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FINANCIAL STATEMENT DETECTION USING FRAUD DIAMOND

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Abstract. This study aims to detect fraudulent financial statements using the theory fraud diamond. Financial statement fraud is measured using the Modified Jones Model. Disclosure of accrued income from credit sales and accrued receivables of the company is the reason for using the Modified Jones Model. In this study, the authors add the use of the receivables ratio as a proxy variable from the nature of the industry so that the most suitable research model used in detecting financial statement fraud is using the Modified Jones Model. The population in this study are all property and sector companies real estate listed on the Indonesia Stock Exchange for the 2015-2019 period. The sample in this study was 20 companies (100 company data with an observation period of 5 years) in the property and sector real estate listed on the Indonesia Stock Exchange from 2015 to 2019. Using multiple linear regression statistical methods and hypothesis testing using SPSS version 26. This study indicates that financial stability, target, and auditor change do not affect financial statement fraud. Meanwhile, external pressure, the nature of the industry, and total accruals affect fraudulent financial statements.

Keywords: fraud in financial statements; fraud diamond; financial stability; pressure; financial targets; nature of the industry.

INTRODUCTION

The limited amount of vacant land is one of the factors that makes real estate a profitable business in the context of rapid population growth and increasing demand for housing and the limited land area required for developer's real estate to remain competitive (Lessambo, 2014). Many frauds occur in the real estate industry, especially in anticipation of paying taxes so that the amount is not high. Certain types of fraud can occur inland, and real estate transactions where the numbers are shown do not match the actual events. This is done because the tax imposed is not high and each party benefits from the fraud committed (Fimanaya & Syafruddin, 2014).

Information provided by the needs or desires of certain parties can pose a risk of fraud because the financial statements do not describe the company's actual state but are prepared to achieve the goals of certain parties (Zhou & Kapoor, 2011). Given the impact of financial conditions on stakeholder decisions, companies are forced to provide interesting financial information. This is done to help companies obtain support through investments or loans from these stakeholders (Novrianty, 2018). Because until now, fraud in the property sector still occurs due to lack of supervision and opportunities that continue to exist (Warohman, 2017). There are many ways to detect fraud, such as diamond fraud. Wolfe & Hermanson (2004) developed a model fraud triangle by adding capability as one of the factors driving fraud.

In the element fraud diamond, financial stability with elements of pressure that threaten the business is caused by the state of the industry, economy, or business conditions. Management is often forced to show that the company can manage its assets well, achieve profitability, and generate high returns for investors (Septriyani & Handayani, 2018). The high value of assets owned by a company makes it attractive to investors, creditors, and entrepreneurs. However, when the company's total assets fall, investors may not care because they conclude that its financial situation is terrible. As a result, management uses fraudulent financial statements as a tool to protect against volatile economic conditions (Sihombing, 2014).

Stakeholder demands and demands from third parties put external pressure on the company to remain competitive and work harder. To overcome these pressures, companies need additional debt or external sources of capital to stay competitive, such as R&D funding and capital investment (Skousen et al., 2011). Risks that can occur, such as manipulating income to achieve company management goals and showing the current year's net income as or exceeding the previous year's profit, will eliminate investors' interest in investing (Skousen *et al.*, 2011).

The company will be said to be stable when the company is in a position appropriate in an industrial environment. This stable condition can be measured through accounts receivable in the financial statements (Irwandi et al., 2019). In the financial statements, there are certain accounts whose balance is determined by the company based on an estimate, for example, bad debts and obsolete inventory

accounts (Sari & Herdiana, 2016). The nature of industry conditions in the inventory and accounts receivable differ between companies that commit fraud and companies that do not commit fraud as disclosed by (Summers & Sweeney, 1998).

To illustrate the rationalization, explained using the total accrual by comparing the total net income for the current year minus the actual cash flows from operating activities (Skousen *et al.*, 2011). The existence of attitudes, characteristics, or other ethical standards allows certain parties to commit fraud or force someone under pressure to rationalize fraud (Skousen *et al.*, 2011).

Knowing that there are gaps in when and how perpetrators can commit fraud is an act of capability (Goleman *et al.*, 2019). Where fraud would not occur without the right people with the capacity and opportunity to carry out all the details of the scam, fraud would not happen. One of the factors that can determine the potential for fraud in the CEO, board of directors, managers, or other department heads are using these positions to influence other people to expedite their fraudulent actions (Nisa *et al.*, 2019).

