DETECTING OF PROBABILITY OF FINANCIAL STATEMENT FRAUD USING FRAUD HEXAGON MODEL: Evidence from Indonesian Public Companies

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A B S T R A C T

The purpose of this reaserch is for detecting financial statement fraud used fraud hexagon fraud consits of pressure, opportunity, rationalization, ccompetence, arroagance & collution variabels. The sample in this reaserch specifically chose companies that were proven to have committed financial statemeent fraud and used logistical regression estimation techniques assisted by STATA 14.The results of this reaserch shows that pressure proxied by financial stability, rationalization proxied by total accruals and collution proxied by state owned enterprises (SOEs) has positive effect significantly on probability of financal statement fraud. Consequently, change of receivables, change of directors, CEO education, CEO narcissism, managerial ownership and CEO duality has negatif effect on probability of financial statement fraud. meanwhile, external pressure, financial target, ineffective monitoring dan auditor switching has no efffect on probability of financial statement fraud. The fraud hexagon model This model can be used for financial statement fraud detection because the results support the collusion variable proxied by state owned enterprises (SOEs) which indicates that regulation, supervision and punishment are still weak for parties proven to have committed financial reporting fraud.

1. Introduction

Fraud practices in business occured in financial statement, asset misappropriation and corruption. Financial statement should be served for truly soundness description a company homewer manegement misleading shareholders by adding or remove vital item in financial statement for describe soundness a company.

According *The Association of Certified Fraud Examiners* (ACFE) 2020, fraud is an act that is intended to be against the law and is carried out intentionally for certain purposes such as manipulation or giving false statement to other parties. The impact of a case of corporate fraud is very large and will harm all parties who have made wrong decisions. The average loss borne by 1 (one) of 10 (ten) companies that were victims of corporate fraud cases amounted to US $5,000,000,000 (Pricewaterhousecoopers, 2011).

Based on the survey result of *Association of Certified Fraud Examiners, Asia-Pacific Edition* (2020) highest percentage cases occured in asset missapropriation 74% and the lowest occured in financial statement 14%. Nevertheless, median loss occured in financial statement of $3.000.000 higher more than 400% than before from the same association in 2018.

Many financial statement fraud cases occured in Indonesia has proven that Indonesia is one of the developed countries has weak regulation (OECD, 2015). Recently, cases of fraud occured at PT. FKS Food Sejahtera Tbk (AISA) in financial statement 2017 (Nasional.Kontan.co.id 2021). Earlier, occured at PT. Hanson International Tbk (MRX) in financial statement 2016 (Money.Kompas.com 2016).

Based on survey result of *The Association of Certified Fraud Examiners* (ACFE) *Asia-Pacific Edition* (2018), Indonesia Ranked 3rd in Asia Pacific wih 29 cases, meanwhile in Southest Asia Indonesia ranked 1st.

Detection fraud using hexagon fraud model still rarely seen because this model fairly new developed by Vousinas (2019). Hexagon fraud model is extended from previous theories of fraud such as: triangel fraud model, diamond fraud model and pentagon fraud model. Hexagon fraud model consist of stimulus/pressure, opportunity, rationalization, competence, ego/arrogance and collution.

Thus, purpose of this research is to examine pressure, opportunity, rationalization, competence, arrogance and collution on financial statement fraud, determine companies that proven carried out financial statement fraud that listed in Indonesian Stock Exchange.

We use data from 20 companies that proven have committed financial statement fraud from the period 2001-2021. Because of the lack of necessary data, we excluded banking sector from the sample. We apply the methodology developed by Dechow et al., (2011) to estimate financial statement fraud. Our results show that pressure, rationalization and collution has positive effect significantly on probability of financial statement fraud.

In summary, our study makes a few contributions to the literature on financial statement fraud. First, our study contribute to the literature on financial statement fraud by adding a recent developed fraud model. A few studies estimate the newest fraud model. Second, our study has policy implication for management, policimakers to develop strategies to hinder or minimum financial statement fraud act concerend on pressure, rationalizationa and collution variabels.

