxable income is less than the pretax accounting income, there will be deferred tax assets or liabilities. Deferred tax assets are recognized based on facts and the tax payable is of greater significance. As long as the potential for significant temporary differences can be exploited to lower fiscal profits in the future, deferred tax assets are recognized in all temporary differences that are permitted to diminish.

The commercial and fiscal gains/losses will be different and result in different amounts of taxes from the separate books due to the variances between accounting

and taxation regulations. The Indonesia Income Tax Law, Articles 6 and 9, lists the sorts of expenses and revenues that can be recognized in the fiscal income statement and provides more detailed instructions for fiscal policies. Deferred tax assets or liabilities may only be reported by a firm once. As most of the companies listed on the Indonesia Stock Exchange are consolidated, they are able to disclose both accounts simultaneously.

2.1.5 Current Tax Expense

The amount of income tax due on taxable income for a time period is known as current tax expense. Due to variations in the treatment of revenue or costs between applicable tax legislation and accounting standards, financial adjustments must be made (Ayu & Susanto, 2022). These differences can be divided into two categories: temporary differences and permanent differences. The manager's strategy of manipulating profits to be greater is illustrated by the difference between accounting and taxable income, and the tax costs will then demonstrate the impact of the difference's value (fixed difference and time difference). The amount is determined by multiplying taxable income by the applicable tax rate, after previously accounting for the existence of a fixed difference and a time difference.

The ability to reflect the taxable income resulting from the reconciliation between the fixed difference and also the time difference to profit in accordance with accounting demonstrates that the existing tax burden permits the company to carry out earnings management. The present tax rate is greater than the commercial tax rate for companies that issue additional shares. Current tax expense and deferred tax expense

combine to form corporate tax expense. The deferred tax for subsequent periods will be significant if the current tax is low.

2.1.6 Tax Panning

To minimize tax payments, managers will manage earnings based on tax motivation (Scott, 2014). An effort is made to take advantage of existing gaps or opportunities as long as they are following tax regulations. Earnings management is carried out, among other things, using accounting procedures by management in the framework of tax savings. Another endeavor is to identify the different forms of income that are expressed as tax objects, but the income that is stated as a tax object does not limit the timing of the recognition of revenue and associated costs.

Tax planning is the initial step in the tax management process. Tax guidelines are currently being gathered and studied to determine the kind of tax-saving measures that will be used. In contrast to legislative objectives, the main objective of tax planning is to minimize tax liabilities as much as possible by utilizing already-existing laws. Tax planning and tax avoidance have the same goal of maximizing income after taxes because tax is a profit deduction burden that can be distributed to shareholders as well as reinvested.

Based on the research of Purnamasari (2019), tax planning is divided into two:

- 1) National tax planning. Only domestic legislation is considered for national tax planning and a transaction's viability depends on it. Taxpayers can decide whether transactions must be completed in accordance with existing tax law, such as whether they will receive the final special tax rate to avoid or decrease taxes.

- 2) International tax planning. It must consider the tax treaties from the participating countries in addition to pay attention to domestic law.

2.1.7 Leverage

Gunawan et al. (2017) defined leverage as the amount of obligation that a firm employs to finance itself for its operational activities. Total debt divided by total liabilities is the formula used to calculate the leverage ratio. It can be understood as the relative wealth of shareholders or principals in relation to the assets owned by creditors. Managers must calculate the leverage ratio to examine the obligations of the organization. Both internal and external stakeholders, notably creditors and investors, benefit from this ratio. Leverage ratios are useful for business management since they allow them to assess how well a firm is performing and producing profits.

According to Brigham & Houston (2011), there are three crucial factors to consider while using leverage:

1. Borrowing money from debt enables shareholders to continue managing the business with little outlay of capital.
2. Creditors closely monitor the capital or paid-up capital of the business owner to provide margin protection.
3. If the business receives a return greater than its investment.

Leverage represents the percentage of corporate spending that is financed by shareholders (own capital), the cost of borrowing, and the company's capacity to guarantee its debt with its own capital. A corporation with a high percentage of debt in its capital structure will have a higher monitoring cost, according to agency theory developed by Jensen and Meckling in 1976. This monitoring expense results from the

owner's desire to keep an eye on how management is handling the resources and facilities he or she has provided to run the business.

Therefore, businesses with significant levels of leverage have more responsibilities to provide owners, shareholders, and creditors with proper information. Budileksman and Andriani (2018) explained that in an agency relationship, managers have information asymmetry towards the company's external parties, such as creditors and investors, where managers have relatively more internal company information and know this information faster than external parties. As agents who know more information, management uses information that the principal is unaware of to further his interests. Managers can therefore use this knowledge to their advantage by modifying it.

2.1.8 Firm Size

The quantity of resources that a corporation owns is correlated with its size. It explains that total assets, sales, average sales, and average total assets can all be used to gauge a company's size. Firm size, in general, serves as a measure for how large an organization has become. For instance, Atkins and Lowe (1997) demonstrated that the idea might be the approximation of the size of the management process that is carried out. They contend that the size is determined by the qualifying measurements.

Depending on the viewpoint and metrics, the size of the company might be regarded differently. A group of small businesses may be classed on one set of criteria as small businesses, yet a corporation may be defined as a large company on another set of criteria. The ratio of one entity's size to that of another entity set is related to the size of the company (Axtell, 2006). There are numerous ways to categorize a

company's size on a huge scale compared to its tiny ones. This comprises total assets, share market value, and other things.

Basically, there are three categories for firm sizes: large, medium, and small businesses. For instance, a corporation with significant assets is thought to be less risky than one with less substantial assets. Large asset companies have stronger access to financial markets and are thought to have a smaller beta. It is believed that the best proxy for firm size is asset size.



2.2 Previous Research

The following are theories and research results that will form the basis of this research:

Table 2. 1 Previous Research

NO.	Authors	Variable	Result
1.	Mulyani, Titisari, & Dewi, 2018. “The Effect of Tax Planning and Deferred Tax Expense on Earnings Management on Manufacturing Companies Listed in The Indonesia Stock Exchange”	Tax Planning, Deferred Tax, Earnings management	The result shows that the variable of earnings management does not influence variable of tax planning and the variable of earnings management affected negatively and significantly by deferred tax expense.
2.	Purnamasari, 2019. “How The Effect of Deferred Tax Expenses And Tax Planning on Earnings management?”	Deferred Tax Expense, Tax Planning, Earnings management	The tax planning variable has a positive effect on earnings management variables, the higher the tax planning, the more likely the company is to conduct earnings management in manufacturing companies listed on the Indonesia stock exchange. Likewise with the deferred tax burden has a positive effect on earnings management, meaning that the higher the deferred tax expense, the higher the profitability of the company in managing earnings.
3.	Bunaca & Nurdayadi, 2019.	Deferred Tax Expense, Tax Planning,	It can be concluded that tax planning has a significant influence toward company’s profitability.

	“The Impact of Deferred Tax Expense and Tax Planning toward Earnings Management and Profitability”	Earnings Management, Profitability	Tax planning can be done by minimizing the tax payable of the company. By minimizing the tax payable of the company, the income of the company will increase. In addition, it can increase company’s profitability and deferred tax expense has a significant influence toward company’s profitability with earnings management as intervening variable.
4.	Rosharlianti & Hidayat, 2019. “The Effect of Tax Planning and Deferred Tax Liabilities on Earnings Management”	Tax Planning, Deferred Tax Liabilities, Earn Management	Tax planning has a negative impact on earnings management, meaning that the higher the tax planning, the smaller the firm's chance to practice earnings management. Deferred tax liabilities do not have a significant impact on earnings management, meaning that the higher or lower deferred tax obligations will not impact the earnings management practices of the firm.
5.	Mulyati et al., 2020. “Deferred Tax Expense, Deferred Tax Asset and Tax Planning on Earnings management.”	Deferred Tax Expense, Deferred Tax Asset and Tax Planning, Earnings management.	In this research, the results of the study prove that the deferred tax burden affects earnings management, while the deferred tax assets and tax planning do not affect earnings management
6.	Samanto & Pitaloka, 2020. “Analysis on the Influence of Tax Planning and Deferred Tax Burden on Profit Management”	Tax Planning, Deferred Tax Burden, Profit Management	The result shows that tax planning has a positive effect on profit management. The influence of tax planning on profit management that the tax and deferred tax planning is the simultaneous effect on profit management. This means that when planning both tax and deferred tax in a company will have a positive influence on profit

			management in achieving the desired profit.
7.	Fajarwati et al., 2020. “The Effect of Deferred Tax Assets, Current Tax Expenses and Leverage on Profit Management”	Deferred Tax Assets, Current Tax Expense, Leverage, Earnings Management	From the discussion of this research, it is found that deferred tax assets have no positive effect on earnings management, current tax expense has no positive effect on earnings management, and leverage has no positive effect on earnings management.
8.	Saputra, 2021. “The Effect of Deferred Tax Assets and Deferred Tax Expense on Earnings Management in Banking Sub-Sector Service Companies and Financing Institutions”	Deferred Tax Assets, Deferred Tax Expense, Earnings Management	The t-test results show that the Deferred Tax Expense partially has no effect but is significant on Earnings Management. The F test results show that Deferred Tax Assets and Deferred Tax Expense simultaneously have a significant effect on Earnings Management.
9.	Tartano, Hidayat, & Haryono, 2021. “Effect of Tax Planning and Temporary Difference to Earnings Management	Deferred Tax Asset, Deferred Tax Expense, Deferred Tax Liability, Tax Planning, Earnings management.	The results of the research found only deferred tax liabilities that has significant impact on earnings management and is able to detect earnings management upwards. Tax planning only impact the absolute part of earnings management without specific direction. Deferred tax assets do not have a significant impact to detect earnings management downwards and deferred tax expense has no significant impact on earnings management but can potentially detect earnings management upwards in extreme cases.
10.	Ardiansyah & Farid, 2021.	Tax Planning, Deferred Tax	The results are tax planning that has a positive and significant effect

	<p>“The Effect of Tax Planning, Deferred Tax Expenses, and Company Size on Earnings management”</p>	<p>Expenses, Company Size, Earnings Management</p>	<p>on earnings management, the tax burden has a positive and significant effect on earnings management, and firm size has a positive and significant effect on earnings management.</p>
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2.3 Hypothesis Development

2.3.1 The Effect of Discretionary Accrual on Earnings Management

Recognizing accruals income or spending that is unrestricted and represents management's decision of policy is known as discretionary accruals. Thus, a high amount of discretionary accrual is linked to a high level of managerial opportunism. Therefore, abnormal discretionary income is used to investigate if earnings management exists. By showing a high-profit value, the manager hopes to attract investors and ultimately demonstrate the qualities of a competent manager.

Utilizing discretionary accrual to manipulate earnings is one way to boost the value of profits. Therefore, discretionary accruals and earnings management have a favorable relationship. This is consistent with research by Sisdianto (2019), which found a strong positive relationship between discretionary accrual and earnings management. The hypothesis will be formulated as follows.

H1: Discretionary accrual has a positive effect on earnings management practice.

2.3.2 The Effect of Deferred Tax Assets on Earnings Management

Deferred tax assets are the amount of income tax recovered in future periods because of potential deductions for temporary differences as well as the remaining loss compensation (Indonesia, 2018). If there is a discrepancy between the company's reported profits (commercial profits) and fiscal profits, such that the discrepancy results in a positive correction, deferred tax assets are created because the tax burden determined by accounting will be lower than the tax burden determined by tax regulations (Agus, 2019). Companies prefer to delay paying the tax due for the

upcoming period because the little tax burden on a commercial basis will have a huge profit, making the tax to be paid likewise substantial.

Deferred tax assets are a proxied indicator of the company's methods for managing its earnings. Therefore, the potential role of deferred tax assets can be utilized as a measure of earnings management. The higher the management will manage earnings, the more deferred tax assets there are. The ratio of changes in the value of deferred tax assets at the end of the period to the prior period is used to calculate deferred tax assets. This justification is in line with Samsi and Sulistiyowati (2020) research, which discovered that deferred tax assets significantly improve earnings management. As the description above, the hypothesis can be drawn as follows.

H2: Deferred tax assets have a positive effect on earnings management.

2.3.3 The Effect of Current Tax Expense on Earnings Management

Due to variances in the standards used to anticipate differences in the reporting of commercial income and taxable income, the handling of revenues and expenses based on standard accounting and tax requirements must be corrected fiscally. With the stated distinctions, management can impose rules for creating financial reports with more profitability. As a result, the higher the difference value, the greater the management's ability to manage earnings. A firm's current tax burden is recorded as an expense that lowers earnings; thus, the corporation needs to make a bigger profit.

In some cases, the current tax burden has an impact on earnings management because when the current tax burden is high, it will lower firm profits, giving

managers a fantastic opportunity to implement earnings management. On the other hand, if current tax expense is low, profits will rise for the business and managers will have less opportunity to manage earnings. However, the research conducted by Fajarwati et al. (2020) proved that the management of earnings is unaffected by current tax costs. This research is in line with Ayu and Susanto (2022) who stated that current tax expense has no effect on earnings management. Based on the above, the hypothesis is formulated as follows.

H3: Current tax expense has a negative effect on earnings management.

2.3.4 The Effect of Tax Planning on Earnings Management

Tax planning and tax sheltering are terms used to describe actions taken to reduce one's tax liability. In a positive accounting theory, the political cost hypothesis claims that the corporation is attempting to minimize significant political costs, such as the tax burden since the higher the tax value, the lower the expected profits. Previous studies by Dewi et al. (2017) indicated that businesses will engage in tax planning to reduce taxes while remaining within the law, and earnings management allows them to report profits based on their objectives. When tax planning is done to reduce tax within legal limitations, Lubis and Suryani (2018) discovered a significant beneficial impact as the likelihood of the corporation performing profits management to achieve that goal increases. According to Baraja et al. (2019), businesses that undertake more tax preparation are also more likely to manage their earnings. Based on the above, the hypothesis is formulated as follows.

H4: Tax Planning has a positive effect on earnings management practices.

2.3.5 The Effect of Leverage on Earnings Management

The leverage ratio may be a sign of the company's dangers, and as those risks increase, so will the uncertainty around the company's future profitability. According to the debt covenants hypothesis of the positive accounting theory, businesses with a lot of debt will typically choose accounting procedures that boost profit value. Managers will therefore try to boost corporate earnings in order to send a favorable message to creditors and investors about how to handle high levels of borrowing. This management effort may take the shape of techniques for managing earnings, which are used to artificially inflate the value of earnings.

Management needs funding from investors or in the form of loans from creditors to carry out business activities. The ability of the loan interest rate to be paid to creditors can be determined by the leverage ratio. A high leverage ratio may be a sign that the business is at default risk. Management will use earnings management procedures to the greatest extent possible to influence the accounting records in the reported financial statements in order to prevent decreasing profitability and avoid breaching debt contract covenants. According to Naftalia and Marsono (2017), leverage significantly improves the management of earnings. The formulated hypothesis will be:

H5: Leverage has a positive effect on earnings management practices.

2.3.6 The Effect of Firm Size on Earnings Management

Agencies conflicts are more prevalent in large firms, which suggests that opportunistic behavior is more likely to occur. On the other hand, positive accounting

theory also makes the case that managers at businesses with high political costs will choose for an accounting approach that minimizes future reported earnings by deferring the current period's earnings to the following one. High profitability draws the attention of customers and the media, which results in political consequences. According to Moses (1997), because income smoothing (one type of earnings management) has a higher political cost, firms are more likely to have a bigger incentive for it than small enterprises. The size of the company has a large and favorable effect on managing earnings (Nalarreason, 2019). The conclusion for the hypothesis that can be drawn is:

H6: Firm Size has a positive effect on earnings management practice.

