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# FACTORS OF FINANCIAL STATEMENT FRAUD IN NON-FINANCIAL COMPANIES (EMPIRICAL STUDY ON NON-FINANCIAL COMPANIES LISTED IN INDONESIA STOCK EXCHANGE 2016-2019)

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## ABSTRACT

This study aims to examine the effect of earnings management and risk management on financial statement fraud. The independent variables tested in this study consisted of earnings management, liquidity, profitability, and solvency. Furthermore, there are exchange rates and economic growth as control variables. The population of this study is the non-financial companies listed on the Indonesia Stock Exchange from 2016 to 2019. The total samples used are 331 companies by using the purposive sampling technique. The analytical methods used are panel data analysis, descriptive statistics, classical assumption test, model fit-test, and regression test using STATA 14. The results indicate that variables in this study simultaneously affect financial statement fraud. Partially, earnings management, profitability, and exchange rates have a positive and significant effect on financial statement fraud. Meanwhile, solvency has a positive effect on financial statement fraud but it is not significant.

## INTRODUCTION

Fraud is behavior to achieve personal or organizational desires through inappropriate means such as deception, dishonesty, and deceiving other parties. In Oxford Dictionary, fraud is defined as a criminal act through the use of falsified data and information to interfere with the interests of others for

profit. This interpretation is in accordance with one of the Indonesian regulations called Kitab Undang-Undang Hukum Pidana (KUHP) which explains that fraud is a violation of Pasal 374 or the Criminal Code regarding embezzlement.Basically, financial information must reflect the actual condition of the company's financial performance.However, there are still many financial reports that do not contain actual information to cover these deficienciesin reality (Rahman, Deliana, & Rihaney, 2020).Based on the results of the fraud surveyconducted by ACFE in Indonesia, there were three major frauds, 64.4% of corruption, 28.9% of asset misappropriation, and 6.7%of financial statement fraud (ACFE, 2019).Financial statement fraud cases that occurred in 2019 increased by 2% from 2016. Meanwhile, corruption and asset misappropriation decreased from 67% and 31% (ACFE, 2016).

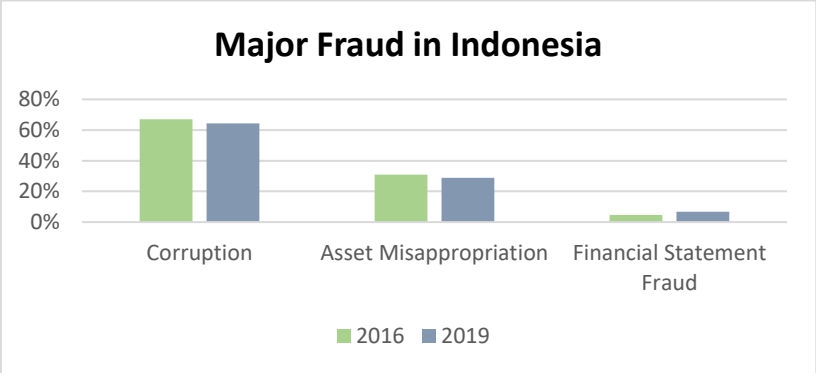


**Diagram 1** Major Fraud in Indonesia

**Source:** ACFE Indonesia (2019)

Financial statement fraud aims to deceive users of information such as investors and creditors to achieve expectations, opportunities, and rationalization (Albrecht, Albrecht, Albrecht, & Zimbelman, 2009; Rahman, Sulaiman, Fadel, & Kazemian, 2016).Managers often change the accounting calculation method for financial statement known as earnings management to improve conditions that cause losses (Baker, Cohanier, & Leo, 2017).Earnings management has two sides like a coin. There is a white side that represents a professional view to creating good performances in financial statement. However, there is also a black side that represents earnings management is an immoral or unethical act (Healy & Wahlen, 1998).The assumption of two-sided earnings management actually is a negative thing because of agency problems that arise from the interests of shareholdersand managers, until it cannot show the actual financial condition of the company. (Noor, Sanusia, Heang, Iskandar, & Isa, 2015 and Rahman, Sulaiman, Fadel, & Kazemian, 2016).

The risk of financial difficulties can encourage financial statement fraud (Lisic, Silveri, Song, & Wang, 2014; Izzalqurny, Subroto, & Ghofar, 2019).According to Izzalqurny, Subroto, & Ghofar (2019), companies are more likely to commit financial statement fraud when they are in the financial crisis phase and supported by the opportunity to take these actions.The

financial crisis pressured companies to show the best performance to internal and external parties inthe wrong way (Dalnial, Kamaluddin, Sanusi, & Khairuddina, 2014).Kanapickianė & Grundianė (2015) and Chen, Liou, Chen, & Wu (2018) stated that measuring this risk can be seen from the ratio of liquidity, profitability, and solvency. Low liquidity makes companies try to manipulate the real conditions (Yao, Zhang, & Wang, 2018).This is attempted to make shareholders believe the company has a good performances(Zainudin & Hashim, 2016).However, according to (Yao, Zhang, & Wang, 2018),liquidity cannot be fully used as an indicator for analyzing financial statement fraud.Profitability is the company's ability to generate profits through company operations. Companies with low profits are motivated to commit fraudulent financial statement to convince external parties (Zainudin & Hashim, 2016).According to Kanapickianė & Grundianė (2015), higher profitability can prevent financial statement fraud, these results are in line with Abbott & Parker (2000).However, Izzalqurny, Subroto, & Ghofar (2019) stated that low profitability has no significant effect on financial statement fraud. It is because when profits in the next period decline, the company tries to maintain profit stability by manipulating financial statement. Solvency is the company's ability to pay off debt. Solvency can be calculated using leverage which is the ratio of total debt to total assets (Noor, Sanusia, Heang, Iskandar, & Isa, 2015).Companies with high leverage have a small probability of paying off debt. This condition tends to be pressure in committing financial statement fraud(Zainudin & Hashim, 2016), this result is in accordance with research conducted by Dalnial, Kamaluddin, Sanusi, & Khairuddina (2014).However, research by Izzalqurny, Subroto, & Ghofar (2019) stated that high leverage actually reduces the chances of financial statement fraud because high debt makes the company more careful in carrying out activities.

