


# Can Fraud Hexagon Detect Financial Statement Fraud in Healthcare Sector Companies in Indonesia?

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Article Info	ABSTRACT
<p><b>Keywords:</b> Financial statement fraud, Personal Financial Need, Ineffective Monitoring, Change in Auditor, Change of Board of Directors, Frequent Number of CEO's Picture, Political Connection</p>	<p>With increasing financial statement fraud cases, measures to detect and prevent fraud are needed. Vousinas developed the fraud hexagon theory to detect manipulation in financial reports[1]. This research aims to empirically test the six dimensions of the fraud hexagon, namely pressure, opportunity, rationalization, capability, arrogance, and collusion, which is proxied by personal financial need, ineffective monitoring, change in auditor, change of board of directors, frequent number of CEO's picture, and political connections which are hypothesized to influence the occurrence of financial statement fraud. F-Score is used to determine fraudulent financial statements. The research population is health sector manufacturing companies listed on the Indonesia Stock Exchange during 2019 - 2021. The research sample consisted of 15 companies using purposive sampling. Hypothesis testing uses logistic analysis with the eviews10 application software. This research shows that personal financial need, ineffective monitoring, change in auditor, change of board of directors, and frequent number of CEO's pictures do not significantly affect financial report fraud. In contrast, political connections have a significant effect on financial report fraud.</p>
<p>This is an open access article under the <a href="https://creativecommons.org/licenses/by-nc/4.0/">CC BY-NC</a> license</p> 	<p><b>Corresponding Author:</b> Widyaningsih Azizah Faculty of Economics and Business, Pancasila University Jakarta <a href="mailto:widyaningsih_azizah@univpancasila.ac.id">widyaningsih_azizah@univpancasila.ac.id</a></p>

## INTRODUCTION

When a public company publishes its financial reports, the company wants to describe conditions in the best possible condition[2][3][4][5][6][7][8]. This situation causes companies to try to present company reports that are attractive to stakeholders, especially investors[9][10][11][12][13][14][15]. Cahyo et al [16], Muhyidin et al [17]. Azizah, Fredy, et al[18]. explained that in its development, the company always tries to maintain and increase its value. If there is a material misstatement in the financial statements, then the information is invalid for decision-making because the analysis was not based on actual information.

Fraud in financial statements is an intentional misstatement in disclosing information and amounts. This can happen because managers, as company managers, have more diverse information about the company's condition and prospects. Meanwhile, owners have

limited information, so the information gap (information asymmetry) encourages managers to disclose information about the company opportunistically[19][20][21][22][23].

The act of manipulating financial reports is a form of fraud. According to the Association of Certified Fraud Examiners Indonesia[24], fraud is an act of deviation or fraud committed based on elements of discrepancy by certain parties to cover up mistakes made by manipulating financial reports so that they can harm interested parties only for the sake of individual interests. The results of the ACFE survey[24] show that the most detrimental level of fraud in Indonesia occurs due to acts of corruption at 69.9%, followed by misuse of assets at 20.9%, and financial statement fraud at 9.2%.

According to ACFE[24], the value of losses due to fraud in Indonesia is as follows: less than Rp. 10 million for corruption cases at 48.1%, financial reporting cases at 67.4%, and cases of misuse of assets at 63.6%. Rp. 10 Million – 50 Million for corruption cases is 4.2%, for financial reporting cases is 2.9%, and for cases of misuse of assets is 3.3%. Rp. 50 Million – 100 Million for corruption cases is 8.4%, for financial reporting cases is 5.4%, and for cases of misuse of assets is 8.8%. Rp. 100 Million – 500 Million for corruption cases is 11.7%, for financial reporting cases is 6.7%, and for misuse of assets is 2.9%. Rp. 500 Million – 1 Billion for corruption cases is 6.7%, for financial reporting cases is 2.9%, and for cases of misuse of assets is 3.8%. 1 billion – 5 billion for corruption cases is 5.9%, for financial reporting cases is 3.8%, and for cases of misuse of assets is 3.8%. 5 billion – 10 billion for corruption cases is 5.4%, for financial reporting cases is 2.1%, and for cases of misuse of assets is 3.4%. More than 10 billion for corruption cases is 5.4%, for financial reporting cases is 5.0%, and for cases of asset misuse is 4.6%. The magnitude of the losses due to fraud is not surprising if The Association of Certified Fraud Examiners revealed that fraud could be the first choice of crime in the 21st century.

The phenomenon of fraudulent financial reporting in the health sector occurred in 2001. Namely, the company went public in Indonesia, PT Kimia Farma Tbk. Manipulation related to inventory is carried out by inflating the value in the inventory price list. The production director of PT Kimia Farma Tbk published 2 (two) inventory price lists (master prices) on February 1 and 3, 2001. These price lists as of February 3 have been inflated in value and are used as the basis for evaluating inventory at Kimia Farma's distribution unit as of December 31 2001.

Meanwhile, manipulation related to sales is a double recording of sales. This double recording was carried out on units not checked by accountants, so it was not detected. Due to this error, PT Kimia Farma was fined IDR 500 million for allegedly inflating profits of IDR 1 billion against the old directors of PT Kimia Farma and IDR 100 million to the external auditor Bapepam.

