

# Detecting Earnings Management And Earnings Manipulation In Indonesia: A Panel Data Analysis

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**Abstract:** This research aims to measure the quality of profits in non-financial sector companies in Indonesia regarding the extent to which the Company's financial reports are trustworthy to stakeholders. In this research, discretionary accruals are an indicator for measuring earnings manipulation, and non-discretionary accruals are an indicator for measuring earnings management. Secondary data is from annual reports of non-financial sector companies on IDX in 2020-2022. The sample for this research is non-financial sector companies, including the raw materials, manufacturing, and service sectors. Our research uses a modified Jones Model to estimate earnings management and earnings manipulation. The data analysis technique uses panel data regression. The research results show that the value aspect of discretionary accruals significantly influences total accruals. In contrast, the value of non-discretionary accruals does not significantly impact total accruals. This research is expected to help auditors, users of financial reports, and accounting standards bodies identify companies that fraud.

**Keywords:** Discretionary Accruals; Earnings Management; Earnings Manipulation; Non-discretionary Accruals; Total Accruals.

**Abstrak:** Penelitian ini bertujuan untuk mengukur kualitas laba pada perusahaan sektor non keuangan di Indonesia tentang sejauh mana laporan keuangan perusahaan layak dipercaya oleh pemangku kepentingan. Dalam penelitian ini, diskresioner akrual sebagai indikator pengukuran manipulasi laba dan non diskresioner accrual sebagai indikator pengukuran manajemen laba. Data sekunder berupa laporan tahunan perusahaan sektor non keuangan yang ada di Bursa Efek Indonesia/IDX pada tahun 2020-2022. Sampel penelitian ini adalah perusahaan sektor non keuangan ini meliputi sektor bahan baku, sektor manufaktur, dan sektor jasa. Penelitian kami menggunakan modifikasi Jones Model untuk mengestimasi manajemen laba dan manipulasi laba. Teknik analisis data menggunakan regresi data panel. Hasil penelitian menunjukkan aspek nilai akrual disresioner berpengaruh signifikan terhadap total akrual, sedangkan nilai akrual non diskresioner tidak berpengaruh signifikan terhadap total akrual. Dengan adanya penelitian ini, diharapkan mampu untuk membantu auditor, pengguna laporan keuangan dan badan standar akuntansi untuk menemukan perusahaan mana saja yang melakukan kecurangan atau memanipulasi laba.

**Kata Kunci:** Diskresioner Accrual; Manajemen Laba; Manipulasi Laba; Non Diskresioner Akrual; Total Akrual.

## INTRODUCTION

In the current era there are many ways and certain motives to manipulate earnings management in a company, this is used to get public recognition to deceive stakeholders in the use of the Company's financial statements. Although this has been regulated in the IASB and GAAP, it does not rule out the possibility that earnings management and earnings manipulation can be avoided. The phenomenon that occurs in the business world

shows that topics related to earnings management and earnings manipulation can explicitly harm various parties such as shareholders, debtors, employees, government, and so on.

This is supported in research (Prasojo & Fatayati, 2018) that earnings management is an attempt by company managers to change financial reports or trick parties who want to know about the Company's performance and condition. Generally Accepted Accounting Principles (GAAP) allow management to set levels to determine the amount and timing of certain period-end accruals. Financial accounting is a controversial area regarding earnings management, as earnings management is not always associated with attempts to manipulate accounting data or information, but has more to do with the deliberate selection of accounting methods chosen by management for specific company objectives.

According to (Suyono et al., 2022) and (Rajab et al., 2022) state that earnings management is used to achieve certain goals, such as increasing company value or for the personal interests of company management. Meanwhile, (Prasojo & Fatayati, 2018) said that in measuring earnings management, non-discretionary accruals (NDA) are used because the value of non-discretionary accruals can be calculated with the Jones model modification. Meanwhile, earnings manipulation is measured using discretionary accruals (DA).

Some of the above statements are supported by the fact that the use of the accrual basis in accounting practice creates many errors, one of which is discretionary accruals which will be used as a representation of earnings management in our study. In this study, we use discretionary accruals (DA) to see how much opportunistic earnings management is carried out by companies.

According to (Istiqomah & Adhariani, 2017) Because the information presented does not describe the actual state and financial position of the Company, opportunistic earnings management practices can cause investors to make inappropriate investment decisions, such as when supervisors use judgment in financial reporting and preparation of transactions to change financial statements. Another goal is to manipulate the magnitude of earnings to some stakeholders about the Company's economic performance or to influence the results of agreements (contracts) that result in reported accounting (Kusumaningtyas, 2022; Pangesti, 2019).

The of our study is to develop a model of Modified Jones that can increase confidence in determining earnings management and earnings manipulation in Indonesia. In previous research, no one has conducted related research in Southeast Asia. In addition, this research is useful to provide guidance to regulators such as accounting standards bodies on a critical view of all financial statements that are realistic and provide a true and fair view.

The practical implementation of our research is to provide a good model development to investors and regulated accounting bodies such as the Security Exchange Commission and the International Accounting Standards (IAS) Council to know how realistic the financial statements are, as well as knowing how to evaluate accounting standards that can reduce director discretion.