The rest of the paper is organized as follow: section 2 summarizes of the literature and develop of research hypotheses. Section 3 describes of research methodology. Section 4 presents summary of the statistics and empirical results on financial statement fraud. And, concluding remarks are presented in section 5.

2.   Theoritical Framework and Hypothesis

2.1 Fraud Theory

Initially, fraud theory was developed by Donald R. Cressy in 1953 named *triangle theory.* It consists of three variables pressure, opportunity and rationalization. Few decades later, in 2004, David T. Wolfe and Dana R. Hermanson extended the theory, its name *diamond theory.* They added a variable named capability. Several years later, Crowe Horwath developed an extended fraud theory in 2011. He called it *penthagon theory* that added two variables named competence and arrogance.

Figure 1.

Fraud Hexagon Model

Source: Vousinas (2019)

Recently, a new extended fraud theory developed by Vousinas in 2019 named *penthagon fraud theory*. He added collution into the theory. He believed collution is one of the factors that triggered fraud. He argued nearly half of the fraud cases involved multiple fraud prepetrators colluted one another to do fraud.

2.2 Agency Theory

The theory is diccused about the owner or principal delegated their rights to run the business to the management or agent under owner's names. The theory initially developed by Jensen and Meckeling in 1976. Yet, there is an information assimetry between principal and agent, in addition in order to carry out the mandate of the principal, agent does not do it however enrich theirselves (Panda & Leepsa, 2017).

2.3 F-Score Model

F-Score model is dependend variable followed to (Skousen & Twedt, 2009). Examination of this model develop a score between 1 and 0. If F-Score demonstrates less than1 (F-Score < 1) this is a signal less possibility of financial statement fraud on the contrary if F-Score more than 1 (F-Score > 1) is a signal that more possibility of financial statement fraud (Dechow et al., 2011). Determination of using F-Score Model based on result and explanation of (Aghghaleh, Mohamed, & Rahmat, 2016; Situngkir & Triyanto, 2020; Walker, 2021).

2.4   Hypothesis Development

2.4.1   The effect of pressure in detecting the probability of financial statement fraud

Financial Stability

Stability of financial attracks investors to invest as well as improve company value in public, therefore management need always to sustain financial stability in the company. Low of change of total asset could triggers financial statement fraud ((Lokanan & Sharma, 2018). Research conducted by Skousen et al., (2009) in Situngkir & Triyanto, (2020) proves that the higher the ratio of changes in a company's total assets, the indication of fraudulent actions against the company's financial statements is higher. This hypotesis inline with results of (Annisya, Lindrianasari, & Asmaranti, 2016; Situngkir & Triyanto, 2020).

External Pressure

A pressure encourge and motivated management to carry out fraud could be from external parties. External parties always demanding company to improve perfomance. To improve performance, management needs external financing. Pressure from external parties proxied by leverege ratio that represents size of debt and asset (Sasongko & Wijayantika, 2019). However, if debt rate is over high and management could not afford to fulfil they payment then probability of financial statement fraud is higher. This hypotesis inline with result of (Yesiariani & Rahayu, 2016).

Financial Target

Financial target arises as a result of a certain target include targets of sales as well as profit. ROA is performace measure widely using to indicate how eficient are assets owned in generating profit (Skousen et al., 2009). This hypothesis inline with the result of (Lou & Wang, 2011).

H$_1$: Pressure has positive effect on probability of financial statement fraud.

2.4.2   The effect of opportunity in detecting the probability of financial statement fraud

Nature of Industry

Summers & Sweeney (1998) in Sihombing & Rahardjo (2014) explains that receivable account requires subjective judgment in estimating uncollectible accounts receivable or bad debt accounts. Due to subjective judgment, management could utilize receivable as one of tools to carry out financial statement fraud. Therefore if receivable account increase then it is a signal of manipulation. This hypotesis inline with result of (Damayani at al., 2019).

Ineffective Monitoring

One of the factors of fraud practices due to weak of monitoring. Monitoring carried by Board Of Commisioner. Present of independend commisioner/s expected able to reduce fraud practices.

