Unveiling Fraud Indicators in Indonesian Cyclical and Non-cyclical Sectors: A Fraud Pentagon-based Analysis

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Abstract
This study seeks to uncover the influence of elements from the Fraud Pentagon Theory, focusing on the pressure factor, which includes financial targets, personal financial needs, and financial stability, the capability factor encompasses audit quality and changes in director, while the opportunity factor is evaluated based on industry characteristics and the effectiveness of monitoring. The arrogance factor is assessed through the frequency of CEO photographs, and the fifth factor, rationalization, is determined by auditor switching. The study includes 51 companies from the Indonesia Stock Exchange (IDX) between 2018 and 2022, covering both cyclical and non-cyclical sectors, resulting in 153 data points. The analysis employs purposive sampling and logistic regression techniques using SPSS. Findings reveal that financial targets, personal financial needs, financial stability, audit quality, changes in director, industry characteristics, CEO photograph frequency, and auditor switching do not have a significant impact on fraudulent financial statements. In contrast, ineffective monitoring demonstrates a significant and positive effect on the probability of fraudulent financial statements. Therefore, the monitoring process must independently assess various stakeholder perspectives, including the interests of minority shareholders, and facilitate communication between management, shareholders and other stakeholders to minimize fraudulent financial reporting.

Keywords: Fraudulent financial statements, Opportunity, Rationalization, Opportunity, Capability, Arrogance.

1. Introduction

1.1. Background

Financial reports serve as a crucial tool for management to gain the trust of shareholders and investors by effectively communicating their performance in managing the company, particularly regarding financial outcomes, to both internal and external stakeholders. Consequently, management strives to present their best financial performance as a demonstration of their accountability as managers, aiming to make the company appealing to stakeholders and potential investors. Unfortunately, some management teams resort to shortcuts, engaging in fraudulent activities. According to the 2024 ACFE report on fraud schemes, while asset misappropriation

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accounts for 89% of total fraud cases, financial statement fraud constitutes only 5%. However, the losses incurred from financial statement fraud are 6.27 times greater than those from asset misappropriation (ACFE, 2024). Furthermore, the report indicates that the speed of fraud cases, determined by dividing total losses by the number of months the fraud scheme was active, is higher for collusion between two or more perpetrators and for fraud committed by individuals in higher authority, leading to quicker financial losses.

PT Indofarma (Persero) Tbk has been implicated in fraudulent activities that have resulted in significant losses to the state. In 2023, the Audit Board of Indonesia (Badan Pemeriksa Keuangan) conducted a specific audit at Indofarma, revealing irregularities that indicate state losses totaling Rp 371.83 billion from 2020 to the first half of 2023. According to the Deputy Chairman of the Audit Board (Badan Pemeriksa Keuangan), these irregularities were perpetrated by individuals involved in the financial management of PT Indofarma, including the sale of medical equipment by its subsidiary, PT Indofarma Global Medika (PT IGM), to an affiliated party, PT Promedik, which lacked the financial capacity to pay. PT Promedik subsequently resold these items to an inexperienced new company, leading to a bad debt of Rp 124.9 billion, which was manipulated through payment engineering to obscure its status as bad debt, alongside various other fraudulent schemes, including fake sales transactions within the one of their Business Unit. Additionally, the placement of personal deposits in a cooperative and the pledging of deposits at Oke Bank for unrelated purposes exacerbated the company's losses (Tempo Co, 2024). In June 2024, Shadiq Akasya, the head of the State-Owned Enterprises (BUMN) Pharmaceutical Holding, reported that the total indication of state losses had risen to Rp 436.87 billion due to various fraudulent activities (CNN Indonesia, 2024). The series of events resulting from poor governance at PT Indofarma Global Medika (IGM) led to the company's declaration of bankruptcy by the Commercial Court at the Central Jakarta District Court on February 10, 2025 (Puspadini, 2025). Poor governance, along with unethical behavior and a lack of integrity among top management, are significant factors contributing to fraud within organizations. The company needs a board of directors, a board of commissioners who are highly committed to supervising the company's activities in order to prevent and detect fraud quickly and accurately. Auditors who are qualified and have integrity also play an important role in being able to detect the possibility of fraudulent financial reporting

Fraud theory has evolved from the triangle model to the hexagon model, and then to the pentagon model, which includes five factors: pressure, opportunity, rationalization, capability, and arrogance. In this context, capability in the pentagon theory corresponds to competence in the diamond theory (Rasheed et al., 2023). The three main categories of occupational fraud schemes are asset misappropriation, corruption, and financial statement fraud. The most common is the case of asset misappropriation fraud which occurs as much as 89% of cases. Although common, this fraud case causes the lowest median loss per case, which is USD 120,000. Financial statement fraud is very rare, only 5% of the cases studied, but causes the largest median loss, which is USD 766,000 per case (ACFE, 2024).

Fraudulent Financial Reporting refers to the intentional misrepresentation or omission of information in financial statements, aimed at misleading the report's users. Fraudulent Financial Reporting is an action planned by an individual or group. The individual or group changes financial data by manipulating income and expenses, asset misappropriation, and errors in disclosure or recording of liabilities in the company's financial statements (Sitoresmi et al., 2024).

