Detection of Financial Statement Fraud Using the Diamond Theory Perspective Fraud Method

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ABSTRACT

The goal of this research is to detect financial statement fraud by using the fraud diamond theory approach. In this experiment, both independent and dependent variables were used. The dependent variable is financial statement fraud, while the independent variable is the one that accounts for opportunity, pressure, capability, and rationalization. The research focuses on banking companies that plan to list on the Indonesia Stock Exchange between 2020 and 2022. The population of this study consists of the 46 banking firms that are listed on the Indonesia Stock Exchange. 42 banking firms make up the research sample, and the sample method used is a purposive sampling methodology that is, a sampling strategy with predetermined criteria. This study approach makes use of logistic regression. According to the study's finding pressure has no effect on financial statement fraud. Opportunity has a negative effect on the release of financial statements. Rationalization and the capability to have a positive effect on financial statement fraud. The limitations of the research obtained after the research were the limitations of the research object only using banking companies registered on the IDX for 2020-2022 and the limitations of the fraud score model which has a high dependence on financial data.

INTRODUCTION

Financial reports are a media of communication between the company and external parties (ACFE Indonesia Chapter, 2019). According to Association of Certified Fraud Examiner (ACFE) (2019) fraud is an act of fraud carried out consciously by an individual or group that has a negative impact on the entity or individual. Fraud is formed when individuals or groups work together to commit fraudulent acts (Maulidi & Ansell, 2020). The increase in fraudulent financial reports is a result of increasingly tight global business competition. Banking is a sector that is trusted by the public and the government in managing finances so that it has control over economic stability. One element of company bankruptcy risk is financial statement fraud (Vousinas, 2019). Examples of companies that experienced bankruptcy as a result of financial statement fraud include WorldCom, Enron, and Iyco.

The first fraud detection theory was researched by Creecy (1950) from research Skousen & Twedt (2009) known as the fraud triangle theory with the detection factors being pressure, opportunity, rationalization and then developed by Wolfe and Hermanson (2004) Research of Omukaga (2020) The aim is to improve fraud prevention and detection, known as fraud diamond theory, by adding a fourth factor, namely capability (Yuniarti & Yogi, 2019), Survei Association of Certified Fraud Examiner (ACFE) (2019) Association of Certified Fraud Examiner (ACFE) (2019) stated that as much as 41.4% of financial statement fraud occurred in the banking sector. According to Meliana and Hartono (2019) explained that 80% of the perpetrators of fraud were at the managerial level.
The trigger was financial pressure in meeting personal needs and interests. According to Utami et al (2019) explains the relationship between financial statement fraud and fraud diamond theory due to internal factors, financial pressure and individual capability, and fraud occurs due to external factors, with opportunities from weaknesses in the control system, and rationalizes fraudulent actions by arranging the logic that the fraud was also committed by someone else. The research results are strengthened by research Avortri & Agbanyo (2021) fraud in banking is dominated by top management because they have pressure on work targets and have the opportunity to rationalize fraudulent acts and of course have the capability to.

The research results show that pressure and opportunity have a positive effect on financial statement fraud, while rationalization and capability have no effect on financial statement fraud (Omkugaga, 2020). In this research, Pressure is proxied by the financial target indicator, Return On Assets (ROA), Opportunity is proxied by In Effective Monitoring and the indicator is the Ratio of the number of independent board of commissioners (BDOUT), Rationalization is proxied by the Total Accrual ratio (TATA), and capability is proxied by changing company directors (DCHANGE).

In previous research, generally the models and proxies for financial reporting conditions used the Jones (1991) model with earnings management proxies in such research. (Agusputri & Sofie, 2019; Gupta & Gupta, 2015; Kaminski et al., 2004; Maulidi, 2020; Maulidi & Ansell, 2020; Noble, 2019; Omukaga, 2020; Ozcelik, 2020; Rustiarrini et al., 2019; Sasongko et al., 2019; Simaremare et al., 2019; Suryani, 2019; Yulistyawati et al., 2019) These models and proxies are effective in detecting fraud in developed countries but less effective in detecting fraud in developing countries like Indonesia. Based on these limitations, this research uses the fraud score (fscore) model in the research Skousen et al (2009) states that the fscore method is very effective in detecting fraud in developing countries because it provides an overview of the risk of fraudulent reporting. Thus, the aim of this research is to analyze the influence of pressure, opportunity, rationalization, capability on financial statement fraud using the fscore model.