2.4 Research Framework

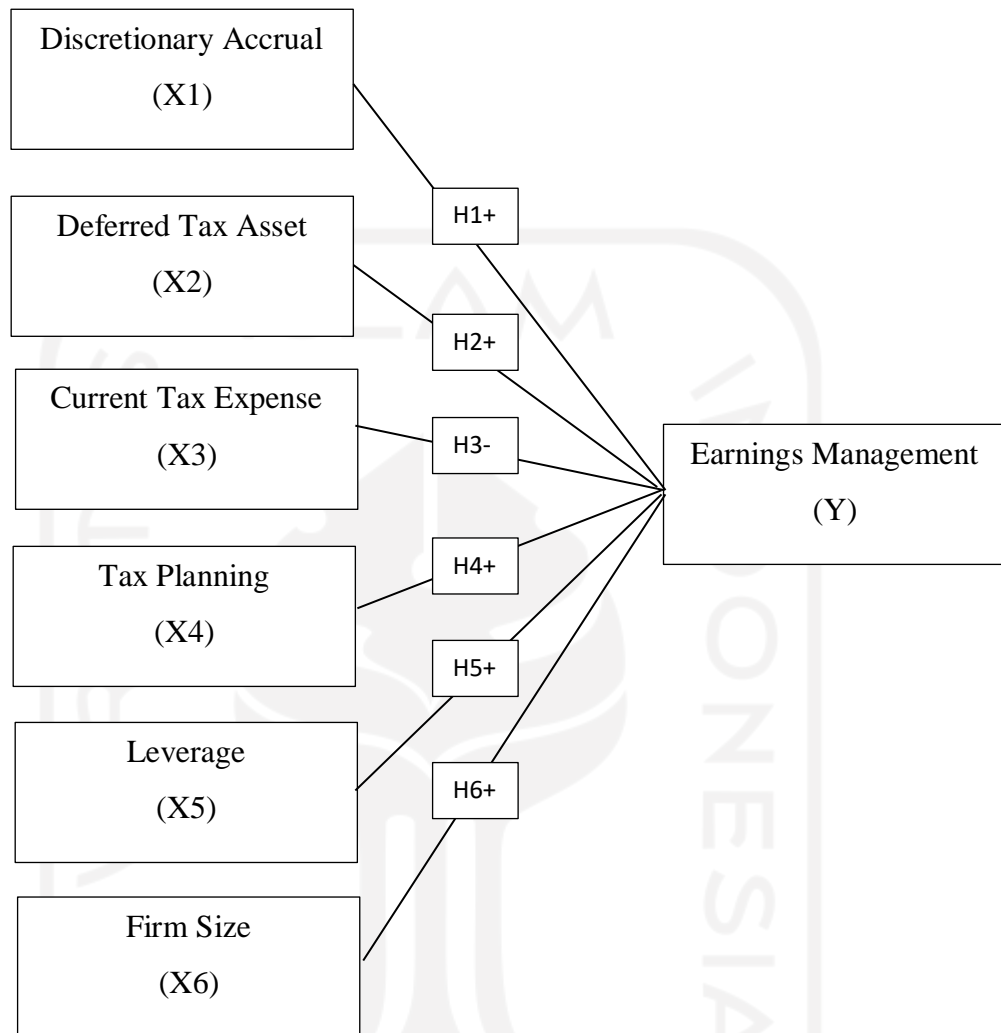


Figure 2. 1 Research Framework

CHAPTER III

RESEARCH METHOD

3.1 Population and Sample

The term "population" refers to the total collection of individuals, occasions, or interesting objects that the researcher desires to study. It is the collection of individuals, occasions, or objects of interest for whom the researcher wishes to draw conclusions (based on sample statistics) (Sekaran & Bougie, 2016). The population used in this research were the companies listed on the Indonesia Stock Exchange-Shariah Economic Community State Owned Enterprises 2017-2021. During these five periods, the companies' financial and annual reports had been accessible and audited. They have the data needed for the research variables as the factors that would affect earnings management in the financial-making statement.

Moreover, samples are thought to be representative of the full population since they are a subset of the population whose characteristics are being studied (a number less than their number of populations). Purposive sampling is being used in this study's sample selection technique. The selection of the sample using the criteria previously developed by the researcher is known as the purposive sampling approach. The criteria of the company's sample data are as follows:

1. Companies listed on the Indonesia Stock Exchange - Shariah Economic Community State Owned Enterprises during 2017 to 2021 which have a financial statement ended on December 31st.
2. The company is not delisting during the observation period.

3. The company that reports the audited financial statements from 2017 to 2021 and the company reported deferred tax asset and current tax expense in certain years, i.e., between 2017 to 2021.
4. The company that has the date of Initial Public Offering before 2017 to measure the market value of equity.
5. The company does not conduct acquisitions, mergers, restructuring, and change of business groups. Financial statements will be presented differently because of an acquisition, merger, restructuring, or change in business groups, which will have an impact on the company's position and financial performance.

3.2 Data Collection Techniques

Secondary data were utilized in this research as the data sources. The annual financial reports from the Indonesia Stock Exchange (IDX), which can be found at www.idx.co.id, were used using the author's data-gathering methodologies to get secondary data for this research. It determines the kinds of components in a financial statement that influence earnings management. This data contains the variable that is necessary and relevant to the research in accordance with the independent variable that will affect the dependent variable.

3.3 Data Collection Results

The sample chosen for this research consisted of 13 companies based on the previously specified criteria. The companies included in this research were as follows:

No	Code	Company's Name
1.	ADHI	Adhi Karya (Persero) Tbk.
2.	ANTM	Aneka Tambang Tbk.
3.	ELSA	Elnusa Tbk.
4.	KAEF	Kimia Farma Tbk.
5.	PGAS	Perusahaan Gas Negara Tbk.
6.	PTBA	Bukit Asam Tbk.
7.	PTPP	PP (Persero) Tbk.
8.	SMBR	Semen Baturaja (Persero) Tbk.
9.	SMGR	Semen Indonesia (Persero) Tbk.
10.	TINS	Timah Tbk.
11.	TLKM	Telkom Indonesia (Persero) Tbk.
12.	WIKA	Wijaya Karya (Persero) Tbk.
13.	WTON	Wijaya Karya Beton Tbk.

3.4 Research Variables

There were six types of variables used in this research, discretionary accrual (X1), deferred tax asset (X2), current tax expense (X3), tax planning (X4), leverage (X5), and firm size (X6) as the independent variable and earnings management (Y) as the dependent variable.

3.4.1 Independent Variable

3.4.1.1 Discretionary Accrual

The Modified Jones Model was used to determine the discretionary accrual (1991). Positive discretionary accrual is the term used to describe the practice of managing earnings through raising earnings. Negative discretionary, in contrast, is a strategy of managing earnings through reducing earnings. Formula of Discretionary measurement Accrual (DA) can be formulated as follows:

$$\text{TAC} = \text{NI}_{it} - \text{CFO}_{it}$$

Total accrual was estimated using OLS regression equation:

$$\text{TAC}_{it}/A_{it-1} = \beta_1 (1/A_{it-1}) + \beta_2 (\Delta\text{Rev}_t/A_{it-1}) + \beta_3 (\text{PPE}_t/A_{it-1}) + \varepsilon$$

Calculating value of nondiscretionary accrual by using this formula:

$$\text{NDA}_{it} = \beta_1 (1/A_{it-1}) + \beta_2 (\Delta\text{Rev}_t/A_{it-1} - \Delta\text{Rec}_t/A_{it-1}) + \beta_3 (\text{PPE}_t/A_{it-1})$$

Calculating value of discretionary accrual:

$$\text{DA}_{it} = \text{TA}_{it}/A_{it-1} - \text{NDA}_{it}$$

Explanation:

TAC_{it} = total of company accrual in the period of t

NDA_{it} = non-discretionary accrual of company in the period of t

DA_{it} = discretionary accrual of company in the period of t
 NI_{it} = net income of company in the period of t
 CFO_{it} = cash flow operations of company in the period of t
 A_{it-1} = total asset of company i in the period of t-1
 ΔRev = sales changing of company i in the period of t
 ΔRec = account receivables changing of company i in the period of t
 PPE_{it} = property, plant, and equipment of company i in the period of t
 e = component of error

3.4.1.2 Deferred Tax Asset

Deferred tax assets are a proxied indicator of the company's methods for managing its earnings (Mulyati et al., 2020). Therefore, the potential role of deferred tax assets can be utilized as a measure of earnings management. The ratio of changes in the value of deferred tax assets at the end of the period to the prior period is used to calculate deferred tax assets.

$$DTA = \frac{\Delta \text{Deferred tax assets}}{\text{Deferred tax assets } (it-1)}$$

3.4.1.3 Current Tax Expense

On taxable income in a given time, various income taxes are due. Based on the findings of the research by Fajarwati et al. (2020), the computation of the amount of past taxable income has been adjusted for time differences and permanent variations, and then multiplied by the current tax rate. Current tax expense is calculated by dividing the prior period's financial reporting's current tax burden by a scale ratio for current tax expense.

$$CTX = \frac{\Delta \text{Current tax expense}}{\text{Total Assets}}$$

3.4.1.4 Tax Planning

Tax management includes tax planning, which is done with the goal of minimizing tax liabilities. To simplify the amount of tax to be paid to the government, tax planning is a systematic action related to transactions that cross paths with tax laws. The tax retention rate formula evaluates a measure of the efficiency of tax management on the company's financial statements for the current year to calculate the tax planning variable (Rosharlianti, 2019).

$$\text{TRR} = \frac{\text{Net Income}}{\text{Pretax Income (EBIT)}}$$

3.4.1.5 Leverage

Gunawan et al. (2017) stated that in order to finance the activities of the asset management company, a number of obligations were used as leverage. Comparing the company's total liabilities to its assets allows us to calculate the leverage ratio. Therefore, according to (Gibson n.d.), the total debt for a specific time divided by the company's total assets at the end of the year is how the leverage variable is calculated.

$$\text{Debt to Asset Ratio} = \frac{\text{Total of Liability}}{\text{Total of Assets}}$$

3.4.1.6 Firm Size

In addition to having a large market capitalization, a large book value, and strong earnings, large corporations will typically have a large firm size. A small business will, in contrast, have a low market capitalization, low book value, and low profit. The amount of the company's total assets can be used to determine its size. In

this research, the natural logarithm of total assets was used to measure firm size (Ghofir, 2020). The firm value of a company is impacted differently by firm size. The total amount of the company's assets that can be utilized for business activities gives an indication of the size of the company.

$$\text{Firm Size} = \text{LN (Total Asset)}$$

3.4.2 Dependent Variable

3.4.2.1 Earnings management

One of the approaches for determining earnings management behavior is to identify and observe the companies that are below the earnings threshold. The companies that are included in the category are most likely to engage in earnings management in an attempt to exceed this limit. According to Phillips et al. (2003), managers implement earnings management using an earnings distribution technique because they are aware that third parties, in particular investors, banks, and suppliers, evaluate their managers' performance using earnings reporting limits.

$$\text{EM} = \frac{NI_{it} - NI_{it-1}}{MVE_{it-1}}$$

Explanation:

EM = Earnings management
NI_{it} = Net income of company year t
NI_{it-1} = Net income company year t-1
MVE_{it-1} = Market value of equity year t-1

3.5 Data Analysis Method

3.5.1 Descriptive Statistics

A data category is gathered and presented using descriptive statistics to provide useful information (Walpole, 1995). Measures of variability and measures of central tendency are the two categories into which descriptive statistics are divided. The mean, median, and mode are central tendency measures, whereas the standard deviation, variance, minimum and maximum variables are measures of variability.

3.5.2 Classical Assumptions Test

The classical assumption test is used to determine whether the estimating model satisfies the required assumptions for the Ordinary Least Square (OLS) technique, which are those that must not seriously deviate from the assumptions. The estimation findings cannot be accounted for or are unreliable if there is a deviation from the classical assumptions based on the proposed linear model (negative). According to Ghozali (2017), to detect deviations from the classical assumptions, normality tests, multicollinearity tests, heteroscedasticity tests, and autocorrelation tests are carried out.

3.5.2.1 Normality Test

To determine whether actual earnings management data have a normal distribution, the normality test is used. Jarque-Bera testing has been used to conduct a normality test. The distribution of the regression model's data is submitted to a

normality test for each research variable. The data were evaluated using intervals and ratios in this research analysis.

- If the results of the normality test create a significant value > 0.05 , the regression model residuals are distributed normally.
- If the significant value < 0.05 , the regression model residuals are not distributed normally.

3.5.2.2 Multicollinearity Test

The multicollinearity test determines whether the independent variables in a regression model are correlated. This test is intended to ascertain whether multicollinearity symptoms are present in the regression model. The multicollinearity test can be seen in the Tolerance Value and Variance Inflation Factor (VIF) results.

- If the tolerance value > 0.1 and the VIF value < 10 , no severe multicollinearity exists in the model.
- If the tolerance value < 0.1 and the VIF value > 10 , there is multicollinearity in the regression model.

3.5.2.3 Heteroscedasticity Test

To evaluate whether there is an inequality in the variance from one residual observation to the other observations, a heteroscedasticity test is conducted. A good regression model does not contain either homoscedasticity or heteroscedasticity. The Glejser test is used in this research to calculate the heteroscedasticity test.

H0: There is no heteroscedasticity in the model.

H1: There is heteroscedasticity in the model.

- If the significance value > 0.05 , H_1 is rejected and there is no heteroscedasticity.
- If the significance value < 0.05 , H_0 is rejected and there is heteroscedasticity in the model.

3.5.2.4 Autocorrelation Test

For regression models, the absence of autocorrelation condition must be met to determine if there is a link between period t and the prior period $(t-1)$. The testing technique is carried out using the Durbin-Watson Test (DW test). The serial correlation test is “no autocorrelation”, where the Durbin-Watson (DW) value is between the Upper Bound (d_U) and $4-d_U$.

H_0 : There is no autocorrelation in the regression model.

H_1 : There is autocorrelation in the model.

- If significant value > 0.05 , H_1 is rejected and it shows no autocorrelation
- If significant value < 0.05 , H_0 is rejected and it shows autocorrelation in regression model

3.5.3 Panel Data Regression Model

In panel data regression, the same cross-section unit is measured at various times using a combination of cross-section and time series data. In other words, panel data is information from people who are monitored repeatedly over time. Common Effects Models, Fixed Effects Models, and Random Effects Models are the three different sorts of models.

3.5.3.1 Common Effect Model

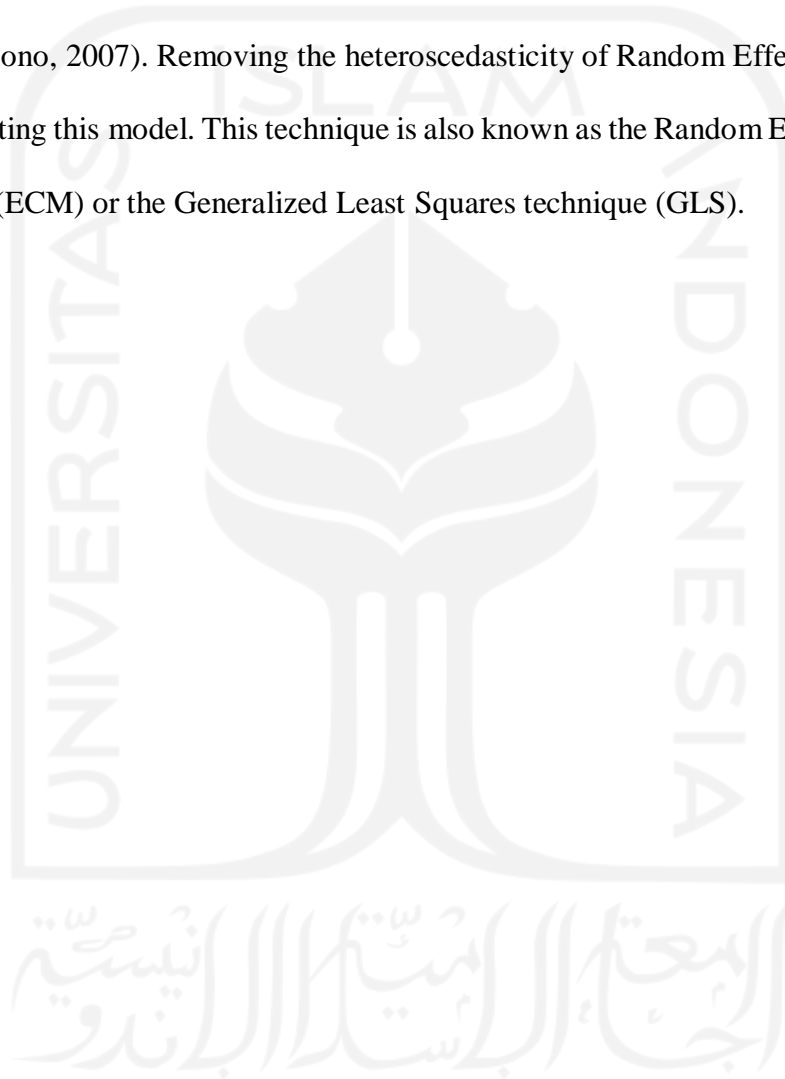
In terms of model estimation methods, the common effect model represents the simplest panel data regression model. The common effect model does not consider individual and temporal dimensions differences. In other words, each person's data behavior is consistent throughout time. As a result, parameter estimation in the common effect model merges cross-sectional and time-series data into a single set without considering individual and temporal differences (Widarjono, 2007). For estimating panel data mode, this method can adopt an Ordinary Least Squares (OLS) approach or a least squares strategy.

3.5.3.2 Fixed Effect Model

According to this concept, variations in intercepts can be explained by individual differences. The fixed effects model uses a dummy variable technique to estimate panel data and capture company intercept differences. Diversity in work culture, management, and incentives can all lead to intercept differences but regardless of the company, the slope is the same (Saputro et al., 2018). The Least Squares Dummy Variable (LSDV) method is a common name for this estimating method.