According to Indarto & Ghozali (2016), do not use the nature of the industry as a research variable and do not use total accruals as a proxy for the rationalization variable. The study was conducted on banking companies in the 2009-2014 period by showing that the elements in the fraud diamond consisting of financial stability, pressure, financial targets, and ability are positively related to fraudulent financial statements. However, the researcher uses the proxy variable nature of the industry, total accruals as a proxy variable for rationalization, and the object of research used is property and companies real estate listed on the Indonesia Stock Exchange (IDX) for the 2015-2019 period.

Agency Theory

The emergence of an agency relationship is because there is a contract between the agent and the principal who delegates authority over decision-making to management (Jensen & Meckling, 1976). The essence of agency theory is determining the most efficient contract between the principal and the agent (Indrati *et al.*, 2018). When managers are interested in maximizing their welfare, agents may not act in the interests of stakeholders. Therefore, the information produced by management allows misleading users of financial statements. The difference in interest will result in a conflict of interest between agents and principals, leading to agency costs. Agency theory arises because of the diversity of interests between management and stakeholders. The goals between management and investors are challenging to reconcile, which causes unclear information between the two parties. This condition occurs because managers have more information about the company than the information obtained by shareholders, so that it will encourage manager behavior to manipulate some information to investors (Annisya *et al.*, 2016).

Theory Diamond Fraud

Added by Wolfe & Hermanson (2004), element capability of the three factors that

have been found before are factors that can influence a person to commit fraud. Wolfe & Hermanson (2004) argues that fraud will not occur without the right people with suitable capacities and opportunities. The conditions involve possible cheating factors, including location, brainpower, self-confidence or ego, compulsions, stress immunity, and effective lying. In committing fraud, one must have the ability to see loopholes and take advantage of them as opportunities to commit fraud. Fraud occurs because of the chance to do so, pressure, and the power of individuals who can make it happen. Therefore, the company uses the services of a public accountant to audit the company's financial statements, which is expected to limit fraudulent practices, so that it is expected to increase stakeholder confidence in the company's balance sheet (Sihombing, 2014).

Fraudulent Financial Statements

Companies are always required to make improvements and increase their operational efficiency to increase their market value. If a company cannot increase its value in the capital market, it risks bankruptcy. The company does not always meet the market demand for better performance every year. The existence of market demands to have better performance year after year cannot necessarily be completed by the company (Gantino, 2013). If the company experiences an increase, the percentage may not be too significant compared to similar competitor companies. Therefore, companies often carry out earnings management in various ways to win investors' hearts (Suryani, 2019). Fraudulent financial statements in the disclosure of financial statements are one of the behaviors that violate the law by manipulating users of financial information so that it has a significant impact, such as loss of investor, customer trust, and damage to the auditor's reputation.

Management deliberately provides false information to please investors and creditors. Fraud in the presentation of financial statements can result in poor financial information and impact stakeholders. Not only investors will be affected, but creditors and auditors as well. Auditors need to understand the characteristics of fraud budget preparers to anticipate and respond to errors made by management (Sihombing, 2014).

Relationship Between Variables

The relationship between variables in this study is depicted in the research model as follows:

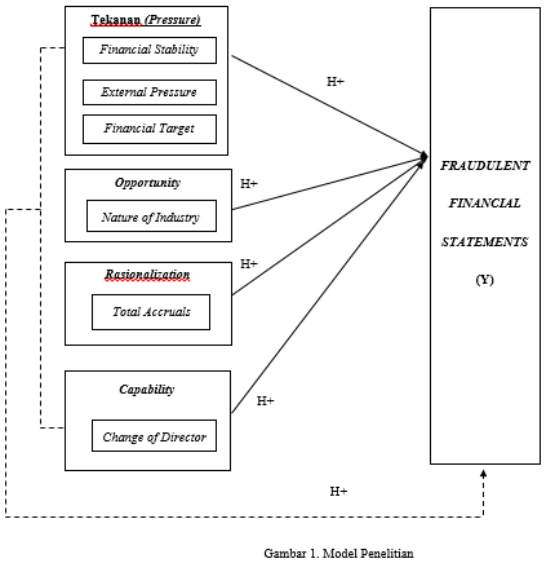

Figure 1. Research Model

The test was carried out using the

multiple linear regression method with the classical assumption test stages, including normality, multicollinearity, autocorrelation, and heteroscedasticity. Then the accuracy of the regression function in knowing the accrual value can be measured from the goodness of fit value. Statistically, the excellence of fit value can be calculated from the coefficient of determination, F test, and T-test.