The more the number of independed commisioners expected able to reduce fraud practice. However, in fact number of independen commisioners distinch in each companies. Dechow et al., (1996) dan Dunn (2004) on Sihombing & Rahardjo (2014) carried out a research regarding number of board of commissioners and fradulent financial statement, the result showed that the fradulent financial statement is more common in companies that have fewer board of commissioners.

H[2]: Opportunity has positive effect on probability of financial statement fraud.

2.4.3 The effect of rationalization in detecting the probability of financial statement fraud

Auditor Switching

According to POJK No. 13/POJK.03/2017 usage of public accuntant no longer limited to several years to carry out audit of financial statement, therefore decision to change of external auditor purely from manajement which has been agreed at the GMS. Ratmono et al. (2020) explain that auditor switching volunterly aims to eliminate fraud traces or to reduce probability of financial statement fraud detection. This hypotesis inline with result of (Siddiq et al., 2017).

Total Accruals

Subramanyam (2014) in Maharani (2015) explains that financial statement has been recorded using accruals method considered more suitable to measure the company's ability to generate cash and equivalent in the present and future. Total accruals is used because subjective judgement and decision making appears in company's accruals. Fondation of accruals gives opportunity to management to carry out manipulation financial statement because judgement in decision making by management. This hypotesis inline with results of (Sihombing & Rahardjo, 2014; Yesiariani & Rahayu, 2016).

H[3]: Rationalization has positive effect on probability of financial statement fraud.

2.4.4 The effect of competence in detecting the probability of financial statement fraud

Change of Directors

Changes in directors generally have a tendency to be full of political content and the interest of certain parties Sihombing & Rahardjo (2014). additionally, many of the intention of changes in directors to eliminate old directors who has been suspected or found fraud practices. This hypotesis inline with result of (Pardosi 2015).

CEO Education

According to statement of ACFE Global (2020) 49% fraud prepetators holds undergraduate with average loss up to $175.000, meanwhile 15% fraud prepetators holds postgraduate with higher average loss of $200.000.

H$_4$: Competence has positive effect on probability of financial statement fraud.

2.4.5 *The effect of arrogancy in detecting the probability of financial statement fraud*

CEO Narcissism

A CEO has tedency to show up status and position to public because they do not wish to lose their status and position. Financial statement could be meaningful as self-actualization for a manager who has narcissistic nature (Ratmono et al., 2020). The managers tend to have narcissistic nature to publish their achievement on financial report to gain positive respons (Amemic & Craig, 2010). This hypotesis inline with results of (Bawekes et al., 2018; Pramana et al., 2019).

Managerial Ownership

Ownership by managerial triggers a claim of assets and profit rights in company that can have impact in policies made regarding transparancy of financial performance (Putri, 2017) on (Pamungkas & Utomo, 2018). The hypotesis is inline with Hapsari (2014).

CEO Duality

A good performance should have a CEO who has single position in company. CEO Duality could triggers collution and sacrifice interest of shareholders (Devi et al., 2021). The hypothesis is inline with (Bawekes et al., 2018; Devi et al., 2021).

H$_5$: Arrogancy has positive effect on probability of financial statement fraud.

2.4.6 *The effect of collusion in detecting the probability of financial statement fraud*

State owned Enterprises (BUMN/BUMD)

BUMN/BUMD has extraordinary relationship with goverment (Pronoto & Widagdo, 2016). Extraordinary relationship such as: direct subsidy, financing dan gurantee of business continuity (Gaio & Pinto, 2018). Thus, BUMN/BUMD very familiar with corruption, collusion and nepotism Practices (Sukardi, 2004) on (Dinata et al, 2018).

