

Accounting Information of Earnings Management That Be Used To Predict an Investment Decision in The Banking Sector

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Abstract

Accounting information of earnings management is very useful at the stage of analyzing the consequences of each alternative investment decision. The purpose of this study was to analyze the effectiveness of earnings management accounting information used to predict investment decisions with firm value as a benchmark. This type of research uses a quantitative approach with secondary data and the object of research is banking sector companies listed on the IDX for the 2015-2020 period. This study calculates earnings management using the modified Jones model as one of its variables. The data required are financial statements and company stock prices. Sample determination was carried out using the purposive sampling method. The number of samples selected was 40 companies. The data analysis technique used is linear regression. The results of this study indicate that earnings management influences stock price investment predictions.

Keywords: Earnings Management, Stock Price, Modified, Jones Model.

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1. Introduction

Earnings management occurs because there are incentives for company managers to manipulate financial reports to achieve their individual goals. Several factors can encourage earnings management, including achieving predetermined profit targets, influencing the company's share price, obtaining bonuses and personal incentives, and avoiding sanctions or negative consequences. The existence of weaknesses in accounting policies and corporate governance can also influence earnings management practices. When accounting policies are not properly enforced, company managers have the opportunity to exploit loopholes in carrying out earnings management. Apart from that, earnings management can also be influenced by factors such as the company's ownership structure, the composition of the board

of directors, and the frequency of board of directors meetings. For example, research shows that the higher the level of managerial ownership, the higher the likelihood of earnings management (Obigbemi, 2016).

According to Wang et al., (2015), implementing earnings management in companies is expected to have several positive impacts, namely the first is improving the company's financial performance to produce better financial reports, such as increasing income or reducing costs. Second, increasing the company's market value can give the impression that the company has better performance so that it can increase the share price and market value of the company. Third, earnings management can be used to meet analysts' and investors' expectations regarding company performance. By achieving or exceeding the expected profit target, the company can maintain or increase the trust and support of analysts and investors. Fourth, earnings management can be used to achieve financial goals, and income fluctuations and optimize tax planning.

The existence of earnings management can be explained by agency theory which states that the agent will try to take opportunistic actions to achieve personal interests such as increasing compensation. Meanwhile, the principal is motivated to enter into a contract in the hope of obtaining financial benefits through dividend distribution or an increase in the company's share price. This means that each stakeholder is equally motivated by their welfare and needs so mutual information asymmetry occurs. When principals do not have enough information about the agent's performance, they cannot monitor the agent's activities in the company, resulting in a conflict of interest. In this problem, if the principal can control the agent well, the company value will be optimal. So that every decision making will always concentrate on improving company performance (Handriani et al., 2021).

In conditions like this, it is necessary to have a third party as an intermediary between the two stakeholders (the agent and the principal), namely professional auditors with high audit quality. So that it can reduce the occurrence of earnings management practices in a company and ensure that the company's financial reports published are credible and do not contain accounting fraud (Paramita et al., 2022).

Manager behaviour in fulfilling personal welfare can be further explained through positive accounting theory which states that earnings management is caused by the interests of the agent or opportunistic behaviour when choosing accounting methods and policies. Watts & Zimmerman (1990) identified three hypotheses that are often used in positive accounting theory that can influence actions in decision-making. The three hypotheses are the bonus program hypothesis, the political cost hypothesis, and the debt agreement hypothesis.

According to Spence (2002), in the practice of earnings management, good signals to users of financial statements can influence investor decisions and the average shares needed to maintain company value. Companies that have good signals can attract more investors and obtain cheaper resources. Overall, signal theory in earnings management practices on company value involves an effective, transparent management approach and the use of good signals to attract investor attention and maintain company value.

However, the implementation of earnings management in Indonesian companies is increasingly making financial reports unethical and manipulative, especially for investors who understand accounting information (fundamental data). This makes many parties

disadvantaged. The following are some of the negative impacts of earnings management practices in companies. First, it reduces the efficiency and effectiveness of making appropriate decisions because it does not have reliable data. Second, it causes losses, especially to shareholders because the information obtained is inaccurate about the company's performance. Third, reducing the company's credibility by manipulating financial reports. So it can reduce investors' trust and interest in investing in the company (Firamadhan & Pujiono, 2021).