Based on the explanation above, this study aims to examine the factors that influence financial statement fraud, including external pressure, financial stability, financial targets, industry conditions, total accruals, and changes in directors that can affect someone to commit fraud. Companies caught committing fraudulent acts will experience a loss of investor confidence and more fatal consequences such as bankruptcy or bankruptcy. And as material for company evaluation and improvement, companies need to identify fraudulent financial statements using fraud diamonds. So that doing this research will provide benefits for the parties concerned.

METHODS

Population and Research Sample

The population in this study uses property companies (real estate) listed on the Indonesia Stock Exchange. This study uses secondary data from the company's annual financial statements obtained from the official website of the Indonesia Stock Exchange for the period 2016 to 2019. The sampling in this study uses a purposive sampling technique using specific considerations.

Operational Definition of Variable

Financial statement fraud will be measured using the Modified Jones Model as determined by Dechow *et al.* (2012). Modified Jones Model is one of the calculation models determining earnings management Dechow *et al.* (2012). Modified Jones Model has the concept of accruals divided into two, namely discretionary accruals and non-discretionary accruals. Discretionary Accruals are the recognition of accruals of profits or expenses that are not bound and are not regulated and are the choice of management policy. While Non-Discretionary Accruals are appropriate accruals and are under generally accepted accounting principles, if they are violated, they can affect the quality of financial statements to be unreasonable (Rohmaniyah & Khanifah, 2018). Modified Jones Model is used because it reflects credit income on an accrual basis. In this study, the receivable ratio is used as a proxy variable in the element fraud diamond. So the Modified Jones Model is very suitable as a method of measuring financial statement fraud. Until now, the Modified Jones Model is considered the best in detecting earnings management (Tianran, 2012).

Table 1. Operational Definition of Dependent Variables

No.	Variable	Measurement		Scale
		Dependent		
1.	*Modified Jones Model*	*Tacit*	= Niit – CFOit	Ratios
		Tacit / Ait-1	= β1(1/Ait-1)+β2(ΔRevt/Ait-1)+β3(PPEt/Ait-1)+e	
		NDAit	=β1(1/Ait-1)+β2(ΔRevt/Ait-1-ΔRect/Ait-1)+β3(PPEt/Ait-1)	
		DAit	= TACit/Ait-NDAit	
			(Dechow *et al*., 2012) *and* (Skousen & Twedt., 2009)	

In this study, there is one dependent variable using fraudulent financial statements and six independent variables: financial stability, external pressure, financial targets, receivable ratios, total accruals, and turnover of directors. Financial stability (FS) is proxied by the percentage of changes in total assets by comparing comprehensive support for the current year with total assets for the following year (Skousen *et al*., 2011). External pressure (DTA) is proxied by ratio leverage measured by dividing total debt by total equity (Ines, 2017). Return on assets (ROA) is used as a proxy for the variable target financial as measured by income after interest and taxes divided by the company's total support for the year (Ines, 2017). The nature of the industry, which is a proxy variable for the opportunity, is measured by using the receivables ratio, which compares the current year's receivables and sales with the previous year's receivables and sales (NOI) (Skousen *et al.*, 2011). Rationalization is measured by using the current year's net income minus cash from the company's operational activities (TATA) (Sihombing, 2014). Also, the capability where the change of directors can result in a period of stress that will impact the opening of opportunities to commit fraud (COD) (Wolfe & Hermanson, 2004). Change of directors, which is also measured by a variable dummy. If there is a change in the company's directors during the 2015-2019 period, code one will be given, whereas if there is no change in the board of directors during that period, it will be coded 0.

A quantitative approach is used as a research design, which proves a significant effect of independent variables on the dependent variable. The variable determined in this study is the dependent variable using a fraudulent financial statement, and the independent variable is financial stability, external pressures, financial targets, receivable ratios, total accruals, and changes in directors.

The population in this study uses property companies (real estate) listed on the Indonesia Stock Exchange. This study uses secondary data from the company's annual financial statements obtained from the official website of the Indonesia Stock Exchange for the period 2015 to 2019. The sampling in this study uses a purposive sampling technique using certain considerations.