H$_6$: Collusion has positive effect on probability of financial statement fraud.
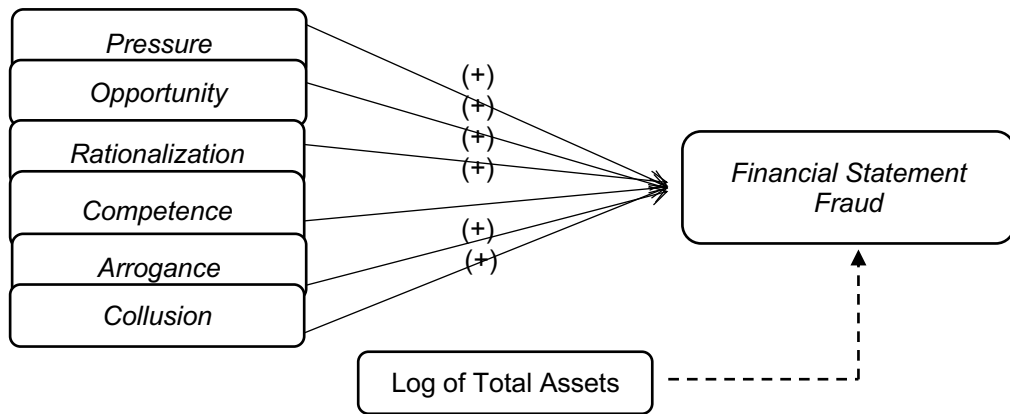
Figure 1. Research Framework

Source: Research Data, 2022

3. Research Methodology

This reaserch aims to examine fraud hexagon model on probability of financial statement fraud. This research is a explanatory research utilize secondary data obtained from osiris database and annual statement each comapnies. This reaserch used purposive sampling to determine sampel and excluded banking sector because of the lack of needed data and different of characteristic of financial statements. There are 20 companies per year as sample for the period 2015-2019. The companies whose proven committed financial fraud were obtained from online news such as kompas.com, money.kompas.com and so on.

Data analysis technique used in this reaserch was logistic regression analysis Hair et al (2019: 556) because depended variable divided into 0 and 1. Additionally, added total asset as a control variable. The equation model is describe as follow:

$$Ln\frac{Fraud}{1-Fraud} = \alpha + \beta_1 press + \beta_2 opp + \beta_3 rtn + \beta_4 comp + \beta_5 argnce + \beta_6 coll + \beta_7 TA + \varepsilon_i$$

$Ln\frac{Fraud}{1-Fraud}$ = Financial Statement Fraud; Press = pressure; Comp = competence; Opp = opportunity; Coll = collusion; Argnce = arrogance; Rtn = rationalization; TA = total asset.

3.1 Variables measurements

3.1.1 Dependent Variables

F-Score = Accrual Quality + Financial Performance

Accrual Quality

RSST *Accrual* = $\frac{\Delta WC + \Delta NCO + \Delta FIN}{Rata-Rata\ Total\ Aset}$

ΔWC = *Working Capital*$_t$ – *Working Capital*$_{t-1}$

     WC = current asset – current liabilities

ΔNCO = *Non Current Operating*$_t$ – *Non Current Operating*$_{t-1}$

 NCO = (total asset – current asset-investment & advances) – (total liabilities – current liabilities- long term debt)

ΔFIN = *Financial Accrual*$_t$ – *Financial Accrual*$_{t-1}$

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FIN = total investment – (long term debt+ short term debt + preferred stock)
Average Total Asset = Early Total Asset + End Total Asset/2

Financial Performance
Financial performance = Δ*receivable* + Δ*inventory* + Δ*cash sales* +Δ*earnings*

$$\Delta receivable = \frac{Receivables_t - Receivables_{t-1}}{Average\ Total\ Assets}$$

Δ*inventory* = $\frac{Inventory_t - Inventory_{t-1}}{Average\ Total\ Assets}$

Δ*cash sales*= $\frac{sales_t - sales_{t-1}}{sales_t} - \Delta Receivables$

Δ*earnings* = $\frac{Earnings_t}{Average\ Total\ Assets_t} - \frac{Earnings_{t-1}}{Average\ Total\ Assets_{t-1}}$

Source: (Skousen & Twedt, 2009)

