

ANALYSIS OF THE EFFECT OF PENTAGON FRAUD ON FINANCIAL STATEMENT FRAUD (Empirical Study on Health Sector Companies Listed on the Indonesia Stock Exchange for the 2018-2021 Period)

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Abstract

The company's financial statements as a means of communication between the company's internal and external parties must be prepared relevantly, competently and completely to be utilized optimally by users of financial statements. Business competition is increasingly fierce every company, encouraging management to manipulate financial statements to get a good assessment from various parties. This study is a quantitative study that aims to examine the effect of pentagon *fraud* proxied with eight indicators from five variables consisting of pressure variables (financial instability, external pressure), opportunity variables (ineffective supervision, industrial nature), rationalization variables (external auditor turnover), competency variables (change of directors), and arrogance variables (CEO *duality*). This study uses secondary data with *purposive sampling* techniques, there are 23 health sector companies listed on the Indonesia Stock Exchange in 2018-2021. The results of this study prove that financial instability has a significant positive effect on financial statements, external pressure and industry nature have a significant negative effect on financial statements, ineffective supervision, change of external auditors, change of directors and CEO *duality* does not affect financial statement fraud.

Keywords: pentagon fraud, financial statement fraud

INTRODUCTION

The importance of financial statements and increasingly fierce business competition encourage management to manipulate the company's financial statements. Based on the results of the ACFE 2022 survey, Financial statement fraud is also the type of fraud that has the lowest proportion of cases at 9%, but the impact on losses caused is actually the greatest, namely \$ 593,000. ACFE Indonesia specifically conducts the Indonesian Fraud Survey while still basing the methodology developed by ACFE Global and of course accompanied by adjustments to several things relevant to Indonesia. In the Indonesian fraud survey in 2019, it was stated that the total loss from fraud in financial statements reached Rp242,260,000,000.00 with a percentage of cases of 9.2%. The results of this survey also revealed that the health industry is the 4th most disadvantaged industry due to fraud with a proportion of 4.2% of cases. This is in line with the results of an audit conducted by the Financial and Development Supervisory Agency (BPKP) in 2019 which found potential fraud in the BPJS Kesehatan National Health Insurance Healthy Indonesia Card (JKN-KIS) program, as well as the phenomenon of 93 cases in the health industry reported to the Corruption Eradication Commission (KPK). Studies show that health care fraud has the potential, even some of which have been proven, to occur in Indonesia. Throughout Indonesia, until the middle of the year potential fraud was detected from 175,774 claims of Advanced Referral Hospitals or Health Facilities (FKRTL) with a value of Rp. 440 M (Anti-Corruption Clearing House, 2016). Cases of financial statement fraud in the health sector have occurred at PT Kimia Farma Tbk and PT Indofarma Tbk.

The role of auditors is very important to prevent and detect fraud in the presentation of financial statements. Crowe (2011) proposed a pentagon fraud theory consisting of 5 indicator elements, including Pressure, Opportunity, Rationalization, Capability, and Arrogance. This theory is a complement or development of previous

theories, namely the diamond fraud theory developed by Wolfe and Hermanson (2004) and the fraud triangle theory initiated by Cressey in 1953.

This study aims to analyze the influence of 5 pentagon fraud variables on financial statement fraud. The difference between this study and previous research is that this study uses a sample of health sector companies listed on the Indonesia Stock Exchange for the 2018-2019 period. In addition, in accordance with the advice given by previous studies to add measurements to the opportunity variable, namely the nature of industry.

The opportunity for fraud in financial statements becomes great when the company's financial condition is unstable. Bad economic conditions will cause the company's financial stability to be shaken, at times like this a manager will feel pressured to maintain the condition of the company's financial statements to keep looking good, even by doing various manipulative or fraudulent ways. When the company's growth is below the industry average, a management will tend to manipulate finances so that financial performance looks good (Skousen et al., 2009). The greater the ratio of changes in total assets owned by the company, the greater the possibility of fraud committed by the company on the financial statements. This statement is supported by research by Putra & Suprasto (2021) and Indriani & Rohman (2022) which also states that financial stability has a significant positive effect on financial statement fraud.