To create an econometric model that can measure earnings quality in the country of Indonesia, several approaches have been announced. However, due to non-articulation issues, the total accruals approach is used to measure earnings quality. Cross-sectional analysis is used in the modified Jones model to estimate discretionary accruals (DA) and non-discretionary accruals (NDA). The model is constructed in two stages. Therefore, the results from the first part of the analysis will be incorporated into the next stage to obtain



the required estimates. To estimate each year, the first stage of model-1 is performed using the least squares estimation possible. As a result, the accruals do not reflect the Company's reasons for generating the accruals.

This condition makes report users often doubt the quality of information, which is feared to impact decision-making. Researchers use discretionary accrual measurement to measure patterns of earnings manipulation behaviour. (Lekok & Febrina, 2021) in his research provides an explanation that discretionary accruals are components of accruals or expenses that are free, unregulated, and are management policies that allow managers to change the way they make reports.

## THEORITICAL REVIEW

In this study, we update previous research on the geographical aspect. This is because research on earnings management and manipulation using the modified Jones model method has not been applied in Indonesia. In addition, Indonesia has not yet applied the earnings quality model in its research.

**GAAP and IFRS provide flexibility to management.** According to GAAP and IFRS, companies can realize certain items at management's discretion, such as revenue recognition and handling income and expenses. Most companies freely recognize earnings management as it adds stability to stock prices.

Currently, earnings management no longer sounds strange in a company; in fact, earnings management is now considered a culture within the company. As a result of misuse of accounting policies, when the company's financial condition experiences a significant decline, managers will immediately take earnings management action.

Earnings management is possible because Generally Accepted Accounting Principles (GAAP) allow management to determine several levels in determining the amount and timing of accruals at the end of a specific period.

Earnings management tends to be more opportunistic because the mismatch of managers' and shareholders' incentives can encourage managers to use the flexibility provided by Generally Accepted Accounting Principles (GAAP) to manage earnings opportunistically, thereby creating information distortions in reporting earnings in financial statements (Suyono et al., 2022).

**Auditor's role in detecting earnings management.** In this case, the external auditor's role is significant in financial reporting. This can be reflected in the Company's audit quality. In its role, high audit quality can prevent earnings management practices because financial statements are a form of management assertion to users of financial statements. In previous research, the status of KAP, such as KAP, which is included in the Big Four category, will determine good auditor quality.

Audit committees can demonstrate their role in overseeing financial reporting through regular meetings. More intensive meetings will allow the committee to minimize opportunities for managers to manipulate financial reporting. Fraud is an act of manipulation or error made by a person, manager or entity who knows that the error can result in inadequate benefits for the use of financial statements, individuals, entities or other parties. One element of the financial report that must be paid attention to is the Profit/Loss report because it contains profit information.

(Robik et al., 2022) stated that auditors from Big Four KAP can prevent earnings manipulation and find forms of corporate earnings management, because they have been



trained to carry out audit programs according to procedures that are considered more accurate and effective than auditors from non-Big Four KAP. That audit quality has no effect on earnings management. This is because audit quality can be measured by proxies other than KAP size so that it can reflect the capacity of the KAP.

This is different from research (Rusliyawati, 2023) which states that there is a negative relationship between audit quality and earnings management practices. In this study, the independent variables in the form of Big Four KAP size and auditor industry specialization have a significant effect of 7.200 per cent on earnings management as proxied by the absolute value of discretionary accruals.

**Accounting fraud and earnings management.** Some accounting fraud involves the following such as employee fraud, payroll bribery, bribery and insider trading, and intentional falsification of financial reporting. According to (Pramesti & Wulanditya, 2021) stated that management morality will contribute significantly to the Company's tendency to commit accounting fraud. Meanwhile, unethical behavior contributes significantly positively to the Company's tendency to commit accounting fraud.

The trend of accounting fraud, or what in auditing language is called fraud, has recently become the main news in frequent media reports. Two types of fraud occur in an agency or Company: external and internal. External fraud is fraud committed by outside parties against the Company, and internal fraud is illegal actions by employees, managers, and executives against the Company.

In business practices both on a national and multinational scale, it is undeniable that many cases of fraud have emerged by companies for specific purposes, including fraud in company financial reporting. This engineering can take the form of presentations that are not by generally accepted accounting guidelines or regulations that are material and influence decision-making by interested parties (Khairi, 2019).

In research (Njonjie et al., 2019) shows the results that effective internal control aspects have a negative effect on unethical behavior. In addition, effective internal control aspects hurt the Company's tendency to commit accounting fraud. Compensation discrepancies have an insignificant effect on unethical behavior in large companies and companies going public in Indonesia, and have an insignificant effect on the tendency to commit accounting fraud.

Accounting practices that do not comply with procedures will be classified under the aspect of accounting fraud: Some misclassified accounting practices such as on sales invoices in the transaction serial code section are considered fraudulent aspects and violate the procedures in GAAP and IAS, but in some cases the sale of transaction serial codes will justify business decisions.

According to (Kalau & Leksair, 2020) stated that to deal with accounting fraud, monitoring is needed in the Company. Good internal control is needed to get good monitoring results. Errors in "subjectivity measurement" can lead to accounting fraud. One of the important elements in the auditor's glasses used to rule out decisions is "measurement subjectivity", which suggests that if the auditor measures "subjective" misstatements rather than "objective" misstatements, then misstatements can be reduced.