3.5.3.3 Random Effect Model

This model will analyze the panel data in cases with cross-temporal and cross-individual correlations among disturbance factors. The error terms of each organization account for intercept differences in the Random Effects Model (Widarjono, 2007). Removing the heteroscedasticity of Random Effect is one benefit of adopting this model. This technique is also known as the Random Error Component Model (ECM) or the Generalized Least Squares technique (GLS).



3.5.4 Panel Data Regression Model Selection

Widarjono (2007) stated that three types of special tests are used to select the best panel data regression model for a given problem. These tests include Chow Test, Hausman test, and Lagrange Multiplier Test.

3.5.4.1 Chow Test

The chow test determines the best panel data regression model between the model obtained based on the common effect model approach and the model obtained with the fixed effect model approach.

H0: Common Effect Model

H1: Fixed Effect Model

- If probability value of $F > 0.05$, it means H1 is rejected, and the best model would be common effect model.
- If probability value of $F < 0.05$, it means H0 is rejected, and the best model would be fixed effect model.

3.5.4.2 Hausman Test

The Hausman test is an advanced test for selecting panel data regression. This test is conducted when the Chow test shows that the fixed effect model is a better model. The Hausman test will choose which is better to use between the fixed and random effect models (Wakhiri, 2017).

H0: Random Effect Model

H1: Fixed Effect Model

- If Chi Square significant value > 0.05 , H1 is rejected, and the best model would be random effect model.
- If Chi Square significant value < 0.05 , H0 is rejected, and the best model would be fixed effect model.

3.5.4.3 Lagrange Multiplier Test

The Lagrange Multiplier test is a test that aims to determine whether the random effect model is better than the common effect model. This test is carried out if the results of the Chow test and the Hausman test give different results.

H0: Common Effect Model

H1: Random Effect Model

- If significant value > 0.05 , it means H1 is rejected and the best model would be common effect model.
- If significant value < 0.05 , it means H0 is rejected and the best model would be random effect model.

3.5.5 Model Feasibility Test

3.5.5.1 Coefficient Determination Test Result (R^2)

The R^2 test, also known as the determination test, is a crucial component of the regression process because it may determine whether the estimated regression results are accurate, to put it another way, how well the regression line approximates the actual data. The purpose of this test is to determine how much the independent variable affects the dependent variable. The coefficient of determination is used in this study to anticipate how much the independent factors' impact on the dependent variable will be. The weaker the independent factors' impact on the dependent variable, the lower the R^2 value. In contrast, the closer R^2 is to 1, the greater the influence. (Ghozali,2017).

3.5.5.2 Partial Test (t Test)

The t test is suggested to be determine if the presented hypothesis is accepted or rejected as well as to examine the significance of the independent variable's impact on the dependent variable. To determine if the independent variables have a partial influence on the dependent variable, a hypothesis test is utilized. In this research, the significant level chosen was 0.05 with the confident level of 95%.

- If $t_{\text{count}} > t_{\text{table}}$ and significance value < 0.05 , a partially independent variable has a significant impact on the dependent variable.
- If $t_{\text{count}} < t_{\text{table}}$ and significance value > 0.05 , a partially independent variable has no significant impact on the dependent variable.

3.5.5.3 Simultaneous Test (F test)

This test is used to confirm the viability of the goodness of fit model, which involves testing hypotheses to see if a set of expected frequencies equals a frequency received from a distribution (binomial, poisson, normal and so on). The accepted significant level is 0.05. The hypothesis test is designed to determine whether the independent variables have a partial influence on the dependent variable.

- If F count > F table and significance value < 0.05, a partially independent variable has a significant impact on the dependent variable.
- If F count < F table and significance value > 0.05, a partially independent variable has no significant impact on the dependent variable.

3.5.5.4 Multiple Linear Regression

This analysis will reveal the direction of each independent variable's relationship to the dependent variable, as well as whether it is positive or negative. Multiple regression analysis was used to examine the research's hypothesis. Multiple linear regression analysis, according to Sugiono (2019), aimed to forecast the condition (up and down) of the dependent variable (criteria) would change if two or more independent variables are changed (increases in value). The data used is usually internal or ratio scale. The following equation is used to create a multiple linear regression model:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon$$

Explanation:

Y = Earnings management

β_1 - β_6 = Regression Coefficient

X1 = Discretionary Accrual

X2 = Deferred Tax Asset

X2 = Current Tax Expense

X3 = Tax Planning

X5 = Leverage

X6 = Firm Size

α = Constants

ε = Standard error



CHAPTER IV

RESEARCH RESULTS AND DISCUSSION

4.1 Research Result

4.1.1 Overview of Research Objects

4.1.1.1 Indonesia Stock Exchange – Shariah Economy Community State Owned Enterprises (IDX – MES BUMN 17)

On April 29, 2021, the Indonesia Stock Exchange (IDX) introduced a new index known as the IDX-MES BUMN 17 in cooperation with the Islamic Economic Community (MES). This index tracks the price performance of 17 shares of State-Owned Enterprises (BUMN) and their affiliated companies, which are thought to operate in line with shariah law and have strong fundamentals, high liquidity, and a substantial market value.

One of the factors for adding additional shariah index possibilities is the lack of stock indices with a shariah-themed concept. Now there are only 3 shariah indices: the Indonesian Sharia Stock Index (ISSI), the Jakarta Islamic Index 70 (JII70), and the Jakarta Islamic Index (JII).

Moreover, with the introduction of this index, IDX and MES intend to satisfy the interest of Indonesian capital market investors in investing in Islamic stocks and SOEs as well as provide a measure of the government's contribution to the growth of the Islamic economy. In addition, investors looking to purchase Islamic stocks may use the IDX-MES BUMN 17 Index as a new benchmark (IDX Islamic, 2021).

The object of this research was company listed in Indonesia Stock Exchange-Shariah Economy Community State Owned Enterprises from 2017-2021. There were 13 companies that used purposive sampling method in this research.

4.1.1.2 Adhi Karya (Persero) Tbk. (ADHI)

Adhi Karya (Persero) Tbk. is an Indonesian state-owned construction company that provides a range of services in the construction industry, including design, construction, and project management for infrastructure, buildings, and industrial plants. The company specializes in engineering and infrastructure development, with a focus on building roads, bridges, airports, and other public facilities. The company started its commercial operations on March 11, 1960. The code name for this company is ADHI in Indonesian Stock Exchange.

4.1.1.3 Aneka Tambang Tbk. (ANTM)

Aneka Tambang Tbk. (ANTM) is an Indonesian mining and smelting company, producing mainly nickel, bauxite and precious metals. The company operates several mining sites and smelting facilities across the country and is a major player in the Indonesian mining industry. Its nickel operations are one of the largest in the world, with the company supplying nickel and other metals to various industries, including the production of stainless steel. Aneka Tambang is one of the companies listed in the IDX – MES BUMN 17 with the code name ANTM.

4.1.1.4 Elnusa Tbk. (ELSA)

PT Elnusa Tbk. is an Indonesian state-owned company engaged in the upstream oil and gas services industry. The company offers a wide range of services,

including drilling, well completion, workover, and abandonment services, as well as geophysical and geotechnical services. Elnusa is also involved in the development of oil and gas infrastructure, such as pipelines and terminals. It has extensive experience and expertise in the Indonesian oil and gas industry and has established partnerships with major international oil and gas companies. The company is listed on the Indonesian Stock Exchange with ELSA as its code name.

4.1.1.5 Kimia Farma Tbk. (KAEF)

PT Kimia Farma Tbk is an Indonesian pharmaceutical company that has been providing healthcare products and services to the Indonesian people for over 70 years. The company is the largest pharmaceutical company in Indonesia and has a strong presence in both the retail and institutional markets. Kimia Farma offers a wide range of products, including prescription drugs, over-the-counter medications, herbal remedies, and health supplements. Companies' code name for Kimia Farma is KAEF that is listed in Indonesia Stock Exchange.

4.1.1.6 Perusahaan Gas Negara Tbk. (PGAS)

Perusahaan Gas Negara Tbk (PGAS) is an Indonesian company that is involved in the natural gas industry. It is a state-owned company that is engaged in the transportation, distribution, and sale of natural gas. PGAS is listed on the Indonesian Stock Exchange, and its core business activities include pipeline network construction, maintenance, and management, as well as the development of natural gas-based power plants and liquefied natural gas (LNG) terminals.

4.1.1.7 Bukit Asam Tbk. (PTBA)

Bukit Asam Tbk (PTBA) is an Indonesian state-owned company involved in the coal mining industry. The company is one of the largest coal producers in Indonesia and is listed on the Indonesian Stock Exchange. Its core business activities include coal exploration, mining, and transportation, as well as the development of coal-based power plants. PTBA also operates a coal trading business, supplying coal to domestic and international customers.

4.1.1.8 PP (Persero) Tbk. (PTPP)

PP Persero Tbk is an Indonesian state-owned enterprise engaged in the construction and engineering industry. It is involved in various types of construction projects, including building and infrastructure construction, as well as the development of real estate. In terms of product offerings, the company provides construction services and solutions, as well as real estate properties for sale or lease. This company listed in Indonesia Stock Exchange with the code name PTPP.

4.1.1.9 Semen Baturaja (Persero) Tbk. (SMBR)

Semen Baturaja (Persero) Tbk., commonly known as SMBR, is a state-owned enterprise involved in the cement industry in Indonesia. The company is based in Baturaja, South Sumatra, and produces a range of cement products, including ordinary Portland cement, Portland composite cement, and oil well cement. The company's products are widely used in various construction projects, including building construction, infrastructure development, and oil and gas drilling.

4.1.1.10 Semen Indonesia (Persero) Tbk. (SMGR)

Semen Indonesia (Persero) Tbk., commonly known as Semen Indonesia, is the largest producer of cement in Indonesia and a leading producer in Southeast Asia. Semen Indonesia produces a wide range of cement products, including ordinary Portland cement, Portland composite cement, and oil well cement. In its core business of producing and distributing cement, Semen Indonesia also operates several subsidiaries that are involved in various activities related to the construction industry, including ready-mix concrete production and quarrying. Semen Indonesia is listed on the Indonesia Stock Exchange with the code name SMGR.

4.1.1.11 Timah Tbk. (TINS)

PT Timah Tbk., commonly known as Timah Tbk., is a state-owned mining company in Indonesia that is involved in the production of tin and tin-based products. The company's main product is tin, which is used in various applications, including tinsplate for packaging, tin chemicals, and tin solder. Timah Tbk. also produces tin-based products, including tin ingots, tin slabs, tin wire, and tin alloys, to meet the needs of various industries. Timah Tbk. is listed on the Indonesia Stock Exchange with the name of TINS for its code.

4.1.1.12 Telkom Indonesia (Persero) Tbk. (TLKM)

Telkom Indonesia is a state-owned telecommunications company in Indonesia. This company provides a wide range of telecommunications services, including fixed-line voice and data services, mobile telecommunications services, broadband internet services, and multimedia services. Telkom Indonesia's products

and services such as, Fixed-line telephone services, Broadband internet services, Mobile telecommunications services (under the "Indosat Ooredoo" brand), Multimedia services (including pay-tv), and Interprise services (including cloud computing and data center services). This company uses the code name of TLKM as listed in Indonesia Stock Exchange.

4.1.1.13 Wijaya Karya (Persero) Tbk. (WIKA)

Wijaya Karya (Persero) Tbk., commonly known as WIKA, is a state-owned construction company in Indonesia. WIKA provides a wide range of construction services, including engineering, procurement, and construction services for infrastructure projects, building construction, and industrial plant construction. WIKA has a strong presence in Indonesia and has been involved in several notable infrastructure projects in the country like maintenance and repair services for infrastructure construction and building projects.

4.1.1.14 Wijaya Karya Beton Tbk. (WTON)

Wijaya Karya Beton Tbk. (WTON) is an Indonesian company that specializes in the production and distribution of ready-mix concrete. It is a subsidiary of Wijaya Karya (Persero) Tbk. (WIKA), a state-owned construction company in Indonesia. The company main products include ready-mix concrete, precast concrete products, and concrete blocks. WTON is listed on the Indonesia Stock Exchange and is actively engaged in various social responsibility programs to support the communities in which it operate.

4.1.2 Data Analysis

The data analysis in this research was carried out using Microsoft Excel 365 software and EViews version 10, where the analysis included the determinants for figuring out whether the company was engaged in earnings management or not. The independent variables were Discretionary Accrual (DA), Deferred Tax Asset (DTA), Current Tax Expense (CTX), Tax Planning (TP), Leverage (LR), Firm Size (FS).

4.1.2.1 Descriptive Statistics

The descriptive statistics analysis in this research involved five main points to be examined. They were mean, median, maximum, minimum, and standard deviation which were used to describe each of the variables.

Table 4. 1 Descriptive Statistic Results

	EM	DA	DTA	CTX	TP	LR	FS
Mean	-0.000338	0.489026	0.484597	0.004783	0.017540	0.542453	30.94297
Median	0.000039	0.406558	0.157348	0.000089	0.017190	0.520108	31.03269
Maximum	0.031928	1.485922	5.861099	0.135686	0.027403	0.858204	33.25570
Minimum	-0.059910	-0.358473	-0.806644	-0.047284	0.009520	0.294092	29.21111
Std. Dev.	0.009254	0.520271	1.161766	0.022583	0.005003	0.155217	1.096845
Observations	65	65	65	65	65	65	65

Sources: Secondary Data Processed, 2023

The description of earnings management was obtained based on Table 4.1. The condition of earnings management as a representation of 13 companies over the past 5 years showed an average of -0.000338 (-0.034%) with the median 0.000039 (0.0039%), while the standard deviation was 0.009254 (0.93%). It means that the average was smaller than standard deviation. It indicated bad result and had large

fluctuations. Furthermore, the maximum and minimum value of earnings management came from the same company of PT Elnusa Tbk. (ELSA), where in 2019 the maximum value was 0.031928 and the minimum value was -0.059910 in 2020.

Discretionary Accrual as one of the independent variables in this research had a higher standard deviation of 0.520271 (52.03%) compared to the average of 0.489026 (48.91%). It indicated that data were more spread out and it allowed the data to have the negative values. The median in discretionary accrual had a value of 0.406558 (40.66%) from 65 of the sample observations. The minimum number can be obtained from PT Aneka Tambang Tbk. (ANTM) for the period of 2020 with the value of -0.358473, while the maximum discretionary accrual was 1.485922 from PT Wijaya Karya (Persero) Tbk. (WIKA) for the period of 2017.

In Table 4.1, the deferred tax asset also had a larger standard deviation with the number of 1.161766 (116.18%) contrary to the average with only 0.484597 (48.46%). It indicated how far from the mean each score was, a large standard deviation indicated that values were typically far from the average. The median in this variable contained the value of 0.157348 (15.74%). The minimum of deferred tax asset was derived from PT Perusahaan Gas Negara Tbk. (PGAS) with the number of -0.806644 and the maximum was 5.861099 from PT Wijaya Karya Beton Tbk. (WTON) for the period of 2020.

From the 65 observations, current tax expense had the average number of 0.004783 (0.48%) and the standard deviation was 0.022583 (2.26%). The high standard deviation in comparison with the small average showed that the data was widely spread, and the data would be less reliable. The number of medians in the

current tax expense was 0.000089 (0.008%), it was implying the relating value or quantity lying at the midpoint of a frequent distributions. The maximum value was in the period of 2021 of PT Wijaya Karya Beton Tbk. (WTON) with the value of 0.135686 and the minimum was -0.047284 for the period of 2018 from the same company.

Tax planning had the higher value of average with 0.017540 (1.75%) in the contrary of standard deviation that was only 0.005003 (0.50%). It means the standard deviation was smaller than the average, where it showed good results and small fluctuation because a high deviation can be reflected from standard deviation. The median value for tax planning was 0.017190 (1.72%). In addition, the maximum value was 0.027403 for the period 2021 of Adhi Karya (Persero) Tbk. (ADhi) and the minimum value was 0.009520 for the period 2019 of PT Bukit Asam Tbk. (PTBA).

Moreover, the data for leverage had the standard deviation that was smaller than the average. The standard deviation was 0.155217 (15.52%), while the average was 0.542453 (54.25%). This data had values that were clustered close to the mean and provided the less extreme values. For the median, leverage had the value of 0.520108 (52.01%). The minimum value was 0.155217 from PT Bukit Asam Tbk. (PTBA) for the year 2019 and PT Adhi Karya (Persero) Tbk. (ADHI) had the maximum of leverage for the year 2021 with the value of 0.858204.