**LITERATURE REVIEW**

**Agency Theory**

The resolution of issues between agents and principals is the goal of agency theory. A conflict of interest arises between the agent and the principal when the principal finds it difficult to manage the agent's performance, which sets off this issue. Jansen and Mecking's 1976 study Budiharta dan Gusnadi (2008) (Tambuati, Kusumah, & Gusni, 2017) It is referred to as internal management in agent businesses, and the principle is a stakeholder or investor. Despite their numerous constraints, agents in business management are expected by the principal to guarantee that the business operates at peak efficiency (Budiharta dan Gusnadi, 2018). This creates a conflict of interest that leads to fraud. An opportunity presents itself for the agent to if the principal is pressuring the agent to maximize the company's performance. This creates a conflict of interest that leads to fraud. When an agent is under pressure from the principal to maximize the company's performance, an opportunity to commit fraud arises. The agent justifies the fraud from this opportunity by citing the pressure from the principal and the management's skill in managing the business.

**Fraud**

The Association of Certified Fraud Examiners, or ACFE (2019), defines fraud as an illegal conduct committed with the goal to deceive or provide false information to third parties. The offender is an internal organization member who is acting to further their own interests or those of the group, which may directly affect third parties. The fraud tree, a classification system for fraud, is explained by ACFE (2019). The first categorization, fraudulent statement, refers to the manipulation of financial reports and the presentation of financial reports that do not reflect the true situation by officials or management of a business or government organization. Second, misappropriation of assets, including the theft of assets that belong to a business or government agency. There are two categories of asset misappropriation: non-cash misappropriation and cash misappropriation. Third, bribery, unlawful gratuities, economic extortion, and the abuse of power or conflict of interest are all
considered forms of corruption. A corporation or agency can suffer greatly from corruption when the offender is in a position of strategic importance, which allows him to support fraud and work with other parties. Because it takes so much thought and preparation to execute, corruption is a kind of fraud that is challenging to identify.

**Fraud Diamond Theory**

The diamond fraud theory was stated by Wolfe and Hermanson (2004). By including capacity as a fourth aspect in addition to pressure, opportunity, and rationalization, the Fraud Diamond theory improves upon the Fraud Triangle theory. (Yuniarti & Yogi, 2019) Pressure that arises when someone is persuaded to conduct fraud and manipulation because of particular circumstances is the primary cause of fraud. Several things might cause stress in an individual. Management commits fraud when it is under pressure to stabilize the company's finances and the company's financial stability is under danger. Any fraud that takes place as a result of lax corporate oversight is considered an opportunity. Opportunities stem from industry characteristics and ineffectiveness of internal control. Rationalization is a justification for an act of fraud. Fraud occurs if a perpetrator of fraud justifies the act of fraud by having character and attitudes or ethical values that give permission for the act of fraud. Risk factors reflect rationalization by members of the board of directors, management or employees, which allows them to engage in and/or justify financial statement fraud (Meliana & Hartono, 2019). The final factor is capability. A fraud perpetrator has strong abilities because he can analyze the condition of the company and has the capability to open up opportunities for fraud.

**Financial Statement Fraud**

Financial statement fraud, as defined by ACFE (2019), is defined as fraud by management that materially misrepresents financial statements in a way that is harmful to third parties. Understatement of profit and loss in expense accounts and inflated or inflated sales accounts are often at the root of financial statement fraud, because they ensure that a company's financial statements reflect profits. This information benefits investors in determining their investment strategy (Meliana & Hartono, 2019). Investors suffer greatly from the lack of relevance and accountability in the financial reports that management produces.

**Fraud Score Model (Fscore)**

According to Skousen & Twedt,(2009), a fraud score is a measurement indicator that is used to evaluate major misstatements in financial reporting. Dechow et al (2009) established the concept of fraud score. Based on Dechow et al.'s 2009 research. Based on fraud cases, the accuracy percentage of the fraud score model ranges from 68 to 70%. There are two components that make up the fscore component: accrual quality and RSST accrual. The name of the researchers who developed this formula, Richardson, Sloan, Soliman, and Tuna, is shortened to RSST (Skousen & Twedt, 2009). This formula separates working capital (WC), non-current operational (NCO), and financial accruals (FIN) based on their reliability and classifies non-cash and non-equity changes in the equity balance sheet as accruals. Supplementary components of assets and liabilities in the different accruals and financial performance, as seen by differences in the cash sales, inventory, receivables, and EBIT accounts. The two components of the fraud score model are changes in cash sales accounts, inventory accounts, accrual quality and financial performance of receivables, and changes in EBIT. The two factors that comprise the fraud score model are accrual quality and financial performance (Skousen & Twedt, 2009).
Theoretical Framework