1.2. Research Objectives

As evidenced by the systematic analysis conducted by Rasheed et al. (2023), which reveals that the Fraud Triangle Theory has been the predominant framework in fraud research from 2018 to 2022, therefore this research employs the Pentagon Theory. This study aims to delve deeper into the factors that may influence the occurrence of fraudulent financial reporting from the perspective of the pentagon theory in both cyclical and non-cyclical companies in Indonesia. It builds upon the foundational work of Hidayah & Saptarini (2019) and incorporates independent variables such as Return on Assets, Nature of Industry, Ineffective monitoring, Change in Assets, Change in Director, and the number of CEO's photographs. The leverage variable as a pressure factor from Hidayah & Saptarini, (2019) is excluded because it showed no impact on fraudulent financial reporting. This research is expanded to include Personal Financial Needs as a pressure factor and also adds Audit Quality as a capability factor, both are from Ariyanto et al., (2021), and Financial stability from (Wibowo & Putra, 2023).

This research provides benefits to the company by identifying factors that influence fraudulent financial statements, enabling management and oversight personnel to enhance prevention and detection procedures. For external parties, such as independent auditors, the benefit lies in designing risk-based audit procedures that effectively detect indications of fraud. Additionally, regulators benefit by reinforcing regulations related to the integrity of financial reports, ensuring that company financial statements do not pose risks to shareholders and stakeholders due to fraudulent activities.

1.3. Hypotheses Development

1.3.1. Financial Target and Fraudulent Financial Statements

The financial target can be assessed using the return on assets (ROA) ratio, which measures the company's capacity to generate net income and indicates the return generated on the company's assets (Devi et al., 2021). Investors usually want companies to show big profits so they can get good dividends from their investments. When investors have high hopes, it can create stress for management to keep delivering positive news. This intense pressure might push management to take unethical actions, like committing fraud, if the company struggles to meet its goals.

According to agency theory, the agent's responsibility for all work done for the benefit of the principal (Prastika & Sasongko, 2023). Agency theory states that optimizing profits is the principal's goal, and the agent aims to fulfill the goals set by the principal (Sitoresmi et al., 2024). The urge for management to manipulate occurs when targets are not achieved and this increases the possibility of financial statements being presented incorrectly (Prastika & Sasongko, 2023).

Research conducted by Hidayah & Saptarini, (2019), Wibowo & Putra, (2023), Prastika & Sasongko (2023), Kusumawati et al., (2021), Mulyadi et al., (2021), and Fathmaningrum & Anggarani, (2021) stated that financial target has a significant and positive effect on fraudulent financial reporting. On the contrary, Khamainy et al.,(2022), Haqq & Budiwitjaksono, (2019), and Sitoresmi et al., (2024) reveal that no matter how much the target is, it will not raise management motivation to manipulate the company’s financial statements.

H1: The Financial target has a significant effect to Fraudulent Financial Statements

1.3.2. Personal Financial Needs and Fraudulent Financial Statements

When top executives face financial needs within the company, they often push management to strive for high dividends and stock returns. If these expectations are not met, it may lead to fraudulent behavior as they seek to fulfill their desires (Basmar & Sulfati, 2022). As stated by Rahmawati & Kassim, ((2020), through managerial ownership, the manager will possess claims on the company's income and assets. An increase in managerial ownership may create opportunities for accounting irregularities to affect the company's financial status. From the perspective of agency costs, stock ownership by executives will reduce agency costs as executives become more focused on advancing the company and more cautious in their decision-making to enhance the company's value.

Ariyanto et al., (2021) declares that personal financial needs has a negative significant impact to fraudulent financial statements. Puspitha & Yasa, (2018) declare personal financial needs have no impact on financial statement fraud. This results consistent with Erni Suryandari & Anggarani, (2021), fraudulent financial reporting in Indonesia and Malaysia is probably not influenced by personal financial needs, given that management holds a small proportion of shares.

H2: The Personal Financial Need has a significant effect to Fraudulent Financial Statements

1.3.3. Financial Stability and Fraudulent Financial Statements

In running its business, the company is expected to always be in a stable financial condition. The growth of the company's total assets over time is assumed as an indicator of its financial stability. A company with significant total assets is generally regarded as prosperous, which can draw in investors eager for high returns. The greater the number of assets owned, the higher the company's value and the more favorable its image. This makes the company appealing to investors, creditors, and other interested parties. External pressures and owner demands will diminish if the company maintains stable finances.

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By contrast, if the company's growth lags behind the industry average, its value will be diminished. Unstable financial conditions reflect the high business risk faced by the company. The instability of economic conditions will create more pressure faced by management because asset management and fund management cannot be optimal (Achmad, Ghozali, et al., 2022). This situation will lead to increased pressure on management from stakeholders, as outlined by agency theory.

This pressure may elevate the risk of committing financial reporting fraud as management may be inclined to present a more favorable image of the company's stability (Kusumawati et al., 2021). The pursuit of higher financial stability correlates with an increased likelihood of fraudulent reporting (Fathmaningrum & Anggarani, 2021). The alteration in the company's assets has substantially positive affect the occurrence of fraudulent financial reporting according to Wibowo & Putra, (2023), Situngkir & Triyanto, (2020), (Fathmaningrum & Anggarani, 2021), and Haqq & Budiwitjaksono, (2020). On the contrarty Yusniarti et al., (2021), Rahayuningsih & Sukirman (2021) stated financial stability has a negative significantly effect on financial statement fraud and also the inconsistent result from (Kusumawati et al., 2021) that asset change does not affect fraudulent financial reporting.