Therefore, this phenomenon is interesting to research and must be addressed immediately because if not, the implementation of earnings management in a non-transparent and misleading manner will continue to have increasingly worsening effects in the long term in various companies in Indonesia so that it can damage investor confidence, reducing the company's credibility, and could potentially cause significant financial loss. Appropriate handling must be carried out immediately, effectively and efficiently. Several ways of handling that can be done include First, increasing the company's transparency and accountability in following relevant accounting standards. Second, strengthen internal control by implementing clear policies and procedures. Third, improve the quality of company audits by collaborating with independent auditors who are competent and have high integrity. Fourth, prioritizing good corporate governance such as transparency, accountability and stakeholder involvement. Fifth, prioritizing an ethical culture by involving employee education and training regarding business ethics (Tarjo et al., 2023).

This research uses data originating from the banking industry sector because there are still minimal references. This research aims to analyze how much earnings management patterns are used to predict investment decisions based on Modified Jones Model calculations in the banking company sector listed on the Indonesia Stock Exchange (BEI) during the 2015-2020 period. This research tries to answer previous calls for research on earnings management practices in the Kompas 100 industrial company index (Indriani & Pujiono, 2021).

Earnings management literature has been analyzed extensively in various sectors, but the banking industry has been neglected in terms of earnings management practices in Indonesia. This is one of the reasons why researchers decided to focus their studies on this industry. Added to this is the fact that, despite the global financial crisis this particular sector has experienced significant growth and has attracted opportunities for foreign investors. In this context, we would like to investigate whether this growth is effectively real or, on the other hand, has been influenced by earnings management policies. These findings contribute to agency theory, positive accounting, and signalling theory by demonstrating the role of effective earnings management in predicting investment decisions.

Apart from the different countries, objects and variables, the description of the analysis results is also different from previous research. In previous research, the focus was on explaining the conditions of opportunistic earnings management on earnings informativeness in the context of low operational performance only, whereas in this research the study of the results of the research discussion was accompanied by disclosure of decisions or strategies taken by principals and agents in certain companies, which brought about changes to the company. towards an increase or decrease in the company's financial condition in the face of earnings management practices. The hope is that with this research, the application of

earnings management in the banking sector in Indonesia aims to be able to make an important contribution and have a significant impact in predicting investment decisions, including, among other things, a new understanding of earnings management in banking companies as a guide used by stakeholders in real future situations if something similar happens, and becomes the basis for further research in the same or related fields. This research aims to analyze the effectiveness of earnings management accounting information used to predict investment decisions in the banking sector.

2. Research Methods

2.1. Research Type and Data Source

This research uses a quantitative approach to measure populations and samples. Quantitative research variables can be identified and variable intercorrelations can be measured to produce conclusions (Filho & Kovaleva, 2015). The data used is secondary data derived from the annual report of a company on the IDX website or the company's official website.

2.2 Population and Sample

Population is the entire object under study where the coverage is taken from all members of a particular group for all possible measurement results in the research area (Pujiono et al., 2023). This research talks about the theory universally, so the population is infinite because it covers the entire capital market. So that the data taken as a sample can use the technique that best suits the research topic, namely purposive sampling. The sample of this study is a banking sector company listed on the IDX in 2015-2020 totalling 40 companies. The banking sector was chosen because the sector has significant growth in total assets so it is easier to attract opportunities for foreign investors to invest. The sample criteria for this study include (1) banking sector companies operating and listed on the Indonesia Stock Exchange for the 2015-2020 period, and (2) companies that publish audited financial statements and have information on discretionary accrual data for the 2015-2020 period. Based on these criteria, 184 data were obtained.

