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Can the Fraud Triangle Detect Financial Statement Fraud?

An Empirical Study of Manufacturing Companies in Indonesia

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Abstract

This study examines the effect of the following factors on financial statement fraud: (1) external pressure, (2) personal financial need, (3) financial targets, (4) the nature of industry, (5) ineffective monitoring, and (6) rationalization. The population in this study consisted of companies listed on the Indonesia Stock Exchange (IDX) over the period 2016-2018. The analysis was conducted with the help of the logistic regression method.

The results of this study indicate that external pressure, financial targets and the nature of industry have an effect on financial statement fraud, while personal financial need, ineffective monitoring and rationalization have no effect on financial statement fraud. Thus, this study contributes to the understanding that not all aspects of the fraud triangle can detect fraud.

Keywords: financial statement, fraud, fraud triangle

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Introduction

According to the Association of Certified Fraud Examiners (ACFE), fraud is a deliberate act against the law that has a specific purpose (manipulating or giving wrong financial statements to other parties), is carried out by people outside or within the organisation to get benefits, and causes direct or indirect losses to other parties.

ACFE classifies fraud into 3 types – corruption, misappropriation of assets and financial statement fraud [1]. In 2016, ACFE conducted a survey on fraud in Indonesia by distributing questionnaires to CFE certificate holders as well as practitioners experienced in fraud investigations. The results showed that the highest percentage of fraud in Indonesia in 2016 was due to corruption (77%), followed by the misappropriation of assets (19%) and financial statement fraud (4%). However, in 2018, ACFE conducted another study on 220 cases in the Asia Pacific environment and found that financial statement fraud occurred more rarely than other frauds (a percentage of less than 15%) yet caused the greatest total loss – about US\$ 700,000. In comparison, corruption caused a total loss of about US\$ 500,000 and the misappropriation of assets a loss of about US\$ 180,000 [2].

Any company that is proven to have committed fraud loses the trust of investors and third parties such as banks. This has an impact on company performance. Chen et al. [3] showed that a company lost loans after getting penalized for corporate fraud, receiving less loans than companies that did not commit fraud. In addition, its loan interest increased to a higher level than the interest of companies that did not commit fraud. This indicates that fraud has a significant effect on the level of confidence of stakeholders.

The aspects of pressure, opportunity and rationalization that encourage people to commit fraud include external pressure, personal financial need, financial targets, the nature of industry, ineffective monitoring, and rationalization [4]. Based on previous studies that have not obtained consistent results and there still many cases of financial statement fraud occur, this study will examine the aspects that have an effect on financial statement fraud based on the fraud triangle.

A number of studies have used the fraud triangle, including Parlindungan et al. [5], Fitri et al. [6], and Aghghaleh et al. [7]. Fitri et al. [6] examines the motivation for fraud in Indonesia and concludes that it can be explained by the high pressure to maintain financial stability, the leverage and efforts to achieve financial targets, the small number of independent committees, the amount of receivables from affiliates and the frequent changes in auditors. Fitri et al. [6] used the fraud triangle to explain this motivation and the M-score from the Beneish Model to classify companies that commit fraud based on earnings manipulation. Similarly, Parlindungan et al. [5] concluded that financial factors based on the fraud triangle are effective for indicating and predicting financial statement fraud in Indonesia.

Aghghaleh et al. [7] used the fraud triangle, particularly the aspects of pressure and opportunity, to examine the

factors that influence corporate fraud in Malaysia. Aghghaleh et al. [7] concluded that greater trade receivables and leverage and smaller control exercised by the audit committee and the board of directors, make a company more likely to commit fraud. The difference between this study and Aghghaleh et al. [7] is that we use the F-score to classify companies that commit fraud, while the latter employs data on companies that violate the Malaysian Security Commission.

In addition to taking a financial approach, Li [8] identifies the possibility of fraud on the basis of psychological aspects by using CEO voice markers of cognitive dissonance or the so-called HMV method developed by Hobson, Mayew, and Venkatachalam [9]. The cognitive dissonance studied by HMV is related to the aspect of attitude or rationalization in the fraud triangle.