**Common ways that companies engage in earnings management and earnings manipulation.** Profit is considered vital information that is the center of attention of investors in making investment decisions. Profit information is presented in the income statement. However, investors often ignore the company's process of generating profits, giving managers the opportunity to practice earnings management. Earnings management



is the process of taking specific deliberate steps within the limits of generally accepted accounting principles (PABU) to produce the desired level of reported profits.

To achieve a profit target, management will usually choose certain accounting policies so that the company's profits can be regulated later. The selection of accounting policies is intended so that the company can increase or decrease the profits obtained in accordance with management's needs and desires so that the company's financial reports look good in the eyes of users. Sometimes, these actions conflict with the main principles of the company; management behavior as described above is called earnings management.

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Previous studies on earnings management practices in Seasoned Equity Offerings provide different results. Some studies find that companies have earnings management practices before Seasoned Equity Offerings, but other studies do not find that (Perdana, 2018).

According to (Nyakarimi, 2022) This study adds to the literature on earnings management by showing that, despite strict bank regulations, earnings management can be widespread in the banking sector in less developed countries. This study also helps the process of reclassifying organizations. In this study, accountants should be given the freedom to create their own financial statements. It is recommended that auditors emphasize ratio calculations made based on financial statements, as this will provide a clear, honest, and fair picture of the organization's finances.

In other words, earnings management is manipulating profits to achieve targets determined by management. This is a deliberate intervention in the external reporting process with the aim of gaining personal advantage.

Earnings management is a gray area where accounting is skewed, managers cut corners, and the earnings report reflects the desires of management and not the underlying financial performance of the company.

Earnings management occurs when managers use judgment in financial reporting and in structuring transactions to alter financial statements to mislead some stakeholders about the underlying economic performance of the company or to influence the outcome of contracts that depend on reported accounting numbers.

**H1:** is there a difference between earnings management and earnings manipulation.

**Detection of earnings management and earnings manipulation.** In other words, the identification of earnings management is based on the value of accounting accruals. If the accrual value is inconsistent, we can assume earnings management has been controlled. The following is a formula to find abnormal accruals in a company.

Abnormal accruals = accounting accruals – expected accruals ..... (1)



In research (Carolin et al., 2022) earnings management detection uses the aggregate accrual model. Although the accrual model has been used in several types of research, a number of researchers have also questioned its accuracy and usefulness.

**Earnings management detection can be measured by two approaches.** Accrual profit management is carried out by engineering the accrual component in the financial statements because accrual is a component that is easy to manipulate according to personal wishes. The reason is that the accrual component is a component that does not require physical evidence of cash, so efforts to manipulate the size of the accrual component do not have to be accompanied by cash received or disbursed by the Company (Majid et al., 2020).

Managers carry out accrual earnings management by engineering discretionary accruals, which have no direct effect on cash flow and are usually carried out at the end of the accounting period when management knows that the profit target has not been achieved. In practice, what many investors and potential investors pay attention to in financial reports is only focused on the company's earnings because, basically, the profits reported by management are a signal for users of financial reports, especially investors, regarding the company's future profits.

According to (Gusnita & Taqwa, 2019) shows that, if earnings are divided into 2 parts, namely cash flow and aggregate accruals, then cash flow can still provide better predictions than total earnings. Even if earnings are disaggregated into main components, cash flow can still provide better predictions than aggregate accruals.

The aggregate accrual method approach: Jones model, Modified Jones model, and Dechow-Dichev are included in the aggregate accrual earnings management detection model (Indriani et al., 2020). Meanwhile, according to (Carolin et al., 2022) to date, only the aggregate accrual-based model is considered the most efficient in detecting earnings management. Researchers use a regression model, where the dependent variable takes aspects of the total accrual value and the independent variables are sales, property, plant and equipment (PPE).

Specific accrual method approach: according to (Ninditha Arih et al., 2017) states that the specific accrual method includes: (1) estimates of depreciation and bad debts that cover initial stock offerings, (2) bank loan loss reserves and insurance claim loss reserves, and (3) deferred tax valuation reserves. The results in this model approach define a systematic relationship between the possibility of manipulation and the specific accrual method. However, another opinion states that the specific accrual method has the advantage of allowing researchers to understand the important components that affect accrual behavior.

According to (Sihombing, 2020) states that accrual accounting serves as the basis for financial measurement and reporting as well as an essential part of profit preparation. Earnings management is an attempt by managers to intervene or influence the information presented in financial reports with the aim of deceiving stakeholders who want to know the performance and condition of the company. The terms intervention and deception make some parties consider earnings management to be an act of fraud (Majid et al., 2020).

Even if earnings management does not explicitly violate accounting rules, it is an ethically questionable practice. An organization that manages its revenue sends a message to its employees that bending the truth is an acceptable practice. Executives who take part in these practices risk creating an ethical climate that allows other questionable activities

to occur. A manager who asks sales staff to help speed sales will one day lose the moral authority to criticize questionable sales tactics another day.

Earnings management can also be a very slippery slope, as relatively small accounting tricks become increasingly aggressive to the point of creating material misstatements in financial statements.

**H2:** do non-financial companies do earnings management or not.

Nowadays, earnings management has become a corporate culture. Due to this abuse of accounting policies, managers will immediately take earnings management actions when the Company's financial condition decreases dramatically. Managers intentionally perform these actions in financial reports that are not real and responsive, so that principals who want to know the Company's actual performance and condition will be fooled.