Table 2. Independent Variable Operational Definition

Independent				
2.	*Financial Stability*	*FS*	= *(Total Assets t - Total Assets t - 1)* / *Total Assets t – 1* (Skousen et al., 2011)	Nominal
3.	*External pressure*	*Debt to Assets Ratio*	= *Total Debt* / *Total Assets* (Kasmir., 2013)	Ratio
4.	*Financial Target*	*ROA*	= *Earning After Interest and Tax* / *Total Assets* (Kasmir., 2013)	Ratio
5.	*Nature of Industry*	*NOI*	= *Receivables t* / *Sales t* – *Receivables t-1* / *Sales t-1* (Summers & Sweeney, 1998)	ratio
6	*Rationalization*	*TATA*	*Net income – cash Flows from the operation* (Dechow et al., 2012)	the ratio of
7.	*Change of Director*	variable mock *(dummy variable)*to the turn of the Board of Directors, where 1 = there is a change of directors for five years priority to the occurrence of fraud and 0 = no change of directors for five years priority to the event of fraud (Skousen et al., 2011)		Ordinal

Data Analysis Method

Hypothesis testing was carried out using software SPSS version 26, and multiple regression analysis using multiple linear regression equations as follows:

$$DACCit = \beta 0 + \beta 1\ FS + \beta 2\ DTA + \beta 3\ ROA + \beta 4\ NOI + \beta 5\ TACIT + \beta 6\ CoD + e$$

Information :

DACCit : *Discretionary accruals* company in the period t

β 0 : Constant

β 1,2,3,4,5,6 : Regression coefficient of each proxy

FS : *Financial Stability*

DTA : *Debt to Asset*

ROA : *Return on Asset*

NOI : *Nature of Industry*

TACIT : *Total Accruals*

e : *Error*

RESULTS AND DISCUSSION

Table 3. Test Results

Descriptive Statistics					
	N	**Minimum**	**Maximum**	**Mean**	**Std. Deviation**
FS	13.5939 .17782	12.37	13.73		92
DTA	78.73 36,066 19.76658	.34			92
ROA	-1.10.3735 .59820		1.26		92
NOI	.8426 .06806	.50	.94		92
Tacit	-0.14523 .57413 .030569 5 .08033574				92
COD	92	0	1	.222	.415
DCAIT	92	-15.85	-3.23	-8.4029	2.19136
Valid N (listwise)	92				

Table 3. Test Results of Multiple Linear Regression Analysis

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	**Std.Error**	**Beta**		
1	(Constant)	-33.4	17 133		-1.949	.055
	FS	1,298	1,245	.105	1,042	.300
	DTA	.013 .254		.28	2,212	.030
	ROA	-.479	.425	-.131	-1.127	.263
	NOI	7.6	3.31	.236	2.296	.024
	Tacit	.304	2,884	8,303	2,879	.005
	COD	-.680	.529	-0.129	-1.284	.203

DISCUSSION

The descriptive statistical analysis can provide an overview of the data consisting of the minimum, maximum, average (mean), and standard deviation values. Descriptive statistics of all variables used in the study can be explained as follows:

The amount of data (N) were included in this study was obtained from a sample of 92 real estate companies and real estate listing on the Indonesian Stock Exchange, which was taken using the method. Purposive sampling The dependent variable as measured by discretionary accruals (DCAIT) has a minimum value of -15.85, a maximum of -3.23, an average of -8.4029, with a standard deviation of 2.19136. The minimum measure of financial stability (FS) is 12.37, the maximum is 13.72, the average is 13.5939, and the standard deviation is 0.17782. The minimum debt to the asset (DTA) is 0.34, the maximum is 78.73, the average is 36.0660, and the standard deviation is 19.76658. Return on Assets (ROA) has a minimum value of -1.10, a maximum value of 1.26, an average value of 0.3735, and a standard deviation of 0.59820. Nature of Industry which is proxied using the receivables ratio (NOI), has a minimum value of 0.50, a maximum of 0.94, an average of 0.8426, and a standard deviation of 0.06806. The rationalization proxied using total accruals divided by total assets t-1 (TACIT) has a minimum value of -0.14523, a maximum of 0.57413, an average of 0.305695, and a standard deviation of 0.08033574. The variable is dummy used to measure the change of directors (COD). The indication of the evolution of directors is given a number 1, and no change of directors is given a number 0. Therefore, the minimum value is 0, the maximum is 1, the average is 0.22 with a standard deviation of 0.415.

The results of research conducted on hypothesis testing H1-H7 indicate that there are accepted hypotheses and rejected hypotheses. The explanation of each theory is as follows:

The results of the multiple linear regression analysis of the first hypothesis are financial stability which is proxied by the comparison of total assets minus total assets of the previous year divided by total assets before having a significant value of 0.300 and an arithmetic value of 1.042. It can be concluded that the results of linear regression analysis of financial stability do not affect fraudulent financial statements. So H_1 is rejected, this result is in line with (Yusroniyah, 2017). The result shows that financial stability does not significantly affect financial statement fraud. No matter how much the number of assets owned by the company changes, this will not necessarily impact fraudulent financial statements in the future because companies with significant assets are unlikely to carry out financial stability to attract investors to invest in the company. (Yusroniyah, 2017).