The last independent variable was firm size, where in the value average was larger with 30.94297 (3094.28%) than the value of standard deviation with 1.096845 (109.68%). The low value of standard deviation implied the data to be normal and not biased, it caused the result to be more likely reliable as opposed to the data who had

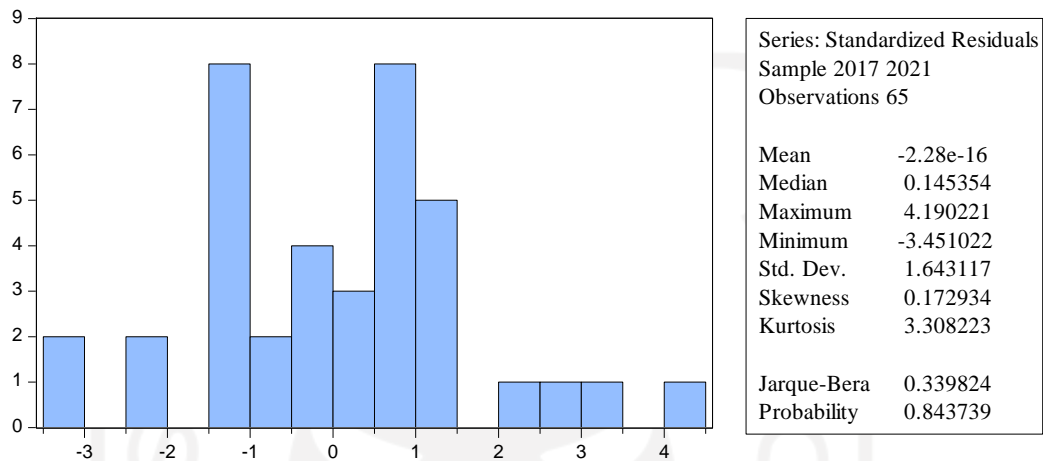
the high standard deviation. Out of the 13 companies, the median had the value of 31.03269 (3103.27%) as the middle number in a sorted list of numbers in firm size variable. Besides, the maximum number of firm sizes was located in the year 2021 from PT Telkom Indonesia (Persero) Tbk. (TLKM) with the value of 33.25570 and the minimum value was 29.21111 from PT Elnusa Tbk. (ELSA) for the period of 2018.



4.1.2.2 Classical Assumption Test

4.1.2.2.1 Normality Test

Table 4. 2 Normality Test Results



Sources: Secondary Data Processed, 2023

Based on the result in Table 4.2, the normality test of this research was using Jarque-Bera with 65 observations and the data was taken from period of 2017-2020. It can be seen that the data was normally distributed, where the significant value was greater than 0.05 with the probability of 0.843739. By checking the normality of the data, it can determine whether these methods were appropriate for the data set, or if alternative methods should be used.

4.1.2.2.2 Multicollinearity Test

Table 4. 3 Multicollinearity Test Before Correction Results

Variance Inflation Factors			
Included observations: 65			
Variable	Coefficient Variance	Uncentered VIF	Centered VIF
DA	8.62E-06	3.023920	1.593802
DTA	1.16E-06	1.260469	1.071182

CTX	0.003159	1.151375	1.101206
TP	109.2110	25188.86	1868.066
LR	0.113543	25060.12	1869.539
FS	3.06E-05	20346.89	25.14164
C	0.029408	20412.66	NA

Sources: Secondary Data Processed, 2023

Table 4.3 shows the independent variables in regression model that were correlated, where the severe of multicollinearity occurred. From the six independent variables, there were three of them had the Variance Inflation Factors (VIF) value > 10. The VIF for tax planning was 1868.066, leverage was 1869.539, and firm size was 25.14164. This multicollinearity can be a problem because independent variables should be “independent”. When fitting the model and interpreting the findings, it may be difficult if there is a high enough degree of correlation among the variables. Multicollinearity decreased the precision of the estimated coefficients, which can reduce the regression model’ statistical power.

Table 4. 4 Multicollinearity Test After Correction Results

Variance Inflation Factors			
Included observations: 65			
Variable	Coefficient Variance	Uncentered VIF	Centered VIF
DA	8.48E-06	3.022113	1.592850
DTA	1.14E-06	1.259265	1.070159
CTX	0.002927	1.083191	1.035993
TP	0.060039	14.06151	1.042836
FS	1.95E-06	1317.986	1.628570
C	0.001874	1320.593	NA

Sources: Secondary Data Processed, 2023

The data from Table 4.4 indicated that there was no more severe multicollinearity existed in the model. The problem was solved by removing the highly correlated independent variables in multicollinearity test. The value of Variance Inflation Factors (VIF) from all independent variables was < 10 . As a result, estimates of regression coefficient can be stable and make it easier to interpret the result of the regression analysis and draw meaningful conclusions.

4.1.2.2.3 Heteroscedasticity Test

The heteroscedasticity test is used to assess whether the variance of the residuals in a regression analysis is constant across all levels of the independent variable. When heteroscedasticity is present, it can lead to incorrect results in regression analysis, such as biased estimates of the regression coefficients and incorrect inference about their significance.

Table 4. 5 Heteroscedasticity Test Results

Heteroskedasticity Test: Glejser				
Included observations: 65				
Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	0.052551	0.151877	0.346008	0.7306
DA	-0.002233	0.002566	-0.870344	0.3877
DTA	-9.80E-06	0.000191	-0.051226	0.9593
CTX	-0.032124	0.048854	-0.657538	0.5134
TP	1.386461	9.278774	0.149423	0.8817
LR	-0.047949	0.299317	-0.160195	0.8733
FS	-0.001508	0.004900	-0.307745	0.7594
R-square	0.146352			
Adjusted R-square	0.058043			
F-statistic	1.657277			
Prob (F-statistic)	0.148011			

Sources: Secondary Data Processed, 2023

The data in the Table 4.5 shows that there was no heteroscedasticity in the model with the probability of 0.1480 which means that the significant value was > 0.05 . When homoscedasticity is present, it indicates that the variability of the dependent variable is constant and not changing systematically with the level of the independent variable. This is a desirable property as it helps to ensure that the regression coefficients are estimated accurately and that the results are reliable and interpretable.

4.1.2.4.4 Autocorrelation Test

The autocorrelation test assessed whether there is a relationship between the residuals of a time series or panel data regression analysis and their lagged values. Autocorrelation, also known as serial correlation, occurs when the residuals at a one-time point are related to the residuals at a previous time point.

Table 4. 6 Autocorrelation Test Before Correction

Included observations: 65				
Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	-0.069790	0.173636	-0.401932	0.6892
DA	-0.000251	0.002934	-0.085481	0.9322
DTA	4.88E-06	0.000219	0.022317	0.9823
CTX	0.023639	0.055853	0.423232	0.6737
TP	3.334469	10.60811	0.314332	0.7544
LR	-0.106785	0.342199	-0.312055	0.7561
FS	0.002227	0.005601	0.397488	0.6925
R-square	0.008542			
Adjusted R-square	-0.094023			
F-statistic	0.083283			

Prob (F-statistic)	0.997657
Durbin-Watson stat	3.042888

Sources: Secondary Data Processed, 2023

The Table 4.6 above shows the autocorrelation that occurred, when the DW value was 3.042888. By comparing this value, the DW table with a sample size of 65 with 6 independent variables obtained a DL value of 1.4043 and DU value of 1.8046. It indicated the DW value > 2 , where the value had a negative autocorrelation. The presence of autocorrelation in the data can also violate the assumptions of many statistical tests, leading to incorrect results.

Table 4. 7 Autocorrelation Test After Correction

Breusch-Godfrey Serial Correlation LM Test:				
Included observations: 65				
Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	0.111048	0.160731	0.690897	0.4938
DA	-0.001101	0.002563	-0.429470	0.6700
DTA	0.000688	0.001006	0.684042	0.4981
CTX	-0.006449	0.048961	-0.131726	0.8959
TP	-9.847603	9.461451	-1.040813	0.3045
LR	0.314245	0.304440	1.032209	0.3085
FS	-0.003496	0.005169	-0.676377	0.5029
R-square	0.455507			
Adjusted R-square	0.097287			
F-statistic	1.271586			
Prob (F-statistic)	0.246909			
Durbin-Watson stat	1.952975			

Sources: Secondary Data Processed, 2023

For correcting the problem exist in autocorrelation model, the Breusch-Godfrey Serial Correlation LM Test was used. There was no more autocorrelation occurred in

the regression with the changing of DW value to 1.952975, which it falls between DU and 4-DU ($1.8046 < 1.952975 < 2.1954$). Therefore, the absence of autocorrelation was a desirable property in time series or panel data regression analysis. It helped to ensure that the results were reliable, robust, and interpretable and that the assumptions of the statistical tests used in the analysis were met.



4.1.2.3 Panel Data Regression Model

4.1.2.3.1 Common Effect Model

In this research, from the 65 observations sample included the results for common effect model can be seen in the table below.

Table 4. 8 Common Effect Model Results

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	-0.071235	0.171442	-0.415505	0.6793
DA	-0.000305	0.002935	-0.104017	0.9175
DTA	0.000169	0.001078	0.157067	0.8757
CTX	0.022601	0.056213	0.402067	0.6891
TP	3.342136	10.44674	0.319922	0.7502
LR	-0.107090	0.336841	-0.317926	0.7517
FS	0.002273	0.005528	0.411127	0.6825
R-square	0.008955			
Adjusted R-square	-0.093567			
F-statistic	0.087346			
Prob (F-statistic)	0.997324			

Sources: Secondary Data Processed, 2023

The common effect model results, as seen in Table 4.8, provide an insight into the significance of the given variables. The coefficients of each variable were calculated, along with their respective standard errors, t-statistics, and probabilities. Generally, the results demonstrated that the coefficients had low t-statistics and probabilities, suggesting that they were not significant.

The R-square for the model was 0.008955, while the adjusted R-square was -0.093567. This value was less than 0.5, where this suggested that the model can only explain a small portion of the variance in the data, and that the independent variables

were not strong predictors of the dependent variable. The F-statistic of 0.087346 with a probability of 0.997324 bigger than 0.05, showed that the model was not significant. Overall, the results indicated that the independent variables had little to no impact on the dependent variable and were not significant predictors.

4.1.2.3.2 Fixed Effect Model

Table 4. 9 Fixed Effect Model Results

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	-0.323759	0.577588	-0.560537	0.5778
DA	-0.003901	0.008337	-0.467876	0.6421
DTA	0.000320	0.001454	0.220189	0.8267
CTX	0.030025	0.067808	0.442785	0.6600
TP	16.05227	25.81833	0.621739	0.5372
LR	-0.515283	0.838559	-0.614487	0.5419
FS	0.010438	0.018791	0.555496	0.5812
R-square	0.036545			
Adjusted R-square	-0.340459			
F-statistic	0.096935			
Prob (F-statistic)	0.999999			

Sources: Secondary Data Processed, 2023

The results showed that the coefficient for all the independent variables ranged from -0.003901 to 0.010438. This suggested that these different variables accounted for a small amount of the total variance in the outcome. The t-statistics and Probability values of the independent variables range from -0.467876 to 0.555496 and 0.6421 to 0.5812 respectively, indicating that none of the independent variables were statistically significant with value more than critical limit of 0.05.

The R-square value of 0.036545 indicated that the model explained a small amount of the total variance in the outcome. The F-statistic of 0.096935, along with its associated Probability of 0.999999 bigger than 0.05, further confirms the insignificance of other independent variables. In conclusion, this fixed effect model results suggested that none of the independent variables had a significant impact on the outcome.

4.1.2.3.3 Random Effect Model

The table below provides the results from a random effect model. This type of model is commonly used to determine the influence of various factors on the outcome of a given event. To do this, a series of factors are measured, and their statistical significance is then calculated based on their contribution to the overall outcome.

Table 4. 10 *Random Effect Model Results*

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	-0.071235	0.189811	-0.375294	0.7088
DA	-0.000305	0.003250	-0.093951	0.9255
DTA	0.000169	0.001193	0.141866	0.8877
CTX	0.022601	0.062236	0.363157	0.7178
TP	3.342136	11.56604	0.288961	0.7736
LR	-0.107090	0.372931	-0.287158	0.7750
FS	0.002273	0.006121	0.371340	0.7117
R-square	0.008955			
Adjusted R-square	-0.093567			
F-statistic	0.087346			
Prob (F-statistic)	0.997324			

Sources: Secondary Data Processed, 2023

The results indicated that none of the independent variables had a statistically significant impact on the outcome of the model, with all the probability value more than 0.05. The R-Square value of 0.008955 showed that only 0.89% of the variance in the outcome could be explained by the factors in the model, while the F-Statistic of 0.087346 suggested that the model was not statistically significant. The Adjusted R-Square of -0.093567 showed that the model did not have a good fit.



4.1.2.4 Panel Data Regression Model Selection

4.1.2.4.1 Chow Test

The Chow Test is a statistical test used to determine whether the Common Effect Model or Fixed Effect Model is the most appropriate model for estimating panel data. If the test indicates that the coefficients are not significantly different, the Common Effect Model is more appropriate for estimating the panel data. If, however, the test indicates that the coefficients are significantly different, the Fixed Effect Model is more appropriate for estimating the panel data.

Table 4. 11 Chow Test Results

Effect Test	Statistics	d.f	Prob.
Cross-section F	0.109774	(12,46)	0.9999
Cross-section Chi-Square	1.835229	12	0.9996

Sources: Secondary Data Processed, 2023

The table shows probability value of “Cross-section Chi-Square” of 0.9996 with the value more than 0.05. It indicated that the result was not significant and H1 was rejected, where the Common Effect Model was more appropriate than the Fixed Effect Model to interpret the data in this chow test results.

4.1.2.4.2 Hausman Test

The Hausman Test is a common method used to determine the best approach between Fixed Effect Model or Random Effect Models. This test evaluated the null hypothesis that the coefficients in the fixed effects model were equal to those in the random effects model and allowed to compare the different models in terms of efficiency.

Table 4. 12 Hausman Test Results

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.738472	6	0.9936

Sources: Secondary Data Processed, 2023

Based on the previous chow test results that has been conducted, it shows the Common Effect Model as the chosen one. It means the researcher can continue the next step using Lagrange Multiplier Test directly, however this Hausman Test was conducted to make sure that the result was more concrete statistically. The probability value was 0.9936, where it was more than 0.05. It indicated the Hausman Test rejected H1 and the method chosen was Random Effect Model.

4.1.2.4.3 Lagrange Multiplier Test

The Lagrange Multiplier Test is a method used to analyze panel data regression, allowing for the determination of the best model between Common Effect Model or Random Effect Model. The Lagrange Multiplier Test utilizes a function to identify which approach offers the best estimates, either using a Random Effect Model or not.

Table 4. 13 Lagrange Multiplier Test Results

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	6.838883	0.010700	6.849583
	(0.0089)	(0.9176)	(0.0089)

Sources: Secondary Data Processed, 2023

The value of P value in Breusch-Pagan was shown by the number of 0.0089 where the value was less than 0.05. This test indicated to receive the H1 and rejected the H0, it means the best estimation method was Random Effect Model compared to the Common Effect Model.

4.1.2.4.4 Final Model Selection Overview

The Random Effect Model method is the most accurate method for estimating the model in this equation based on the Chow Test, Hausman Test, and Lagrange Multiplier Test that has been done. The Chow Test analysis results indicated the probability value generated was 0.9996; therefore, it was considered to be non-significant because it was more than 0.05. As a result, the first hypothesis (H1) was rejected, and the Common Effect Model was selected as the model. The Hausman Test's findings indicated a probability value of 0.9936, which is greater than 0.05. Following that, the first hypothesis (H1) was rejected, and the Random Effect Model was applied. Furthermore, the results of the Lagrange Multiplier Test showed the Breusch-Pagan value of 0.0089 which means it was less than 0.05, it means that the null hypothesis (H0) was rejected and the best method to use is Random Effect Model. Overall, from the three tests that have been conducted the better estimation method is Random Effect Model to estimate this simultaneous equation model.

4.1.2.5 Model Feasibility Test

4.1.2.5.1 Coefficient Determination Test Results (R^2)

Table 4. 14 Results of Coefficient Determination (R^2)
(*based on Random Effect Model)

R-squared	0.008955	Mean dependent var	-0.000338
Adjusted R-squared	-0.093567	S.D. dependent var	0.009254
S.E. of regression	0.009677	Sum squared resid	0.005432
F-statistic	0.087346	Durbin-Watson stat	3.566813
Prob(F-statistic)	0.997324		

Sources: Secondary Data Processed, 2023

The R-squared value based on table was 0.008955 or equal to 0.90%. This number indicated only 0.90% among all the independent variables (discretionary accrual, deferred tax asset, current tax expense, tax planning, leverage, and firm size) can explain their influence towards the dependent variable which was earning management. While the rest of 99.1% of the influences will be explained by the other variables that were not included in this research model.