The number of cases in Indonesia related to financial reports that have been manipulated can result in financial reports being rated unfavorably by stakeholders. The manipulation uses the accrual earnings management method, which is earnings engineering with accounting policies used by managers for business purposes by improving or managing the Company's financial statements with personal goals.

One of the strategies most often used by managers when they work with the accounting system is earnings management. Managers can use earnings management to alter financial statements so that the reported earnings can convince stakeholders about the value of the Company. They can also use it as a strategy to convince investors and potential investors (Rudiawarni et al., 2017).

The higher the level of profit generated by the company, the more the manager is considered successful and deserves higher incentives as well. Profit management carried out by managers occurs not only due to the manipulation of financial reports but also due to the selection of accounting methods to regulate the expected level of profit in accordance with applicable accounting standards.

Earnings management is viewed as management's efforts to induce or, influence or manipulate reported earnings by using certain accounting methods or changing methods, recognizing one-time non-current items, delaying or increasing expense or income transactions or using other methods designed to influence long-term earnings.

**H3:** Are non-financial companies involved in earnings manipulation or not.

In the least square dummy variable (LSDV) model, the data is stacked, giving each unit a cross-section because the intercept is different for each subject. However, the intercepts of the entities do not change over time, which is known as time-invariant. However, keep in mind that the LSDV model faces some problems. Using too many dummy variables will have problems with the degree of freedom. In FEM (Fixed effect model), each firm's intercept is time invariant. It remains the same over time (will not deform over time). FEM facilities in pool analysis because when the pool of firms ignores the fixed effect which gives rise to slope bias to avoid this problem this model uses a dummy variable technique called (differential dummy intercept technique).

Under some conditions, LSDV may not be able to identify the impact of time-invariant variables. Third, consider the error term in the random effects model. Unlike the LDV model, where each intercept value is fixed, the random effects model assumes that





coefficient values  $\beta_1$ ,  $\beta_2$ , and  $\beta_3$ , then proceed to calculate the non-discretionary accrual component.

Based on the regression coefficient above, Nondiscretionary Accruals (NDA) can be calculated using the formula:

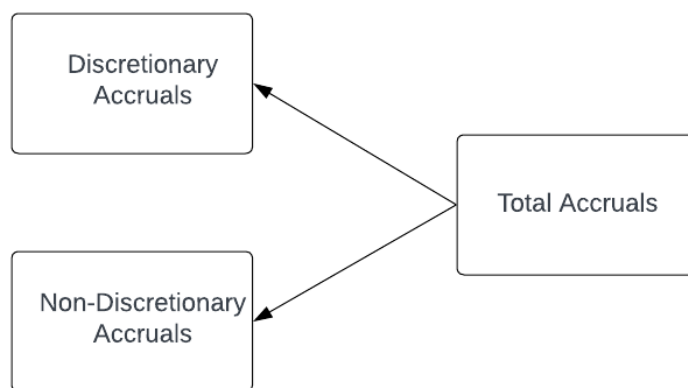
$$NDA = \beta_1(1/A_{it-1}) + \beta_2 (\Delta REV_{it}/ A_{it-1} - (\Delta REC_{it} / A_{it-1})) + \beta_3 (PPE_{it}/ A_{it-1}) + \epsilon_{it} \dots\dots\dots (3)$$

Next, the discretionary accruals (DA) formula is used to estimate the existence of earnings manipulation, where the total accrual value is divided by total assets. After that, it is reduced by the weight of non-discretionary accruals (NDA). Furthermore, Discretionary Accrual (DA) can be calculated by:

$$DA_{it} = (TA_{it}/A_{it-1}) - NDA_{it} \dots\dots\dots (4)$$

**Development of basic equation to detect earnings management.** As we know, total accruals are the composition of discretion net income less cash flow out of the operational. Then, the discretionary and non-discretionary accruals are determined by business conditions such as operating cycle length and growth. These components naturally make and break accruals. On the other hand, the discretionary accrual component is based on management choices.

In the end, we will extract the amount of discretionary accruals from the total accruals. In other words, discretionary accruals reflect accruals that are the result of management choices. Therefore, the value of such accruals does not represent the business reason for generating these accruals. So, for discretionary accruals, consider a better proxy for earnings management.



**Figure 1.** Research Model

**Figure 1** shows, its estimated discretionary accruals are based on total accruals and can be compared to the estimated discretionary accruals of all firms in the sample. This ranking is a comparative measure of the size of discretionary accruals and is an indicator of the quality of a company's earnings; a high amount of discretionary accruals indicates low-quality earnings and is a red flag that management may be utilizing a high amount of discretionary accruals to generate smaller profits which imply high earnings manipulation.

**Basic Assumptions Model.** The rationale behind using the cross-sectional Jones model for data analysis is to avoid bias: (1) It is assumed that the level of non-discretionary accruals within the same industry is the same, (2) The model can regress accruals for multiple companies in the same industry for one time period (cross-sectional) or by reverting accrual data from the same Company over various periods (time series), (3) Analyses in time series may not have enough observations in the estimation period to obtain reliable parameter estimates for linear regression, (4) Coefficient estimates on sales and GPPE may not be stationary over time, (5) The self-reversing property of accruals may result in serially correlated residuals, (6) If any of the above issues are true, making valid statistical inferences from the regression results obtained by time series analysis is impossible, (7) Due to different company sizes and scales, all variables have been deflated with Lagged(t-1) assets to control for heteroscedasticity, and (8) All variables are deflated by lagged (t-1) assets. Thus, we can measure the magnitude of the Company's discretionary accruals as a per centage of the Company's total assets.