Over time, considering that are so many financial statement fraud that harms internal and external parties, this research focuses on analyzing earnings management and risk management that can affect financial statement fraud by using macroeconomic factors as control variables.

## THEORETICAL REVIEW

### *Theories*

### *Agency Theory*

Agency theory means the misalignment of the goals and needs of the principal and agent due to the principal's desire to make the agent in accordance with the principal's goals.But on the other hand, the agents try to do things that can maximize their own desires. Thiscondition causes the principal to supervise the agent's performance.In this theory, the agent is the management that is trusted by the principal to run an organization or company(Pepper & Gore, 2012).Company managers have information asymmetry in agency theory.The existence of information asymmetry means that the management knows more information and the condition of the company than external parties such as creditors and investors(Karajiana & Ullah, 2021).The condition of the agent's personal desire, which is supported by information asymmetry, becomes an

opportunity for company managers to commit financial statement fraud(Eaglesham & Rapoport, 2015).

***Fraud***

Black's Law Dictionary quoted from the Association of Certified Examines (ACFE), fraud is defined as inappropriate interpretation of the truth or hiding the actual conditions for adverse actions. Fraud is classified as an intentional or unintentional act of seizing the property of another party.According to ACFE, fraud is caused by a lack of targets that are used as the basis for obtaining profits through inappropriate actions.The basic things for fraud are illustrated in the fraud triangle introduced by Donald Cressey in 1953. There are three main things in the fraud triangle: pressure, opportunity, and rationalization.

***Pressure***

Pressure can come from economic difficulties, lifestyle, and life needs that make related parties feel pressured to fulfill themand motivate them tocommit crimes (Rahman, Deliana, & Rihaney, 2020).Basically, the pressure begins with financial problems that are not able to get a solution from the right way. Therefore, it encourages a party to take illegal actions such as stealing materials or falsifying financial statement(Martin, 2011; Shi, Connelly, & Hoskisson, 2017).

***Opportunity***

Opportunity for a person or group to commit fraud. The party estimates that the actions will not be detected due to the lack of management supervision, weak internal controls, and the use of positions (Izzalqurny, Subroto, & Ghofar, 2019).One opportunity to commit fraud is support from the auditor(Chen, Wang, & Xing, 2021).In the fraud triangle, the upper part is occupied by the opportunity which means that this factor is control over the company or organization to prevent fraud (ACFE, 2021).

***Rationalization***

Rationalization is an condition when the party who commits fraud tries to justify the actions.(Zainudin & Hashim 2016).When there is pressure and opportunity to commit fraud, the parties try to cover up the action by falsifying true information.This falsification can be through proof of payment, preparation of financial statement, and other actions (Gande & Lewis, 2009; Shi, Connelly, & Hoskisson, 2017).To minimize the rationalization of this fraud, management's role is urgently needed in emphasizing and correcting the conditions that cause losses (Baker, Cohanier, & Leo, 2017).

**FINANCIAL STATEMENT FRAUD**

American Institute Certified Public Accountant (AICPA) defines financial statement fraud as intentional or unintentional behavior that falsification the results of financial statement. Similar to Association of Certified Fraud

Examiners (ACFE), defines financial statement fraud as fraudulent activity in presenting reports from managers to investors and creditors. The motivation of fraud is to increase stock prices, obtain bank loans, reduce tax obligations, to attract investors(Al-Hashedi & Magalingam, 2021).

There are two methods that can be used to record financial statementnamely cash and accruals. The cash method is used when there is cash in and cash out. While the accrual method is used when there is an agreement between related parties even though there has not been cash in or cash out. In accounting standards, the calculation of accruals is based on several criteria such as revenue, cost of debt, warranty costs, and depreciation. The accrual method is divided into two classifications, there are non-discretionary accruals and discretionary accruals. Nondiscretionary accrual is an accrual method that pays attention to company factors and accounting provisions such as depreciation. Basically, depreciation does not occur cash out but there are accounting provisions to record during the current period. The discretionary accrual is an accrual method that is concernedwith company policies, such as the company's policy in deciding the profit target to be presented in the financial statement. Financial statement fraud can be calculated by using discretionary accruals as a proxy for calculating the discretionary and unregulated earnings of management options. Managers have considerable control over the amount and timing of the use of the accrual method. Discretionary accruals value relative to cash flows that recorded using the accrual method which leads to low earnings quality(Scott, 2015).

Accruals changes can be calculated using the discretionary accrual modified modelJones(Lee & Vetter, 2015).In line with Pae (2005) and Dechow and Dichev (2002), this study used discretionary accruals which add the current Operating Cash Flow (OCFt) and previous period Operating Cash Flow (OCFt-1).The addition of the formula aims to strengthen the Jones model in analyzing the quality of financial statement. Simultaneously, the higher this model indicates abnormal cash flow due to earnings management (Roychowdhury, 2006; Rahman, Sulaiman, Fadel, & Kazemian, 2016).

(Eq, i)

$$\mathrm{DOCF_{it}} = \left(\frac{\mathrm{TACC_{it}}}{\mathrm{TA_{it-1}}}\right) - \mathrm{NDOCF_{it}}$$

(Eq, ii)

$$\mathrm{NDOCF_{it}} = ß_1\left(\frac{1}{\mathrm{TA_{it-1}}}\right) + ß_2\left(\frac{\Delta\mathrm{REV_{it}} - \Delta\mathrm{REC_{it}}}{\mathrm{TA_{it-1}}}\right) + ß_3\left(\frac{\mathrm{PPE_{it}}}{\mathrm{TA_{it-1}}}\right) + ß_4\left(\frac{\mathrm{OCF_{it}}}{\mathrm{TA_{it-1}}}\right) + ß_5\left(\frac{\mathrm{OCF_{it-1}}}{\mathrm{TA_{it-1}}}\right) + \varepsilon$$