4.1.2.5.2 Partial Test (t test)

Table 4. 15 t Test Results
(*based on Random Effect Model)

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	-0.071235	0.189811	-0.375294	0.7088
DA	-0.000305	0.003250	-0.093951	0.9255
DTA	0.000169	0.001193	0.141866	0.8877
CTX	0.022601	0.062236	0.363157	0.7178
TP	3.342136	11.56604	0.288961	0.7736
LR	-0.107090	0.372931	-0.287158	0.7750

FS	0.002273	0.006121	0.371340	0.7117
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Sources: Secondary Data Processed, 2023

The t-table that was already calculated based on the chosen significant level of 0.05 with 65 observations was 1.99773. The conclusion of the table t-test results above can be explained as follows:

1. The discretionary accrual (X1) had a t count value of -0.093951 and a probability value of 0.9255, which means the value of t count was smaller than 1.99773 ($-0.093951 < 1.99773$) and the value of significant level was greater than 0.05 ($0.9255 > 0.05$). This result can imply that the hypothesis was rejected. It means discretionary accrual did not significantly affect earnings management.
2. The deferred tax asset (X2) had a t count value of 0.141866 and a probability value of 0.8877, which means the value of t count was smaller than 1.99773 ($0.141866 < 1.99773$) and the value of significant level was greater than 0.05 ($0.8877 > 0.05$). This result can imply that the hypothesis was rejected. It means deferred tax asset does not significantly affect earnings management.
3. The current tax asset (X3) had a t count value of 0.363157 and a probability value of 0.7178, which means the value of t count was smaller than 1.99773 ($0.363157 < 1.99773$) and the value of significant level was greater than 0.05 ($0.7178 > 0.05$). This result can imply that the hypothesis was rejected. It means current tax expense did not significantly affect earnings management.
4. The tax planning (X4) had a t count value of 0.288961 and a probability value of 0.7736, which means the value of t count was smaller than 1.99773

(0.288961 < 1.99773) and the value of significant level was greater than 0.05 (0.7736 > 0.05). This result can imply that the hypothesis was rejected. It means tax planning did not significantly affect earnings management.

5. Leverage (X5) had a t count value of -0.287158 and a probability value of 0.7750, which means the value of t count was smaller than 1.99773 (-0.287158 < 1.99773) and the value of significant level was greater than 0.05 (0.7750 > 0.05). This result can imply that the hypothesis was rejected. It means leverage did not significantly affect earning management.
6. Firm size (X5) had a t count value of 0.371340 and a probability value of 0.7117, which means the value of t count was smaller than 1.99773 (0.371340 < 1.99773) and the value of significant level was greater than 0.05 (0.7117 > 0.05). This result can imply that the hypothesis was rejected. It means leverage did not significantly affect earning management.

4.1.2.5.3 Simultaneous Test (F test)

Table 4. 16 F Test Results
(*based on Random Effect Model)

R-squared	0.008955	Mean dependent var	-0.000338
Adjusted R-squared	-0.093567	S.D. dependent var	0.009254
S.E. of regression	0.009677	Sum squared resid	0.005432
F-statistic	0.087346	Durbin-Watson stat	3.566813
Prob(F-statistic)	0.997324		

Sources: Secondary Data Processed, 2023

Based on Table 4.16, the probability value was 0.997324, which means the value was smaller than 0.05 (0.997324 > 0.05) and the F-statistic value was 0.087346. For calculating f table value with the number of samples (n) = 65, the number of

variables (k) = 6, the significant level = 0.05 df1 = k-1 = 6-1 = 5, and df2 = n-k = 65-6 = 59, then in get f table of 2.2332 means f count < f table (0.087346 < 2.2332). This means that discretionary accrual, deferred tax asset, current tax expense, tax planning, leverage, and firm size simultaneously did not significantly affect earnings management.

4.1.2.5.4 Multiple Linear Regression

Table 4. 17 Multiple Linear Regression Results
(*based on Random Effect Model)

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	-0.071235	0.189811	-0.375294	0.7088
DA	-0.000305	0.003250	-0.093951	0.9255
DTA	0.000169	0.001193	0.141866	0.8877
CTX	0.022601	0.062236	0.363157	0.7178
TP	3.342136	11.56604	0.288961	0.7736
LR	-0.107090	0.372931	-0.287158	0.7750
FS	0.002273	0.006121	0.371340	0.7117

Sources: Secondary Data Processed, 2023

Multiple linear regression from Table 4.17 would result in the regression equation as follows:

$$Y = -0.0712 - 0.0003X_1 + 0.0002X_2 + 0.0226X_3 + 3.3421X_4 - 0.1071X_5 + 0.0023X_6 + \epsilon$$

From the results of the multiple regression analysis equation, the constant value (α) was -0.0712 which indicated the value of the earnings management variable. This showed that if the value of independent variable was equal to zero or constant, the company will make earnings management.

1. The regression coefficient value for variable X1, discretionary accrual proxied by DA, was negative. The regression coefficient X1 was -0.0003, meaning that each increase in Tax Planning (X1) was 1 point; thus, the value of earnings management will decrease by 0.0003.
2. The regression coefficient value for variable X2, deferred tax asset proxied by DTA, was positive. The regression coefficient X2 was 0.0002, meaning that each increase in Deferred Tax Asset (X2) was 1 point; thus, the value of earnings management will increase by 0.0002.
3. The regression coefficient value for variable X3, the current tax expense proxied by CTX, was positive. The regression coefficient X3 was 0.0226, meaning that each increase in Current Tax Expense (X2) was 1 point; thus, the value of earnings management will increase by 0.0226.
4. The regression coefficient value for variable X4, the tax planning proxied by TP, was positive. The regression coefficient X3 was 3.3421, meaning that each increase in Tax Planning (X4) was 1 point; thus, the value of earnings management will increase by 3.3421.
5. The regression coefficient value for variable X5, the leverage proxied by LR, was negative. The regression coefficient X5 was -0.1071, meaning that each increase in Leverage (X5) was 1 point; thus, the value of earnings management will decrease by 0.1071.
6. The regression coefficient value for variable X6, the firm size proxied by FS, was positive. The regression coefficient X6 was 0.0023, meaning that each

increase in Firm Size (X6) was 1 point; thus, the value of earnings management will increase by 0.0023.

The error term " ε " represented the difference between the observed value of the dependent variable that was earning management (Y) and the predicted value based on the independent variables (X1 to X6).



4.2 Discussion of Research Results

Table 4. 18 Hypothesis Testing Results
(*based on Random Effect Model)

	Hypothesis	t-Statistic	Prob	Decision
H1	Discretionary Accrual has positive effect on Earnings management	-0.093951	0.9255	Rejected
H2	Deferred Tax Asset has positive effect on Earnings management	0.141866	0.8877	Rejected
H3	Current Tax Expense has negative effect on Earnings management	0.363157	0.7178	Rejected
H4	Tax Planning has positive effect on Earnings management	0.288961	0.7736	Rejected
H5	Leverage has positive effect on Earnings management	-0.287158	0.7750	Rejected
H6	Firm Size has positive effect on Earnings management	0.371340	0.7117	Rejected

4.2.1 Effect of Discretionary Accrual on Earnings management

Discretionary accruals are adjustments made to financial reports that are not rooted in past events or transactions. They are discretionary, meaning that the management can choose the extent and timing of these accruals. This type of accrual can be utilized for the purpose of earning management, a process in which the financial statements are manipulated to attain a specific earnings result.

In this research, variable of discretionary accrual had a beta coefficient of -0.0003 with a significance value of 0.9255 greater than 0.05, and the t count value of -0.093951 was smaller than t table of 1.99773. It means that discretionary accruals

had a negative effect on earnings management, leading to the rejection of hypothesis. The negative impact of discretionary accruals on earnings management indicated that a higher level of discretionary accruals results in a lower likelihood of earnings management practices by the company. Companies were increasingly recognizing the importance of providing more accurate and informative financial statements, resulting in a decrease in the probability of earnings management practices. The results were not consistent with the research by Sisidianto (2019) and Haykal (2018), where they found that the discretionary accrual had a positive and significant effect on earnings management.

This research found that discretionary accruals had a negative effect on earning management, where the manipulation of financial statements through discretionary accruals was not effective in achieving the desired earnings outcome. This can have several implications for the company, stakeholders, and the accounting profession. For the company, it can mean that their financial reporting was not accurately reflecting their true financial performance, leading to decreased credibility and reduced investor confidence. This can result in lower stock prices, reduced access to capital, and potentially legal and reputational consequences. Thus, the first hypothesis which states that Discretionary Accrual has a positive effect on Earnings Management is rejected.

4.2.2 Effect of Deferred Tax Asset on Earnings management

The relationship between deferred tax assets and earnings management is complex and can vary depending on various factors. Deferred tax assets are created when a company pays more taxes in the current year than what it is required to pay

based on its taxable income. These excess tax payments can be used in future years to reduce taxable income and, as a result, lower tax liabilities. Some researchers have found that companies can use deferred tax assets as a tool for earnings management. This is because companies can manipulate the recognition of deferred tax assets to smooth earnings, which can lead to an overstated view of the company's financial performance.

Hypothesis testing results from the comparison between t count and t table obtained t count value of deferred tax assets variable which is smaller than t table ($0.141866 < 1.99773$), and a probability value of $0.8877 > 0.05$ at a level of error of 5%. It was decided to reject the hypothesis. The results of this research indicated that deferred tax assets did not affect earnings management in Shariah Economic Community-States Owned Enterprises (MES-BUMN) companies listed on the Indonesia Stock Exchange. This means that the Deferred Tax Assets variable did not have sufficient information to detect earnings management.

The effect of deferred tax assets on earnings management can be positive or negative, depending on the specific circumstances of the company. In some cases, companies can use deferred tax assets to manipulate financial statements and achieve a desired earnings outcome, which can have a positive impact on earnings management. The results of this research did not prove this opinion, in this case the researcher sees during the observation period that the value of deferred tax assets is highly unstable, meaning that it is uncertain whether deferred tax assets have an impact on earnings management. These results are in line with research conducted by Fajarwati et al. (2020) and Mulyati et al. (2020) which stated that deferred tax assets

have no effect on earnings management. Overall, the second hypothesis which stated Deferred Tax Asset has a positive effect on Earning Management was rejected.

4.2.3 Effect of Current Tax Expense on Earnings management

The impact of the current tax expense on earnings management varies depending on the size of the tax expense. A high current tax expense reduces a company's profits and provides more opportunities for managers to engage in earnings management. On the other hand, a low current tax expense increases profits and offers fewer opportunities for earnings management. Based on the results presented in Table 4.18, it is found that the t count of current tax expense is smaller than t table ($0.363157 < 1.99773$) with a significance value of 0.7178. The significance value of the current tax expense is greater than 0.05 which means that the current tax expense had no affect to earnings management. The current tax expense could not reflect the earnings management in real terms. The result was supported with Fajarwati et al., (2019) which stated current tax expense had no effect on earnings management.

The findings of the research were not aligned with the research done by Ricy et al. (2020), who believed that the current tax expense can reveal the likelihood of earnings management. This was because the current tax expense could reflect taxable income, which was the result of reconciling differences in timing and permanent differences among accounting profits. However, it requires further validation as the current tax expense did not directly show the difference between accounting and tax purposes.

From the findings, suppose the current tax expense has a negative impact on earnings management. In that case, it means that a high current tax expense reduced the opportunities for managers to manipulate financial statements and achieved a desired earnings outcome. This can be seen as a positive development, as it may indicated that the company was following tax laws and regulations and presenting more accurate financial statements. However, it could also put pressure on the company's profits, as a high tax expense would result in lower earnings.

If there was no effect of current tax expense on earnings management, other factors such as accounting policies, reporting practices, and governance mechanisms may play a greater role in earnings management. It is important to note that the absence of an effect did not necessarily mean that earnings management was not taking place, just that current tax expense was not a major factor in this regard. Thus, the third hypothesis which stated that Current Tax Expense has a negative effect on Earning Management was accepted.

4.2.4 Effect of Tax Planning on Earnings management

Earnings management through tax planning refers to manipulating a company's financial statements to minimize its tax liability. This type of earnings management can significantly impact a company's financial performance and reputation. The hypothesis testing results obtained in this research showed that the t count value of the tax planning variable of 0.288961 was smaller than t table of 1.99773, and a probability value of $0.7736 > 0.05$ at a level of error of 5%. The regression coefficient was 3.3421, meaning that each increase in tax planning was 1 point, then the value of earnings management would increase by 3.3421. It was

decided to reject the hypothesis, where the results of this research indicated that tax planning had no effect on earnings management. This implied that tax planning did not provide enough information to identify earnings management.

The findings of this research suggested that tax planning and earnings management had opposing goals, with tax planning aiming to minimize profits and reduce tax payments, while earnings management aimed to increase profits to boost the company's value. Several research, including those conducted by Mulyani (2018) and Rosharlianti & Hidayat (2019) found that tax planning has no significant impact on earnings management. This suggested that tax planning was mainly used to comply with tax laws and regulations and only reduced taxable income without affecting commercial profits. However, the research conducted by Dewi (2021) found a positive effect of tax planning on earnings management, which may be due to differences in the method of calculating tax planning used in their research compared to the method used in this research.

Tax planning can help companies reduce their tax expenses and increase their profits. Companies that effectively managed their taxes can have a competitive advantage over those that did not, as they had more resources for investment and growth. On the other hand, aggressive tax planning can be viewed as unethical and may lead to legal consequences or negative public opinion. The company may face legal or regulatory sanctions if the tax planning practices were found to be unethical or in violation of tax laws. Moreover, the negative impact on earnings management may result in lower stock prices and reduced market capitalization. The company may also face difficulties in securing financing or attracting investment due to the negative

impact on its financial performance. All things considered, the fourth hypothesis which stated that Tax Planning has an effect on Earnings Management was rejected.

4.2.5 Effect of Leverage on Earnings management

The study found that the correlation between leverage and earnings management was not significant, as indicated by the regression coefficient value for leverage being -0.1071 meaning that each increase in leverage was 1 point, so the value of earnings management would decrease by 0.1071. The significance value of 0.7750, which was greater than 0.05, and t count was smaller than t table ($-0.287158 < 1.99773$). This means that an increase in the debt of a manufacturing company, which may result in higher future income did not lead to earnings management practices. These results was in line with previous research conducted by Fajarwati et al. (2020) who also found no significant impact of leverage on earnings management.

The results of the research suggested that the companies in this research had a safe level of leverage, which means they can pay off their debts used to finance their assets. As a result, the managers were not inclined or motivated to engage in earnings management. The companies were in a stable condition and able to repay their debts without the need for actions that would benefit them in specific situations. This indicated that the use of leverage by the companies did not significantly influence their ability to manipulate their financial statements for a desired earnings outcome. In simpler terms, the level of leverage that a company had did not seem to impact the success or failure of their earnings management practices.

The relationship between leverage and earnings management was not straightforward and requires a careful examination of a company's financial status. High levels of leverage can increase the financial risk for a company, which may result in a drop in earnings and a higher possibility of earnings management practices. Conversely, low levels of leverage can decrease financial risk and make it easier for managers to attain their desired earnings goals without resorting to earnings management. It is essential to analyze a company's financial situation in detail to comprehend the connection between leverage and earnings management. Thus, the fifth hypothesis which stated that Leverage has an influence on Earning Management was rejected.

4.2.6 Effect of Firm Size on Earnings management

This research found that company size had a negative impact on earnings management, meaning that as a company grows larger, it became more difficult for management to engage in the manipulation of financial statements. This was because large companies were under more scrutiny from the public, investors, creditors, government, and analysts, and they had a reputation to maintain. Competent auditors from well-known accounting firms often audit big companies, and the auditing process is more thorough, leading to more transparent and accountable financial reporting. Also, the cost of manipulating earnings was considered high for big companies.

The regression analysis results showed that company size had no significant impact on earnings management. The t count value of 0.371340 was smaller than 1.99773 ($0.371340 < 1.99773$) and its significance value was 0.7117, which was

greater than 0.05. This indicated that the size of a company did not have a meaningful relationship with the practice of earnings management. The t-value for company size was also smaller than the t-table value, meaning that the results were not statistically significant. The results were consistent with research by Ayu (2022) and Agustia & Suryani (2018), which also concluded that firm size had no influence on earnings management. According to Agustia & Suryani (2018), strict regulation by the government, analysts, and investors discourages earnings management. The fear of being caught committing fraudulent practices can harm the credibility of a company's management and is a deterrent to earnings management.

This research was supported by the positive accounting theory and the political costs hypothesis, which suggested that larger companies were more susceptible to public scrutiny and pressure, leading to a greater cost of accounting activities. The hypothesis posits that bigger companies were more politically sensitive and need to adopt different accounting methods than smaller companies to avoid any political costs. Because of the higher public attention and scrutiny, larger firms are likelier to avoid earnings management practices to maintain their reputation and credibility. This evidence supported the research by Ghofir and Yusuf (2020), who found that company size had a negative impact on earnings management due to increased scrutiny from analysts. Overall, the sixth hypothesis which stated that Firm Size has a significant effect on Earnings Management was rejected.

CHAPTER V

CONCLUSIONS

5.1 Conclusions

Based on the results of this research regarding the determinant factors that influenced earnings management in shariah enterprise, it can be concluded that:

1. Discretionary accrual had no significant effect on earnings management. This was since businesses were now beginning to understand how crucial it was to offer financial statements that were more accurate and informative. It can imply that firms were not depending on these adjustments to hit profit targets or that investors and analysts were not taking these adjustments into account when assessing a firm's financial performance.
2. Deferred tax assets do not significantly impact earnings management. This is a result of the risk that comes with having a lot of deferred tax assets, which includes the possibility that people would dispute the financial statement's veracity. It would suggest that the deferred tax asset does not significantly shape a company's financial performance.
3. Based on the discussion, other factors like current tax expense did not significantly affect earnings management. It means that a company's management was not considering the current tax expenses when making decisions that affect earnings. If the management is not considering the impact of current tax expenses on earnings, in that case they may make decisions that

result in higher reported earnings but lower company's true financial performance.