Fraudulent behaviour in presenting financial reports is an essential concern so that this action can be detected and eliminated. So that stakeholders and the public can trust financial reports. Apart from that, auditors can improve the quality of their audits and gain the trust of interested parties and the public [25]. Cases of accounting scandals in recent years provide strong evidence of audit failures, which have resulted in losses for business people. Although some cases of misstatement are not necessarily related to fraud issues,

risk factors related to fraud by management are proven to exist. The impacts caused by fraud include the destruction of an organization's reputation, which results in company losses up to bankruptcy, damage to employee morality, destruction of the credibility of public accountants who audit their financial reports, and many other negative impacts. With the spread of fraud cases, preventing and detecting financial statement fraud is necessary. One way to detect manipulation in financial reports is to use the fraud hexagon theory developed by Vousinas[1].

Fraud hexagons is a theory that can be used to level fraud prevention and detection by considering pressure, opportunity, rationalization, capability, and arrogance (ego) by increasing one qualitative element, which is believed to influence fraud significantly. Is collusion? This research uses proxies for the six factors used in the fraud hexagon theory, namely, personal financial need as a proxy for pressure, ineffective monitoring as a proxy for opportunity, change in auditor as a proxy for rationalization, change of board of directors as a proxy for capability, frequent number of CEO's picture as a proxy for arrogance, and political connection as a proxy for collusion.

From several previous studies, it can be said that the conflict in determining results is still far from consistent, including Sari and Nugroho[26], Lestari and Henny[27], Aprilia[28], Novita[29], Imtikhani and Sukirman[30], Amarakamini and Suryani[31], Oktarigusta[32], Azizah et al.[33]. Apart from that, the results of a survey conducted by ACFE (2019) show that the industry that suffers the most from fraud, with a percentage of 41.4%, is the financial and banking industry, followed by the government industry and the health industry, holding a percentage of 4.2%. It cannot be denied that there are still companies registered on the IDX in the health sub-sector that have been hit by scandals involving fraudulent financial reports, such as PT Kimia Farma Tbk. Even Until now, little research has been carried out to uncover fraud cases. Mainly by using the fraud hexagon theory.

## METHOD

The population that is the object of this research is health sector manufacturing companies that publish annual financial reports that have been audited and published on the Indonesia Stock Exchange (BEI) in 2019 - 2021. The criteria used to select samples are as follows:

- a. Health sector manufacturing companies listed consecutively on the Indonesia Stock Exchange (BEI) for 2019 – 2021.
- b. Companies that publish audited annual reports on the company or IDX websites during 2019 – 2021.
- c. Companies that have complete information for measuring related variables.

The dependent variable is financial statement fraud. F-Score is a fraud detection method that develops the Benish M-Score calculation method and is considered more comprehensive than the Benish M-Score. Financial statement fraud in this research uses dummy variables. Code 1 (one) if the company is indicated to have committed financial statement fraud. Code 0 (zero) if the company is not indicated to have committed financial statement fraud.

The independent variable in this research starts from personal financial need, which is a proxy for pressure, where company executives also influence the company's financial condition. OSHIP measures personal financial needs. OSHIP is the cumulative percentage of ownership in a company owned by insiders.

Ineffective monitoring is a proxy for opportunity, which is the condition of a company when it does not have a supervisory unit that effectively monitors its performance. It is hoped that the existence of an independent board of commissioners can improve the monitoring of company performance, thereby reducing fraud. Ineffective monitoring can be measured by the independent board of commissioners (BDOOUT) ratio. Change in Auditors is a proxy for rationalization, which in a company can be assessed as an effort to eliminate traces of fraud (fraud trial) discovered by previous auditors. Therefore, this study measures the rationalization proxy using external auditor turnover (AUDCHANGE). Change of board of directors(CHANGE) is a proxy for capability. Changes in directors or CEOs can indicate fraudulent financial reporting. Therefore, change of directors is used as a proxy for capability.

A frequent number of CEO's pictures is a proxy for arrogance. Measurements were taken to measure the level of arrogance based on the frequency of CEO photos (CEOPICT). Political connection is a proxy for collusion where the company's condition has a political relationship (POLCON). It is said to be a political connection if the CEO or board of commissioners hold concurrent positions or are former officials from (a) politicians associated with political parties, (b) the government, and (c) the military.

The data analysis method used in this research is logistic regression analysis testing [34]. To test the hypothesis whether the data fits the model or not, the Hosmer test and Lomeshow's Goodness of the fit test; if the Hosmer and Lomeshow's value shows more than 0.05, then the model can be said to be accepted because it matches the observed value or it can be said that the model can predict the observed value. The coefficient of determination test used the McFadden R Square test. Hypothesis testing is carried out using the Z Test.