The population in our study is based on non-financial companies, including service, manufacturing, and raw material companies in Indonesia listed on the IDX. We have sampled 356 stock market index companies; the primary source of data collection we took is the annual report.

**Analysis Techniques.** The analysis technique in our study uses panel data regression analysis, which deals with each Company simultaneously. In this case, heterogeneity in companies is found. In addition, cross-section and time series analysis in panel data can see and measure the influence of variables that cannot be found through ordinary cross-section and time series analysis. It will increase the efficiency value and degree of freedom, reducing collinearity and variability between variables.

Apart from the advantages of panel data itself, panel data estimation techniques can deal with heterogeneity explicitly by providing subjective-specific variables. Apart from that, panel data is best for detecting and measuring impacts that cannot be seen in pure cross-sections or time-series data. Panel data also makes it easier to study complex behavioural models; by making panel data into several thousand units, panel data can minimize bias when aggregating individuals or companies into large aggregations.

We balance the panel data where the number of companies have the same number of observations for this study. Since the number of cross-sectional companies (subjects)  $N$  is greater than the number of periods, we take a sample of 356 companies, each with three years of data, i.e., 2020 to 2022. Therefore, I have a short panel data.

It is half the problem of panel data analysis. The remaining issue is choosing which panel data analysis model is appropriate, as there are two pooled data models, each with features unique to the Eviews 12 application: (1) Fixed effects least squares dummy variables (LSDV) model, and (2) Effect model random (REM).

**Fixed effects least square dummy variable (LSDV) model.** In the fixed effects, the least unbiased dummy variable (LSDV) model in LSDV itself by stacking the data, but by giving each unit a cross-section because the intercept is different for each subject, but each entity's intercept does not change over time, it means time-invariant.

However, the LSDV model has several problems that must be remembered first; if you use too many dummy variables, it will have issues with the degrees of freedom. Second, in certain situations, SLDV may not be able to identify the impact of time-invariant variables. Third, you have to be careful about error terms. Fourth, with the large number of dummy variables in the model, both individual and interaction or multiplication,



there will always be the possibility of multicollinearity occurring, making it difficult to estimate one or more parameters accurately.

The facility of FEM in pool analysis is because when the business pool ignores FEM (fixed effect model), which causes slope bias, this model uses a dummy variable technique known as differential dummy intercept technique to avoid this problem.

$$TAC_{it}/A_{it-1} = \beta_1 + \beta_2 D_{2i} + \beta_3 D_{3i} + \beta D + \beta_4 D_{4i} + \dots \beta_{n33} D_{n353} + \beta_1 (\Delta REV_{it}/A_{it-1} - (\Delta REC_{it}/A_{it-1})) + \beta_2 (PPE_{it}/A_{it-1}) + \square_{it} \dots \dots \dots (5)$$

Meanwhile, D2: 1 for company 2, 0 otherwise: D3i for company 3, 0 otherwise with 33 companies.

And the model sample changes to 356 firms, only introducing 355 dummy variables. Thus, we can avoid falling into the trap of dummy variables (called perfect collinearity).

**Effect model random (REM).** Unlike the LSDV model, where every intercept value is fixed, the random effect model assumes that the intercept value is randomly drawn from a larger population.

If the dummy variable represents limited knowledge, it will be a (actual) model. This approach is an error component model (ECM) or random effects model (REM).

An alternative to FEM is ECM. ECM assumes that the individual intercept is a random draw from a larger population with a constant mean value. One advantage of ECM over FEM is saving degrees of freedom; no need to estimate N cross-section intercepts. Calculating the average value of the intercept and its variance, ECM is suitable for situations where each cross-section unit's (random) intercept is not correlated with the independent variable. Another advantage of ECM is that it can use variables such as gender, religion, and ethnicity, which remain constant for a subject. In FEM, it cannot do that because all such variables are collinear concerning the subject-specific intercept.

The logic behind this model is that if a dummy variable indicates a lack of knowledge about the actual model, we can use a nuisance term to distinguish this ignorance. This method is known as the error component (ECM) or random effects model (REM).

$$TAC_{it}/A_{it-1} = \beta_0(1/A_{it-1}) + \beta_1 (\Delta REV_{it}/A_{it-1} - (\Delta REC_{it}/A_{it-1})) + \beta_2 (PPE_{it}/A_{it-1}) + \square_{it} \dots \dots \dots (6)$$

Instead of  $\beta_0$ , in our study, we consider that it is a random variable, whereas

$$TAC_{it}/A_{it-1} = \beta_0(1/A_{it-1}) + \beta_1 (\Delta REV_{it}/A_{it-1} - (\Delta REC_{it}/A_{it-1})) + \beta_2 (PPE_{it}/A_{it-1}) + W_{it} \dots \dots \dots (7)$$

Here,  $W_{it}$ 's term, which combines error terms such as cross-section and sequence of time, is called idiosyncratic because it contains two or more error words. This intelligence is unrelated to any of the explanatory variables in the model.