4. The fourth variable was tax planning, which had no significant effect on earnings management. This was because businesses employed tax planning to prevent declining earnings rather than to boost profits to reach the revenue level. It was contrary to earnings management's objective, which was to increase profit. The prevalence of earnings management was determined by a multitude of other elements.
5. The effect of leverage was not significant simultaneously on earnings management. In this research, most of the companies had a safe leverage level, meaning that they could pay their debts without difficulty, and may not have a strong motivation to engage in earnings management. The financial stability and good condition of these companies may give managers the confidence to report their financial results honestly without having to resort practices that manipulated earnings to achieve specific goals or hide any financial weaknesses.
6. The effect of firm size did not have significant influence on earnings management. It was because the size of a firm did not appear to have any impact on the level of earnings management that the firm engaged in. In other word, the level of earnings management practices was not influenced by the size of the company. If the results of a research indicated that there was no effect of firm size on earnings management, it suggested that other factors, such as ownership structure or regulatory environment, may be more

important in determining the level of earnings management that the firm engaged.

5.2 Limitations

The limitations of this research are as follows:

1. Secondary data sources were the foundation of this investigation. Due to the incompleteness of the company data, some companies were eliminated from the samples using the secondary data from www.idx.co.id.
2. The boundaries of this research were only based on shariah enterprise companies as part of Shariah Economic Community State Owned Enterprises (MES-BUMN) in the Indonesia Stock Exchange for the period 2017-2021. As a result, the number of companies that serve populations was minimal.
3. The determinant factors for this research only consist of six independent variables, where all these variables could not conclude all of the factors that would influence the earning management in making the financial statement performance.

5.3 Suggestion

Based on the limitations of this research, the authors advise the next researcher:

1. The study can be expanded to include additional factors influencing earnings management. The observation period might be extended to get the best results, and the research samples can be larger.

2. More research is anticipated to pay for a model that better explains earnings management, its deeper connection to the variable of accounting, and other tax-related variables.
3. The only strategy used in this research was earnings management which was the profit distribution approach. A different proxy measure of management in the probability of doing earning managements may be used in future research.



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APPENDIX 1

DATA CALCULATION

1. Earnings management

No	Code	Company	Year	NI(it)-NI(it-1)	MV t-1	EM
1	ADHI	Adhi Karya (Persero) Tbk.	2017	201,952,065,072	740,656,670,208,000	0.0003
			2018	127,969,600,898	671,220,107,376,000	0.0002
			2019	20,018,972,424	564,394,626,096,000	0.0000
			2020	-641,345,769,082	418,399,801,680,000	(0.0015)
			2021	62,797,147,938	546,590,379,216,000	0.0001
2	ANTM	Aneka Tambang Tbk.	2017	71,697,081,000	2,150,753,443,335,000	0.0000
			2018	737,923,324,000	1,501,922,795,625,000	0.0005
			2019	-680,574,562,000	1,838,353,501,845,000	(0.0004)
			2020	955,501,662,000	2,018,584,237,320,000	0.0005
			2021	712,386,307,000	4,649,952,975,255,000	0.0002
3	ELSA	Elnusa Tbk.	2017	-65,312,000,000	3,065,370,000,000	(0.0213)
			2018	25,562,000,000	2,715,042,000,000	0.0094
			2019	80,161,000,000	2,510,684,000,000	0.0319
			2020	-133,800,000,000	2,233,341,000,000	(0.0599)
			2021	44,717,000,000	2,569,072,000,000	0.0174
4	KAEF	Kimia Farma Tbk.	2017	60,109,969,798	1,527,350,000,000,000	0.0000
			2018	70,084,891,487	1,499,580,000,000,000	0.0000
			2019	-385,902,369,948	1,444,040,000,000,000	(0.0003)
			2020	4,535,317,000	694,250,000,000,000	0.0000
			2021	269,463,033,000	2,360,450,000,000,000	0.0001
5	PGAS	Perusahaan Gas Negara Tbk.	2017	-1,486,625,071,903	13,922,127,313,339,500	(0.0001)
			2018	1,960,519,513,690	9,023,601,036,423,750	0.0002
			2019	-3,921,578,277,095	10,931,448,112,696,200	(0.0004)
			2020	-3,635,290,393,031	11,189,265,285,165,400	(0.0003)
			2021	6,240,199,151,199	8,533,748,408,732,170	0.0007
6	PTBA	Bukit Asam Tbk.	2017	4,547,232,000,000	2,880,165,000,000,000	0.0016
			2018	573,880,000,000	2,834,082,360,000,000	0.0002
			2019	-1,080,718,000,000	4,953,883,800,000,000	(0.0002)
			2020	-1,632,467,000,000	3,064,495,560,000,000	(0.0005)
			2021	5,628,961,000,000	3,237,305,460,000,000	0.0017
7	PTPP	PP (Persero) Tbk.	2017	575,376,573,570	2,362,160,891,874,000	0.0002
			2018	235,140,165,074	1,636,772,901,456,000	0.0001
			2019	-750,722,504,030	1,119,081,472,397,000	(0.0007)
			2020	-1,081,775,709,474	982,683,730,609,000	(0.0011)
			2021	-105,474,947,929	1,156,280,856,521,000	(0.0001)
8	SMBR	Semen Baturaja (Persero) Tbk.	2017	-112,442,093,000	2,769,018,441,120,000	(0.0000)
			2018	-70,573,711,000	3,771,422,966,400,000	(0.0000)
			2019	-46,000,866,000	1,736,839,524,000,000	(0.0000)
			2020	-19,092,182,000	436,691,080,320,000	(0.0000)
			2021	40,835,632,000	1,056,990,910,320,000	0.0000
9	SMGR	Semen Indonesia (Persero) Tbk.	2017	-2,492,010,909,000	5,442,169,600,000,000	(0.0005)
			2018	1,042,678,086,000	5,872,204,800,000,000	0.0002
			2019	-714,471,000,000	6,821,248,000,000,000	(0.0001)
			2020	303,110,000,000	7,117,824,000,000,000	0.0000
			2021	-591,996,000,000	7,369,913,600,000,000	(0.0001)
10	TINS	Timah Tbk.	2017	219,368,000,000	400,317,100,000,000	0.0005
			2018	-370,132,000,000	281,152,940,000,000	(0.0013)
			2019	-743,569,000,000	281,152,940,000,000	(0.0026)
			2020	274,878,000,000	307,220,100,000,000	0.0009
			2021	1,639,662,000,000	552,996,180,000,000	0.0030
11	TLKM	Telkom Indonesia (Persero) Tbk.	2017	3,529,000,000,000	20,059,200,000,000,000	0.0002
			2018	-5,722,000,000,000	22,377,600,000,000,000	(0.0003)
			2019	613,000,000,000	18,900,000,000,000,000	0.0000
			2020	1,971,000,000,000	20,008,800,000,000,000	0.0001
			2021	4,385,000,000,000	16,682,400,000,000,000	0.0003
12	WIKA	Wijaya Karya (Persero) Tbk.	2017	145,086,179,000	2,116,908,523,320,000	0.0001
			2018	717,184,375,000	1,390,342,462,350,000	0.0005
			2019	547,715,276,000	1,484,526,951,735,000	0.0004
			2020	-2,298,672,627,000	1,785,020,322,630,000	(0.0013)
			2021	-107,917,719,000	1,780,535,346,945,000	(0.0001)
13	WTON	Wijaya Karya Beton Tbk.	2017	58,310,779,548	719,025,994,500,000	0.0001
			2018	146,181,315,062	435,773,330,000,000	0.0003
			2019	24,071,558,950	327,701,544,160,000	0.0001
			2020	-387,564,653,983	392,195,997,000,000	(0.0010)
			2021	-41,713,121,851	336,417,010,760,000	(0.0001)

2. Discretionary Accrual

No	Code	Company	Year	a1(1/Ait-1)	a2 ((DREvit-DRECit)/Ait-1)	a3(PPE/Ait-1)	NDA	DAC (Y)
1	ADHI	Adhi Karya (Persero) Tbk.	2017	0.0000000000002458	0.06491	0.0938	0.15869	0.0276
			2018	0.0000000000001744	0.00076	0.0688	0.06956	-0.0493
			2019	0.0000000000001640	-0.00953	0.0756	0.06603	-0.0604
			2020	0.0000000000001353	-0.03122	0.0748	0.04358	-0.0807
			2021	0.0000000000001297	0.00808	0.0699	0.07802	-0.0994
2	ANTM	Aneka Tambang Tbk.	2017	0.0000000000000730	-0.04436	0.1941	0.14977	-0.1912
			2018	0.0000000000000730	-0.16418	0.2770	0.11279	-0.1461
			2019	0.0000000000000658	-0.08664	0.2339	0.14730	-0.1905
			2020	0.0000000000000725	0.07347	0.2496	0.32306	-0.3585
			2021	0.0000000000000690	-0.13483	0.2195	0.08467	-0.1849
3	ELSA	Elnusa Tbk.	2017	0.00000000000005679	0.11806	0.0487	0.16680	-0.2013
			2018	0.00000000000004902	0.16685	0.0469	0.21372	-0.2278
			2019	0.00000000000004902	0.15556	0.0489	0.20447	-0.2496
			2020	0.00000000000003497	-0.06418	0.0347	-0.02952	-0.0742
			2021	0.00000000000003147	0.02185	0.0312	0.05304	-0.1505
4	KAEF	Kimia Farma Tbk.	2017	-0.00000000000012531	0.00772	-0.0889	-0.08119	0.1520
			2018	-0.00000000000009481	0.07603	-0.1074	-0.03135	0.0549
			2019	-0.00000000000006110	0.03283	-0.2384	-0.20553	0.4032
			2020	-0.00000000000003149	0.02417	-0.1245	-0.10032	0.0459
			2021	-0.00000000000003291	0.05142	-0.1301	-0.07867	1.0887
5	PGAS	Perusahaan Gas Negara Tbk.	2017	0.00000000000000399	-0.00998	0.0611	0.05110	0.8038
			2018	0.00000000000000432	0.09984	0.1305	0.23035	1.0820
			2019	0.00000000000000291	0.00057	0.0844	0.08502	0.7416
			2020	0.00000000000000313	-0.08732	0.0398	-0.04755	0.7996
			2021	0.00000000000000392	0.00001	0.0492	0.04926	0.9438
6	PTBA	Bukit Asam Tbk.	2017	0.00000000000000700	-0.01444	0.3227	0.30826	0.7453
			2018	0.00000000000000591	-0.02343	0.2880	0.26453	0.4770
			2019	0.00000000000000538	-0.00311	0.2909	0.28783	0.6141
			2020	0.00000000000000498	0.01554	0.2914	0.30691	0.4802
			2021	0.00000000000000540	-0.04936	0.3345	0.28513	0.7677
7	PTPP	PP (Persero) Tbk.	2017	0.00000000000000823	0.11988	0.0061	0.12594	1.1657
			2018	0.00000000000000615	-0.09577	0.0311	-0.06463	1.3052
			2019	0.00000000000000489	-0.01405	0.0278	0.01378	1.1064
			2020	0.00000000000000434	-0.17212	0.0051	-0.16702	0.4879
			2021	0.00000000000001389	-0.10616	0.0148	-0.09131	1.2371
8	SMBR	Semen Baturaja (Persero) Tbk.	2017	-0.00000000000000977	-0.01704	1.1008	1.08380	0.0325
			2018	-0.00000000000000848	0.03224	0.9920	1.02421	0.0575
			2019	-0.00000000000000728	0.00088	0.9424	0.94328	0.0468
			2020	-0.000000000000007682	-0.01988	0.9526	0.93276	0.0338
			2021	-0.000000000000007460	0.00046	0.9011	0.90159	0.0471
9	SMGR	Semen Indonesia (Persero) Tbk.	2017	0.00000000000000470	0.00090	0.6376	0.63847	0.4066
			2018	0.00000000000000425	0.00254	0.5736	0.57611	0.3700
			2019	0.00000000000000410	0.01114	0.9663	0.97746	0.4836
			2020	0.00000000000000261	-0.00354	0.6089	0.60541	0.2815
			2021	0.00000000000000267	0.00004	0.6082	0.60823	0.2868
10	TINS	Timah Tbk.	2017	0.00000000000000534	0.11138	0.0939	0.20524	1.0544
			2018	0.00000000000000429	0.07633	0.0950	0.17134	1.2165
			2019	0.00000000000000335	0.37683	0.0861	0.46295	1.0115
			2020	0.00000000000000250	-0.12022	0.0629	-0.05734	0.5051
			2021	0.00000000000000351	-0.05899	0.0865	0.02747	0.7062
11	TLKM	Telkom Indonesia (Persero) Tbk.	2017	-0.00000000000000285	0.07082	-0.3899	-0.31908	1.1491
			2018	-0.00000000000000258	0.04014	-0.3883	-0.34814	1.1569
			2019	-0.00000000000000248	0.04708	-0.4096	-0.36249	1.1688
			2020	-0.00000000000000231	0.03092	-0.3914	-0.36046	1.1815
			2021	-0.00000000000000207	0.03578	-0.3595	-0.32375	1.1694
12	WIKA	Wijaya Karya (Persero) Tbk.	2017	0.000000000000003939	-0.12644	0.0374	-0.08907	1.4859
			2018	0.000000000000002703	-0.04243	0.0305	-0.01193	1.2223
			2019	0.000000000000002085	0.02193	0.0259	0.04786	0.9867
			2020	0.000000000000001988	0.05741	0.0241	0.08152	1.0100
			2021	0.000000000000001813	-0.00738	0.0386	0.03127	1.0424
13	WTON	Wijaya Karya Beton Tbk.	2017	-0.0000000000000030881	0.20406	1.0941	1.29812	0.0983
			2018	-0.0000000000000020374	0.11228	0.7941	0.90641	0.2464
			2019	-0.0000000000000016213	0.00870	0.6457	0.65441	0.3828
			2020	-0.0000000000000013929	-0.11160	0.5438	0.43218	0.3132
			2021	-0.0000000000000016923	-0.02917	0.7055	0.67633	0.3677

3. Deferred Tax Asset

No	Code	Company	Year	Δ DTA	DTA
1	ADHI	Adhi Karya (Persero) Tbk.	2017	1,337,156,440	1.076966048
			2018	12,193,739	0.004728542
			2019	-61,912,818	(0.023895836)
			2020	779,544,057	0.308237983
			2021	1,084,429,701	0.327763161
2	ANTM	Aneka Tambang Tbk.	2017	-254,032,149,000	(0.453110060)
			2018	-86,513,323,000	(0.282161711)
			2019	-90,647,158,000	(0.411853404)
			2020	43,925,517,000	0.339328051
			2021	-61,903,046,000	(0.357049094)
3	ELSA	Elnusa Tbk.	2017	15,460,000,000	0.182923943
			2018	9,708,000,000	0.097103305
			2019	17,914,000,000	0.163323730
			2020	-9,967,000,000	(0.078112510)
			2021	-4,971,000,000	(0.042259268)
4	KAEF	Kimia Farma Tbk.	2017	-4,179,950,466	(0.136802771)
			2018	34,242,442,316	1.298310153
			2019	-31,363,687,471	(0.517406884)
			2020	36,898,731,000	1.261349364
			2021	35,913,566,000	0.542893734
5	PGAS	Perusahaan Gas Negara Tbk.	2017	-13,133,477,064	(0.037193010)
			2018	1,643,663,113,012	4.834540258
			2019	-15,261,772,038	(0.007693796)
			2020	-1,587,786,261,681	(0.806644292)
			2021	95,293,691,422	0.250378583
6	PTBA	Bukit Asam Tbk.	2017	350,389,000,000	0.723685542
			2018	-109,350,000,000	(0.131026814)
			2019	-83,268,000,000	(0.114818839)
			2020	-99,300,000,000	(0.154686390)
			2021	226,189,000,000	0.416827607
7	PTPP	PP (Persero) Tbk.	2017	-3,169,351,372	(0.162852208)
			2018	-3,821,717,898	(0.234573933)
			2019	-6,639,332,719	(0.532405224)
			2020	368,780,097	0.063243471
			2021	10,110,696,180	1.630784447
8	SMBR	Semen Baturaja (Persero) Tbk.	2017	9,530,320,000	2.860573200
			2018	41,456,852,000	3.223221208
			2019	13,698,535,000	0.252187807
			2020	58,743,090,000	0.863649007
			2021	18,381,082,000	0.145006490
9	SMGR	Semen Indonesia (Persero) Tbk.	2017	-87,774,162,000	(0.116644595)
			2018	-102,109,161,000	(0.153612714)
			2019	95,653,000,000	0.170016832
			2020	-106,283,000,000	(0.161460027)
			2021	-78,458,000,000	(0.142139465)
10	TINS	Timah Tbk.	2017	9,281,000,000	0.053765185
			2018	15,086,000,000	0.082934767
			2019	128,598,000,000	0.652821492
			2020	20,511,000,000	0.062997180
			2021	18,793,000,000	0.054299806
11	TLKM	Telkom Indonesia (Persero) Tbk.	2017	2,035,000,000,000	2.646293888
			2018	-300,000,000,000	(0.106990014)
			2019	394,000,000,000	0.157348243
			2020	680,000,000,000	0.234644582
			2021	246,000,000,000	0.068753494
12	WIKA	Wijaya Karya (Persero) Tbk.	2017	7,470,785,000	0.409829262
			2018	5,737,492,000	0.223250427
			2019	6,711,447,000	0.213486784
			2020	25,539,872,000	0.669481368
			2021	27,191,804,000	0.426949219
13	WTON	Wijaya Karya Beton Tbk.	2017	457,573,330	1.120770199
			2018	446,687,424	0.515900543
			2019	2,598,496,113	1.979764910
			2020	22,922,898,511	5.861099321
			2021	5,172,747,719	0.192768976