Research Variables

Earnings Management (X)

Based on the research of Dechow et al., (1995), the formula for determining the value of earnings management using the modified Jones model approach can go through the following stages:

1. Finding the total accrual value in a formulation

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

2. Determine the value of accruals with the regression equation

$$\frac{TA_{it}}{A_{it-1}} = \beta_{it} \left(\frac{1}{A_{it}} \right) + \beta_2 \left(\frac{\Delta REV_{it} - \Delta REC_{it}}{A_{it-1}} \right) + \beta_3 \left(\frac{PPE_{it}}{A_{it-1}} \right) \varepsilon_{it}$$

3. Calculating the value of non-discretionary accruals using the formula

$$NDA_{it} = \beta \left(\frac{1}{A_{it-1}} \right) + \beta_2 \left(\frac{\Delta REV_{it}}{A_{it-1}} - \frac{\Delta REC_{it}}{A_{it-1}} \right) + \beta_3 \left(\frac{PPE_{it}}{A_{it-1}} \right) \varepsilon_{it}$$

4. Calculating earnings management value

$$DA_{it} = \frac{TA_{it}}{A_{it-1}} - NDA_{it}$$

Description:

CFO = Operating cash flow of company i in year t

TA_{it} = Total accruals of company i in year t

REC_{it} = Net receivables of the company i in year t

A_{it-1} = Total assets of the company i in year t-1

NI_{it} = Net income of company i in year t

NDA_{it} = *Non-discretionary accrual of the company i in year t*

REV_{it} = Revenue of company i in year t

PPE_{it} = Assets of the company i in year t

DA_{it} = *Discretionary accrual of the company i in year t*

Stock Price (Y)

The stock price is used as the dependent variable. The conclusion of the stock price in one period can be seen at the closing price. Stock price data is taken from the website www.idx.co.id.

2.3 Data Analysis Technique

Descriptive Statistics Test

Descriptive statistics is a method of organizing, summarizing, and presenting data in an informative manner. It is used to calculate the percentage growth from one decade to the next. However, this statistical test is not used to summarize past populations, but to estimate future populations. This technique is available to organize types of data into a meaningful form (Beckett et al., 2017).

Classical Assumption Test

The classical assumption test on the linear regression model used is carried out to determine whether the regression model is good or not (Beckett et al., 2017). The classic assumption test in this study aims to detect and ensure that the data has passed the normality test, autocorrelation test, and heteroscedasticity test.

Linear Regression Analysis

To see the relationship between variable X (Earnings Management) and Variable Y (Stock Price) in the banking sector, the researchers conducted a linear regression test. Linear regression is based on the functional or causal relationship of one independent variable with one dependent variable (Beckett et al., 2017). This study uses the following analysis:

$$Y = \alpha + \beta X + \varepsilon$$

Description:

Y = Stock Price

α = Constant Value

β = X variable coefficient

X = Earnings management

ε = error

Model Eligibility Test (F-test)

The f-test shows if all the independent variables mentioned in the model act on the dependent variable at the same time at least one variable has an effect (Beckett et al., 2017).

- 1) If $F_{count} > F_{table}$ at a significant level of 0,05, it means that the regression model is suitable for testing
- 2) If $F_{count} < F_{table}$ at a significant level of 0,05, it means that the regression model is not suitable for testing

Hypothesis Test (t-test)

According to Beckett et al., (2017), the t-test is used to prove the significant effect between the independent variable and the dependent variable, and if the calculated t value is greater than the t table, it indicates the acceptance of the proposed hypothesis. To determine the reliability and meaningfulness of the regression coefficient value, so that it can be seen whether earnings management (X), on stock prices (Y) has a significant effect or not. The basis for making t-test decisions:

- 1) $H_0: \beta_n = 0$, if the probability value $> 5\%$ or $t_{write} < t_{table}$, then H_0 is rejected
- 2) $H_a: \beta_n \neq 0$, if the probability value $< 5\%$ or $t_{write} > t_{table}$, then H_a is accepted

3. Results and Discussion

3.1. Results

Descriptive Statistics

Research carried out, the results of the analysis to show the characteristics of calculating earnings management predictions on stock prices using the Modified Jones Model. Below are presented the following results:

Table 1. Descriptive Statistics

	N	Min	Max	Mean	Std. Deviation
X	184	19,06	30,60	25,2060	2,30520
Y	184	3,91	9,12	6,2800	1,40583
Valid N (listwise)	184				