Mulyaningsih & Merawati (2018) argue that external pressure is excessive pressure for management to meet requirements or expectations from third parties. There are several external pressures for company managers, one of which is the company's ability to pay debts and convince creditors by meeting debt requirements (Skousen et al., 2011). According to Tessa (2016) in Putra & Suprasto (2021) stated that companies that have a high leverage value will be considered to have large debts and high credit risks. The higher the credit risk, the creditor's trust in the company will decrease. Managers may feel pressure as a result of the need to acquire additional debt or equity financing in order to remain competitive (Skousen et al., 2011). External pressure on this study was measured by leverage ratio.

Ineffective supervision is a condition of the company's weak internal control system on company performance. ACFE Indonesia (2019) revealed that companies without strong internal supervision open up opportunities for greater fraud. This means that an ineffective monitoring system will increase the potential for fraudulent financial statements. This statement is supported by the results of research by Putra & Suprasto (2021) and Luvita (2019) which state that ineffective supervision has a significant positive effect on financial statement fraud. In this study, ineffective supervision will be measured using a comparison between the number of independent commissioners and the total number of board of commissioners (BDOUT). The lower the ratio of independent board of commissioners in a company, the less effective the supervision carried out by the company, and the higher the potential for fraud on financial statements.

Industrial nature is the ideal condition of an enterprise in an industrial environment. This is used by companies to carry out fraudulent financial statement practices. The incident arose due to industry regulations that require companies to have special expertise to estimate accounts calculated based on subjective values. The nature of the industry is related to sales and receivables, where these two things are objects that are vulnerable to management fraud. A good company will minimize the amount of receivables and increase the company's cash receipts (Sihombing and Rahardjo, 2014). If the value of changes in total receivables is higher, the potential for financial statement fraud will also increase. Research conducted by Indriani & Rohman (2022) and Ani & Murtanto (2022) states that the nature of the industry has a positive effect on financial statement fraud. In contrast to research conducted by Hamadi et al (2022) which states that the nature of the industry can reduce the potential for financial statement fraud.

Auditor is someone who works for a company with the task of checking financial documents to find fraud committed by management or ensure that the company's internal finances are in safe condition and there is no

fraud. The change of auditors has been regulated in the Regulation of the Minister of Finance of the Republic of Indonesia Number 17/PMK.01/2008 article 3. Change of auditors can open up great opportunities for management to commit fraud on financial statements. Even when auditors begin to detect fraud, companies change auditors to hide the case. Managers will justify all means, even with fraud, to hide it from third parties. This is supported by research by Putri & Shapira (2019) and Yanti & Munari (2021) which states that variable rationalizations proxied by auditor turnover have a significant positive effect on financial statement fraud.

The change of directors is carried out by the company to maintain the company's growth and refresh the company. The change of directors was carried out as an effort to improve the performance of the previous directors who were considered less superior than the new directors. However, the change of directors does not always have a good impact. Changes in directors can also be done because old directors begin to detect fraud. There is a change of directors and followed by the failure of new directors in carrying out their duties in the company will further open up opportunities for fraud. Similar to the change of auditors, the change of directors also certainly requires adaptation time for new directors to the company environment which will cause initial performance to run optimally. This is supported by research conducted by Putri & Shapira (2019) and Suryani (2019) which said that changes in directors as an indicator of competence have no influence on financial statement fraud. The results of this study are not supported by research conducted by Widyatama & Setiawan (2020) which states that changing directors can reduce the potential for financial statement fraud.

Arrogance is usually more commonly shown by someone with a high position in the company such as the CEO or president director. Arrogance in this case is the arrogant and greedy attitude of someone who wants others to see or know that he is a person who has great influence in the company. CEO duality is a condition that shows that a person has two positions at once, namely as chairman of the board (board of commissioners) and chief executive officer (CEO) or board of directors in a company. Indonesia adheres to a two-tier board system, which prevents a person from serving on the board of commissioners and board of directors simultaneously. Therefore, CEO duality in Indonesia can be interpreted because of the family relationship between the board of commissioners and the board of directors (Widyatama & Setiawati, 2020). Arrogant CEOs usually show that internal control does not apply to them and feel free to commit fraud without any guilt. Someone who has an arrogant attitude is none other than a sense of superiority over his rights, in this case the directors who have the power to choose policies in the company feel out of control from the board of commissioners because of a conflict of interest, namely family relationships. Therefore, the existence of CEO duality is considered to reduce the effectiveness of corporate governance and increase the potential for financial statement fraud.