H3: The Financial Stability has a significant effect to Fraudulent Financial Statements

1.3.4. Audit Quality and Fraudulent Financial Statements

Aree et al., (2018) explained agency theory posits that the separation of ownership and control creates a conflict of interest between agents and principals. Dominant shareholders may prioritize their own interests at the expense of minority shareholders by providing misleading financial information. To address these agency conflicts and supervise management, it is necessary to incur monitoring costs by hiring Big Four auditors. Consequently, external auditors can play a crucial role in overseeing management activities according to agency theory. External auditors who demonstrate high integrity and competence possess a shared comprehension of the auditing process for financial statements, regardless of the size of the Public Accounting Firms. Apart from that, competing with other professionals can put a lot of stress on auditors. Worries about whether a CPA firm can keep up in a tough market can add to that stress. Sometimes, auditors might feel pushed by their clients to give false reports. This kind of pressure can lead auditors to work together with clients in wrong ways, which can cause fraud, like what happened in the Andersen scandal (Sahla & Ardianto, 2023). Auditors also possess a deep understanding of the accounting process, including the potential loopholes that may facilitate creative accounting. These skills can be exploited to engage in fraudulent activities (Sahla & Ardianto, 2023).

Companies audited by the big four firms tend to experience less fraud than those audited by smaller firms, highlighting how a high-quality audit can lower the chances of financial fraud in a business (Irishabel et al., 2020). This aligns with the findings of Fathmaningrum & Anggarani (2021), who noted that the quality of audits affects the occurrence of fraudulent financial reporting. Additionally, Yusniarti et al. (2021) found that the caliber of external auditors significantly influences fraudulent financial reporting, whereas Ariyanto et al. (2021) reported no significant relationship between audit quality and fraudulent financial statements.

H4: The Audit Quality has a significant effect to Fraudulent Financial Statements

1.3.5. Change in Director and Fraudulent Financial Statements

The director is the top management in a company who has very large duties, responsibilities and authority. Their abilities can pose a serious threat because of their power, intelligence, and good understanding of the company's internal systems. These individuals can perpetrate white-collar crimes, and it will constitute a significant danger to the organization (Kusumawati et al., 2021). The agency theory indicates that hiring a new director might lead to chances for people to commit fraud, especially if they do not have enough knowledge of the company's internal controls (Sitoresmi et al., 2024). Capability refers to an individual's ability to effectively use their role but they may choose to disregard established rules and policies. An individual in a position of power may be more susceptible to corruption, as their easy access to various key stakeholders can facilitate corrupt practices (Dwimawanti & Ramadani, 2023). Syafira & Cahyaningsih, (2022) and Sitoresmi et al., (2024) stated the change of directors in a company does not occur due to fraud but rather the company's desire for better performance. As performance improves, the company will be more attractive to investors. Another reason is that the change of directors occurs because of job rotation or because of the end of a person's period in holding the position of Director. Furthermore, companies often have specific policies governing director rotation. The newly elected board of directors will refine or revise the policies of the old board of directors. These policy changes are intended to reduce the possibility of fraudulent financial reporting (Fitriyah & Novita, 2021).

Hidayah & Saptarini, (2019), Ariyanto et al., (2021) and Puspitha & Yasa, (2018), Hastuti et al., (2023) found that changes in directors lead to an increase in fraudulent financial reporting. But according to Fitriyah & Novita, (2021), Achmad et al., (2022), Syafira & Cahyaningsih, (2022), Situngkir & Triyanto, (2020), Wibowo & Putra, (2023), Agusputri & Sofie, (2019), Pramesti & Kusumawati, (2023) and Sitoresmi et al., (2024) Change in Director does not have a significant effect to financial statement fraud.

H5: The Change in Director has a significant effect to Fraudulent Financial Statements

1.3.6. Nature of Industry and Fraudulent Financial Statements

Hidayah & Saptarini, (2019) stated the characteristics of an industry represent the optimal circumstances and conditions under which a company operates within an industrial context. These characteristics can potentially lead to opportunities for companies to engage in the preparation of misleading financial statements. Receivables cannot be separated from the provision for doubtful accounts that use estimates. So there can be opportunities to commit fraud in financial reports through the provision for doubtful accounts (Prastika & Sasongko, 2023). Moral hazard can result in agency costs and arises when agents engage in actions that do not

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align with the principal's best interests, for instance, when an estimate of bad debts is created without a reliable assessment, it carries a significant risk of uncollectibility. However, management often overlooks this issue because they are aware they will not be held responsible for the resulting losses.