**The role of the Hausmann test.** In our research, we used the random effect model (REM). This is based on the results of the Husman test, which can be concluded from the explanation of the results of the panel data regression model, which is better than the three in the random effect model because, in the random effect model, it is assumed that the intercept value is taken randomly from the company population (index), the individual

error components are not correlated with each other. There is no autocorrelation either between cross-section and time-invariant units.

Individual error components are not correlated, and there is no autocorrelation between cross-section and time-series units. It is also important to note that  $w_{it}$  is not correlated with the explanatory variables in the model. Because  $\epsilon_i$  is a component of  $w_{it}$ , it is likely to correlate with the explanatory variables.

If that were the case, the ECM would produce inconsistent estimates of the regression coefficients. In short, the hausmat test will tell whether  $w_{it}$  is correlated with the explanatory variables, namely whether the ECM is the suitable model.

## RESULTS

**Empirical Results.** In the case of this study, researchers used a balanced panel analysis where researchers have short panel data because the number of cross-sectional companies (subjects)  $N$  is greater than the number of 356 companies in the 2020 to 2022 period for Indonesia.

Statistics can be interpreted as a collection of facts in numbers arranged as a list or table that describes a problem. Meanwhile, descriptive statistics discusses how to collect data, simplify the observation figures obtained (summarize and present), and measure the disconnection and dissemination of data to obtain more interesting, useful, and easy-to-understand information.

The data collection will be presented concisely with descriptive statistics, including measuring data breaks, such as mean, median, and mode. Distribution measures include range, average deviation, variance, and standard deviation. Descriptive statistics also includes measures of location, such as, quartiles, deciles, and per centiles. The following is descriptive statistical data that we tested in our research.

**Table 1.** Table Descriptive Statistics

	NDA	DA	TOTAL ACCRUAL
Mean	-0.045	-0.658	-4.820
Median	-1.32E	-0.029	-7.052
Maximum	0.622	2.129	2.180
Minimum	-31.662	-322.026	-1.010
Std. Dev.	0.982	12.305	4.280
Skewness	-31.321	-22.981	-13.851
Kurtosis	1005.565	552.134	302.142

Source: Primary Data has been processed by Eviews 12

**Table 1** shows that in our sample, the minimum value for the independent variable NDA is -31.662, the maximum value for the independent variable NDA is 0.622, while the average for the independent variable NDA is -0.045, so it can be concluded that the data is included in the heterogeneity category. NDA values' data or distribution is still relatively small in a sample population.

Meanwhile, the minimum value for the independent variable DA is -322.026, the maximum value for the independent variable DA is 2.129, and the average for the independent variable DA is -0.658, it can be concluded that the data is included in the heterogeneity data category or the distribution of NDA value data. Relatively small in a sample population.



Meanwhile, the minimum value for the dependent variable total accruals is -1.010, and the maximum value of the dependent variable total accruals is 2.180, while the average for the dependent variable total accruals is -4.820, it can be concluded that the data included in the heterogeneity data category or the distribution of NDA value data is relatively small in a sample population.

Two types of panel data models, and each model has its uniqueness and attributes for its application. Fixed Effects Least Squares Dummy Variables (LSDV) and Random Effects Model (REM) Model selection is based on the Hausman test. If the null hypothesis is rejected, we can say that the ECM is not an appropriate model because the random effects may correlate with one or more regressors. Thus, Wit that contains two or more error terms, such as cross-section and sequence of time, is called idiosyncratic. One of the model's explanatory variables is uncorrelated with these rates. There is in the random effect model of the explanation of the results of the panel data regression model that is better than the youth. In the random effects model, the intercept values are randomly drawn from the population of firms (index), the individual error components are uncorrelated, and there is no autocorrelation between cross-sectional and time-invariant units.

**Husman Test.** The null hypothesis underlying Husman's results is that the FEM and ECM estimators do not have significant differences. The statistical test developed by Hausman has an asymmetry  $X^2$ . If the null hypothesis is rejected, the conclusion is that the ECM is not appropriate because the random effect is likely to be correlated with one or more independent variables.

**Ho:** ECM and FEM estimators do not differ substantially.

In this case, from the above results, the Hausman test accepts the null hypothesis as the P value of 0.984 is more than 0.050. As a result, we accept ECM (REM) against FEM.

The Hausman test shows that the value of  $X^2$  with 2 df is very significant to accept the null hypothesis. If the null hypothesis is an actual condition, the probability of obtaining a chi-square value is 0.031. As a result, we can accept ECM(REM) instead of FEM. From the results above, it shows that the Husman test agrees with the null hypothesis because the probability value is 0.984 (more than 0.050), so it can be concluded that the best model used in the Hausman test is the REM model, where the ECM accepts REM against FEM. In this regard, the final part of the table above compares each variable's fixed-effect and random-effect coefficients of each variable and, in the last column, the difference in the test we carried out is statistically significant.

**Table 2.** FEM Estimation Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.730	4.792	-987.532	0.000
NDA	-1.410	8.000	-17.6189	0.000
DA	1.410	7.840	18.019	0.000

Source: Primary Data has been processed by Eviews 12

The null hypothesis underlying the Husman test means that the FEM and ECM estimators do not have a significant difference. The statistical test developed by Hausman has  $X^2$  asymmetry. If the null hypothesis is rejected, then the conclusion is that the ECM is incorrect because the random effect is likely to be correlated with one or more





independent variables. Because the null hypothesis accepts ECM as an estimator, and FEM cannot be accepted. Therefore, the conclusion from the FEM test states that FEM cannot be taken because the probability value is zero.