## RESULT AND DISCUSSION

Fifteen companies in the health sector are registered and have the complete data required for this research. So, the total data in 3 years of observation is 45 data (15 companies x 3 years). The list of companies sampled in this research is:

**Table 1.** List of Sample Companies

No.	Company name	Code
1	Darya – Varia Laboratoria Tbk.	DVLA
2	Mediakaloka Hermina Tbk.	HEAL
3	Indofarma Tbk.	INAF
4	Kima Farma Tbk.	KAEF
5	Kalbe Farma Tbk.	KLBF
6	Merck Tbk.	BRAND
7	Mitra Keluarga Karya Sehat Tbk.	MICA

No.	Company name	Code
8	Phapros Tbk.	PEHA
9	Prodia Widyahusada Tbk.	PRDA
10	Royal Prima Tbk.	PRIM
11	Pyridam Farma Tbk.	PYFA
12	Sarana Meditama Metropolitan Tbk.	SAME
13	Sido Muncul Herbal Medicine and Pharmaceutical Industry Tbk.	SIDO
14	Siloam International Hospital Tbk.	SILO
15	Tempo Scan Pacific Tbk.	TSPC

The results of this research prove that personal financial need does not significantly affect financial statement fraud, with a probability value of 0.852. This could be due to the small percentage of OSHIP from the companies in the sample for this research, so it cannot influence management in preparing financial reports. The average value of personal financial need is 0.065699 or only 6.5%, which indicates that share ownership held by insiders in the companies sampled in this study tends to be low. This research supports previous research conducted by Sari and Nugroho[26], which stated that there was no significant influence of personal financial need on financial statement fraud.

Ineffective monitoring, nor does it have a significant effect on financial statement fraud, with a probability value of 0.1712. This is because the companies sampled in this research in determining the independent board of commissioners' proxies aim to comply with Financial Services Authority (OJK) regulations Number 33/POJK. 04/2014 in Chapter III, article 20, paragraph (1).

Change in auditor does not affect financial statement fraud, with a probability value of 0.5986. This is because the internal control in the company runs well and effectively, so whether or not the auditor changes, managers cannot carry out manipulation actions on the financial reports. The results of this research support previous research conducted by Lestari and Henny[27] and Sari and Nugroho[26], which stated that there was no effect of change of auditor on financial statement fraud.

The board of directors change does not significantly affect financial statement fraud, with a probability value of 0.8999. The company may want to improve the company's performance by replacing directors who are more competent than the previous directors. Changes in directors are also influenced by several factors, including the previous director resigning or passing away. To fill the vacancy, the company changed the composition of the board of directors. The results of this research support previous research conducted by Oktarigusta[32], Aprilia[28], and Imtihan and Sukirman[30].

Many CEOs picturedoes do not significantly affect financial statement fraud, with a probability value of 0.4187. This is because the number of CEO photos in the company's annual report does not cause the CEO to be arrogant; it could be that the number of photos provides information about the CEO. The results of this research support previous research conducted by Sari and Nugroho[26].



The results of this research proved that political connections significantly affect financial statement fraud, with a probability value of 0.01. This research supports previous research conducted by Sari and Nugroho[26] and Imtikhani and Sukirman[30], which stated that there is a significant influence between political connections and financial statement fraud.

Based on an assessment of the feasibility of the regression model, which shows that the value of the Hosmer and Lomeshow's Goodness of Fit Test statistically is 11.0269 with a probability value of 0.2002, which is a value greater than 0.05, indicating that this model can predict the value of research observations or it can be said that this model is accepted because it matches the observation data. The Mcfadden R Square coefficient result is 0.26704. So, it can be explained that the independent variables in this research can explain 26.70% of financial statement fraud, and the remaining 73.30% can be explained by other independent variables outside the model or influenced by other variables that are not included in the model.

## CONCLUSION

Based on the results of research and analysis in the previous chapter regarding the influence of the fraud hexagon component on fraudulent financial statements by taking a sample of 15 health sector manufacturing companies listed on the Indonesia Stock Exchange (BEI) during the 2019 - 2021 period, the following conclusions can be drawn: As a proxy for pressure, personal financial needs do not significantly affect fraudulent financial reports in health sector manufacturing companies listed on the Indonesia Stock Exchange (BEI) during 2019 – 2021. Ineffective monitoring as a proxy for opportunity does not significantly affect fraudulent financial reports in manufacturing companies in the health sector listed on the Indonesia Stock Exchange (BEI) during 2019 - 2021. Change in auditors, a proxy for rationalization, has no significant effect on fraudulent financial reports in health sector manufacturing companies listed on the Indonesia Stock Exchange (BEI) during 2019 – 2021. The change of board of directors as a proxy for capability has no significant effect on fraudulent financial reports in health sector manufacturing companies listed on the Indonesia Stock Exchange (BEI) during 2019 – 2021. Frequent CEOs picture a proxy for arrogance; it has no significant effect on fraudulent financial reports in health sector manufacturing companies listed on the Indonesia Stock Exchange (BEI) during 2019 - 2021. Political connections are a proxy for collusion; they significantly affect fraudulent financial reports in health sector manufacturing companies listed on the Indonesia Stock Exchange (BEI) during 2019 - 2021. This shows that a company's political connections can influence the CEO or board of commissioners to commit acts of fraud on financial reports.

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