4. Current Tax Asset

No	Code	Company	Year	ΔCTX	Total Asset	CTX
1	ADHI	Adhi Karya (Persero) Tbk.	2017	867,286,000	28,332,948,012,950	0.000030611
			2018	2,670,236,652	30,118,614,769,882	0.000088657
			2019	-4,191,752,052	36,515,833,214,549	(0.000114793)
			2020	-1,135,638,020	38,093,888,626,552	(0.000029812)
			2021	5,592,248,720	39,900,337,834,619	0.000140155
2	ANTM	Aneka Tambang Tbk.	2017	50,708,925,000	30,014,273,452,000	0.001689494
			2018	241,014,635,000	33,306,390,807,000	0.007236288
			2019	133,123,705,000	30,194,907,730,000	0.004408813
			2020	49,600,999,000	31,729,512,995,000	0.001563245
			2021	557,236,000,000	32,916,154,000,000	0.016928952
3	ELSA	Elnusa Tbk.	2017	1,541,000,000	4,855,369,000,000	0.000317381
			2018	3,062,000,000	4,855,369,000,000	0.000630642
			2019	33,829,000,000	6,805,037,000,000	0.004971171
			2020	-41,022,000,000	7,562,822,000,000	(0.005424166)
			2021	7,684,000,000	7,234,857,000,000	0.001062080
4	KAEF	Kimia Farma Tbk.	2017	15,967,830,475	6,096,148,972,533	0.002619331
			2018	111,606,340,598	9,460,427,317,681	0.011797178
			2019	-131,853,827,000	18,352,877,132,000	(0.007184368)
			2020	-42,287,114,000	17,562,816,674,000	(0.002407764)
			2021	30,421,648,000	17,760,195,040,000	0.001712912
5	PGAS	Perusahaan Gas Negara Tbk.	2017	-456,483,353,108	83,360,753,532,885	(0.005475998)
			2018	351,368,070,778	123,717,693,761,361	0.002840079
			2019	-153,439,396,387	114,904,572,109,948	(0.001335364)
			2020	-260,919,227,554	91,743,102,363,137	(0.002844020)
			2021	228,487,280,217	92,239,408,353,239	0.002477111
6	PTBA	Bukit Asam Tbk.	2017	903,624,000,000	21,987,482,000,000	0.041097202
			2018	-29,737,000,000	24,172,933,000,000	(0.001230178)
			2019	-298,189,000,000	26,098,052,000,000	(0.011425719)
			2020	-602,172,000,000	24,056,755,000,000	(0.025031306)
			2021	1,678,550,000,000	36,123,703,000,000	0.046466720
7	PTPP	PP (Persero) Tbk.	2017	47,755,967,325	41,782,780,915,111	0.001142958
			2018	-37,452,231,374	52,549,150,902,972	(0.000712709)
			2019	3,580,747,030	59,165,548,433,821	0.000060521
			2020	-30,211,964,374	18,496,821,048,659	(0.001633360)
			2021	549,654,502	21,086,427,083,575	0.000026067
8	SMBR	Semen Baturaja (Persero) Tbk.	2017	-27,891,303,000	5,060,337,247,000	(0.005511748)
			2018	6,983,266,000	5,538,079,503,000	0.001260954
			2019	-12,783,578,000	5,571,270,204,000	(0.002294554)
			2020	-31,012,481,000	5,737,175,560,000	(0.005405531)
			2021	-8,949,070,000	5,817,745,619,000	(0.001538237)
9	SMGR	Semen Indonesia (Persero) Tbk.	2017	153,935,729,000	48,963,502,966,000	0.003143887
			2018	315,734,551,000	50,783,836,000,000	0.006217225
			2019	-194,713,000,000	79,807,067,000,000	(0.002439796)
			2020	-10,235,000,000	78,006,244,000,000	(0.000131207)
			2021	573,483,000,000	76,504,240,000,000	0.007496094
10	TINS	Timah Tbk.	2017	25,591,000,000	11,876,309,000,000	0.002154794
			2018	-171,783,000,000	15,220,685,000,000	(0.011286154)
			2019	-15,450,000,000	20,361,278,000,000	(0.000758793)
			2020	55,219,000,000	14,517,700,000,000	0.003803564
			2021	358,803,000,000	14,690,989,000,000	0.024423339
11	TLKM	Telkom Indonesia (Persero) Tbk.	2017	-85,000,000,000	198,484,000,000,000	(0.000428246)
			2018	-350,000,000,000	206,196,000,000,000	(0.001697414)
			2019	1,036,000,000,000	221,208,000,000,000	0.004683375
			2020	704,000,000,000	246,943,000,000,000	0.002850860
			2021	260,000,000,000	277,184,000,000,000	0.000938005
12	WIKA	Wijaya Karya (Persero) Tbk.	2017	22,065,943,000	45,683,774,302,000	0.000483015
			2018	-56,296,219,000	59,230,001,239,000	(0.000950468)
			2019	-16,354,869,000	62,110,847,154,000	(0.000263317)
			2020	-7,775,689,000	68,109,185,213,000	(0.000114165)
			2021	-17,554,060,000	69,385,794,346,000	(0.000252992)
13	WTON	Wijaya Karya Beton Tbk.	2017	516,421,335,963	7,067,976,095,043	0.073064952
			2018	-419,964,953,924	8,881,778,299,672	(0.047283882)
			2019	-29,149,503,265	10,337,895,087,207	(0.002819675)
			2020	369,328,218,821	8,509,017,299,594	0.043404333
			2021	1,211,429,684,274	8,928,183,492,920	0.135686020

5. Tax Planning

No	Code	Company	Year	NI (Net Income)	Earning Before Income T	TRR
1	ADHI	Adhi Karya (Persero) Tbk.	2017	517,059,848,207	518,983,115,109	0.99629
			2018	645,029,449,105	649,504,162,099	0.99311
			2019	665,048,421,529	686,491,539,347	0.96876
			2020	23,702,652,447	39,735,297,098	0.59651
2	ANTM	Aneka Tambang Tbk.	2021	86,499,800,385	99,232,995,537	0.87168
			2017	136,503,269,000	454,396,524,000	0.30041
			2018	874,426,593,000	1,265,501,806,000	0.69097
			2019	193,852,031,000	687,034,053,000	0.28216
3	ELSA	Elnusa Tbk.	2020	1,149,353,693,000	1,641,178,012,000	0.70032
			2021	1,861,740,000,000	3,043,509,000,000	0.61171
			2017	250,754,000,000	326,366,000,000	0.76832
			2018	276,316,000,000	351,807,000,000	0.78542
4	KAEF	Kimia Farma Tbk.	2019	356,477,000,000	466,749,000,000	0.76374
			2020	222,677,000,000	344,877,000,000	0.64567
			2021	267,394,000,000	202,720,000,000	1.31903
			2017	331,707,917,461	449,709,762,422	0.7376
5	PGAS	Perusahaan Gas Negara Tbk.	2018	401,792,808,948	577,726,327,511	0.69547
			2019	15,890,439,000	38,315,488,000	0.41473
			2020	20,425,756,000	73,359,098,000	0.27844
			2021	289,888,789,000	392,883,409,000	0.73785
6	PTBA	Bukit Asam Tbk.	2017	3,721,644,725,090	4,545,057,099,031	0.81883
			2018	5,682,164,238,780	9,114,563,473,155	0.62342
			2019	1,760,585,961,685	4,361,720,517,253	0.40364
			2020	(1,874,704,431,346)	(1,245,565,614,482)	1.5051
7	PTPP	PP (Persero) Tbk.	2021	4,365,494,719,853	5,376,614,161,667	0.81194
			2017	4,547,232,000,000	6,101,629,000,000	0.74525
			2018	5,121,112,000,000	6,799,056,000,000	0.75321
			2019	4,040,394,000,000	5,455,162,000,000	0.74066
8	SMBR	Semen Baturaja (Persero) Tbk.	2020	2,407,927,000,000	3,231,685,000,000	0.7451
			2021	8,036,888,000,000	10,358,675,000,000	0.77586
			2017	1,723,852,894,286	1,792,261,562,466	0.96183
			2018	1,958,993,059,360	2,003,090,738,328	0.97799
9	SMGR	Semen Indonesia (Persero) Tbk.	2019	1,208,270,555,330	1,239,763,092,293	0.9746
			2020	126,494,845,856	127,650,713,946	0.99095
			2021	21,019,897,927	22,725,420,519	0.92495
			2017	146,648,432,000	208,947,154,000	0.70184
10	TINS	Timah Tbk.	2018	76,074,721,000	145,356,709,000	0.52337
			2019	30,073,855,000	86,572,265,000	0.34738
			2020	10,981,673,000	36,467,602,000	0.30114
			2021	51,817,305,000	68,354,164,000	0.75807
11	TLKM	Telkom Indonesia (Persero) Tbk.	2017	2,043,025,914,000	2,746,546,363,000	0.74385
			2018	3,085,704,000,000	4,104,959,000,000	0.7517
			2019	2,371,233,000,000	3,195,775,000,000	0.74199
			2020	2,674,343,000,000	3,488,650,000,000	0.76658
12	WIKA	Wijaya Karya (Persero) Tbk.	2021	2,082,347,000,000	3,470,137,000,000	0.60008
			2017	502,417,000,000	716,211,000,000	0.70149
			2018	132,285,000,000	199,058,000,000	0.66456
			2019	-611,284,000,000	-722,414,000,000	0.84617
13	WTON	Wijaya Karya Beton Tbk.	2020	-336,406,000,000	-269,760,000,000	1.24706
			2021	1,303,256,000,000	1,728,705,000,000	0.75389
			2017	32,701,000,000,000	42,659,000,000,000	0.76657
			2018	26,979,000,000,000	36,405,000,000,000	0.74108
14	WTON	Wijaya Karya Beton Tbk.	2019	27,592,000,000,000	37,908,000,000,000	0.72787
			2020	29,563,000,000,000	38,775,000,000,000	0.76242
			2021	33,948,000,000,000	43,678,000,000,000	0.77723
			2017	1,356,115,489,000	1,462,391,358,000	0.92733
15	WTON	Wijaya Karya Beton Tbk.	2018	2,073,299,864,000	2,358,628,934,000	0.87903
			2019	2,621,015,140,000	2,789,255,688,000	0.93968
			2020	322,342,513,000	310,275,688,000	1.03889
			2021	214,424,794,000	196,664,427,000	1.09031
16	WTON	Wijaya Karya Beton Tbk.	2017	340,458,859,391	419,501,620,158	0.81158
			2018	486,640,174,453	619,251,303,685	0.78585
			2019	510,711,733,403	626,270,544,710	0.81548
			2020	123,147,079,420	130,504,809,969	0.94362
2021	81,433,957,569	78,646,542,746	1.03544			

6. Leverage

No	Code	Company	Year	Total of Liability	Total of Asset	DAR
1	ADHI	Adhi Karya (Persero) Tbk.	2017	22,463,030,586,953	28,332,948,012,950	79.28%
			2018	23,833,342,873,624	30,118,614,769,882	79.13%
			2019	29,681,535,534,528	36,515,833,214,549	81.28%
			2020	32,519,078,179,194	38,093,888,626,552	85.37%
			2021	34,242,630,632,194	39,900,337,834,619	85.82%
2	ANTM	Aneka Tambang Tbk.	2017	11,523,869,935,000	30,014,273,452,000	38.39%
			2018	13,567,160,084,000	33,306,390,807,000	40.73%
			2019	12,061,488,555,000	30,194,907,730,000	39.95%
			2020	12,690,063,970,000	31,729,512,995,000	39.99%
			2021	12,079,056,000,000	32,916,154,000,000	36.70%
3	ELSA	Elnusa Tbk.	2017	1,803,449,000,000	4,855,369,000,000	37.14%
			2018	2,357,127,000,000	4,855,369,000,000	48.55%
			2019	3,456,723,000,000	6,805,037,000,000	50.80%
			2020	3,821,876,000,000	7,562,822,000,000	50.54%
			2021	3,456,723,000,000	7,234,857,000,000	47.78%
4	KAEF	Kimia Farma Tbk.	2017	3,523,628,217,406	6,096,148,972,533	57.80%
			2018	6,103,967,587,830	9,460,427,317,681	64.52%
			2019	10,939,950,304,000	18,352,877,132,000	59.61%
			2020	10,457,144,628,000	17,562,816,674,000	59.54%
			2021	10,528,322,405,000	17,760,195,040,000	59.28%
5	PGAS	Perusahaan Gas Negara Tbk.	2017	33,578,481,833,340	83,360,753,532,885	40.28%
			2018	73,822,630,811,848	123,717,693,761,361	59.67%
			2019	64,504,461,481,325	114,904,572,109,948	56.14%
			2020	39,318,553,014,359	91,743,102,363,137	42.86%
			2021	35,424,785,281,040	92,239,408,353,239	38.41%
6	PTBA	Bukit Asam Tbk.	2017	8,187,497,000,000	21,987,482,000,000	37.24%
			2018	7,903,237,000,000	24,172,933,000,000	32.69%
			2019	7,675,226,000,000	26,098,052,000,000	29.41%
			2020	7,117,559,000,000	24,056,755,000,000	29.59%
			2021	11,869,979,000,000	36,123,703,000,000	32.86%
7	PTPP	PP (Persero) Tbk.	2017	27,539,670,430,514	41,782,780,915,111	65.91%
			2018	36,233,538,927,553	52,549,150,902,972	68.95%
			2019	41,839,415,194,726	59,165,548,433,821	70.72%
			2020	14,044,751,384,971	18,496,821,048,659	75.93%
			2021	16,588,283,290,255	21,086,427,083,575	78.67%
8	SMBR	Semen Baturaja (Persero) Tbk.	2017	1,647,477,388,000	5,060,337,247,000	32.56%
			2018	2,064,408,447,000	5,538,079,503,000	37.28%
			2019	2,088,977,112,000	5,571,270,204,000	37.50%
			2020	2,329,286,953,000	5,737,175,560,000	40.60%
			2021	2,351,501,098,000	5,817,745,619,000	40.42%
9	SMGR	Semen Indonesia (Persero) Tbk.	2017	18,524,450,664,000	48,963,502,966,000	37.83%
			2018	18,168,521,000,000	50,783,836,000,000	35.78%
			2019	43,915,143,000,000	79,807,067,000,000	55.03%
			2020	40,571,674,000,000	78,006,244,000,000	52.01%
			2021	34,940,122,000,000	76,504,240,000,000	45.67%
10	TINS	Timah Tbk.	2017	5,814,816,000,000	11,876,309,000,000	48.96%
			2018	9,072,333,000,000	15,220,685,000,000	59.61%
			2019	15,102,873,000,000	20,361,278,000,000	74.17%
			2020	9,577,564,000,000	14,517,700,000,000	65.97%
			2021	8,382,569,000,000	14,690,989,000,000	57.06%
11	TLKM	Telkom Indonesia (Persero) Tbk.	2017	86,354,000,000,000	198,484,000,000,000	43.51%
			2018	88,893,000,000,000	206,196,000,000,000	43.11%
			2019	103,958,000,000,000	221,208,000,000,000	47.00%
			2020	126,054,000,000,000	246,943,000,000,000	51.05%
			2021	131,785,000,000,000	277,184,000,000,000	47.54%
12	WIKA	Wijaya Karya (Persero) Tbk.	2017	31,051,949,689,000	45,683,774,302,000	67.97%
			2018	42,014,686,674,000	59,230,001,239,000	70.93%
			2019	42,895,114,167,000	62,110,847,154,000	69.06%
			2020	51,451,760,142,000	68,109,185,213,000	75.54%
			2021	51,950,716,634,000	69,385,794,346,000	74.87%
13	WTON	Wijaya Karya Beton Tbk.	2017	4,320,040,760,958	7,067,976,095,043	61.12%
			2018	5,744,966,289,467	8,881,778,299,672	64.68%
			2019	6,829,449,147,200	10,337,895,087,207	66.06%
			2020	5,118,444,300,470	8,509,017,299,594	60.15%
			2021	5,480,299,148,683	8,928,183,492,920	61.38%