**Table 3. REM Estimation Results**

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-4.680	1.740	-2.682	0.007
NDA	-3.570	1.270	-0.280	0.778
DA	2.430	9.470	2.567	0.010

Source: Primary Data has been processed by Eviews 12

The REM method is used when there are many data corrections in the Random effect model, unlike the LSDV model, where each intercept value is (fixed) because the random effect model assumes that the intercept value is randomly drawn from a larger population.

The following are the differences between FEM and ECM. In FEM, each cross-section unit has its intercept (constant) value; all N values are for each N cross-section unit. Conversely, the intercept (together) represents the average value of all intercepts (cross-section) in ECM. The error component  $\epsilon_i$  represents the (random) deviation of the individual intercept from that mean value, which is called good; however, that  $\epsilon_i$  is not directly observed, which are called unobservable, or latent, variables.

This REM model is free from errors in the classical assumption test (data normality test, multicollinearity test, autocorrelation test, and heteroscedasticity test), and this model has no data bias.

Because the Hausman test results favor REM, describing the results of the random effect model. The R-squared value shows that the independent variables, namely Discretionary Accruals ( $PPE_{it}/A_{it-1}$ ) and Non-discretionary Accruals ( $\Delta REV_{it}/A_{it-1}$ ), explain 32 per cent of the variation in the dependent variable, namely Total Accruals ( $TAC_{it}/A_{it-1}$ ). It also indicates the suitability of the REM model. The P-value of the F-statistic is less than 0.050, meaning that the overall model is significant. The Durbin-Watson test values indicate the presence of autocorrelation between the independent variables of the model.

The regression model discussed earlier is:

$$TAC_{it}/A_{it-1} = \beta_0(1/A_{it-1}) + \beta_1 (\Delta REV_{it}/A_{it-1} - (\Delta REC_{it}/A_{it-1})) + \beta_2 (PPE_{it}/A_{it-1}) + \epsilon_{it} \dots \dots \dots (8)$$

Based on the REM results, the regression model with the intercept and slope values of the independent variables will be as follows:

$$TAC_{it}/A_{it-1} = 0.105(1/A_{it-1}) + 0.009 (\Delta REV_{it}/A_{it-1} - (\Delta REC_{it}/A_{it-1})) + 0.938 (PPE_{it}/A_{it-1}) + W_{it} \dots \dots \dots (9)$$

As shown in the equation above, the constant value illustrates that if the independent variables are removed, the dependent variable, Total Accruals, will equal 0.007.

The slope of non-discretionary accruals indicates that one unit change in non-discretionary accruals increases total accruals by 0.778 units. Similarly, the slope of

discretionary accruals indicates that one unit change brings a 0.010 unit decrease in total accruals.

The conclusion that can be drawn is that the value of discretionary accruals significantly affects total accruals. In contrast, the value of non-discretionary accruals has no significant impact on total accruals. Since discretionary accruals are a measure of earnings manipulation and non-discretionary accruals are a measure of earnings management, it can be concluded that companies engage in earnings manipulation rather than earnings management. Still, as discussed earlier, the model is not significant. The independent variables do not explain significant variation in the dependent variable.

## DISCUSSION

In the FEM data test results, the non-discretionary accrual value is 0.778, and for the discretionary accrual value it is 0.778. From these results, the discretionary accrual value significantly affects total accruals. Meanwhile, the value of non-discretionary accruals has no effect, and this shows that the independent variable discretionary accruals have a significant effect on dependent total accruals, which is a phenomenon that illustrates that non-financial companies in Indonesia have manipulated profits because the benchmark for profit manipulation (discretionary accruals) affects total accruals. This is in line with research by (Prasojo & Fatayati, 2018), which proves that in measuring earnings management, the value of non-discretionary accruals (NDA) is used because the value of non-discretionary accruals can be calculated using a modified Jones model. Meanwhile, profit manipulation is measured using discretionary accruals (DA).

(Suyono et al., 2022) and (Rajab et al., 2022) state that earnings management is used to achieve specific goals, such as increasing company value or for the personal interests of company management. Meanwhile, according to (Prasojo & Fatayati, 2018) research, earnings management is an attempt by company managers to change financial reports or deceive parties who want to know about the Company's performance and condition. According to (Istiqomah & Adhariani, 2017) because the information presented does not describe the Company's actual financial condition and position, opportunistic earnings management practices can cause investors to make inappropriate investment decisions, such as when supervisors use judgment in financial reporting and preparing transactions to change financial reports. Earnings management tends to be more opportunistic because the mismatch of managers' and shareholders' incentives can encourage managers to use the flexibility provided by Generally Accepted Accounting Principles (GAAP) to manage earnings opportunistically, thereby creating information distortions in earnings in financial statements (Suyono et al., 2022).