The present study focuses on the use of financial data, as it can be directly accessed by the public, allowing the latter to identify factors that encourage fraudulent financial statements. The difference between this study and Fitri et al. [6] is that we use the F-score to classify companies that have been identified as committing fraud and those that have not.

Literature Review

Agency Theory

This theory was proposed by Jensen and Meckling [10], who define it as the relationship between the owners and the agents who manage the owners' resources. This relationship has the potential to cause conflicts between owners and agents due to a conflict of interests.

According to Eisenhardt [11], agency theory uses 3 assumptions about human nature: a. Humans are generally selfish; b. Humans have limited thinking power about future perceptions; c. Humans always avoid risks. These three characteristics result in doubts about the correctness of submitted information, which frequently does not reflect what is happening in the company or is "asymmetric information". Asymmetric information refers to differences in the information available to the agent and the owner, with the agent disposing of more information about the company. Asymmetric information and conflicts of interest result in the agent providing untrue information to the owner, especially if this information is related to the agent's performance, which may include earnings management, resulting in a type of fraudulent financial statement. There are 3 types of agency costs: (1) Costs for supervising the agent, (2) Bonding cost, (3) Residual loss.

Fraud

According to ACFE, fraud is a deliberate act against the law that is carried out by people outside or within the organisation with the specific purpose of getting benefits and that causes direct or indirect losses to other parties. ACFE defines financial statement fraud as a deliberate misstatement of a company's financial situation through manipulated reports or omissions in financial statements in order

to deceive users. According to ACFE, fraud can be grouped into several categories:

- a) Misappropriation of Company Assets
Fraudulently taking or using company assets for individual interests.
- b) Financial Statement Fraud
Fraudulently hiding financial information or manipulating and/or changing financial statements with the aim of tricking the readers of financial statements for personal or group interests.
- c) Corruption
Fraudulently abusing authority and power for individual interests.

Fraud also occurs due to corporate culture factors such as bullying and the greed of top management [11]. Fraud can be minimized by improving the work ethos, encouraging proper behaviour and organising well-tailored internal control [12].

Financial Statement Fraud

According to ACFE, there are 2 *modi operandi* (operating methods) used by the perpetrators of financial statement fraud [11]:

- a) Presenting higher income or more assets with the intention of tricking stakeholders or financial

statement users into believing in the company's performance.

- b) Manipulating information by presenting assets as being less than they really are to reduce the amount of tax payments or obligations to the government.

Financial statement fraud can be identified by using the F-score that was developed by Dechow et al. [13]. The F-score model is the sum of two variables: accrual quality and financial performance [14]. Companies with an F-score > 1 have the potential to commit financial statement fraud, while companies with an F-score < 1 have no potential to commit financial statement fraud.

Fraud Triangle

The fraud triangle theory is a method of explaining the causes of fraud proposed by Cressey [15]. According to Statement on Auditing Standards No. 99 [16], several conditions serve as incentives for committing fraud: external pressure, personal financial needs and financial targets. Based on their research results, Maka et al. [17] conclude that models that can significantly indicate financial statement fraud are interest earned, the Altman Z-score and the ratio of debt to equity. The fraud triangle explains the 3 factors involved in a fraud situation (Figure 1).

Figure 1. Fraud triangle



1. Pressure

Free [18] states that fraud occurs when there are (1) an incentive for committing fraud, (2) an opportunity to commit fraud, such as weakness in internal control, and (3) the attitude or ability of individuals to commit fraud.

Romney and Steinbart [19] define pressure as the encouragement or motivation for someone to commit fraud. The pressure can take the form of financial pressure, such as when the actor needs money to assure his lifestyle, and non-financial pressure, such as when a manager is required to show good performance to be superior to others and get the opportunity to obtain a higher position, which indirectly can encourage him to commit fraud.

According to SAS 99 [16], there are several types of pressure for committing fraud:

- a) External Pressure

External pressure refers to any external pressure experienced by the company. External pressures on a company include the striving to receive additional funds from external parties in order to be competitive and to show the best financial and profit ratio performance. In addition, com-

panies must also be able to show that they can repay loans, which can also encourage managers to commit fraud. In addition, excess debt levels can also put external pressure on companies to commit financial statement fraud.