Hypothesis Development

The effect of pressure on financial statement fraud
Research of Ozcelik (2020) states that pressure has a positive effect on financial statement fraud, so that high pressure from stakeholders on organizational management can increase or trigger the risk of financial statement fraud. The results of this research are in line with the statement Skousen & Twedt (2009) explain the pressure on management from stakeholders. When a company's financial threat can be a trigger for management to manipulate financial reports, the aim is that the company's financial performance can be achieved optimally in accordance with stakeholder targets. Research of Yesiariani & Rahayu (2017) explains the pressure on management from stakeholders. When a company's financial threat can be a trigger for management to manipulate financial reports, the aim is that the company's financial performance can be achieved optimally in accordance with stakeholder targets. The following is the alternate theory, which is based on the preceding description:

H1 : Pressure has a positive effect on financial statement fraud

The influence of opportunity on financial statement fraud
Research of Skousen & Twedt (2009) states opportunity has a positive effect on financial statement fraud. In conclusion, management has the authority to control the company, so management has the opportunity to commit financial statement fraud. Hasil riset ini diperkuat dengan penelitian Kassem & Higson (2012) states that opportunity has a positive effect on financial statement fraud. The explanation is that the opportunity for fraud perpetrators occurs if the perpetrator's position is trusted to manage and control the company's finances, as a result the opportunity for perpetrators to commit fraud is greater. Opportunity is proxied by ineffective monitoring. That the opportunity for perpetrators of fraud is due to weak supervision and control by the company. The following is the alternate theory, which is based on the preceding description:

H2 : Opportunity has a positive effect on financial statement fraud

The Effect of Rationalization on financial statement fraud
The definition of rationalization is an attitude of justifying oneself for a crime or fraud. The impact of rationalization on a person is to make someone commit fraud who previously did not want to commit fraud. Research Omukaga (2020) rationalization has a positive effect on fraudulent reporting. So someone who has a high level of rationalization is more likely to commit financial statement fraud. The research results are in line with research (Repousis, 2016; Simaremre et al., 2019) rationalization has a positive effect on financial statement fraud. Rationalization can influence the mindset of someone who feels innocent for the fraudulent act that has been committed. Based on the description above, the alternative hypothesis is prepared as follows:

H3 : Rationalization has a positive effect on financial statement fraud

The influence of capability on financial statement fraud
Research (Repousis, 2016; Yulistyawati et al., 2019) shows that capability has a positive effect on financial statement fraud. Fraud is generally carried out by top management in line with their abilities, so that these abilities can trigger someone to commit fraudulent acts. Capability is proxied by breadth of director because someone who has a strategic position can take advantage of their
capability to commit financial statement fraud (Omukaga, 2020) This statement is in accordance with Based on the description above, the alternative hypothesis is prepared as follows: 

\[ H_4 : \text{Capability has a positive effect on financial statement fraud.} \]

**RESEARCH METHODS**

This study uses a descriptive methodology to confirm causality. The aim of the descriptive causality verification approach is to gather data and provide an overview of how the independent variable (pressure, opportunity, rationalization, capability) affects the dependent variable (financial statement fraud) and to test the relationship between the independent and dependent variables. The focus of this study is the banking firms that will be listed between 2020 and 2022 on the Indonesia Stock Exchange. The 46 financial companies that made up the research's population. Purposive sampling, or the process of selecting samples based on predetermined criteria, is the method used in the sampling procedure. The application of data makes use of qualitative data, namely numerical data or qualitative score data (Sugiyono, 2009).

Secondary data are the source of this research's data. Researchers can collect secondary data indirectly or through intermediary media that has been obtained and recorded by other parties. This research data comes from banking financial report data on the IDX. The research method uses logistic regression analysis. Logistic regression to test probability predictions between the independent variable and the dependent variable (Ghozali, 2017). Normality testing and traditional assumption checks on the independent variables are no longer necessary when using the logistic regression analysis technique. Ghozali (2017) states that logistic regression does not use the heteroscedacity test, meaning that the dependent variable does not need to use homoscedacity for each independent variable. The criteria for accepting or rejecting the hypothesis from the logistic regression model is if the results are significant is less than 0.05 then H0 Accepting and if result significant > 0.05 then H0 rejecting. Logistic regression which is used to test research using proxies.

\[ \text{FSCORE} = \alpha + \beta_{\text{pressure}} + \beta_{\text{opportunity}} + \beta_{\text{rationalization}} + \beta_{\text{capability}} \]