Based on the existing review literature, the proposed hypothesis is presented as follows.

- H₁: Financial instability has a positive effect on financial statement fraud
- H₂: External pressure has a positive effect on financial statement fraud
- H₃: Ineffective supervision has a positive effect on financial statement fraud
- H₄: The nature of the industry has a positive effect on financial statement fraud
- H₅: Change of auditor has a positive effect on financial statement fraud
- H₆: Change of directors has a positive effect on financial statement fraud
- H₇: CEO duality has a positive effect on financial statement fraud

METHODOLOGY

This study used quantitative research with secondary data. The population in this study is health sector companies listed on the Indonesia Stock Exchange (IDX) in 2018-2021. The sampling method used in this study is the *purposive sampling* method. The dependent variable used in this study is financial statement fraud. This study uses a fraud score model in detecting financial statement fraud as determined by Dechow et al. (2012). According to Skousen & Twed (2009) F-Score is the sum of two variables, the variables are accrual quality and financial performance described in the following equation:

F-Score = Accrual Quality + Financial Performance

$$RSST\ Accrual = \frac{\Delta WC + \Delta NCO + \Delta FIN}{Average\ Total\ Assets\ (ATS)}$$

Financial Performance = changes in receivables + changes in inventories + changes in cash sales + changes in earnings

Financial instability

Financial stability is a condition that shows that the company's financial condition is stable. When the company's financial stability is in a critical period, it will pressure managers to commit fraud. Skounse et al. (2008) revealed that financial security is measured by the ratio of changes in assets with the ACHANGE formula below:

$$ACHANGE = \frac{Total\ assets\ (t) - Total\ assets\ (t-1)}{Total\ Asset\ (t)}$$

External Pressure

External pressure is the ability to meet good judgments from third parties such as listing requirements and pay debts. The manager will perceive the guidance to look good to the third party as pressure, and will create fraud. In this study, external pressure will be measured using *leverage*. *Leverage* is a ratio used to show the ability of a company to meet its obligations to pay debts with assets owned, where the formula is as follows:

$$Leverage = \frac{Total\ Debt\ (t)}{Total\ Asset\ (t)}$$

Ineffective supervision (X4)

The number of independent board of commissioners in a company greatly affects the size of the opportunity for fraud (Dechow, 2019). In this study, variable measurement will use the ratio of the independent board of commissioners (BDOUT), with the following formula:

$$BDOUT = \frac{Number\ of\ Independent\ Board\ of\ Commissioners\ (t)}{Total\ Number\ of\ Board\ of\ Commissioners\ (t)}$$

Nature of Industry

The nature of the industry is the ideal condition of the enterprise. The condition of receivables of the enterprise is one of the forms of industrial nature. This study will use receivable or total receivables ratio, which is formulated as follows:

$$Receivable = \frac{Receivable\ (t)}{Sales(t)} - \frac{Receivable\ (t-1)}{Sales(t-1)}$$

Auditor Change

The auditor is tasked with conducting an audit process to determine whether there is fraud in the company. The change of auditor may be a game of management trying to cover up fraud and justify all actions. The rationalization variable in this study will be measured by external auditor turnover (*AUDCHANGE*) using dummy variables. Where if there is a change of public accountant or public accounting firm during the 2018-2021 period, a code 1 will be given. However, if there is no change, the code 0 is given.

Change of Board of Directors

Change of directors means giving authority and responsibility to manage the company and run GCG from the previous directors to new individuals appointed as new directors. Wolfe & Hermanson (2004) argue that a change of directors will open up opportunities for fraud. The competency variable in this study will be measured by changing directors (*DCHANGE*) using dummy variables. Where if there is a change of president director in the company during the 2018-2021 period, the code 1 will be given. However, if there is no changeover, the code 0 is given.