(Eq, iii)

$$\mathrm{TACC_{it}} = \mathrm{NI_{it}} + \mathrm{OCF_{it}}$$

$\mathrm{DOCF_{it}}$ = Discretionary Accruals Operating Cash Flow company, year t
$\mathrm{NDOCF_{it}}$ = Non Discretionary Accruals Operating Cash Flow companyi, year t

$TA_{it-1}$ = Total Asset companyi, year t-1
$\Delta REV_{it}$ = Changes in income company i, year t
$\Delta REC_{it}$ = Changes in accounts receivable company i, year t
$PPE_{it}$ = Fixed Assetcompany i, year t
$OCF_{it}$ = Operating Cash Flow company i, year t
$OCF_{it-1}$ = Operating Cash Flow company i, year t-1
$TACC_{it}$ = Total Accruals company i, year t
$NI_{it}$ = Net Incomecompany i, year t

***Earnings Management***

Earnings management is an opportunity for managers to take action against accounting rules that are motivated by their goals. Earnings management is closely related to agency theory which contains certain personal or organizationgoals and supported by information asymmetry from internal parties rather than external parties(Rahman, Sulaiman, Fadel, & Kazemian, 2016).Given these facts, managers restructured financial statement which had an impact on financial performance information addressed to stakeholders, investors, and other parties (Healy & Wahlen, 1998; Orellana, Romero, & Garrido, 2017). However, earnings management is not always a negative thing. Earnings management can be said to be positive because this action is a must in the management field to reduce company risk. The use of earnings management is allowed as long as it does not violate the rules of Financial Accounting Standards, or is within reasonable limits – there are no major changes.(Scott, 2015) Explained that there are four models used when companies practice earnings management:

***Taking a Bath***

Taking a bath is the act of reporting a large losses in financial statement when there is a change of CEO. This model is carried out as a step to increase profits in the future.

***Income Minimization***

Income minimization is a model of earnings management through profit reduction. This action is motivated by high profitability in the present and as a step to anticipate large losses in the future

***Income Maximization***

Income maximization is a model of earnings management through increasing profits in financial statement. This model is usually carried out when the company violates the debt covenant while at a loss. In addition, this model is also used when internal parties want to get high compensation.

***Income Smoothing***

Income smoothing is a model of stabilizing profits to avoid high growth or decline in profits. This is because there are investors who tend to like earnings stability

Earnings management calculations in this study are proxied by discretionary accruals with a statement of income position approach belonging to the Modified Jones Model (1991).This approach is expected to be able to analyze changes in income and the intensity of changes in capital(Ahmad, Suhara, & Ilyas, 2016). In Rahman, Sulaiman, Fadel, & Kazemian (2016), Gerayli, Yanesari, & Ma'atoofi (2011) and Roychowdhury (2006) result that discretionary accruals with a statement of income position approach make financial statement close to actual conditions before earnings management is carried out, such as lower cash flow and higher production costs.

(Eq, iv)

$$\mathrm{DACC_{it}} = \left(\frac{\mathrm{TACC_{it}}}{\mathrm{TA_{it-1}}}\right) - \mathrm{NDACC_{it}}$$

(Eq, v)

$$\mathrm{NDACC_{it}} = ß_1\left(\frac{1}{\mathrm{TA_{it-1}}}\right) + ß_2\left(\frac{\Delta\mathrm{REV_{it}} - \Delta\mathrm{REC_{it}}}{\mathrm{TA_{it-1}}}\right) + ß_3\left(\frac{\mathrm{PPE_{it}}}{\mathrm{TA_{it-1}}}\right) + \varepsilon$$

(Eq, vi)

$$\mathrm{TACC_{it}} = \mathrm{NI_{it}} + \mathrm{OCF_{it}}$$

$\mathrm{DACC_{it}}$ = Discretionary Accruals companyi, year t
$\mathrm{NDACC_{it}}$ = Non Discretionary Accruals companyi, year t
$\mathrm{TA_{it-1}}$ = Total Asset companyi, year t-1
$\Delta\mathrm{REV_{it}}$ = Changes in income company i, year t
$\Delta\mathrm{REC_{it}}$ = Changes in accounts receivable company i, year t
$\mathrm{PPE_{it}}$ = Fixed Assetcompany i, year t
$\mathrm{TACC_{it}}$ = Total Accruals company i, year t
$\mathrm{NI_{it}}$ = Net Incomecompany i, year t
$\mathrm{OCF_{it}}$ = Operating Cash Flow company i, year t

***Risk Management***

InOxford English Dictionary risk management is defined as the chance of harm, damage, or loss. Meanwhile, the Institute of Risk Management defines risk management as a combination of success and failure opportunities or consequences. These consequences can be positive or negative depending on how the practitioner applies the risk. Basically, risk cannot be eliminated but can be minimized until it reaches the tolerance limit.

Liquidity represents the company's ability to ensure working capital to total assets. High liquidity indicates that the company's performance has been good in managing its assets(Dalnial, Kamaluddin, Sanusi, & Khairuddina, 2014).Liquidity can be measured by calculating the ratio of current assets and current liabilities to the company's total assets, this calculation is called Working Capital to Total Asset ratio (WCTA(Kaminski, Wetzel, & Guan, 2004).Liquidity can indicates financial statementfraud(Kanapickianė &

Grundienė, 2015).Low liquidity provides an opportunity for managers to manipulate financial statement(Zainudin & Hashim, 2016).However (Yao, Zhang, & Wang, 2018)(Yao, Zhang, & Wang, 2018) stated that the liquidity ratio cannot be fully used as an indicator to analyze fraud in financial statement.

Profitability is the company's ability to gain operational results. Profitability can be measured by calculating Return on Asset (ROA) or ratio of net income to total assets(Dalnial, Kamaluddin, Sanusi, & Khairuddina, 2014). High profitability indicates that the company's performance has been good because profitability is an indicator in calculating the effectiveness of profits that obtained with assets through operational activities. Companies with low profits are motivated to increase revenue or reduce costs (Zainudin & Hashim, 2016).However, Izzalqurny, Subroto, & Ghofar (2019) stated that profitability is in line with fraudulent financial statements to maintain profit stability when there is a decline in profit in the next period.