The nature of industry measurement has a positive effect on fraudulent financial statement according to Fitriyah & Novita, (2021), (Khamainy et al., 2022), and Pramesti & Kusumawati, (2023). The opposite research results by based on Situngkir & Triyanto, (2020), Haqq & Budiwitjaksono, (2019), Hastuti et al., (2023), and Wibowo & Putra, (2023) stated that the nature of the industry do not substantially influence the occurrence of fraudulent financial reporting and Yusniarti et al., (2021), Hidayah & Saptarini, (2019) concluded that the nature of industry has a negative direction to fraudulent financial statement

H6: The Nature of Industry has a significant effect to Fraudulent Financial Statements

1.3.7. Ineffective Monitoring and Fraudulent Financial Statements

Lack of control over the prevention and detection of fraud and lack of supervision can encourage someone to act fraudulently. According to Donelson et al., (2017) inadequate controls not only indicate a management team that lacks commitment to quality and integrity in reporting, but also an opportunity to increase the likelihood of fraudulent activities. This is in line with the explanation of agency theory, that the absence of a competent supervisory body to oversee operations gives rise to the possibility of fraudulent financial reporting (Sitoresmi et al., 2024).
Ineffective monitoring refers to the lack of adequate oversight within an organization or supervisory body in assessing the company's performance. This deficiency can lead to increased opportunities for both management and employees to engage in fraudulent activities due to insufficient monitoring (Achmad, Ghozali, et al., 2022). Inadequate oversight can allow people exploit situations for their own benefit (Wibowo & Putra, 2023).

Research results by Mulyadi et al., (2021) concludes that ineffective monitoring has a positive impact on Fraudulent Financial Reporting, but Khamainy et al., (2022) shows that ineffective monitoring has a negative and significant effect on financial statement fraud risk. Based on Wibowo & Putra, (2023), Achmad et al., (2022), Rahayuningsih & Sukirman, (2021), Mentari & Indriani, (2024), Sitoresmi et al., (2024), Hidayah & Saptarini, (2019), and Kusumawati et al., (2021) Independent Commissioners does not have an effect to Financial statement fraud due to the establishment of an independent committee of commissioners is intended solely to ensure adherence with regulation as the consequence, this limits the effectiveness of the committee's role and function in overseeing the company.

H7: The Ineffective monitoring has a significant effect to Fraudulent Financial Statements

1.3.8. Number of CEO's photos and Fraudulent Financial Statements

Wolfe & Hermanson, (2004) suggest that recognizing and analyzing the personal characteristics that lead to fraud is vital for developing more effective anti-fraud strategies. Through this framework, organizations can better understand the human element of fraud and enhance their preventive measures. The more CEO photos are displayed in financial reports, it is assumed that the CEO wants the public to know about the strata he has, therefore the CEO will be considered increasingly arrogant. The CEO is also considered to be able to exclude existing company regulations and internal controls (Achmad, Ghozali, et al., 2022). Arrogance is an excessive sense of superiority and is the cause of fraud. The elevated sense of arrogance and superiority leads CEOs to believe that internal controls do not pertain to them, as their status and position seemingly grant them the freedom to engage in fraudulent activities (Haqq & Budiwitjaksono, 2020). Arrogance demonstrates a disregard behavior for the company's rules, as they perceive these rules do not pertain to them (Fuad et al., 2020). An arrogant CEO tends to prioritize their personal image over the long-term goals of the company, which contrasts sharply with the principal's objectives and can lead to an agency problem.

Based on Sitoresmi et al., (2024), Puspitha & Yasa, (2018), and Haqq & Budiwitjaksono, (2020) frequent number of CEO's pictures has a positive influence in detecting fraudulent financial reporting. The more CEO pictures you see in the annual report, the greater the chance of financial fraud in the company. However Hidayah & Saptarini, (2019), Wibowo & Putra, (2023) Achmad et al., (2022), Syafira & Cahyaningsih, (2022), Situngkir & Triyanto, (2020), Ariyanto et al., (2021), Agusputri & Sofie, (2019), and Pramesti & Kusumawati, (2023) stated there is no significant influence between number of CEO's photos and Financial Statement Fraud.

H8: The number of CEO's photo has a significant effect to Fraudulent Financial Statements

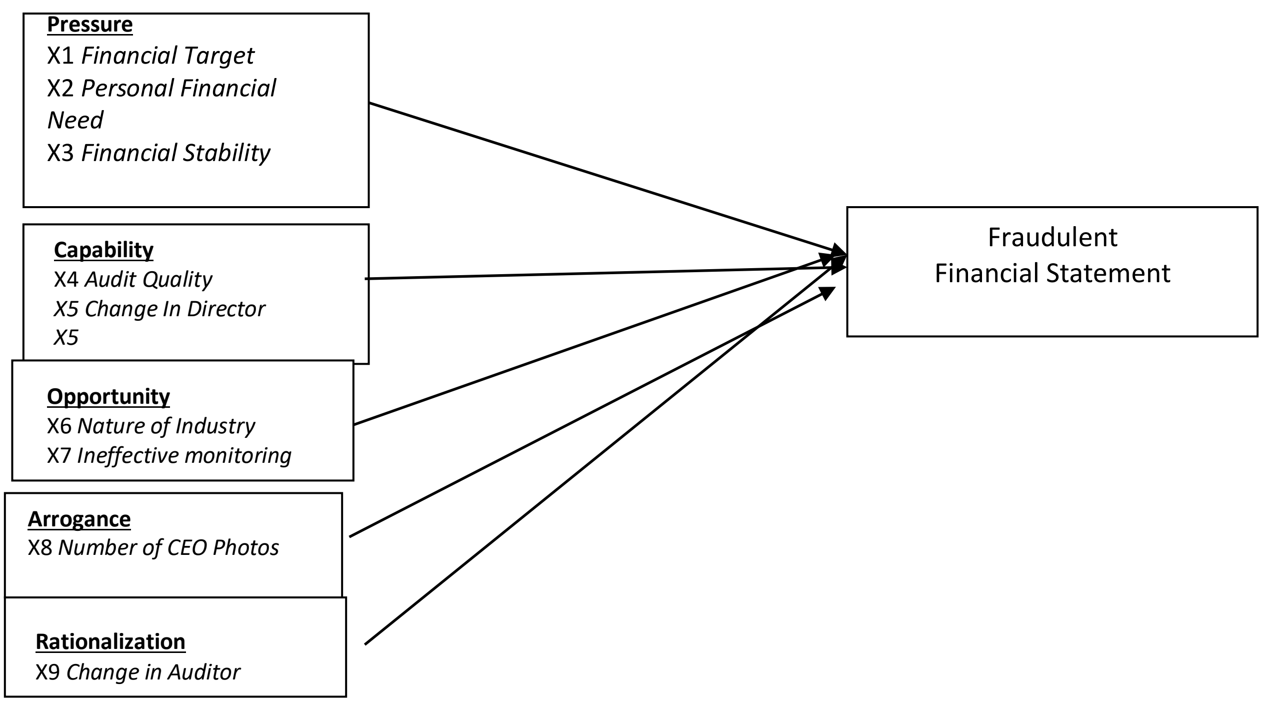
1.3.9. Change in auditor and Fraudulent Financial Statements