3.1.2 Independent Variables

Pressure

Financial stability; Change of Total Asset = $\frac{Total\ Asset_t - Total\ Asset_{t-1}}{Total\ Asset_{t-1}}$ (Situngkir & Triyanto, 2020)

Eksternal pressure; Leverege = $\frac{Total\ Debt}{Total\ Asset}$ (Skousen et al., 2009)

Financial target; ROA = $\frac{Net\ Profit}{Total\ Asset}$ (Lokanan & Sharma, 2018)

Opportunity

Nature of Industry; ΔReceivable = $\frac{Receivable_t}{Sales_t} - \frac{Receivable_{t-1}}{Sales_{t-1}}$ (Situngkir & Triyanto, 2020)

Ineffective Monitoring; BDOUT = $\frac{number\ of\ independent\ commisioners}{total\ number\ of\ board\ of\ commisioners}$ (Sihombing & Rahardjo, 2014)

Rationalization
Auditor Switching; Dummy variable, 1 if there was auditor switching and 0 otherwise. (Devi et al, 2021)
Total Accrual; $TATA_{it}$ = $\frac{Total\ Akrual}{Total\ Aset}$ (Situngkir & Triyanto, 2020)

Competence
Change of Directors; dummy variable, 1 if there was change of directors and 0 otherwise. (Sihombing & Rahardjo, 2014)
CEO Education; dummy variable, 1 if CEO education is postgraduate and 0 undergrduate or below.

Arrogance
CEO Narcissism; number of CEO's photo display in annual statement
Managerial Ownership; dummy variable, 1 if there was managerial ownership and 0 otherwise
CEO Duality; dummy variable, 1 if CEO has multipe position internal or external and 0 otherwise.

Collusion
State Owned Enterprises; dummy variable, 1 if SOEs and 0 otherwise.

4. Results and Discussion

4.1 Results

The results on the pressure variable shows only financial stability proxied by change of total asset has positive and significant effect on probability of financial statement fraud. Coefficient value of 6.3447 and p-value (sig) of 0.075 (0,075 < 0.10). meanwhile two others external pressure and financial target's probability value greater than 0.05. Thus, pressure variable was accepted eventhough only one proxy is significant.

The results on the opportunity variable shows none was accepted. Nature of industry has significant value greater than 0.05 (0.173 > 0.05) and ineffective monitoring also has significant value greater than 0.05 (0.388 > 0.05). Thus, opportunity variable was rejected.

The results on the rationalization variable shows only total accruals had positive and sgnificant effect on probability of financial statement fraud. Coefficient value of 7.5912 and p-value (sig) of 0.01 (0.01 < 0.01).

The results on the competence variable shows none was accepted. Either change of director or CEO education both has p-value (sig) greater than predetermined level of significance. Thus, this variable was rejected.

Table 1
Summary Statistics

Variable	N	Mean	SD	Min	Max
FraudScore	100	0,11	0,31	0,00	1,00
ChangeofTotalAsset	100	1,94	17,76	-0,79	2,87
Leverege	100	0,42	0,45	0,01	3,25
ROA	100	-0,54	5,57	-55,59	1,37
ChangeofReceivable	100	-0,13	11,1	-75,17	75,38
IneffectiveMonitoring	100	0,42	0,1	0,25	0,8
AuditorSwitching	100	0,28	0,45	0,00	1,00
TotalAccruals	100	-0,06	0,44	-3,01	0.79
ChangeofDirectors	100	0,46	0,5	0,00	1,00
CEOEducation	100	0,38	0,49	0,00	1,00
CEONarcissism	100	6,55	5,86	1	33
ManagerialOwnership	100	0,42	0,5	0,00	1,00
CEODuality	100	0,67	0,47	0,00	1,00
Collusion	100	0,35	0,48	0,00	1,00
LnTotalAsset	100	22,17	2,22	16,04	25,55

Notes: This table presents descriptive statistics for variable used in this study, incuding mean, standard deviation (SD), minimum value (Min) and maximum value (Max). fraud score, auditor switching, changes of directors, CEO education, managerial ownership, CEO duality and collution using dummy variables consits of 0 and 1. Meanwhile, change of total asset, leverege, ROA. Change of receivable, ineffective monitoring, total akrual, CEO narcissism and total asset using ratio scale.