Solvency is the company's ability to pay off debt using its assets. Solvency can be determined by debt ratio or dividing total liabilities to total assets (Kanapickianė & Grundienė, 2015). Low debt ratio indicates that the company has good solvency. Meanwhile, if the debt ratio is high, it means that the company is at risk of insolvency or inability to pay off debt(Dalnial, Kamaluddin, Sanusi, & Khairuddina, 2014).It is because the total assets of company cannot cover upthe total liabilities. High debt ratio can motivate companies to manipulate financial statement (Noor, Sanusia, Heang, Iskandar, & Isa, 2015). It because of company is trying to present good performance in financial statements to attract the investors. However, other research results that high debt ratio encouraging companies to be more careful and avoid manipulation of financial statements (Izzalqurny, Subroto, & Ghofar, 2019).

***Exchange Rate***

The exchange rate is the value of a country's currency compared to the value of other countries' currencies. The changes of currency rates due to the supply and demand of the two currencies(KLC, 2019).This activity occurs through transactions involving two countries such as trade, investment, tourist activities, and other things.The exchange rate is one part of the macroeconomics that becomes a reference for the stability of economic change(Kartono, Febriyanti, Wahyudi, & Irmansyah, 2020). The use of exchange rates in research can provide more accurate results with actual conditions, especially for large industrial countries (Grilli & Roubini, 1995; Kim, Kim, & Park, 2020).

***Economic Growth***

Economic growth is a change in the country's economy to achieve better conditions within a certain period of time.Economic growth can be used as a reference for the national economy based on detailed economic data and information for each period(Landefeld, Seskin, & Fraumeni, 2008). Wahidin, Akimov, & Roca (2021)and Fraj, Hamdaoui, & Maktouf (2018) stated that

economic growth is considered as the center of overall economic activity in the short to long term by considering many factors such as costs which are closely related to the exchange rate. The existence of economic growth in research can make the results in accordance with actual conditions (Ahmad, Suhara, & Ilyas, 2016).

## HYPOTHESIS DEVELOPMENT

Risks that arise either from internal or external can be a pressure for a company. Moreover, if the company does not have the internal ability to mitigate risks.On the other hand, there is interest of internal parties to achieve certain goals through the opportunities that exist in the company. If the process of risk mitigation and goal achievement are not carried out properly, it can affect financial statement fraud.

**H1** = Earnings management and risk management simultaneously affect financial statement fraud

Earnings management activities are carried out by institutions to regulate financial statement; especially in income statement. This activity aims to show good performance in company reports. However, earnings management provides an opportunity to manipulate data in financial statement. The higher institution performs earnings management, the more likely its commit fraud financial statement.

**H2** = Earnings Management partially has a positive effect on financial statement fraud.

Liquidity represents the company's ability to ensure working capital to total assets. In addition, liquidity also reflects the ability of an organization to pay the short-term debt. High liquidity means that the company has good performance. The high level of liquidity makes the company not pressured by risk and not motivated to commit financial statement fraud.

**H3** = Liquidity partially has a negative effect on financial statement fraud.

Profitability indicates the company's profit from operations. Higher profitability shows that the company is able to manage operational processes to increase profits. With high profitability, the company has minimal business risk and internal parties will make financial reports according to actual conditions.

**H4 =** Profitability partially has a negative effect on financial statement fraud.

Solvency represents the company's ability to pay its debts with its assets. A low debt ratio indicates that the company is able to pay its debts or has good solvency, so the less likely the company is to commit financial statement fraud.

**H5** = Solvency partially has a negative effect on financial statement fraud.

The exchange rate is one of the macroeconomic indicators to measure the stability of a country's economy. The higher value of the exchange rate indicates that the country's currency is depreciating. The condition of the depreciating value of money is because the country's economy has decreased. It had a negative impact on the company's business activities and became pressure to manipulate the financial statement.

**H6** = The exchange rate partially has a positive effect on financial statement fraud.

Increased economic growth means that economic conditions are getting better. This condition occurs due to an increase in economic activity, such as company sales. With an increase in sales, companies are not pressured to manipulate the financial statement.

**H7** = Economic growth partially has a negative effect on financial statement fraud.

## RESEARCH METHODS

### *Variable Construction*

**Table 3.1** Research Variable

| Code | Variable | Indicator |
|---|---|---|
| Dependent Variable | | |
| FR | Financial Statement Fraud | Discretionary accruals with operating cash flow approach |
| Independent Variables | | |
| EM | Earning Management | Discretionary accruals with a statement of comprehensive income approach |
| LIK | Liquidity | $\frac{Current\ Assets\ -\ Current\ Liabilities}{Total\ Assets}$ |
| PRO | Profitability | $\frac{Net\ Income}{Total\ Assets}$ |
| SOL | Solvency | $\frac{Total\ Liabilities}{Total\ Assets}$ |
| Control Variables | | |
| ER | Exchange Rate | Value of Rupiah to 1 Dollar |
| ECG | Economic Growth | Gross Domestic Product |

The regression model for this research is as follows:
$FR_{it}$ = β0 +β1 EM +β2 LIK +β3 PRO +β4 SOL +β5 ER +β6 ECG + ε

### *Sample Selection*

This research usedthe purposive sampling method for sample selection.The sample of this research is non-financial companies listed on the Indonesian Stock Exchange in 2016-2019. The results of sample selection are 331 companies with the following criteria:

**Table3.2** Criteria of Sample

| **Sampling Criteria** | **Number of Companies** |
|---|---|
| Non-financial companies listed on the Indonesian Stock Exchange | 614 |
| Companies that IPO in 2020 and above | 52 |
| Companies that do not publish financial statements in rupiah | 91 |
| Companies with incomplete information | 140 |
| **Number of Samples** | 331 |

This research collects data from 331 samples of companies to be used in research processes. The research processesare descriptive statistical test, classical assumption test, multiple linear regression test, determinant coefficient test, simultaneous significant test, and partial significant test.