Auditor changes can be carried out by companies for mandatory reasons due to regulatory reasons regarding the limitation of the maximum number of years of engagement that can be given by public accountants to the same client. However, companies can also change auditors voluntarily. The rationale behind a company's decision to change its auditors volutarily is to mitigate the risk of uncovering financial statement fraud. The transition is perceived as a strategy to erase any evidence or audit trails that the former auditors may have identified. An auditor switching may signal the presence of financial statement fraud within their operations. The previous auditor may had detected signs of fraudulent activity, prompting the management to take action. When management becomes aware of such findings, they may choose to replace the auditors in an effort to obscure any audit trails in subsequent periods. Management expect that auditor's change will prevent the former auditors from discovering any additional instances of financial statement fraud that may have occurred during their tenure with the company (Fitriyah & Novita, 2021). Therefore, a change in auditor by an organization may indicate the possibility of financial statement fraud. The previous auditor may have uncovered evidence of fraudulent activities, prompting the company's management switching the auditor in order to obscure the audit trail in subsequent periods. Dissatisfaction with the previous auditor's services or the need for a new perspective in financial audits are some of the factors that cause auditor switching. Auditor switching is expected to improve audit quality and integrity of financial reporting in good governance in the organization (Mentari & Indriani, 2024). Tessema & Abou-El-Sood, (2022) indicate that the impact of audit rotation (AR) on information asymmetry (IS) between informed and uninformed investors suggests that when investors perceive voluntary auditor rotation, they believe the company is more dedicated to securing high-quality audits. Consequently, this leads to advantages from audit rotation, resulting in more dependable financial reporting that surpasses the costs associated with losing client-specific knowledge compared to mandatory audit rotation, thus reducing agency costs.

The results of research conducted by Hastuti et al., (2023), and Puspitha & Yasa, (2018), Mentari & Indriani, (2024), Yusniarti et al., (2021), and Fitriyah & Novita, (2021) are that auditor switching has a positive and significant effect on fraudulent financial reporting. Frequent changes of auditors can cause the audit process to become unstable and provide opportunities for management to commit fraud. Nevertheless, Syafira & Cahyaningsih, (2022), Situngkir & Triyanto, (2020), Wibowo & Putra, (2023), Pramesti & Kusumawati, (2023), Hidayah & Saptarini, (2019), Rahayuningsih & Sukirman, (2021), and Ariyanto et al., (2021) research presents distinct findings, indicating that the alteration of auditors does not influence the occurrence of fraudulent financial reporting.

H9: The Change in Auditor has a significant effect to Fraudulent Financial Statements

Figure 1: Research Framework



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2. Methods

2.1. Population and Sample

The research focuses on companies in the cyclicals, and non-cyclicals sector listed on the Indonesia Stock Exchange (IDX) from 2018 to 2022. The sample was selected through purposive sampling. The sample selection process are as follows :

Tabel 1 Sample Selection Process

No	Sample Criterias	Total Companies	Total Data
1.	Cyclical and non-cyclical companies consistently listed on the Indonesia Stock Exchange from 2018 to 2022.	168	504
2.	Companies in the cyclical and non-cyclical sectors that did not use the rupiah as their currency in financial reports from 2018 to 2022.	(30)	(90)
3.	Companies in the cyclical and non-cyclical sectors that reported no profits in their financial statements from 2018 to 2022.	(87)	(261)
	Total Research Sample	51	153

Source: Data Processed, 2025

Out of 153 data points, 5 were identified as outliers, leaving a total of 148 data points for analysis.

2.2. Research Variables

Dependent variable used in this research is F-Score from Dechow et al., (2011), Dechow et al., (2011) model to measure Fraudulent Financial reporting.