Carrying out manipulation uses the accrual earnings management method, profit engineering with accounting policies managers use for business purposes by improving or managing the Company's financial reports for personal purposes. Reporting Managers will immediately take earnings management actions when the Company's financial condition declines drastically. Managers deliberately carry out this action in unreal and responsive financial reports so that principals who want to know the actual performance and condition of the Company will be deceived. This aligns with previous research, which states that earnings management is used to achieve certain goals, and company managers attempt to change reports. Finances or tricking parties who want to know about the Company's



performance and condition (Istiqomah & Adhariani, 2017; Prasajo & Fatayati, 2018; Rajab et al., 2022; Suyono et al., 2022).

It is hoped that the results of this research will make it easier for auditors to assess the existence of earnings management and earnings manipulation in a company. Audit committees can demonstrate their role in overseeing financial reporting through regular meetings. Having more intensive meetings will enable the committee to minimize opportunities for managers to manipulate financial reporting. Fraud is an act of manipulation or error made by a person, manager or entity who knows that the error can result in inadequate benefits for using financial statements, individuals, entities or other parties. One element of the financial report that must be paid attention to is the Profit/Loss report because it contains profit information.

The above phenomenon is in line with research (Robik et al., 2022), who stated that auditors from Big Four KAPs can prevent earnings manipulation and discover forms of company earnings management, because they have been trained to carry out audit programs according to procedures that are considered more accurate and effective compared to auditors from non-Big KAPs. Four. This is supported by research by (Pramesti & Wulanditya, 2021), which states that management morality will contribute significantly to a company's tendency to commit accounting fraud. This research itself can help auditors prevent manipulation of profits in the Company; auditors can identify discretionary accruals, if accruals discretionary can be detected as significant. This is by previous research which stated that auditors from Big Four KAPs can prevent earnings manipulation and find forms of company earnings management, management will contribute significantly to the Company's tendency to commit accounting fraud (Pramesti & Wulanditya, 2021; Robik et al., 2022).

Meanwhile, unethical behavior contributes significantly positively to the company's tendency to commit accounting fraud. According to (Kalau & Leksair, 2020), monitoring is needed in the company to deal with accounting fraud. Reasonable internal control is required to obtain good monitoring results. Carrying out monitoring in the company is very important, this is in line with several researchers' opinions which state the need to monitor internal controls to deal with accounting fraud (Kalau & Leksair, 2020).

In the discussion above, answering H1, where there is a difference between earnings management and earnings manipulation, in (Prasajo & Fatayati, 2018) research, it is said that in measuring earnings management, non-discretionary accruals (NDA) are used because the value of non-discretionary accruals can be calculated using a modified Jones model. Meanwhile, profit manipulation is measured using discretionary accruals (DA). My research is by research (Prasajo & Fatayati, 2018), which states that in measuring earnings management, non-discretionary accruals are used because of the value of non-discretionary accruals.

In the discussion above, the answer to H2 and H3 is that non-financial companies manipulate earnings and manage earnings because the value of discretionary accruals significantly influences total accruals. In contrast, the value of non-discretionary accruals has no significant effect on total accruals. Because discretionary accruals are a measure of earnings manipulation and non-discretionary accruals are a measure of earnings management, it can be concluded that the Company is involved in earnings manipulation rather than earnings management, but as discussed previously, the model is not significant. The independent variables do not explain significant variations in the dependent variables.



This research hopes to help auditors, users of financial reports, and accounting standards bodies such as IASC, IASB, or GAAP find which companies are committing fraud or manipulating profits using discretionary accruals.

Some of the limitations of this research is that the data sample period is only three years, namely 2020-2022, and this influences the results of existing research. Apart from that, we only use proxies from the modified John model for earnings management in our research. From the limitations stated above, we provide several suggestions aimed at future researchers; namely, researchers can use theoretical approaches such as the Heally model, DeAngelo model, Jones model, industrial model, modified Jones model, Dechow-Dichev model, Kothari model, Stubben model, and other new approach models for developing earnings manipulation and earnings management behavior.

## CONCLUSION

This study was conducted to determine whether there is earnings manipulation in non-financial sector companies on the Indonesia Stock Exchange. After a thorough analysis of the data test results, it explains that users of financial statements ignore some elements of the financial statements that indicate the Company's quality in reporting the amount of its income. In this study, we use a modified Jones model, which will be able to build stakeholder confidence in using the Company's financial statements.

The results of our study indicate that if earnings management is negative, it means reducing profits and avoiding taxes. On the one hand, the COVID-19 pandemic results in a decrease in aggregate profits, which makes this Company experience a reduction in profits. Based on the results of the data I took, the decline in profit was due to the minus NDA value, and this minus value is due to changes in income where the importance of changes in income is divided by total assets. So, it can be concluded that in 2020 to 2022, the impact of COVID affects changes in revenue for companies in Indonesia, so there is a minus change in income value.

If the Company has carried out earnings management, a total accrual value is used to analyze earnings manipulation and earnings quality in the reported financial statements. In addition, users of financial statements must consider influential factors from outside the financial reporting system, users of financial statements must have the ability to identify the types of accounts that play a major role in earnings manipulation, users of financial statements also know which types of reports can be easily manipulated, and users of financial statements must assess the state of the Company where management is largely responsible for financial statements that are not.

In addition, accounting standards bodies such as IASB and GAAP are responsible for reducing the role of discretionary accruals in developing and revising accounting standards. Although most accounting standards are revised with this approval, there is still more room for discretionary accruals in accounting standards, which should be minimized or eliminated by implementing these recommendations, earnings management, and earnings manipulation.

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