7. Firm Size

No	Code	Company	Year	Total Asset	Firm Size
1	ADHI	Adhi Karya (Persero) Tbk.	2017	28,332,948,012,950	30.97504648
			2018	30,118,614,769,882	31.03616453
			2019	36,515,833,214,549	31.22876707
			2020	38,093,888,626,552	31.27107498
			2021	39,900,337,834,619	31.31740591
2	ANTM	Aneka Tambang Tbk.	2017	30,014,273,452,000	31.03269417
			2018	33,306,390,807,000	31.13677041
			2019	30,194,907,730,000	31.03869441
			2020	31,729,512,995,000	31.08826837
			2021	32,916,154,000,000	31.12498466
3	ELSA	Elnusa Tbk.	2017	4,855,369,000,000	29.21110622
			2018	4,855,369,000,000	29.21110622
			2019	6,805,037,000,000	29.54868419
			2020	7,562,822,000,000	29.65426552
			2021	7,234,857,000,000	29.60993171
4	KAEF	Kimia Farma Tbk.	2017	6,096,148,972,533	29.43867837
			2018	9,460,427,317,681	29.87813867
			2019	18,352,877,132,000	30.54080747
			2020	17,562,816,674,000	30.49680509
			2021	17,760,195,040,000	30.50798084
5	PGAS	Perusahaan Gas Negara Tbk.	2017	83,360,753,532,885	32.05419873
			2018	123,717,693,761,361	32.44902342
			2019	114,904,572,109,948	32.37512309
			2020	91,743,102,363,137	32.15001342
			2021	92,239,408,353,239	32.15540858
6	PTBA	Bukit Asam Tbk.	2017	21,987,482,000,000	30.72149441
			2018	24,172,933,000,000	30.81625465
			2019	26,098,052,000,000	30.89288179
			2020	24,056,755,000,000	30.81143695
			2021	36,123,703,000,000	31.21797036
7	PTPP	PP (Persero) Tbk.	2017	41,782,780,915,111	31.36350543
			2018	52,549,150,902,972	31.59277006
			2019	59,165,548,433,821	31.71136054
			2020	18,496,821,048,659	30.54862
			2021	21,086,427,083,575	30.67965068
8	SMBR	Semen Baturaja (Persero) Tbk.	2017	5,060,337,247,000	29.25245425
			2018	5,538,079,503,000	29.3426689
			2019	5,571,270,204,000	29.34864419
			2020	5,737,175,560,000	29.37798814
			2021	5,817,745,619,000	29.39193395
9	SMGR	Semen Indonesia (Persero) Tbk.	2017	48,963,502,966,000	31.5220963
			2018	50,783,836,000,000	31.55859923
			2019	79,807,067,000,000	32.01063318
			2020	78,006,244,000,000	31.98780999
			2021	76,504,240,000,000	31.96836728
10	TINS	Timah Tbk.	2017	11,876,309,000,000	30.10556669
			2018	15,220,685,000,000	30.35367647
			2019	20,361,278,000,000	30.64465608
			2020	14,517,700,000,000	30.30638971
			2021	14,690,989,000,000	30.31825543
11	TLKM	Telkom Indonesia (Persero) Tbk.	2017	198,484,000,000,000	32.92172961
			2018	206,196,000,000,000	32.95984829
			2019	221,208,000,000,000	33.03012455
			2020	246,943,000,000,000	33.14017866
			2021	277,184,000,000,000	33.25570266
12	WIKA	Wijaya Karya (Persero) Tbk.	2017	45,683,774,302,000	31.4527643
			2018	59,230,001,239,000	31.71244931
			2019	62,110,847,154,000	31.75994176
			2020	68,109,185,213,000	31.8521332
			2021	69,385,794,346,000	31.87070327
13	WTON	Wijaya Karya Beton Tbk.	2017	7,067,976,095,043	29.58659529
			2018	8,881,778,299,672	29.81502291
			2019	10,337,895,087,207	29.96683739
			2020	8,509,017,299,594	29.77214758
			2021	8,928,183,492,920	29.82023407

APPENDIX 2

PROCESSING DATA WITH EViews SOFTWARE

1. Heteroscedasticity Test

Heteroskedasticity Test: Glejser

F-statistic	1.657277	Prob. F(6,58)	0.1480
Obs*R-squared	9.512853	Prob. Chi-Square(6)	0.1467
Scaled explained SS	20.93582	Prob. Chi-Square(6)	0.0019

Test Equation:

Dependent Variable: ARESID

Method: Least Squares

Date: 01/29/23 Time: 21:53

Sample: 1 65

Included observations: 65

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.052551	0.151877	0.346008	0.7306
DA	-0.002233	0.002566	-0.870344	0.3877
DTA	-9.80E-06	0.000191	-0.051226	0.9593
CTX	-0.032124	0.048854	-0.657538	0.5134
TP	1.386461	9.278774	0.149423	0.8817
LR	-0.047949	0.299317	-0.160195	0.8733
FS	-0.001508	0.004900	-0.307745	0.7594

R-squared	0.146352	Mean dependent var	0.002945
Adjusted R-squared	0.058043	S.D. dependent var	0.008723
S.E. of regression	0.008466	Akaike info criterion	-6.604012
Sum squared resid	0.004157	Schwarz criterion	-6.369847
Log likelihood	221.6304	Hannan-Quinn criter.	-6.511619
F-statistic	1.657277	Durbin-Watson stat	0.891652
Prob(F-statistic)	0.148011		

2. Autocorrelation Test Before Correction

Dependent Variable: EM
 Method: Least Squares
 Date: 01/29/23 Time: 21:00
 Sample: 1 65
 Included observations: 65

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.069790	0.173636	-0.401932	0.6892
DA	-0.000251	0.002934	-0.085481	0.9322
DTA	4.88E-06	0.000219	0.022317	0.9823
CTX	0.023639	0.055853	0.423232	0.6737
TP	3.334469	10.60811	0.314332	0.7544
LR	-0.106785	0.342199	-0.312055	0.7561
FS	0.002227	0.005601	0.397488	0.6925
R-squared	0.008542	Mean dependent var		-0.000338
Adjusted R-squared	-0.094023	S.D. dependent var		0.009254
S.E. of regression	0.009679	Akaike info criterion		-6.336232
Sum squared resid	0.005434	Schwarz criterion		-6.102068
Log likelihood	212.9276	Hannan-Quinn criter.		-6.243839
F-statistic	0.083283	Durbin-Watson stat		3.042888
Prob(F-statistic)	0.997657			

3. Autocorrelation Test After Correction

Breusch-Godfrey Serial Correlation LM Test:

F-statistic	1.766092	Prob. F(18,38)	0.0694
Obs*R-squared	29.15243	Prob. Chi-Square(18)	0.0465

Test Equation:

Dependent Variable: RESID

Method: Least Squares

Date: 01/30/23 Time: 06:13

Sample: 2 65

Included observations: 65

Presample missing value lagged residuals set to zero.

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.111048	0.160731	0.690897	0.4938
DA	-0.001101	0.002563	-0.429470	0.6700
DTA	0.000688	0.001006	0.684042	0.4981
CTX	-0.006449	0.048961	-0.131726	0.8959
TP	-9.847603	9.461451	-1.040813	0.3045
LR	0.314245	0.304440	1.032209	0.3085
FS	-0.003496	0.005169	-0.676377	0.5029
EM(-1)	0.550372	1.170313	0.470277	0.6408
RESID(-1)	-1.175907	1.172806	-1.002644	0.3224
RESID(-2)	-0.519466	0.658521	-0.788838	0.4351
RESID(-3)	-0.380904	0.383652	-0.992836	0.3271
RESID(-4)	-0.059574	0.278639	-0.213803	0.8318
RESID(-5)	0.074150	0.237823	0.311786	0.7569
RESID(-6)	0.136407	0.212478	0.641984	0.5247
RESID(-7)	0.182380	0.226057	0.806788	0.4248
RESID(-8)	0.180142	0.248668	0.724428	0.4732
RESID(-9)	0.102433	0.239596	0.427522	0.6714
RESID(-10)	0.137068	0.234030	0.585688	0.5615
RESID(-11)	0.145173	0.224274	0.647299	0.5213
RESID(-12)	0.063030	0.219941	0.286576	0.7760
RESID(-13)	-0.054195	0.219215	-0.247221	0.8061
RESID(-14)	-0.185185	0.231964	-0.798336	0.4296
RESID(-15)	-0.262880	0.234532	-1.120871	0.2694
RESID(-16)	-0.292876	0.236722	-1.237212	0.2236
RESID(-17)	-0.213284	0.192174	-1.109851	0.2740
RESID(-18)	-0.129716	0.168423	-0.770182	0.4460
R-squared	0.455507	Mean dependent var		3.20E-17
Adjusted R-squared	0.097287	S.D. dependent var		0.007857
S.E. of regression	0.007465	Akaike info criterion		-6.666064
Sum squared resid	0.002117	Schwarz criterion		-5.789018
Log likelihood	239.3141	Hannan-Quinn criter.		-6.320551
F-statistic	1.271586	Durbin-Watson stat		1.952975
Prob(F-statistic)	0.246909			

4. Common Effect Model

Dependent Variable: EM
 Method: Panel Least Squares
 Date: 02/15/23 Time: 16:19
 Sample: 2017 2021
 Periods included: 5
 Cross-sections included: 13
 Total panel (balanced) observations: 65

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.071235	0.171442	-0.415505	0.6793
DA	-0.000305	0.002935	-0.104017	0.9175
DTA	0.000169	0.001078	0.157067	0.8757
CTX	0.022601	0.056213	0.402067	0.6891
TP	3.342136	10.44674	0.319922	0.7502
LR	-0.107090	0.336841	-0.317926	0.7517
FS	0.002273	0.005528	0.411127	0.6825
R-squared	0.008955	Mean dependent var		-0.000338
Adjusted R-squared	-0.093567	S.D. dependent var		0.009254
S.E. of regression	0.009677	Akaike info criterion		-6.336649
Sum squared resid	0.005432	Schwarz criterion		-6.102484
Log likelihood	212.9411	Hannan-Quinn criter.		-6.244256
F-statistic	0.087346	Durbin-Watson stat		3.566813
Prob(F-statistic)	0.997324			

5. Fixed Effect Model

Dependent Variable: EM
 Method: Panel Least Squares
 Date: 02/15/23 Time: 16:21
 Sample: 2017 2021
 Periods included: 5
 Cross-sections included: 13
 Total panel (balanced) observations: 65

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.323759	0.577588	-0.560537	0.5778
DA	-0.003901	0.008337	-0.467876	0.6421
DTA	0.000320	0.001454	0.220189	0.8267
CTX	0.030025	0.067808	0.442785	0.6600
TP	16.05227	25.81833	0.621739	0.5372
LR	-0.515283	0.838559	-0.614487	0.5419
FS	0.010438	0.018791	0.555496	0.5812

Effects Specification				
Cross-section fixed (dummy variables)				
R-squared	0.036545	Mean dependent var		-0.000338
Adjusted R-squared	-0.340459	S.D. dependent var		0.009254
S.E. of regression	0.010714	Akaike info criterion		-5.995653
Sum squared resid	0.005280	Schwarz criterion		-5.360062
Log likelihood	213.8587	Hannan-Quinn criter.		-5.744871
F-statistic	0.096935	Durbin-Watson stat		3.625312
Prob(F-statistic)	0.999999			

6. Random Effect Model

Dependent Variable: EM
 Method: Panel EGLS (Cross-section random effects)
 Date: 02/15/23 Time: 16:22
 Sample: 2017 2021
 Periods included: 5
 Cross-sections included: 13
 Total panel (balanced) observations: 65
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.071235	0.189811	-0.375294	0.7088
DA	-0.000305	0.003250	-0.093951	0.9255
DTA	0.000169	0.001193	0.141866	0.8877
CTX	0.022601	0.062236	0.363157	0.7178
TP	3.342136	11.56604	0.288961	0.7736
LR	-0.107090	0.372931	-0.287158	0.7750
FS	0.002273	0.006121	0.371340	0.7117
Effects Specification				
			S.D.	Rho
Cross-section random			0.000000	0.0000
Idiosyncratic random			0.010714	1.0000
Weighted Statistics				
R-squared	0.008955	Mean dependent var		-0.000338
Adjusted R-squared	-0.093567	S.D. dependent var		0.009254
S.E. of regression	0.009677	Sum squared resid		0.005432
F-statistic	0.087346	Durbin-Watson stat		3.566813
Prob(F-statistic)	0.997324			
Unweighted Statistics				
R-squared	0.008955	Mean dependent var		-0.000338
Sum squared resid	0.005432	Durbin-Watson stat		3.566813



7. Chow Test

Redundant Fixed Effects Tests
Equation: FIXED_MODEL
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	0.109774	(12,46)	0.9999
Cross-section Chi-square	1.835229	12	0.9996

Cross-section fixed effects test equation:

Dependent Variable: EM

Method: Panel Least Squares

Date: 02/15/23 Time: 16:38

Sample: 2017 2021

Periods included: 5

Cross-sections included: 13

Total panel (balanced) observations: 65

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.071235	0.171442	-0.415505	0.6793
DA	-0.000305	0.002935	-0.104017	0.9175
DTA	0.000169	0.001078	0.157067	0.8757
CTX	0.022601	0.056213	0.402067	0.6891
TP	3.342136	10.44674	0.319922	0.7502
LR	-0.107090	0.336841	-0.317926	0.7517
FS	0.002273	0.005528	0.411127	0.6825
R-squared	0.008955	Mean dependent var		-0.000338
Adjusted R-squared	-0.093567	S.D. dependent var		0.009254
S.E. of regression	0.009677	Akaike info criterion		-6.336649
Sum squared resid	0.005432	Schwarz criterion		-6.102484
Log likelihood	212.9411	Hannan-Quinn criter.		-6.244256
F-statistic	0.087346	Durbin-Watson stat		3.566813
Prob(F-statistic)	0.997324			

8. Hausman Test

Correlated Random Effects - Hausman Test
Equation: RANDOM_MODEL
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.738472	6	0.9936

** WARNING: estimated cross-section random effects variance is zero.

Cross-section random effects test comparisons:

Variable	Fixed	Random	Var(Diff.)	Prob.
DA	-0.003901	-0.000305	0.000059	0.6396
DTA	0.000320	0.000169	0.000001	0.8559
CTX	0.030025	0.022601	0.000725	0.7827
TP	16.052268	3.342136	532.812665	0.5819
LR	-0.515283	-0.107090	0.564103	0.5868
FS	0.010438	0.002273	0.000316	0.6458

Cross-section random effects test equation:

Dependent Variable: EM

Method: Panel Least Squares

Date: 02/15/23 Time: 16:46

Sample: 2017 2021

Periods included: 5

Cross-sections included: 13

Total panel (balanced) observations: 65

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-0.323759	0.577588	-0.560537	0.5778
DA	-0.003901	0.008337	-0.467876	0.6421
DTA	0.000320	0.001454	0.220189	0.8267
CTX	0.030025	0.067808	0.442785	0.6600
TP	16.05227	25.81833	0.621739	0.5372
LR	-0.515283	0.838559	-0.614487	0.5419
FS	0.010438	0.018791	0.555496	0.5812

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.036545	Mean dependent var	-0.000338
Adjusted R-squared	-0.340459	S.D. dependent var	0.009254
S.E. of regression	0.010714	Akaike info criterion	-5.995653
Sum squared resid	0.005280	Schwarz criterion	-5.360062
Log likelihood	213.8587	Hannan-Quinn criter.	-5.744871
F-statistic	0.096935	Durbin-Watson stat	3.625312
Prob(F-statistic)	0.999999		

9. Lagrange Multiplier Test

Lagrange Multiplier Tests for Random Effects

Null hypotheses: No effects

Alternative hypotheses: Two-sided (Breusch-Pagan) and one-sided
(all others) alternatives

	Test Hypothesis		
	Cross-section	Time	Both
Breusch-Pagan	6.838883 (0.0089)	0.010700 (0.9176)	6.849583 (0.0089)
Honda	-2.615126 --	0.103438 (0.4588)	-1.776031 --
King-Wu	-2.615126 --	0.103438 (0.4588)	-1.217983 --
Standardized Honda	-2.077212 --	0.396350 (0.3459)	-4.912953 --
Standardized King-Wu	-2.077212 --	0.396350 (0.3459)	-3.915310 --
Gourieriou, et al.*	--	--	0.010700 (≥ 0.10)
*Mixed chi-square asymptotic critical values:			
	1%	7.289	
	5%	4.321	
	10%	2.952	