According to the Dechow et al., (2011) model, an F-Score of less than 1 indicates that the company's financial statements are free from corruption. Conversely, an F-Score greater than 1 points to potential deception within those statements. If the F-Score equals 1, it suggests that the company has an equal likelihood of misstatement, meaning the outcome is consistent regardless of any other prevailing conditions (Saleh et al., 2021).

The formula is (Hidayah & Saptarini, 2019):

F-score = Accrual quality + Financial Performance

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

Description :

WC = (Current Assets – Current Liabilities)

NCO = (Total Assets - Current Assets - Invesment and Advances) - (Total Liabilities -

Current Liabilities - Long Term Debt)
FIN = (Total Investments – Total Liabilities)
Average Total Assets = (Beginning Balance of Total Assets + Ending Balance of Total Assets)/2

Financial performance = change in receivables + change in inventories + change in cash sales + change in earnings.
Description :
Change in receivables= Δ*receivables* /*average total assets*
Change in inventory = Δ*inventory* / *average total assets*
Change in cash sales = (Δ *sales* / *sales t*) – (Δ *receivables* /*receivables t*)
Change in earnings = *(profit t / average total assets t) – (profit (t-1) / average total assets (t-1)*

Table 2: Independent Variables Measurements

Variable	Proxy	Measurement	Source
Financial Target	FT	$\frac{\text{Earnings After Tax}}{\text{Total Assets}}$	Hidayah & Saptarini, (2019)
Personal Financial Needs	PFN	$= \frac{\text{Executives Shares}}{\text{Total Outstanding Shares}}$	Ariyanto et al., (2021)
Asset Change	ACHANGE	$= \frac{(\text{Total Asset t} - \text{Total Asset }(t-1))}{\text{Total Asset }(t-1)}$	Wibowo & Putra, (2023)
Audit Quality	AQUAL	A Dummy variable: 1 indicates the company is audited by a big four public accounting firm, and 0 indicates it is audited by non big four public accounting firm.	Ariyanto et al., (2021)
Change In Director	CID	A dummy variable that takes the value of 1 when there is a change in the company's director, and 0 when there is no change.	Hidayah & Saptarini, (2019)
Nature of Industry	NATURE	$= \frac{\text{Receivable}}{\text{Sales}} - \frac{\text{Receivable}_{(t-1)}}{\text{Sales}_{(t-1)}}$	Hidayah & Saptarini, (2019)
Ineffective monitoring	IM	$\frac{\text{Number of Independent Board Commissioner}}{\text{Number of Board Commissioner}}$	Hidayah & Saptarini, (2019)

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Arrogance	NOCP	The number of CEO photos in a company's annual report.	Hidayah & Saptarini, (2019)
Change in Auditor	CIA	Dummy variable: 1 if there is a change in Public Accounting Firm, and 0 if there is no change in Public Accounting Firm	Wibowo & Putra, (2023)

Source: Data Processed, 2025

3. Results

Prior to testing the hypothesis, a detailed description of the research variables, encompassing both dependent and independent variables, is provided.

Table 3. Descriptive Statistics

Variabel	**N**	**Minimum**	**Maximum**	**Mean**	***Std.Deviation***
FFR	148	0.00	1.00	0.0473	0.21299
FT	148	0.00	0.35	0.0807	0.06189
PFN	148	0.00	0.54	0.0355	0.10692
ACHANGE	148	-0.15	1.68	0.0940	0.17373
AQUAL	148	0.00	1.00	0.8465	0.50151
CID	148	0.00	1.00	0.2095	0.40830
NATURE	148	-0.21	5.52	0.0317	0.45549
IM	148	0.33	0.83	0.4276	0.11424
NOCP	148	0.00	36.00	12.3446	5.60091
CIA	148	0.00	1.00	0.0473	0.21299

Source: Data Processing Results, 2025

The Financial Target variable, represented by ROA, has a minimum value of 0.00, specifically 0.00011, and a maximum value of 0.35. The average value of this variable is 0.0807. An average of 8% indicates that during the observation period affected by the COVID-19 pandemic, the company's ability to generate profit was impacted, resulting in an average profit below 10%. The Personal Financial Needs variable is measured by the percentage of shares owned by executives. The minimum value is 0.000000, indicating that management in their companies does not hold shares, while the maximum share ownership by executives is 54%. With an average value of 0.0355 for the Personal Financial Needs variable, it can be concluded that the sample companies have low executive share ownership, averaging 3.55%. The asset change variable has a lowest value of -0.15 due to a decline in company assets in 2022, and a highest value of 1.68, with an average asset growth percentage of 0.0940. The nature variable has a lowest value of -0.21 because the company has accounts receivable that are smaller compared to the previous year. The maximum value is 5.52, with an average of 0.0317. The range of independent commissioner percentage values is between 0.33 and 0.83, with an average of 0.4276. The CEO photo variable indicates that there are annual financial reports of the company that do not include any director photos, while there are annual financial reports that include the CEO's photo 36 times.

Table 4 Change in Auditor

	Frequency	Percentage
Change in Public Accounting Firm Not Occurred	141	95.3%
Change in Public Accounting Firm Occurred	7	4.7%

Source: Data Processing Results, 2025

A total of 141 companies, representing 95.3% of the sample, experienced a change in auditors, while 7 companies, or 4.7% of the sample, did not undergo an auditor change.