CEO duality (X7)

The arogation variable in this study will be measured by CEO duality. CEO duality in Indonesia is described by conditions where the company's board of commissioners and board of directors have family relationships. CEO duality will be measured using dummy variables. Code 1 will be given if the company, the president director has a family relationship with the board of commissioners during the 2018-2021 period. Code 0 will be given if the company, the president director does not have a family relationship with the board of commissioners during the 2018-2021 period.

RESULT AND DISCUSSION

Results

Descriptive statistics are described with minimum values, maximal values, averages, and standard deviations of all variables. From the results of descriptive statistical testing, the results listed in table 1 are obtained.

Descriptive Statistics

Variable	Proxy	N	Minimum	Maximum	Mean	Std. Deviation
And	F-Score	76	-.72477	.99792	.1684396	.31731012
PRESSURE	ACHANGE (X ₁)	76	-.40181	.71649	.1292669	.18138275
	LEVERAGE (X ₁)	76	.04496	.79274	.3498500	.19642999
CHANCE	BDOUT (X ₁)	76	.250	1.000	.46193	.133980
	RECEIVABLE (X ₁)	76	-.20181	.32505	-.0094824	.07855291

Source: SPSS 25 processing results, 2023

Descriptive Analysis of Dummy Variables

Variable	Proxy	Std. Deviation	Dummy	Frequency	Percent
RATIONALIZATION	Change of Auditor (AUDCHANGE)	.401	No Change of External Auditors	61	80.3
			There is a turnover of external auditors	15	19.7
ABILITY	Change of President Director (DCAHNGE)	.410	No Change of President Director	60	78.9
			There is a change of President Director	16	21.1
Arrogance	CEO Duality (CEOD)	.379	No Family Relationship between Board of Directors and Board of Commissioners	63	82.9
			There is a Family Relationship between the Board of Directors and the Board of Commissioners	13	17.1

Source: SPSS 25 processing results, 2023

Table 1. Descriptive Statistics

The dependent variable of this study, namely financial statement fraud (F-Score) has a standard deviation value that is higher than the average value, it can be concluded that the data varies or is not grouped. Based on the results of data normality testing with the Kolmogorov-Smirnov test shows normally distributed data. So that the data meets the assumption of normality. The results of heterokedasticity testing show that the model does not contain heterokedasticity. The results of multicollinearity testing, show that it is free from multicollinearity problems. Likewise, the test results showed no autocorrelation in the study.

Discussion

Based on the results of regression testing, it shows that the variable of financial instability has a significant positive effect on financial statement fraud. External pressure variables and the nature of the industry have a significant negative effect on financial statement fraud. Ineffective supervisory variables, changes in external auditors, changes in directors and CEO *duality* contained in the company's financial statements have no effect on financial statement fraud (Table 2)

Coefficients^a

Variable	Model	Unstandardized Coefficients		Standardized Coefficients	t	Itself.
		B	Std. Error	Beta		
	(Constant)	.283	.125		2.262	.027
PRESSURE	ACHANGE	.386	.170	.221	2.274	.026
	LEVERAGE	-.448	.153	-.277	-2.917	.005
CHANCE	BDOUT	.031	.227	.013	.138	.891
	RECEIVABLE	-2.345	.384	-.580	-6.101	.000
RATIONALIZATION	AUDCHANGE	-.053	.073	-.068	-.729	.469
ABILITY	DCHANGE	-.056	.074	-.073	-.758	.451
ARROGANCE	CEOD	-.128	.079	-.153	-1.629	.108

The Effect of Financial Instability on Financial Statement Fraud

The pressure variable proxied with financial instability from the test results in table 2 shows that the t value is 2.274 with the significance value formed in financial stability is smaller than $\alpha = 0.05$, which is 0.026. So it can be interpreted that financial instability has a positive and significant effect on financial statement fraud. The greater the ratio of changes in total assets owned by the company, the greater the possibility of fraud committed by the company on the financial statements. Thus, it can be concluded that hypothesis 1 is accepted.