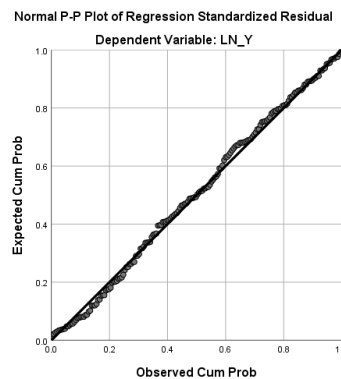
Source: SPSS 26 Processed Data, 2024

Table 1 above indicates that there are 184 units of analysis in the form of banking companies examined in the study. The average value (mean) of each variable is 25,2060 for earnings management (X) and 6,2800 for stock prices (Y). Observation of the maximum and minimum values can be seen that earnings management (X) has the highest value of 30,60 and the lowest value of 19,06 while the stock price (Y) has the highest value of 9,12 and the lowest value of 3,91. Next, the standard deviation of the tested variables is 2,30520 for earnings management (X) and 1,40583 for stock price (Y).

In the descriptive statistics on the regression model of banking companies, it can be found that there is no significant difference in the average (mean) of each variable. Furthermore, if you look at the minimum and maximum values, there is no significant difference in each variable. For example, the maximum value of the earnings management variable (X) is much greater than the stock price variable (Y). Based on the data collection process that has been carried out, this inconspicuous difference in maximum value is because there is no significant difference in the number of values in the nominal earnings management and stock prices in banking sector companies.

Classical Assumptions

Figure 1. Data Normality Test Results



Source: SPSS 26 Processed Data, 2024

Figure 1 above, shows that the plotting points follow and approach the diagonal line. Therefore, as a requirement in the Normal P-Plot test, it can be concluded that the residual value is normally distributed.

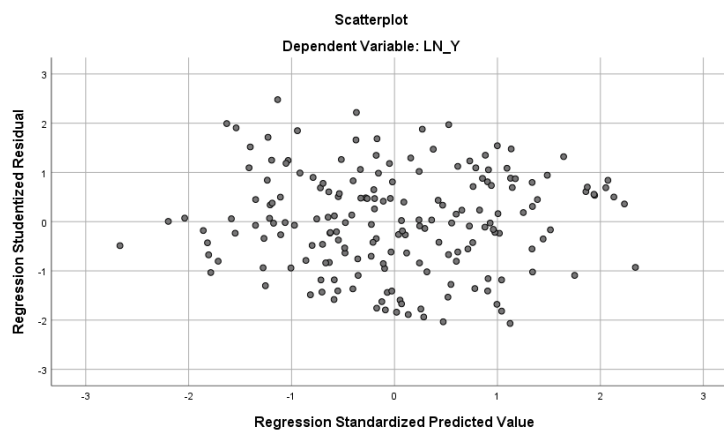
Table 2. Autocorrelation Test Results

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	,392 ^a	,154	,149	1,29661	2,105

Source: SPSS 26 Processed Data, 2024

In Table 2 above, the results show that the DW value obtained is 2.105, this value will be compared with the table value using a significance of 5%, the number of samples $n = 184$ and $k = 1$. These results are between the DU value of 1,7697 and the 4-DU value of 2,2303 or $DU < DW < 4-DU$. This means that based on these results there is no autocorrelation problem in this study.

Figure 2. Heteroscedasticity Test Results



Source: SPSS 26 Processed Data, 2024

Based on Figure 2 above, the results of the heteroscedasticity test show that there are points that spread and form a pattern, while this can explain the data to be used. This means that the data in this study have passed the test so that it can be ascertained that there are no symptoms of heteroscedasticity.

Hypothesis Test

Table 3. Hypothesis Test Results

Variable	β	t-Statistic	Sig	Conclusion
(Constant)	,248	,235	,814	
X	,239	5,756	,000	Significant
F-statistic				33,127
Sig (F-statistic)				,000 ^b

a. Dependen Variabel : Y

Source: SPSS 26 Processed Data, 2024

Based on Table 3 above, it is explained that the regression model in this study has F test results with F count 33,127 and significance (Sig value is smaller than 0,05). The F table value is 3,89 so that F count > F table (33,127>3,89). Obtained F test results with a significant probability value of 0,000 where this value is smaller than $\alpha = 0,05$ so that it can be stated that it has a simultaneous effect and the regression model is suitable for use in testing.