- b) Personal Financial Need

Personal financial need relates to the condition of company executives who play a strong financial role in the company. Personal financial need also affects the company's financial performance [4].

In this study, personal financial need is measured by the percentage of share ownership by insiders (OSHIP), as share ownership by company executives can affect the company's financial condition. Share ownership by insiders can be used as a control in financial reporting: if the share ownership by insiders is high, then fraud in manipulating financial statements will be reduced.

- c) Financial Targets

Financial target refers to any financial target that must be achieved by the company over a given period. This can include pressure put on managers to improve their performance in achieving company targets. Such pressure can

lead people to commit fraud to achieve company targets. The higher the ROA value for which the company strives, the more likely it is to commit financial statement fraud.

2. Opportunity

Opportunity refers to any opportunity that allows fraud to occur. An opportunity occurs when an actor believes that his fraudulent activity will not be detected or when a colleague of his has previously committed fraud and not received any sanctions, so that the actor believes that he has nothing to fear. Inadequate control systems in the company, weak management supervision and unclear procedures can also create opportunities for fraud.

According to SAS 99 [16], several conditions create opportunities for fraud:

a) Nature of industry

The nature of industry refers to the ideal state of a company or organisation in the industry, including the state of the company's receivables. A company with good performance will minimize the amount of receivables and maximize the revenue of its cash flow. High receivables on sales show that accounts receivable are assets that have a higher risk of manipulation, so they are vulnerable to financial statement fraud occurring through accounts receivable. In this study, the nature of industry is calculated by using the ratio of total accounts receivable.

b) Ineffective monitoring

Ineffective monitoring refers to weak monitoring that creates opportunities for fraud. Ineffective monitoring occurs when there are individuals or small groups that dominate management without compensation control, ineffective supervision of the board of commissioners and audit committee over the process of reporting financial statements, internal decision making and so on.

c) Rationalization

Rationalization refers to a mode of behaviour, trait or ethical value that enables acts of fraud or to a suppressive environment that encourages fraud. Rationalization is one of the important elements of fraud that leads the actor to find justifications for his actions. There are several conditions encouraging rationalization for committing fraud, including auditor change and audit opinion.

Formulation of Hypotheses

1. Effect of Pressure on Financial Statement Fraud

This study uses the leverage ratio, personal financial need and financial targets to measure pressure. One of the external pressures on the company is the striving to receive additional funds from external parties in order to be competitive and to show the best financial and profit ratio performance. In addition, a company must also show that it can repay loans, which can also encourage managers to commit fraud.

This study uses the leverage ratio as a proxy for external pressure. Tiffani [4] and Aghghaleh et al. [7] have found that external pressure has an effect on financial statement fraud. In view of the above, the proposed hypothesis is that

external pressure has an effect on financial statement fraud because managers may commit fraud in financial statements by presenting financial ratios with good profits to get loans from external parties.

H1: external pressure has an effect on financial statement fraud.

2. Effect of Financial Need on Financial Statement Fraud

In addition to external pressure, this study also considers internal pressure. Internal pressure focuses on internal motivation such as employee motivation [20]; problems originated from individual problems [21] where the research uses managerial ownership that shows the financial needs of the company's internal parties. Personal financial need refers to the condition of company executives who play a strong financial role in the company. Personal financial need also affects the company's financial performance [4].

In view of the above, the proposed hypothesis is that personal financial need has an effect on financial statement fraud because share ownership by insiders can lead to fraud in the company. The greater the insider ownership, the smaller the tendency to commit fraud.

H2: Personal financial need has an effect on financial statement.

3. Effect of Financial Targets on Financial Statement Fraud

Financial targets refer to situations when managers are required to achieve company targets. This pressure can make managers commit fraud to bring the company's finances in conformity with set targets. In this study, financial targets are calculated using ROA. ROA is a broad measure of the company's operational performance that shows how efficiently assets are being used.

In view of the above, the proposed hypothesis is that financial targets have an effect on financial statement fraud because managers are required to show financial stability and to display good performance by achieving company financial targets that are different from reality [22] so as to get rewards, leading them to commit fraud.