## RESULT AND DISCUSSION

### *Results*

### *Descriptive Statistical Test*

In Table 4.1 there are descriptive statistical test results that describe the minimum, maximum, average, and standard deviation values for each variable in the study.

**Table4.1** Descriptive Test Result

| | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| FR | 1.324 | -0.2179 | 0.4653 | -2.5559 | 3.6890 |
| EM | 1.324 | -0.2424 | 2.6761 | -12.9999 | 94.8546 |
| LIK | 1.324 | -0.3999 | 17.2710 | -626.6468 | 6.2738 |
| PRO | 1.324 | 0.0064 | 0.2556 | -3.9332 | 2.1920 |
| SOL | 1.324 | 1.4230 | 26.8942 | 0.0064 | 973.4064 |
| ER | 1.324 | 0.0127 | 0.03071 | -0.0096 | 0.0649 |
| ECG | 1.324 | 0.0507 | 0.0006 | 0.0502 | 0.0517 |

The average value of the financial statement fraud (FSF) variable is -0.2179. The standard deviation of FSF variable is 0.4653, this value means that the data deviation of this study is between 0.4653 from the average value. Then the minimum value of FSF variable is 2.5559. While the maximum value of FSF variable is 3.6890.

Earnings management (EM) variable has an average value of -0.2424 with 2.6761 in standard deviation. The minimum value of the EM variable is -12,9999 and the maximum value is 94.8546. Liquidity (LIK) variable has an average value of -0.3999. Then the standard deviation is 17.2710 from the average value. The minimum value of LIK variable is -626.6468 and the maximum value is 6.2738.The profitability (PRO) variable has an average value of -0.0064 with a standard deviation of 0.2556value. Then the smallest value ofPRO variable is -3.9332 and the maximum value is 2.1920.Then, the average value of the solvency (SOL) variable is 1.4230. Then the standard deviation is 26.8942 from the average value. The minimum value for the SOL variable is -0.0064 and the maximum value is 973.4064.

Exchange rate (ER) variable has an average value of -0.0127 with a standard deviation 0.03071 from the average value. Then the smallest value of ER variable is -0.0096 and the maximum value is 0.0649.The economic growth (ECG) variable has an average value of -0.0507 with 0.0006 in standard deviation. The smallest value for ECG variable is 0.0502 and the maximum value is 0.0517.

***Model Test***

***Chow Test***

**Table4.2** Chow Test Result

| | |
|---|---|
| **α** | 1% |
| **Prob>F** | 0.0000 |

Chow Test is a test to determine the model between Pooled Least Square (PLS) and Fixed Effect Model (FEM) that will be used in research.If theP-value <αindicates that the FEM was chosen to be used in this research. Meanwhile, if the value ofP-value>α, PLS was chosen to be used.The p-value in Chow Test of this research is 0.0000, it indicates that the value is smaller than the significance level 1%. Based on these results, it means that the selected model is FEM.

***LM Test***

**Table4.3 LM Test Result**

| | |
|---|---|
| **α** | 1% |
| **Prob>chibar2** | 0.0000 |

Lagrange Multiplier (LM) Test is a test to determine the model between Pooled Least Square (PLS) or Random Effect Model (FEM)that will be used in this research. If the P-value <αindicates that the REM was chosen to be used in this research.Meanwhile, if the value ofP-value>α, PLS was chosen to be used.The p-value in LMTest of this research is 0.0000, it indicates that the

value is smaller than the significance level 1%. Based on these results, it means that the selected model is REM.

***Hausman Test***

**Table 4.4** Hausman Test Result

| | |
|---|---|
| **α** | 1% |
| **Prob>chi2** | 0.0000 |

HausmanTest is a test to determine the model betweenFixed Effect Model (FEM)or Random Effect Model (FEM)that will be used in this research. If the P-value <αindicates that the FEM was chosen to be used in this research.Meanwhile, if the value ofP-value>α, REM was chosen to be used.The p-value in HausmanTest of this research is 0.0000, it indicates that the value is smaller than the significance level 1%. Based on these results, it means that the selected model is FEM.

***Classical Assumption Test***

***Multicollinearity Test***

Correlation test is a test to identify thecorrelation between independent variables.Variables that have a high correlation must be eliminated to avoid errors in the research model.In Table 4.5, the absolute value above 0.75 indicates that the variable has a high correlation. The SOL variable with LIK has a value of |-0.9988| and ECG variable with ER value |0.9908|. These value means that the variables between SOL and LIK ; ECG and ER must be removed on this research model.

**Table4.5** Correlation Test Result

| | Period | FR | EM | LIK | PRO | SOL | ER | ECG | FIRM |
|---|---|---|---|---|---|---|---|---|---|
| Period | 1.0000 | | | | | | | | |
| FR | 0.0434 | 1.0000 | | | | | | | |
| EM | -0.0145 | 0.2166 | 1.0000 | | | | | | |
| LIK | -0.0381 | -0.0134 | -0.0022 | 1.0000 | | | | | |
| PRO | -0.0219 | 0.0086 | 0.0288 | -0.0158 | 1.0000 | | | | |
| SOL | 0.0403 | 0.0130 | 0.0021 | -0.9988 | 0.0026 | 1.0000 | | | |
| ER | 0.2166 | 0.0338 | -0.0255 | 0.0202 | 0.0126 | -0.0204 | 1.0000 | | |
| ECG | 0.1096 | 0.0286 | -0.0269 | 0.0255 | 0.0144 | -0.0259 | 0.9908 | 1.0000 | |
| FIRM | 0.0000 | -0.0422 | -0.0025 | 0.0398 | 0.0423 | -0.0387 | 0.0000 | 0.0000 | 1.0000 |

Multicollinearity test based on the results of Variance Inflation Factor (VIF).The independent variables PRO and EM in this research had a VIF value < 10. Meanwhile, the LIK, SOL, ECG, and ER variables each had a VIF > 10 as shown in Table 4.6.