Furthermore, the regression equation in the t-test shows that the β coefficient represents a positive beta value, which means that the earnings management variable has a positive effect on stock price investment decisions. The hypothesis test results show that earnings management has a t value of 5,756 > t table of 1,97308 with a significant probability value of 0,000 < 0,05 so that H_0 is rejected and H_a is accepted. So it can be concluded that there is a significant influence between earnings management on stock price investment decisions in the banking sector in 2015-2020.

3.2. Discussion

The results showed that earnings management has a significant positive effect on stock price investment decisions or firm value. This means that there are indications of income maximization earnings management patterns used by banking companies for six consecutive years. Based on the hypothesis in Table 3.3, the significance value of earnings management is 0.000 < 0.05 where the t-test result obtained is 5,756 it can be concluded that H_0 is rejected and H_a is accepted. This shows that the higher the company practices earnings management, the higher the firm value.

The research results obtained provide support for investment decisions by measuring share prices. The theory of Tandry et al., (2014), explains that earnings management can make financial reports look more attractive and profitable for investors. Managers tend to make financial reports as best as possible to attract investors' attention, and they often carry out various earnings management patterns such as taking a bath, income minimization, income maximization, and income smoothing. Thus, investors will assess companies based on financial reports without knowing that these reports have been manipulated by earnings management practices so that they do not reflect the actual condition of the company.

The positive influence of earnings management on company value can be caused by the perception that higher reported profits reflect better performance it can strengthen the company's market value (Kamran et al., 2018). Furthermore, Riswandi & Yuniarti (2020), found that earnings management practices can increase company value in the short term. Not only that, managers use earnings management as a tool to convey positive signals to shareholders about the company's operational performance, which can make investors interested in investing in the company. The existence of agency theory also reveals that

earnings management can reduce agency costs and have an impact on increasing company value.

Based on the results of the t-test on the hypothesis described above, the discussion is in line with the agency theory proposed by Berle & Means (1932), and developed by Jensen & Meckling (1976) where there are two parties in this theory, the management who acts as the agent then the owner who acts as the principal. Agency theory discusses various problems that arise between agents and principals. Where there is an agency relationship that can trigger conflicts of interest between agents and principals that can have an impact on the business being managed. In this case, it can continue to result in earnings manipulation management practices or so-called earnings management in the financial statements of the company's operational performance. Therefore, the existence of a contract between agents and principals aims to minimize conflicts between them (Ghorbani & Salehi, 2021).

Stock price fluctuations are one of the various problems faced by companies, the sustainability of the company is influenced by decisions made by management and company owners, and the strategy or decision chosen by the company determines the steps that must be taken to deal with the problems the company has, so that the company avoids a decrease in company value when publishing financial statements. In this case, management plays an important role in determining the decision to manage the company's financial performance taken. It can be concluded that earnings management actions provide a positive signal to investors which affects the company's share price. On the other hand, investors may lack an understanding of earnings management patterns and tend to see what is reflected in the financial statements, namely net income. It is that accounting information in the financial statements of banking sector companies is useful for investors, the existence of information about the effect of net income and earnings management on stock price predictions can help investors in making these investment decisions.

4. Conclusion

Based on the results of research and discussion that has been conducted in the banking sector in Indonesia, it can be concluded that earnings management practices carried out by managers have a significant positive effect on the prediction of stock price investment decisions seen from the beta value in the t-test. This indicates that accounting information in the financial statements of banking sector companies is useful for investors, the existence of accounting information regarding the company's net profit has a significant effect on stock price predictions and can help investors in making investment decisions by fundamental analysis. These results are by previous research, namely, earnings management has a significant positive effect on firm value. This means that the bigger a company is, the higher the value of the company.

For further researchers, it is recommended to conduct research with a longer period, choose a sector with a level of data variation that is not too high, and expand the scope of research referring to companies listed on the Foreign Stock Exchange and have never been conducted research so that a large sample can be obtained for testing.

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