H3: financial targets have an effect on financial statement fraud.

4. Effect of the Nature of Industry on Financial Statement Fraud

The opportunity aspect is associated with the nature of industry. The nature of industry refers to the condition of the company in the industry, including accounts receivable, which are handled differently by each company manager. There are certain accounts in financial statements for which the balance is predictably made – for example, obsolete inventories and bad debts. This condition can give managers the opportunity to manipulate financial statements about the account.

This study uses the accounts receivable ratio as a proxy for the nature of industry. The measurement of the allowance for bad debts is subjective which is the focus of managers to commit fraud [23]. Mariati and Indrayani [24] conclude

that an increase in accounts receivable indicates that the company's cash turnover is not good, which can affect the company's financial stability and encourage it to commit fraud. Our study is based on a sample of manufacturing companies. One of the important aspects of a manufacturing company is the management of working capital, namely the management of cash, accounts receivable and inventory. Manufacturing companies require larger working capital than service companies. Large working capital can be obtained through good management of accounts receivable [25].

In view of the above, the proposed hypothesis is that the nature of industry has an effect on financial statement fraud because a company that wants to look good reduces the amount of receivables and increases the amount of cash flow. With a reduced amount of accounts receivable and bad debts are made with suspicion, it is very likely that fraud will occur.

H4: the nature of industry has an effect on financial statement fraud.

5. Impact of Ineffective Monitoring on Financial Statement Fraud

Ineffective monitoring refers to a lack of supervision that creates an opportunity for managers to commit fraud. It can happen due to a lack of members on the company's board of commissioners, increasing the probability of fraud due to insufficient supervision [6]. The effectiveness of monitoring is measured as the proportion of independent boards to the total number of boards. The greater the number of independent boards, the more effectively the monitoring prevents fraud. Supervision carried out by an independent board is one aspect of good governance practice. The board of directors is an important mechanism in good governance because it has the highest authority in making decisions in the company [26].

In view of the above, the proposed hypothesis is that effective monitoring has an impact on financial statement fraud, because, when a small group dominates management and inside supervision is lacking, fraud may occur.

H5: ineffective monitoring has an effect on financial statement fraud.

6. Effect of Rationalization on Financial Statement Fraud

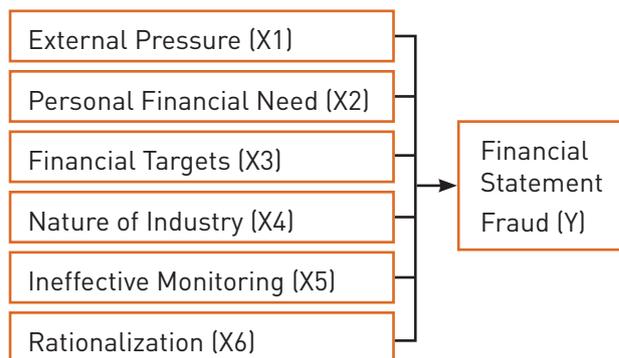
Rationalization refers to the justification of the perpetrator of fraud for his actions. Rationalization is measured by the level of auditor changes. When the auditor changes, rationalization tends to increase. A change of auditor within a company can represent an attempt to remove traces of fraud, especially if the new auditor is unable to disclose the fraud [6].

In view of the above, the proposed hypothesis is that rationalization has an effect on financial statement fraud because a change of auditor suggests that the company is committing fraud and trying to justify it.

H6: rationalization has an effect on financial statement fraud

The research design is presented in Figure 2.

Figure 2. Research Design



Research Methodology

The population used in this study consisted of manufacturing companies listed on the Indonesia Stock Exchange over the period 2016-2018. The sample was taken according to the set criteria. After sampling, there were 24 companies that met these criteria, and so all of the 72 companies were taken as the sample. Perusahaan manufacture yang menjadi sample merupakan perusahaan yang mengelola bahan mentah menjadi barang jadi yang bergerak di tiga sector yaitu sector basic industry and chemicals, miscellaneous industry and consumer goods.

Variable

This study uses dependent and independent variables. The dependent variable is the potential for financial statement fraud, and the independent variable is the fraud triangle (Table 1).