The results on the arrogance variable shows none was significant. Either CEO narcissism, managerial ownership or CEO duality has p-value (sig) greater than predetermined level of significance. Thus, this variable was rejected.

The result on the collusion variable shows was significant. Collution proxied by state owned enterprises (SOEs) has coefficient value of 2.1342 and p-value (sig) lower than 0.10 (0.064 < 0.10). Thus, this variable was accepted.

Table 2
Result of Hypothesis Testing

FraudScore	Coef.	Std. Err.	Sig.
ChangeofTotalAsset	6,3447	3,5627	0,075*
Leverege	0,6761	0,6096	0,267
ROA	0,0253	0,2758	0,927
ChangeofReceivable	-0,1324	0,0971	0,173
IneffectiveMonitoring	5,4460	6,3129	0,388
AuditorSwitching	0,2583	1,2427	0,835
TotalAccruals	7,5912	6,5093	0,01***
ChangeofDirectors	-0,5578	1,3152	0,671
CEOEducation	-8,4933	6,5808	0,197
CEONarcissism	-0,2653	0,2853	0,352
ManagerialOwnership	-1,0356	1,5138	0,494
CEODuality	-0,7203	1,5486	0,642
Collusion	2,1342	4,7689	0,064*
LnTotalAsset	0,0887	0,4920	0,857
Constant	-5,6571	1,0833	0,602

Notes: this table reports results from regression analyzing the effect of fraud hexagon model on f-score using logistic regression. T-statistics are in parentheses superscripts ***, **, * indicates statistical significance at 1%, 5% and 10% level respectively.

4.2 Discussion

Financial Stability

Based on the hypothesis result that financial stability was accepted. Septriani & Desi Handayani (2018) explained that the company strives to make the company's prospects good, one of which is by beautifying the company's asset information related to the growth of its assets. Total assets that increase from year to year indicate that the company is able to meet its obligations so as not to worry investors and the company's wealth increases. The results of this study in line with (Annisya et al., 2016; Situngkir & Triyanto, 2020).

External Pressure

High or low leverege is not able to show the probability of financial statement fraud in a company. According to Ratmono et al. (2020) explained that there are several alternative ways to increase the company's capital, one of which is by issuing shares. Many companies prefer to reissue shares with the aim of obtaining additional capital. This result contradicts (Yesiariani & Rahayu, 2016).

Financial Target

Sihombing & Rahardjo (2014) a high ROA in the previous year will trigger the company to increase its profitability in the future. However, a decline of profitability can occur due to a crisis that hit an industry or company that cannot be predicted, resulting in a false decrease or increase in profitability. The increase in company profitability can also be caused by improving the quality of company operations such as modernization of information systems, recruitment of potential workers and the right policy of directors in solving problems. This result is inconsistent with (Lou & Wang, 2011).

Nature of Industry

Summers & Sweeney (1998) in Sihombing & Rahardjo (2014) explains that accounts receivable requires a subjective assessment in estimating uncollectible accounts. Because there is a subjective assessment, management can use accounts receivable as a tool to commit financial statement fraud. This result is inconsistent with (Damayani et al., 2019).

Ineffective Monitoring

In accordance with POJK No. 33/POJK.04/2014 regarding the directors and board of commissioners of public companies. Public companies are required to have independent commissioners at least 30% of the total number of commissioners. In relation to the regulation, all sample companies have implemented the regulation. Therefore, the supervisory duties carried out by independent commissioners are appropriate and effective in reducing the practice of financial statement fraud.

Auditor Switching

Basically, all public companies are required to determine an external auditor who has been registered with the OJK. Therefore, all external auditors are independent and have the same roles and duties to carry out their responsibilities in preparing audit opinions based on their findings in auditing financial statements. This result contradicts (Siddiq et al., 2017)

Total Accruals

Based on the hypothesis result that the total accruals accepted. The accrual method is very subjective so that it reflects the company's accrual value carried out by management. Based on its highly subjective nature, the accrual basis can be misused by management to modify or manipulate financial statements. This result inline with (Sihombing & Rahardjo, 2014; Yesiariani & Rahayu, 2016) found that rationalization proxied by total accruals have positive effect on fraudulent financial statement.