Table 5 Change in Director

	Frequency	Percentage
No change in the board of directors	117	79.1%
Change in board of directors	31	20.9%

Source: Data Processing Results, 2025

There are 117 companies, representing 79.1% of the sample, that did not undergo a change in director during the observation period, while 31 companies, accounting for 20.9% of the sample, experienced a change in director.

Table 6 Audit Quality

	Frequency	Percentage
Audited by Big Four Public Accountant Firm	72	48.6%
Audited by Non Big Four Public Accountant Firm	76	51.4%

Source: Data Processing Results, 2025

Among the sample of companies studied, 72 firms, representing 48.6%, were audited by a Big Four Public Accounting Firm, while 76 firms, accounting for 51.4%, were audited by non-Big Four Public Accounting Firms.

4. Discussion

The logistic regression analysis indicates that 5 data points are outliers due to their studentized residuals exceeding 2.000. After the removal of these outliers, the processed data yields the following results:

Table 7 -2 Log Likelihood

Description	-2 Log Likelihood
Block 0: Beginning *Block*	56.382
Block 1: Method = Enter	29.793

Source: Data Processing Results, 2025

The -2 Log Likelihood value for Block 0 is higher at 56.382 compared to the -2 Log Likelihood value recorded for Block 1, which is 29.793. The decrease in the -2 Log Likelihood value indicates that the regression model is suitable for use, as the inclusion of independent variables in the model enhances its quality compared to a model that relies solely on a constant.

Omnibus Test

The omnibus test plays a vital role in assessing the overall fit of a logistic regression model and determining the significance of the predictors in forecasting the outcome. It is utilized to evaluate whether the inclusion of predictor variables results in a statistically significant enhancement over a null model that consists solely of the intercept.

The omnibus test results at table 8 indicate a significance level of 0.002, which is less than the threshold of 0.05. Therefore, the independent variables collectively have the capacity to explain the likelihood of fraudulent financial statements.

Table 8 Omnibus Test Of Model Coefficients

		Chi-square	df	Sig
Step 1	Step	26.589	9	0.002
	Block	26.589	9	0.002
	Model	26.589	9	0.002

Source: Data Processing Results, 2025

Cox and Snell's R Square and Nagelkerke's R Square

The Nagelkerke R Square value indicates the degree of the coefficient of determination in the logistic regression model. The outcomes corresponding to the Nagelkerke R Square values are presented in Table 9.

Table 9 Cox and Snell's R Square and Nagelkerke's R Square

Step	-2 log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	29.793	0.164	0.519

Source: Data Processing Results, 2025

The test outcomes at table 9 indicate that the coefficient of determination for the Cox and Snell R-squared tests is 0.164, while for the Negelkerke R-squared, it is 0.519. This implies that 51.9% of the variability in the dependent variable can be accounted for by the variability in the independent variable.

Classification Table

The classification matrix test is designed to evaluate the effectiveness of the regression model in forecasting the likelihood of acceptance of the dependent variable, which serves as an indicator of fraudulent financial reporting. As presented in Table 10, the overall percentage achieved in the

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classification matrix test is 95.3%, indicating that the accuracy of the logistic regression analysis conducted in this study is 95.3%.

Tabel 10 Classification Table For Fraudulent Financial Statements

Predicted	**Fraudulent Financial Statements**		**Percentage**
Observed	**Not Indicated**	**Indicated**	
Not indicated	141	0	100%
Indicated	7	0	0%
Overall percentage			95.3%

Source: Data Processing Results, 2025

The conclusion of this table is 95.3% companies are not indicated having a fraudulent financial statements.

Hypothesis Testing Results

The research hypothesis was tested using the Logistic Regression method using SPSS, yielding the following results :

Table 11: Hyphotesis Testing

Hyphotesis		**Fraud Factor**	**B**	**Sign**	**Decision**
H1	Pressures	Financial Target	16.314	0.113	Rejected
H2		Personal Financial Needs	1.026	0.662	Rejected
H3		Financial Stability	1.741	0.647	Rejected
H4	Capability	Audit Quality	-22.388	0.995	Rejected
H5		Change in Director	-0.204	0.856	Rejected
H6	Opportunity	Nature of Industry	-4.680	0.665	Rejected
H7		Ineffective monitoring	12.863	0.007	Accepted
H8	Arrogance	Number of CEO Picture	-0.112	0.419	Rejected
H9	Rationalization	Change in Auditor	-20.338	0.999	Rejected

Source: Data Processing Results, 2025

The result of the hypothesis test on the pressure factor indicators, financial targets, proxied by Return on Assets showed coefficient value 16.314 and do not significantly affect the occurrence of Fraudulent financial reporting, as indicated by a p-value of 0.113, which exceeds the 0.05 threshold. Therefore H1 is rejected. ROA has no effect on fraudulent financial reporting, possibly because the performance target set by the company is a reasonable target that can be achieved. Another reason is when a company's management manipulates profitability figures, investors might view the company as thriving, resulting in increased stock prices and can lead to significant dividend payments. It is causing management to take a cautious stance to reduce the risk of over-distributing dividends (Puspitha & Yasa, 2018). This condition discourages agents from engaging in the preparation of fraudulent financial reporting. This results is consistent with

Khamainy et al.,(2022), Haqq & Budiwitjaksono, (2020), and Sitoresmi et al., (2024) but not consistent with Hidayah & Saptarini, (2019), Wibowo & Putra, (2023), Prastika & Sasongko (2023), Kusumawati et al., (2021), Hastuti et al., (2023), and Fathmaningrum & Anggarani, (2021).