**Table 4.6** Multicollinearity Test Result 1

| Variable | VIF | 1/VIF |
|---|---|---|
| LIK | 444.50 | 0.0023 |
| SOL | 444.45 | 0.0023 |
| ECG | 55.07 | 0.0182 |
| ER | 55.05 | 0.0182 |
| PRO | 1.08 | 0.9267 |
| EM | 1.00 | 0.9983 |
| Mean VIF | 166.86 | |

VIF value > 10 indicates that the variable has multicollinearity.So it is necessary to eliminate one of the correlation variables by looking at the higher VIF value. Between LIK and SOL variables, LIK has a higher VIF value,so it must be omitted. Then, between ECG and ER variables, the VIF of ECG is higher than ER, so the ECG variable must also be eliminated.

**Table 4.7 Multicollinearity Test Results 2**

| Variable | VIF | 1/VIF |
|---|---|---|
| EM | 1.00 | 0.9959 |
| ER | 1.00 | 0.9961 |
| PRO | 1.00 | 0.9988 |
| SOL | 1.00 | 0.9999 |
| Mean VIF | 1.00 | |

After eliminating the LIK and ECG variables, the results of the second multicollinearity test are free from multicollinearity as shown in Table 4.7. It is because independent variables have VIF < 10.

***Heteroscedasticity Test***

Heteroscedasticity test to test the similarity or dissimilarity between variance of residuals in the regression model of research.If there is variance from the same residual, the research is homoscedasticity. Heteroscedasticity test based on the results of the comparison of P-value with$\alpha$.If the P-value >$\alpha$indicates that there is no heteroscedasticity in research.However, if P-value <$\alpha$indicates that the study has symptoms of heteroscedasticity.

**Table 4.8** Heteroscedasticity Test Results

| | |
|---|---|
| **Chi2 (331)** | 7.6e+06 |
| **Prob>chi2** | 0.0000 |

Heteroscedasticity test in this research obtained P-value of 0.0000 with a significance level of 1%. This value means that the model in this researchhas symptoms of heteroscedasticity.

***Autocorrelation Test***

Autocorrelation test is a test to ensure there are no residuals or distractions between the current time and the previous time.Research has an autocorrelation problem if there is a correlation between time series. Autocorrelation can be known by comparing the P-value with α. Ifthe P-value >α means that there is no autocorrelation research. However, if P-value <α indicates that the research has symptoms of autocorrelation.

**Table 4.9** Autocorrelation Test Results

| | |
|---|---|
| **F (1, 330)** | 12.529 |
| **Prob>F** | 0.0005 |

In this research, the P-value is 0.0005 with a significance level of 1%. It means that the model in this researchhas symptoms of autocorrelation.

***Multiple Linear Regression Test***

Multiple linear regression test serves to determine the effect of two or more independent variables on the dependent variable either positively or negatively. This test can also find out the constant condition of the dependent variable. The results of the multiple linear regression test in this research are as shown in Table 4.10

**Table4.10** Multiple Linear Regression Test Results

| | | |
|---|---|---|
| **Number of Observations** | | 1,324 |
| **Number of Groups** | | 331 |
| **F (4,330)** | | 26.29 |
| **Prob>F** | | 0.0000 |
| **R-Square** | | 0.1217 |
| **Var** | **Coef** | **Prob > \|t\|** |
| EM*** | 0.0307 | 0.000 |
| PRO*** | 0.3456 | 0.000 |
| SOL** | 0.0002 | 0.163 |
| ER** | 0.5483 | 0.042 |
| _CONS | -0.2200 | 0.000 |

The value of beta (β) constant in this research is -0.2200. Meanwhile, for the independent variable EM is 0.0307, PRO is 0.35, SOL is 0.0002, and ER is 0.5483. With these results, the multiple linear regression equation in this research is:

$FSF_{it}$ = β0 +β1 EM +β2 PRO +β3 SOL +β4 ER + ε
$FSF_{it}$ = -0,220 + 0,0307 EM + 0,0346 PRO + 0,0002 SOL + 0,5483 ER

Based on the multiple linear regression equation, the value of β0 is -0.2200. It means that when the value of independent variables is zero, the constant value of FSF variable is -0.2200 %. It indicates that if the condition of variable independens has no value, the level of financial statement fraud is -

0.2200%.Furthermore, β1 has a value of 0.0307 which means that ifEM variable or earnings management increase by 1%, it can increase 0.0307% of FSF variable. Then, the value of β2 means that eachPRO variableor profitability increase by 1% is able to increase the FSF variable by 0,3456%. The value of β3 is 0.0002 which means that every 1% increase in the SOL variable or solvency, it can increase the FSF variable by 0.0002%.The value of β4 is 0.5483, it indicates that every 1% increase in the ER variable or exchange rate can increase the FSF variable by 0.5483%.

***Determinant Coefficient Test***

The determinant coefficient of this study resulted in an adjusted R square or $R^2$of 0.1217 or 12.17%.This value is to find out how much the dependent variable can be explained by the independent variables. The value of $R^2$ indicates that the changes of FSF variable can be explained by 12.17% by the independent variable in this study. Meanwhile, the other 87.83% were explained by factors that were not used in this study. The factors that are expected to increase the accuracy of this research are stock prices. The stock price is considered to represent an external view of the company's performance. A low stock price makes the company seen as having a worse performance than other companies. In addition, from the internal side, the decline in stock prices will reduce personal profits (Cox & Weirich, 2002).So the company is trying to increase stock prices through good financial statement.

In addition, based on the results, it is necessary to pay attention to select the samples. In this research, the samples are companies that sell domestically and internationally. By limiting the sample domestically or internationally is expected to increase the accuracy of the results. It becaused by in domestic sales, a higher exchange rate indicates that the currency is depreciating. However, in international sales, the higher exchange rate actually becomes an opportunity for the company to earn more profitsfrom the exchange of purchase value.

***Simultaneous Significant Test***

**Tabel 4.11** Hasil Uji Simultan

| | |
|---|---|
| **F (4, 330)** | 26.29 |
| **Prob>F** | 0.0000 |

Simultaneous significant test or F-test produces a P-value of 0.0000. This research model is simultaneously significant, because the P-value is smaller thansignificance level of 1%. Due to the significant effect of independent variables on the dependent variable, this research model can be tested.