Change of Directors

Changes in directors are not always fraught with political content or hidden interests held by company executives. The change of directors is intended to obtain leaders who are more capable or competent in their respective fields to lead the running of the company. This result inconsistent with Pardosi (2015).

CEO Education

Firdaus & Suryandari (2008) explained that CEOs with education below a master's degree are able to lead & manage the company because they already have previous knowledge and abilities.

CEO Narcissism

Photos of CEOs displayed on financial statements are not to show their position or status, but for other purposes. Situngkir & Triyanto (2020) explained that one of the reasons CEOs display their photos is because it aims to be transparent about the activities that have been carried out both for the benefit of the company and the fulfillment of policies or regulations such as: CSR and as evidence that the CEO participates in these activities. This result contradicts (Bawekes et al., 2018; Pramana et al., 2019).

Managerial Ownership

Managerial ownership shows an increase in management performance. Pamungkas & Utomo (2018) explains management who owns company shares will have the same ego as other shareholders. However, this ego has an impact on increasing management morale and maximizing performance. This result is inconsistent with Hapsari (2014).

CEO Duality

Based on POJK No. 33/POJK.04/2014 Article 6 concerning the directors and board of commissioners of issuers or public companies. None of the CEOs in the sample companies violated the OJK regulations. Thus, concurrent positions are allowed as long as they do not violate the OJK regulations. This result inconsistent with (Bawekes et al., 2018; Devi et al., 2021).

State Owned Enterprises (BUMN/BUMD)

Based on the hypothesis result that collusion was accepted. Based on the regulation of the Minister of State-Owned Enterprises (BUMN) No. PER-03/MBU/02/2015 states that the selection and appointment of members of the board of directors is carried out by the GMS or the Minister of SOEs and can be dismissed at any time based on the considerations of the Minister/GMS. In accordance with this regulation, the Minister of SOEs who controls the sustainability of SOEs is

based on the skills of the members of the board of directors. According to the regulation, Minister of SOEs ables to pointed out uncompetence directors based on political affinity or special relationship and increase the probability of collusive practices within SOEs environment.

5. Conclusion

This study aims to detect of financial statement fraud using the fraud hexagon model with sample that listed in the Indonesian Stock Exchange. Based on the hypothesis results using logistic regression, it can be concluded that: the fraud hexagon model can be used to detect the probability of fraud in financial statements. The results of this study indicates that the pressure variable proxied by financial stability, rationalization proxied by total accruals and collusion proxied by SOEs has a positive and significant effect on the probability of financial statement fraud. Thus, pressure, rationalization and collusion can be used to detect the probability of financial statement fraud. Consequently other proxies whether dont have or negative effect on the probability of financial statement fraud.

Our findings render practical and theoritical implications subsequently for policy and practice. First, based on the results that financial stability and total accruals have positive effect. They can be using to detect probability of financial statement fraud. Moreover auditor, BOD and BOC expected to pay more attention and supervise to the financial stability as well as accrual-based recording method because both factors are vulnerable to becoming a tool for committing financial statement fraud. Futhermore, implication for collusion is goverment prioritizing independence and competence in determining BUMN leaders in order to contributes to the country. Second, fraud hexagon model can be a model to represent the motives of prepetrators to carry out financial statement fraud.

Our study is facing some limitations such as, excluded banking sector because of the characteristic of the financial statement and lack of needed data. Collusion variable as a new variable only proxied by one proxy. In order to estimate financial fraud, this study only use financial measurements. Based on the limitations, the authors suggest a research specialized in banking sector from several countries or a specific continent/region, add some proxies for collusion variable and combine between financial and non financial measurements such as number of employees, distributors, agent, independen auditor and so on..

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