The results of this study are consistent with research conducted by Lestari & Henny (2019) and Tinambunan & Januarti (2022) which also states that financial instability has a significant positive effect on financial statement fraud. The results of this study also support the agency's theory, where management will commit fraud on financial statements because they feel pressured over the abundance of responsibility from the principal that cannot be done optimally. Unstable company conditions occur because management is unable to manage the assets owned, causing changes in total assets that are too high or too low during a certain period. A stable financial condition can minimize the risk of fraud.

The effect of external pressure on financial statement fraud

The results of the study in Table 2 show that the value of t is - 2. 917 and the significance value formed at external pressure is less than $\alpha = 0.05$, which is 0.0 05. These results show that external pressures as measured by the ratio of debt to assets (LEV) have a negative and significant effect on financial statement fraud. The higher the level of leverage of a company, the lower the possibility of management manipulating financial statements, or vice versa. Thus, it can be concluded that hypothesis 2 is rejected.

This can happen because creditors will provide tighter supervision in looking at the company's credit history, so it will be difficult for management to commit fraud on financial statements. Creditors will also consider various factors that influence loan application decisions, of course, creditors will approve loan applications to companies that have a good image, already have credibility, and do not get sanctions from the OJK. These factors can be a limitation for the company not to cheat the company's financial statements even though it has a high leverage ratio.

The effect of ineffective supervision on financial statement fraud

The results of the study in Table 2 show that the t value is 0.138 and the significance value formed in the BDOU indicator is greater than $\alpha = 0.05$, which is 0.891. The results show that ineffective supervision measured using a comparison between the number of independent commissioners and the total number of board of commissioners (BDOU) has no effect on financial statement fraud. Thus, it can be concluded that hypothesis 3 is rejected.

The results of this study support research conducted by Widyatama & Setiawati (2020) and Suryani (2019) which also states that ineffective supervision has no effect on financial statement fraud. It is possible that the determination of the number of members of the independent board of commissioners is possible only because it is simply to comply with the Financial Services Authority (OJK) Regulation No 33/POJK.04/2014 concerning the Board of Directors and Board of Commissioners of Issuers or Public Companies. Where it is stated in the regulation that, the Board of Commissioners consisting of two members of the Board of Commissioners, one of whom is an Independent Commissioner, and for the Board of Commissioners consisting of more than two members, the number of Independent Commissioners must be at least 30% of the total members of the Board of Commissioners. This was also confirmed by Widarti in Gideon (2005) who explained that the strong control of the company's founders and majority share ownership made the board of commissioners not independent. The oversight function that should be the responsibility of board members has become ineffective.

The influence of industrial nature on financial statement fraud

The results of the study in Table 2 show that the t value is -6.101 and the significance value formed in industrial properties is smaller than $\alpha = 0.05$, which is 0.000. These results show that the nature of the industry measured using the ratio of the amount of receivables to sales (*RECEIVABLE*) has a negative and significant effect on financial statement fraud. The greater the value of the ratio of the amount of receivables to sales, the lower the potential for financial statement fraud. Thus, it can be concluded that hypothesis 4 is rejected.

The results of this study support research conducted by Putriyanti & Cahyati (2020) and Nabila (2020) which also states that the nature of the industry has a significant negative effect on financial statement fraud. Receivables usually have a vulnerability to be overpresented, because more receivables can mean there has been an increase in sales and profits. However, if the company does have large changes in receivables, the auditor can anticipate the possibility of material misstatements that occur in the accounts receivable by confirming receivables that have a high level of reliability because they come from third parties, in this case customers. This reason causes the risk of management to commit fraud on financial statements to be smaller even though there is a large change in the receivables ratio.

The effect of changing external auditors on financial statement fraud

The results of the study in Table 2 show that the t value is -0.729 and the significance value formed at the change of auditor is greater than $\alpha = 0.05$, which is 0.469. These results show that auditor turnover measured by dummy variables has no effect on financial statement fraud. Thus, it can be concluded that hypothesis 5 is not capable of being proven.