***Partial Significant Test***

Partial significant test or t-test is used to determine the effect of independent variable partially on the dependent variable. The t-test is obtained by

comparing the value of Prob>|t| tolevel of significance or α.If the value of Prob>|t| smaller than the α, it means that the independent variable affects the dependent variable significantly. In Table 4.12 there are coefficients and P-value from the t-test of this research as bellow:

**Tabel 4.12** Hasil Uji Parsial

| **Var** | **Coef** | **Prob > \|t\|** |
|---|---|---|
| EM*** | 0.0307 | 0.000 |
| PRO*** | 0.3456 | 0.000 |
| SOL** | 0.0002 | 0.163 |
| ER** | 0.5483 | 0.042 |
| _CONS | -0.2200 | 0.000 |

EM variable has a coefficient of 0.0307 andP-value 0.000. It means that earnings management variable has a significant positive effect on the dependent variable (FSF). It because of the P-value is smaller than significance level of 1%, so the H2 in this research is accepted.

Then, the coefficient of PRO variable is 0.0346 andP-value 0.000. Profitability variable has a significant positive effect on dependent variable (FSF) because the P-value is smaller than significance level of 1%. So that the hypothesis H3 is rejected.

The SOL variable has a coefficient of 0.0002 andP-value 0.163. But the P-value of this variable is greater than significance level of 5%. It means that the solvency variable has a positive effect but not significant on the dependent variable (FSF), so the hypothesis H5 is rejected.

Furthermore, ER variable has a coefficient value of 0.5483 andP-value 0.042. The ER variable has a significant positive effect on dependent variable (FSF) because the P-value is smaller than significance level of 5%, so hypothesis H6 is accepted.

## DISCUSSION

### *Effect of Independent Variables Simultaneously on Financial Statement Fraud*

To determine the effect of the independent variable simultaneously on dependent variable, it can be done by comparing the P-value with significance level or α.Based on the results of simultaneous test, the P-value is 0.0001 with a significance level of 1%.These results indicate that the H0 is rejected, which means there is a simultaneous significant effect of independent variable on dependent variable.

With the results, H1 in this research is accepted. H1 estimates that earnings management and risk management simultaneously affect financial statement fraud. The existence of internal objectives with an opportunity for managers to take action on financial statements and the high risk of company can influence

them to commit financial statement fraud.Fraud in financial statement is attempted to avoid risk and achieve the goal to have a good reputation for the company.

### *Effect of Earning Management on Financial Statement Fraud*

The earnings management variable (EM) in this research has a P-value of 0.000, it less than significance level value of 1%. Then, the coefficient of relationship between earnings management and financial statement fraud is 0.0307. It means that every 1% increase in earnings management, the financial statement fraud will increase by 0.0307%. Therefore, based on the statistical value obtained, H0 is rejected. These results indicate that earnings management has a significant positive effect on financial statement fraud in non-financial companies that listed in Indonesia Stock Exchange for the 2016-2019 period. The significant positive effect of earnings management on financial statement fraud means that the higher earnings management actions in the company will lead to higher financial statement fraud in the company, H2 in this research is accepted.

Company managers make earnings management an opportunity to change the amount of accounting reports to achieve certain goals, such as internal needs, reducing losses, and fulfillingthe expectations of external parties. This earnings management activity is closely related to agency theory which stated that the internal parties get more information than external parties. Earnings management is considered an immoral or unethical act because it motivatesmanagers to try to restructure financial statementsthat will be submitted to stakeholders, investors, and other parties (Healy and Wahlen, 1998; Orellana, Romero, & Garrido, 2017).

In Noor, Sanusia, Heang, Iskandar, & Isa (2015) also results that earnings management is a negative thing because there are agency problems from shareholders and managers, which encourages the company not to show the actual financial condition of the company to make a profit. Moreover, there is an opportunity because the management lacks internal control during the working period(Baker, Cohanier, & Leo, 2017).Then, research of Orellana, Romero, & Garrido (2017) supports that earnings management is a behavior in the field of management to manipulate data that does not match expectations such as assets, sales, debt, costs, profits, and losses. In addition, Shi, Connelly, & Hoskisson (2017) result that when there is an opportunity to act fraudulently in material terms, the partiestry to cover it up through falsification of information such as proof of payment and financial statements.

There are many findings related to fraud in financial statements that occur in companies that aggressively manage earnings for the next three years to the next three years. Usually, the act of manipulating income in the previous year is to avoid the tax burden. Meanwhile, revenue manipulation in the following year is to show that the company is able to obtain high profits and good performance (Rahman, Sulaiman, Fadel, & Kazemian, 2016).

### *Effect of Profitability on Financial Statement Fraud*

Based on the results of this research, the profitability variable (PRO) has a P-value of 0.000, it less than the significance level value of 1%. The coefficient of relationship between profitability and financial statement fraud is 0,3456. It means that every 1% increase in profitability can increase 0.3456% of financial statementfraud, so H0 is rejected. This condition means that profitability has a significant positive effect on financial statement fraud in non-financial companies that listed in Indonesia Stock Exchange for 2016-2019 period. The higher the company's profitability will increase the fraudulent financial statements in the company, so H4 in this research is rejected.

Profitability represents the company's ability to earn profit through the company's operations. The high profit of company can be an opportunity for internal parties to change the profit in financial statements. This action is an implication of personal or group needs that supported by information asymmetry. The existance of interests of agent, which is supported by information asymmetry can becomes an opportunity for company managers to cheat on financial statements(Eaglesham & Rapoport, 2015).

This study is in line with the results of Kanapickianė & Grundianė (2015) which stated that profitability has a significant influence on financial statementfraud. Abbott & Parker (2000) also found that profitability has a positive effect on financial statement fraud, but this research had no significant effect.Then, research of Izzalqurny, Subroto, & Ghofar (2016), profitability has a positive effect on financial statement fraud to maintain profit stability when there is a decrease in income in the next period. In addition, according to the theory of earnings management model described in Scott (2015), there is an income minimization model by reducing profits on financial statement sconducted by the company's internal.