FSCORE: Dummy variable fraud score value > 1 then given a code 1, if fraud score value < 1 then given a code 0

\[ \alpha \quad \text{Constant} \]

\[ \beta_{\text{pressure}} \quad \text{ROA} \]

\[ \beta_{\text{opportunity}} \quad \text{BDOOUT} \]

\[ \beta_{\text{rationalization}} \quad \text{TATA} \]

\[ \beta_{\text{capability}} \quad \text{Dummy Variable if there is changes in company directors during the period 2020-2022 then given a code 1, conversely, if there is no change in the company’s directors during the period 2020-2022 then given the code 0.} \]

**RESEARCH RESULTS AND DISCUSSION**

**Descriptive statistics**

The values of the maximum, mean, minimum, and standard deviation for each are explained in the descriptive statistics table. Variable in this research which are explained:

<table>
<thead>
<tr>
<th>Explanation</th>
<th>N</th>
<th>Mean</th>
<th>Max</th>
<th>Min</th>
<th>Std Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Financial statement fraud</td>
<td>126</td>
<td>0.186</td>
<td>1.000</td>
<td>0.000</td>
<td>0.376</td>
</tr>
<tr>
<td>Pressure</td>
<td>126</td>
<td>0.009</td>
<td>0.150</td>
<td>0.130</td>
<td>0.024</td>
</tr>
<tr>
<td>Opportunity</td>
<td>126</td>
<td>0.489</td>
<td>0.700</td>
<td>0.000</td>
<td>0.278</td>
</tr>
<tr>
<td>Rationalization</td>
<td>126</td>
<td>0.007</td>
<td>0.140</td>
<td>0.290</td>
<td>0.069</td>
</tr>
<tr>
<td>Capability</td>
<td>126</td>
<td>0.372</td>
<td>1.000</td>
<td>0.000</td>
<td>0.498</td>
</tr>
</tbody>
</table>

Source: Eviews Output Version 12 (Data processed by researchers, 2023)
The research sample, as indicated by the accompanying descriptive statistics table, numbered 126. Financial statement fraud is the dependent variable in this study, and its mean value is 0.186. The fraud score (FSCORE) is used as an indicator of financial statement fraud. Financial statement fraud is not present when the minimum fscore value is 1.0, and variance in the data sample is present when the minimum fscore value is 0 standard deviation, or 0.376.

Multicollinearity Test

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std.Error</th>
<th>zStatistic</th>
<th>Prob</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>8,480</td>
<td>3,954</td>
<td>3,685</td>
<td>0.0002</td>
</tr>
<tr>
<td>Pressure</td>
<td>3,260</td>
<td>8,784</td>
<td>0.358</td>
<td>0.813</td>
</tr>
<tr>
<td>Opportunity</td>
<td>-3,880</td>
<td>1,900</td>
<td>2.563</td>
<td>0.043</td>
</tr>
<tr>
<td>Rationalization</td>
<td>8,750</td>
<td>4,518</td>
<td>3,338</td>
<td>0.035</td>
</tr>
<tr>
<td>Capability</td>
<td>0,843</td>
<td>0,543</td>
<td>2,228</td>
<td>0.043</td>
</tr>
</tbody>
</table>

Source: Eviews Output Version 1.2 (Data processed by researchers, 2023)

The multicollinearity test findings demonstrate that no variable coefficient value in the study was discovered to be greater than 0.9. There is no multicollinearity between the variables, according to the findings.

Hypothesis Test

The effect of pressure on financial statement fraud

The pressure variable's logistic regression test results indicate a coefficient of 3,260 and a significance value of 0.813 > 0.05, which no accepted that pressure has no beneficial effect on financial statement fraud because the significance value is higher than 0.05. These findings demonstrate that the rise in fake financial reports in businesses is not just a product of shareholder pressure on management, but also of other factors including lax control and lax legal penalties for fraudsters. research results supported with Omukaga (2020) that pressure does not have a positive effect on financial statement fraud. So financial statement fraud caused by high financial pressure can be influenced by other factors, for example individual factors.
The Influence of Opportunity on Financial Statement Fraud

The results of the hypothesis test on the opportunity variable for financial statement fraud have a coefficient of -3.880 and a significance of 0.043<0.05, so Ha is accepted that the opportunity hypothesis has a negative effect on financial statement fraud because the significance value is less than 0.05. The study's findings demonstrate that the presence of an impartial board of commissioners can improve management oversight's efficacy and lessen or eliminate the incidence of financial statement fraud. The research results are strengthened by research Omukaga (2020) opportunities have a negative influence on financial statement fraud.