External pressure shows a result of 0.030 where the significance value is smaller than 0.05, so H_2 is accepted. This result is the same or consistent with Suryani's (2019).'s results. The emergence of the company's reasons for fraudulent financial statements will be more open if the company's operations financed by debt are more significant than the company's capital. This has become one of the company's focuses in terms of indications

of selective management in choosing the company's operational funding options. But this can have a destructive impact if the company continues to make loans without considering the capital they have to pay off these obligations. The significant difference between the company's debt and the company's total capital is an indication that the company is not in good health. Therefore, management will be under pressure to commit fraudulent financial reporting by increasing their total equity to offset the amount of company debt (Sihombing, 2014).

Return on assets, a proxy variable for financial targets, shows that the results do not affect fraudulent financial statements. So H_3 is rejected. This is in line with research conducted by Aulia (2018), which proves that companies are advised not only to have high profitability targets but also to be supported by improvements in operational quality in the company. Because no matter how high a company's profitability target is, not necessarily an indication of fraudulent financial statements (Aulia, 2018).

The nature of the industry, which is a proxy for the receivables ratio, gives a value of 0.024 where the value is smaller than 0.05, so H_4 is accepted. In line with Sihombing (2014) which states that an increase in the company's receivables from the previous year can indicate that the company's cash turnover is not in a stable condition. The number of accounts receivable and the high ratio of bad debts owed by the company will reduce the amount of cash that the company can use for its operational activities. Limited cash can be an impetus for management to manipulate financial statements (Septriyani & Handayani, 2018).

Total accruals, a proxy for the variable rationalization, prove that the significance value is smaller, namely 0.005 compared to 0.05. Then H_5 is accepted. This result is the same or consistent with research conducted by Novrianty (2018). This happens if the higher the total accruals of a company, the more fraudulent in the financial statements. Total accruals can reflect the company's operating activities by calculating the current year's net income minus the incremental cash flows from the company's operating activities (Dechow *et al*., 2012). This happens as a form of justification by the company to make the company's financial condition look in good condition but by cheating or manipulating profits (Dechow *et al*., 2012).

Change of director, used as a proxy variable for capability, shows insignificant results, namely -1.284, where the significance value is smaller than the t-count value of 1.98827. So H_6 is rejected. This is in line with research conducted by (Annisya *et al*., 2016). The change of directors in the company does not affect the potential for fraudulent financial statements. This happened because the evolution of directors was not because the old directors took advantage of their ability to commit fraud but because of other things. In addition, the change of directors was successful because the new directors could use their position to advance the company further and prevent fraud (Aulia, 2018).

The f test determines whether all independent variables included in the regression model have the same effect on the dependent variable. The calculated F

value is 2.812, and the significance value is 0.15, indicating that n is smaller than 0.05 (sig < 0.05), which accepts the H_7 hypothesis, indicating that financial stability, external pressures, financial objectives, nature in the industry, rationalization and the ability to influence financial statement fraud simultaneously.

CONCLUSIONS

Research data are 61 property and sector companies' real estate listed on the Indonesia Stock Exchange during 2015-2019. The research sample is 20 companies (100 data with five years of observation) with sample selection criteria using purposive sampling. This shows that financial stability, financial target, and director change do not affect financial statement fraud. External pressure, the nature of the industry, and total accruals affect financial statement fraud.

There are limitations in this study because it has not used all the variables in the fraud diamond, and there is a lack of statistical bias, which is a side effect of quantitative research methods in reflecting fraud risk factors. Future research is expected to use a broader population and sample listed on the Indonesia Stock Exchange. For further researchers, it is recommended to measure rationalization and ability to use qualitative methods and use surveys using a Likert scale as primary data to reflect rationalization and ability variables.

The managerial implication of this research for the company is that the management is expected to be more careful in including costs or expenses in calculating profits. If an error occurs, it will impact the more significant opportunity to carry out earnings management by reflecting on this study where external pressure, nature of the industry, and total accruals positively affect financial statement fraud. As for potential investors, to be more careful in making investment decisions in companies to be invested in. by assessing changes in the receivable ratio, changes in the debt to assets ratio, changes in the company's total accruals from year to year, as well as changes in the company's current year profit in the observation period presented in the financial statements.

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