This study results are consistent with research conducted by Putra & Suprasto (2021) and Indriani & Rohman (2022) which states that auditor turnover has no effect on fraud in financial statements. This can happen because auditor changes can be caused or carried out when the company is dissatisfied with the performance of

the Public Accounting Firm (KAP) in the previous period. The change of auditors is carried out to improve the performance of external auditors in the previous period with the aim of improving the quality of the company's financial statements so that investors will be interested in investing in the company. In addition, it is possible that the company strives to comply with Government Regulation Number 20 of 2015 concerning Public Accountant Practice article 11 paragraph 1 which states that the provision of audit services on historical financial information to an entity by a Public Accountant is limited to a maximum of 5 (five) consecutive financial years.

The effect of changing directors on financial statement fraud

The results of the study in Table 4.12 show that the t value is -0.758 and the significance value formed at the change of auditor is greater than $\alpha = 0.05$, which is 0.451. These results show that the change of directors measured by the dummy variable does not have a significant effect on financial statement fraud. Thus, it can be concluded that hypothesis 6 is rejected.

The results of this study are supported by the results of research conducted by Putra & Suprasto (2021) and Utami (2019) which stated that the change of directors has no effect on fraud in financial statements. This is because, the change of president director in a company does not intend to take advantage of his position but is caused by other aspects. The change of president director can also be due to the president director not being good at performing his performance and to advance the company, the company chooses a new president director in order to further develop the company. The selection that must be made by the company to choose a new president director by looking at the performance in the previous position, and seeing what vision and mission will be done to improve the quality of the company.

CEO Duality's influence on financial statement fraud

The results of the study in Table 4.12 show that the value of t is -1.629 and the significance value formed in CEO *duality* is smaller than $\alpha = 0.05$, which is 0.108. These results show that the CEO has no significant effect on financial statement fraud. Thus, it can be concluded that hypothesis 7 is rejected.

The results of this study do not support the hypothesis that CEO *duality* has a positive and significant effect on financial statement fraud. This can happen because the family relationship between the board of directors and the board of commissioners occurs on the careful consideration of various boards. Not all directors and commissioners have family relationships, of course, in a company they still have other internal controls, so if someone wants to act fraudulently, there are still other parties who can prevent it. It is precisely possible that the family relationship between the board of directors and the board of commissioners can be utilized to improve and maintain the company's performance. It can also be possible that the existence of family relationships is a strong foundation for the company because basically together pioneering the ins and outs of the company so that the existing relationship is positive. The board of directors and board of commissioners can also feel that they will not commit fraud, the impact that will be caused later can make the good name that has been built so far scattered.

CONCLUSIONS

Based on the data that has been collected and statistical testing that has been carried out in this study, it can be concluded that:

1. Financial instability has a significant positive effect on financial statement fraud.
2. External pressures and the nature of the industry have a significant negative effect on financial statement fraud
3. Ineffective supervision, change of external auditors, change of directors and CEO *duality* do not have a significant effect on financial statement fraud

LIMITATIONS

Based on this research on the analysis of the effect of pentagon fraud on financial statement fraud in manufacturing companies listed on the IDX for the 2016-2018 period. Researchers experience limitations in conducting research, as follows:

1. This research is only limited to health sector companies so that the results of the study cannot be generalized to all companies listed on the Indonesia Stock Exchange.
2. *Change in Auditor and change in director in the company* can occur because the period of audit assignment between the auditor and the company has indeed been completed
3. In general, the number of independent company boards of commissioners has been regulated in the OJK Regulation, so according to researchers, BDOUT indicators can be replaced with other indicators that are more accurate.
4. Companies that have just *Initial Public Offering (IPO)* on the Indonesia Stock Exchange in the observation year, namely Itama Ranoraya Tbk 2019 and Soho Global Health Tbk 2020, are assumed that in that year the company did not change external auditors.
5. This study uses 7 proxies from 5 variables, where there are many other proxies that can affect fraud in financial statements.

RESEARCH CONTRIBUTION

This research makes a positive contribution to the company as a reference material for management to find out the factors that encourage financial statement fraud. Investors are expected to provide information in assessing and analyzing their investment potential to be more careful in investing. Contributing to knowledge science and the world of education can be a reference for development in accounting science, especially in the field of forensic accounting regarding factors that can influence companies to commit fraud on financial statements using indicators from *pentagon fraud* theory.

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