Table 1. Operating Definitions of Variables

Variable	Measurement
<p>Financial statement fraud</p> <p>Financial performance is measured by changes in cash sales accounts, accounts receivable, inventory accounts and income accounts before taxes and interest.</p> <p>A company with an F-score value > 1 has the potential to commit financial statement fraud, while a company with an F-score value < 1 has no potential to commit fraud [27]</p>	$Fscore = accrualquality + financialperformance$ $RSSTaccrual = \frac{(\Delta WC + \Delta NCO + \Delta FIN)}{AverageTotalAsset}$ $WC = currentassets - currentliabilities$ $NCO = (assets - currentassets - investment \& \ advance) - (liabilities - currentliabilities - longtermdebt)$ $FIN = investment - liabilities$ $ATS = (beginningassets + endassets) / 2$ $financialperformance = changeinreceivable + changeininventories + changeincashsales + changeinearnings$ $changeinreceivable = \frac{\Delta receivable}{averageassets}$ $changeinreceivable = \frac{\Delta receivable}{averageasset}$ $changeininventories = \frac{\Delta inventories}{averageinventories}$ $changeincashsales = \frac{\Delta sales}{sales(t)} - \frac{\Delta receivable}{receivable(t)}$ $changeinearnings = \frac{earning(t)}{averageasset(t)} - \frac{earning(t-1)}{averageasset(t-1)}$
<p>External Pressure</p> <p>In this study, external pressure is calculated using the leverage ratio (debt to asset ratio), because one source of external pressure on companies is their ability to meet loan requirements and repay debts</p>	$leverage = \frac{totaldebt}{totalasset}$
<p>Financial Need</p> <p>In this study, financial need is calculated using managerial ownership (OSHIP), because, when company executives play a strong financial role in the company, the financial need of the executives will also have an effect on company performance</p>	$OSHIP = \frac{Total \ Shared \ Ownership \ of \ Insiders}{Total \ Common \ Shares \ Outstanding}$ $OSHIP = \frac{Total \ Shared \ Ownership \ of \ Insider}{Total \ Common \ Shares}$

Variable	Measurement
<p>Financial Targets</p> <p>The ROA formulation is used to calculate the financial targets, because one of the management performance measures is the effectiveness and efficiency of a company in using assets to generate profits, while ROA is a profitability ratio that measures company performance [14]</p>	$ROA = \frac{\text{earning after interest and tax}}{\text{total assets}}$
<p>Change in Accounts Receivable</p> <p>In this study, the nature of industry is calculated using the ratio of total accounts receivable, because certain accounts in financial statements are determined on the basis of estimates – for example, bad debts and obsolete inventories. These conditions can create opportunities for managers to commit fraud</p>	$RECEIVABLE = \frac{\text{receivable}(t)}{\text{sales}(t)} - \frac{\text{receivable}(t-1)}{\text{sales}(t-1)}$
<p>Ineffective Monitoring</p> <p>In this study, ineffective monitoring is calculated using BDOU, which measures the percent of the number of independent commissioners on the board of commissioners, as weak supervision can create opportunities to commit fraud</p>	$BDOU = \frac{\text{total independent boards}}{\text{total boards}}$
<p>Rationalization</p> <p>In this study, rationalization is calculated by auditor changes or AUDCHANGE. AUDCHANGE is used because auditor changes may represent an attempt to eliminate traces of fraud found by previous auditors. If the auditor is unable to disclose the fraud that occurred, it will continue to increase, because the manager considers it to be permissible insofar the auditor is unable to disclose it</p>	<p>This measurement uses a dummy variable that is equal to 1 if an auditor change occurred and 0 if no auditor change occurred</p>

Data Analysis

This study used logistic regression. The results of the calculation of the risk of financial statement fraud (F-score) were classified into high and low-risk groups. In addition to logistic regression, the data were processed using OLAP (Online Analytical Processing) cubes, which are used for databases in multidimensional structures, providing fast answers to complex queries and analysis with the aim of looking more specifically at the companies under the study.