### *Effect of Solvency on Financial Statement Fraud*

In this research, the P-value of solvency variable (SOL) is 0.163 or greater than the significance level value of 5%. The coefficient of solvency to financial statement fraud is 0.0002, it means that financial statement fraud will increase by 0.0002% if the solvency increases by 1%. Based on the result, solvency has a positive but not significant effect on financial statement fraud in non-financial companies that listed in Indonesia Stock Exchange for 2016-2019 period.

Solvency is the company's ability to pay off debt using its assets. The solvency can be calculated with debt ratio or dividing total liabilities to total assets(Kanapickianė & Grundienė, 2015).The result of this research indicates that solvency has a positive effect but not significant on financial statement fraud. It means that if the solvency or debt ratio of company is higher, it will not necessarily increase financial statement fraud. So, H5 in this research is

rejected, which states that solvency has a negative effect on financial statement fraud.

High solvency actually increases financial statement fraud because when the company's solvency is high, it means the company's debt ratio is low or the assets of company are more than debt. High assets can be a factor for companies to commit financial statement fraud because the companies are trying to maintain the stability of their assets(Rahman, Deliana, & Rihaney, 2020).Then if the company's solvency is low, it indicates that the debt ratio is high or the companyhas difficulty paying off debt. This condition means that the company still has a responsibility to other parties and is under their control. The results of this researchis in line with Izzalqurny, Subroto, & Ghofar (2016) which stated that a high debt ratio will motivate companies to be more careful and avoid manipulation of financial statements. However, Noor, Sanusia, Heang, Iskandar, & Isa (2015), found that high debt firms would increase the opportunity for managers to involve the earnings in financial statementto cover the actual conditions.

***Effect of Exchange Rate on Financial Statement Fraud***

The exchange rate variable (ER) in this research has a P-value of 0.042, it less than the significance level of 5%. The coefficient of exchange rate variable is 0.5483 which means the financial statement fraud will increase by 0.5483% when there is an increase of 1% exchange rate. The statistical result of the exchange rate variable shows that H0 is rejected. This condition means that the exchange rate has a significant positive effect on financial statement fraud in non-financial companies listed in Indonesia Stock Exchange for 2016-2019 periods.

The significant positive effect of the exchange rate on financial statement fraud means that a higher exchange rate will increase the fraudulent financial statement in the company.Exchange rate is the value of a country's currency compared to the value of other country’s currencies.The higher value of exchange rate indicates that the country's currency is depreciating. It had a negative impact on the company's business activities and became pressure to manipulate the financial statement. Therefore, H6 in this research was accepted.

The use of exchange rate in research can make it more accurate with actual conditions, especially for large industrial countries (Grilli dan Roubini, 1995; Kim, Kim, & Park 2020).The condition of the depreciating value of money is because the country's economy has decreased.This activity occurs through transactions involving two countries such as trade, investment, tourist activities, and other things(Kartono, Febriyanti, Wahyudi, & Irmansyah, 2020).The weakeningeconomy of the country certainly has a negative impact on companies, such as hampering the business processes. Itconditions pressure companies to manipulate financial statements to keep the company's performance stable. So, the high exchange rate which indicates the depreciation of the economy will increase financial statement fraud.

## CONCLUSION AND SUGGESTION

### *Conclusion*

The purpose of this research is to determine the effect of earnings management and risk management in non-financial companies listed in Indonesia Stock Exchange for 2016-2019 period. The independent variables used in this study are earnings management, liquidity, profitability, and solvency. Then there are the exchange rate and economic growth as control variables. In statistical processing, the liquidity and economic growth variables areeliminated to avoid errors in the research model because it has a VIF > 10.The independent variables in this research simultaneously affect financial statement fraud and it can explain 12.17% of dependent variable changes Meanwhile, the other 87.83% are explained by factors outside this study. Some of these factors such as stock prices that considered to represent an external view of the company's performance. Then,the limitationof samples domestically or internationally is expected to increase the accuracy of the resultsbecause there is a difference between them.

The earning management variablehas a significant positive effect on financial statement fraud. The higher earnings management actions in the company will lead to higher financial statement fraud in the company.Company managers make earnings management an opportunity to change the amount of accounting reports – not to show the actual financial condition – to achieve certain goals(Shi, Connelly, & Hoskisson, 2017).Then,the profitability variable also has a significant positive effect on financial statement fraud. The high profit ofthe company can be an opportunity for internal parties to change the income of financial statements. This action is an implication of personal or groupgoals(Eaglesham & Rapoport, 2015)and to maintain profit stability when there is a decrease in income in the next period(Scott, 2015).Furthermore, the solvency variable also has a positive effect on the financial statement fraud variable but itis not significant.This condition can be caused when thesolvency or debt ratio of the company is high, it will not necessarily increase financial statement fraud.The amount of assets is a factor to commit financial statement fraudbecause the companymaintains the asset stability(Rahman, Deliana, & Rihaney, 2020).Moreover, if the solvency is low, the company still has responsibilities to other parties and is under theircontrol(Izzalqurny, Subroto, & Ghofar, 2019). Then, the exchange rate variable also has a significant positive effect on financial statement fraud.The high exchange rate indicates that the country's currency is depreciating.This activity occurs through transactions of two countries such as trade, investment, tourist activities, and other things (Kartono, Febriyanti, Wahyudi, & Irmansyah, 2020). Itconditions pressure companies to manipulate financial statements to keep the company's performance stable.

### SUGGESTION

Based on the results, it is hoped that it will be useful for practitioners such as company managers, audit committees, and investors to minimize the possibility of financial statement fraud.The process of minimizing fraud can be carried out through management policies and tighter the control from both

of company's internal and external auditors.In addition, investors are expected to be more detailed in analyzing the financial statements. Not only looking at net profits and financial ratios, but also looking at the notes section such as sources of incomeand comparing the results with the previous periods.

In addition, it is realized that there are still many limitations. It is hoped that further research can add other variables that have not been included in this study such as stock prices and limit the research sample of domestic or international companies. So it is hoped that further research will find more accurate results.

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