From these results it can be concluded that opportunities for fraud are open due to low levels of control by the company. The study's results align with agency theory, which posits that conflicts of interest between principals and agents give management opportunities to manipulate earnings or participate in fraudulent financial reporting. The disparity between the interests of the principal and agent is a trigger for fraud because the activities carried out by the agent are contrary to what is requested by the principal, resulting in information asymmetry between the two parties. The existence of these differences gives agents the opportunity to cover up or hide some financial information from the principal with the aim of manipulating financial reports or carrying out earnings management so that the results of the financial statements are in line with the principal's expectations.(Budiharta dan Gusnadi, 2018).

The Effect of Rationalization on financial statement fraud

Hypothesis testing on the rationalization variable shows results, coefficient of 8.750 and a significance value of 0.035 < 0.05, then Ha is accepted aimed at the hypothesis that rationalization has a positive effect on financial statement fraud because the significance value is less than 0.05. In conclusion, a person's rationalization can be a trigger for high levels of fraud because rationalization occurs if someone justifies a crime that has been committed. In line with research Repousis, (2016); Simaremare et al (2019) rationalization has a positive effect on financial statement fraud.

The influence of rationalization comes from the mindset of a person who feels that the act of fraud is justified, so the justification is as an example of assets belonging to the company but the perpetrator of the fraud feels that the assets are his own with the aim of improving the standard of living. The findings of this study are consistent with the theory of planned behavior, which takes normative, control, and behavior beliefs into account. Behavioral beliefs are when an individual has positive beliefs about fraudulent behavior, then these beliefs can be transmitted to other parties or co-workers to justify fraudulent behavior. Normative belief is that fraud occurs if top management understands and commits fraud so that lower management feels that it is normalizing committing fraud. Control belief is when the individual receives knowledge about fraud from his manager (Nurwanah et al., 2018).

The Influence of Capability on Financial Statement Fraud

The results of the hypothesis test on the capability variable with a coefficient value of 0.843 and a significance value of 0.043, Ha is accepted, so capability has a positive effect on financial statement fraud. Changes in directors in each period can increase financial statement fraud. In line research with Repousis, (2016), Yulistyawati et al (2019) state capability positive influence to financial statement fraud. Person have good capability with high education background have capability to do fraud (Hidajat, 2020). Research result in line with theory of planned behavior on Normative beliefs is individual have capability on understand fraud and minimized fraud.

Model Feasibility Test (Goodness Fit Model)

Hosmer Lemeshow test (Goodness of Fit test) Feasibility Test Results Assess whether the null hypothesis has nothing in common with the model and this data can be categorized as good or not. The following are the results of the del model feasibility test (Goodness fit Model):
The results of the model feasibility test (Goodness fit Model) show a Hosmer-Lemeshow figure of 0.8874 with a significant value greater than 0.05 so there is no difference between the observation data and the estimated data from the logistic regression model. In conclusion, the model is very precise so there is no need to modify other models.

**Coefficient of Determination Test Results (McFadden RSquare)**

The function of the coefficient of determination test is to explain the magnitude of the relationship between how much influence the independent variable has on the dependent variable (Ghozali, 2017). Financial statement fraud is the dependent variable in this study, while pressure, opportunity, rationalization, and capability are the independent variables. With control factors, the McFadden RSquare value is 0.35 (35%) and other independent variables account for the remaining 0.65.

**Prediction level accuracy results (Expectation Prediction Evaluation)**

The expectation prediction evaluation test has the function of assessing the level of accuracy of an equation model and variables used in the research. If the result value is close to 100%. The aforementioned table indicates that there is a 96.27% prediction accuracy between the independent and dependent variables. Given that the preceding findings demonstrate that the model's prediction accuracy reached 95.27%, it can be said to be in good working order. Table 6 shows that 96.27% of the predictions were made accurately. Fscore is an efficient model for identifying financial reports because it found 126 of them. Of those, 42 had a value greater than 1, classifying them as manipulators.

**CONCLUSION AND RECOMMENDATION**

The conclusion drawn from the data analysis results and the discussion is that financial statement fraud is positively impacted by capability and rationalization, negatively impacted by opportunity, and not positively impacted by pressure variables. Since avoiding fraud is the first step in lowering the elements that cause it, it is believed that this research will assist businesses in detecting and preventing it using the fraud diamond theory. In both the public and private sectors, this can lower financial statement fraud. The limitations of the research obtained after the research are the limitations of the research objects and data only using financial reports of banking companies listed on the IDX for 2020-2022 and the limitations of the Fraud Score model which has a high dependence on financial data.

Suggestions for further researchers are to expand research objects and data such as manufacturing companies or direct observation of companies so that primary data can be obtained and use other detection models that do not depend on financial data such as

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