Data Analysis and Discussion

Data Analysis

Descriptive analysis yielded the following means: 0.36 for external pressure, 0.03 for personal financial need, 0.06 for financial target, 0.00 for nature of industry, 0.33 for ineffective monitoring, 0.46 for rationalization and 0.047 for financial statement fraud. The complete descriptive statistics results are shown in Table 2.

Table 2. Descriptive Statistics

Identification	N	Min	Max	Mean	Median	Std. Deviation
External pressure	72	0.13	0.81	0.3675	0.3572	0.16771
Personal financial need	72	0.00	0.38	0.0333	0.0000	0.09489
Financial targets	72	0.00	0.47	0.0957	0.0649	0.09464
Nature of industry	72	-0.25	0.27	-0.0017	0.0010	0.06180
Ineffective monitoring	72	0	0.57	0.3594	0.3333	0.14289
Rationalization	72	0	1	0.46	0.0000	0.502
Financial statement fraud	72	-0.56	1.65	0.0743	0.0472	0.29680

Source: Research Data.

The risk category for financial statement fraud is based on the median value of the processed data, which divides companies into two categories: companies with an F-score < 0.0472 were categorized as low risk and those with an F-score \geq 0.0472 were categorized as high risk. As shown in Table 3, there are significant differences between high- and low-risk companies.

Table 3. Differential Test for High-risk and Low-risk Companies

	Lavene Test Equality of Variances		t-test for equality means		
	F	Sig.	t	df	Sig. (2-tailed)
Equality variances assumed	0.008	0.930	4.893	70	0.000

Source: Research Data.

The differences in mean and standard deviation between the companies with high-risk and low-risk category are shown in Table 4.

Table 4. Differences in mean and standard deviation between companies in high-risk and low-risk categories

Identification	Mean		Std. Deviation	
	High-risk	Low-risk	High-risk	Low-risk
External pressure	0.3128	0.422	0.11789	0.192
Personal financial need	0.0352	0.032	0.10490	0.085
Financial targets	0.1180	0.073	0.09434	0.090
Nature of industry	-0.0184	0.014	0.05320	0.065
Ineffective monitoring	0.3667	0.35	0.15450	0.132
Rationalization	0.4167	0.5	0.50000	0.5
Financial statement fraud	0.223	-0.0739	0.172	0.32

Source: Research Data.

As Table 4 shows, a significant difference between companies with high and low fraud risk is that companies with high fraud risk have high debt ratios, low financial targets, and receivables that increase every year.

The Omnibus test was conducted with a total of 6 independent variables, resulting in a significance value lower than 0.05 (0.003, to be exact). This shows that there is a significant and simultaneous effect of the independent variables on the dependent variable. The results of the Omnibus test are shown in Table 5.

Table 5. Omnibus Tests of Model Coefficients

Identification	Chi-square	df	Sig.
Step			
Step 1	19.822	6	0.003
Model			

Source: Research Data.

The Nagelkerke R Square value is the R-squared value in linear regression. The independent variables were able to explain 32 percent of the dependent variable as seen from the Nagelkerke R Square value of 0.32. The remaining 68 percent can be explained by factors other than the independent variables in the logistic regression results equation. The results of the Nagelkerke R Square and Hosmer-Lomeshow tests are shown in Table 6.

Table 6. Nagelkerke R Square and Hosmer-Lomeshow Tests

Information	Value
Nagelkerke R Square	0.321
Chi-square	9.417
Sig.	0.308

Source: Research Data.

The Hosmer value in Table 6 is 0.308, which is higher than $\alpha = 0.05$, meaning that the logistic regression model is able to explain the data and that there is no difference between the model and its observation value. This shows that the logistic regression equation can be used to explain the relationship between the independent variables and the dependent variable.

Table 7. Significance Test

Information	Sig.	Hypothesis
External Pressure	0.028	H1: Proven
Personal Financial Need	0.932	H2: Not proven
Target Pressure	0.024	H3: Proven
Nature of Industry	0.054	H4: Proven

Information	Sig.	Hypothesis
Opportunity	0.472	H5: Not proven
Rationalization	0.289	H6: Not proven

Source: Research Data.

Table 7 shows that external pressure and target pressure have a significant effect. The nature of industry has a quasi-significant effect, while personal financial need, opportunity and rationalization have no significant effect.

Discussion

External pressure is measured by the ratio of total liabilities to total assets. The results of the hypothesis test in Table 7 show that external pressure has a significance value of 0.028. External pressure has an effect on fraud, because, to obtain a loan from an external party in order to remain competitive, a company must have an excellent financial and profit ratio. In addition, the company must be able to show that it can repay the loan, which can encourage managers to commit fraud.

Target pressure – in this case, the financial target – has a significant effect, as it requires managers to achieve company targets. This pressure can make managers commit fraud to bring company finances into accordance with the set targets. In this study, the financial target was calculated using ROA, which is a broad measure of the company's operational performance that shows how efficiently assets are being used.

Personal financial need has a significance value of 0.932. The significance value is $0.932 > 0.05$, which means that personal financial need has no significant effect. The non-significant effect can be explained in the study by the fact that the average share ownership by insiders is only 3.3% and so cannot affect fraud due to its low percentage. This low percentage does not have any effect on management control over the company, so that the company does not have the opportunity to commit fraud.

The nature of industry has a significance value of 0.000 (the calculated value of 0.05 is at the limit of significance). The effect of the nature of industry on the risk of financial fraud is that the condition of accounts receivables responded differently by each company manager. An increase in accounts receivable encourages companies to commit fraud. Accounts receivable management is one aspect of working capital management in addition to cash and inventory. A larger collection period or increased credit sales result in an increase in receivables, which disrupts the company's cash flow. Non-current cash flows can affect profitability, which companies can try to overcome by committing fraud [24].

Opportunity, which is proxied by effective monitoring, has a significance value of 0.472, meaning that ineffective monitoring does not have a significant effect on the risk of financial statement fraud. Members of an independent board of commissioners may take their positions due to the formal requirements of the IDX, which specifies that independent commissioners must account for at least 30% of the total board of commissioners, while majority share-

holders continue to play an important role so that the performance of the board does not increase or even declines.

The number of independent members on boards of commissioners does not affect company fraud, which was also shown by Salleh and Othman [28]. Fraud is much more affected by the number of meetings of the board of commissioners. The more frequently meetings are held, the more effective the board of commissioners is in monitoring, improving its chances of uncovering fraud [28].

Rationalization has a significance value of only 0.289 and so does not have a significant effect. Changes of auditor cannot be used to detect fraud, as companies may change auditors not to conceal fraud but to comply with Article 11 of the Government Regulation of the Republic of Indonesia No. 20 of 2015 concerning public accountant practices, which limits the provision of audit services to 5 consecutive fiscal years.

A change of auditor does not indicate that a company has committed financial statement fraud. The Financial Services Authority (OJK) has also regulated auditor changes in Regulation No. 13 / POJK.03 / 2017, where parties providing financial service activities are required to limit the use of audit services from the same public accountant for a maximum of three years.

A number of regulations have been enacted to improve corporate governance, which also reduces the possibility of fraud. Auditor change regulations, strengthening the audit committee is considered only as an effort to increase the image of the company [29]. This regulation has not been fully implemented and its implementation effectiveness has not been optimal [30].

In view of the above, the fraud triangle theory cannot fully explain fraudulent financial statements. In the pressure aspect, external pressure and target pressure determine fraud. Likewise, in the opportunity aspect, only the nature of industry has an effect on fraudulent financial statements. As to the rationalization aspect, it does not show any impact at all on the occurrence of fraud. Based on these results, the indicators of every aspect need to be re-examined. Free [18] concluded that financial statement fraud is closely related to behavioural aspects. This is in line with the results of Trompeter [31], which states that inter-disciplinary research needs to be applied to study the problem of financial statement fraud.

Conclusion

The results of this study shall be useful to auditors, investors and stakeholders to understand the factors influencing the risk of financial statement fraud in Indonesia, especially factors relating to external pressure, target pressure, and the nature of industry. This study supports the conclusions of Yolanda [32] that it is necessary to emphasize the potential risk of fraud in audit reporting.

Further research can use different samples or increase the duration of research to improve the sample, using M-score or Z-score models or even adding new variables for detecting fraud in companies.

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