The analysis indicates that Personal Financial Needs does not significantly influence Fraudulent Financial Reporting, as evidenced by a coefficient of 1.026 and a p-value of 0.662, which exceeds the 0.05 threshold (H2 rejected). This is supporting research by Puspitha & Yasa, (2018) and Erni Suryandari & Anggarani, (2021). From statistics descriptives, mean for executives shares is 3,55%. The proportion of shares held by executives does not exert pressure to engage in fraudulent financial reporting due to average executive holds 3.5% of shares. This figure suggests that such individuals are minority shareholders, lacking control over the company's operations and decision-making processes (Puspitha & Yasa, 2018). This result research is not consistent with Ariyanto et al., (2021).

Additionally, Financial Stability does not have a significant impact on Fraudulent financial reporting, as indicated by a coefficient value of 1.741 and a p-value of 0.647, which exceeds 0.05 (H3 rejected). This finding aligns with the work of Kusumawati et al. (2021), but contrasts with the conclusions of Wibowo & Putra (2023), Situngkir & Triyanto (2020), Fathmaningrum & Anggarani (2021), Rahayuningsih & Sukirman (2021), Yusniarti et al., (2021), and Haqq & Budiwitjaksono (2020). Rahayuningsih & Sukirman (2021) suggest that even in the presence of financial instability, the likelihood of fraud remains low if an effective reporting and monitoring system is in place, supported by the board of commissioners and internal auditors who supervise management's financial reporting.

Statistical testing of two hypotheses for capability factor, namely audit quality and change in director, gave the following results. The analysis indicates that Audit Quality has coefficient value of -22.388 and does not significantly influence Fraudulent financial reporting, as evidenced by a p-value of 0.995, which exceeds the 0.05 threshold (H4 rejected). This result is consistent with Ariyanto et al., (2021) but not consistent with Fathmaningrum & Anggarani, (2021), Irishabel et al., (2020), Sitoresmi et al., (2024) , and Yusniarti et al., (2021). According to Auditing Standard 200, regardless the public accountant firm size, external auditors hold the responsibility for identifying material misstatements, whether they result from errors or fraudulent activities. They are particularly accountable for uncovering material misstatements that may stem from internal factors, such as fraudulent financial reporting (IAPI, 2021.)

The change in director does not appear to have a significant impact on fraudulent financial reporting, as indicated by a p-value of 0.856, which exceeds the 0.05 threshold (H5 is rejected) and coefficent value of -0.204. This finding aligns with the studies conducted by Fitriyah & Novita (2021), Achmad et al. (2022), Syafira & Cahyaningsih (2022), Situngkir & Triyanto (2020), Wibowo & Putra (2023), Agusputri & Sofie (2019), Pramesti & Kusumawati (2023), and Sitoresmi et al. (2024), but contrasts with the findings of Hidayah & Saptarini (2019), Ariyanto et al. (2021), Hastuti et al. (2023), and Puspitha & Yasa (2018). The transition may occur when the organization seeks to improve its performance by appointing more qualified directors. The findings of the hypothesis test regarding two capability factors, specifically audit quality and changes in directorship, reveals that capability factors do not contribute to the occurrence of fraudulent financial reporting.

Further statistical testing was carried out for the Opportunity indicator factors, namely Nature of Industry and Ineffective monitoring. The coefficient value of nature of industry is -4.680 and does not significantly impact Fraudulent financial reporting, given a p-value of 0.665, which is above the 0.05 level (H6 rejected). This is consistent with based on Situngkir & Triyanto, (2020), Haqq & Budiwitjaksono, (2019), Hastuti et al., (2023), and Wibowo & Putra, (2023) research result that conclude nature of industry does not have a significant impact on fraudulent financial reporting but not consistent with Yusniarti et al., (2021), Hidayah & Saptarini, (2019).

Ineffective Monitoring demonstrates a coefficient value of 12.863 and has a significant positive effect on Fraudulent financial reporting, with a p-value of 0.007, which is below 0.05 (H7 accepted). This is in line with Agency theory supports the implementation of effective monitoring, including information transparency, designing a good incentive system, and a good and strong corporate governance structure (Sitoresmi et al., 2024). Numerous prominent fraudsters have intelligence, experience, and creativity, and also a deep comprehension of the company's controls and weaknesses. This expertise is manipulated by individuals entrusted with authorized access to systems or assets (Wolfe & Hermanson, 2024). For mitigating the influence of capabilities on fraud, it is essential to establish checks and balances or detection systems, or for auditors to broaden the audit's scope, procedures, and testing for potential fraudulent activities (Wolfe & Hermanson, 2004). The independent commissioners duties according to the National Committee on Governance Policy are essentially in line with the Agency theory. Independent commissioners must act in a way that prioritizes the best interests of the corporation, tasked with monitoring conflicts of interest that may occur between the corporation and members of the Board of Directors and Board of Commissioners or controlling shareholders. Independent commissioners must also independently monitor the views of other stakeholders including minority shareholders and prioritize dialogue between management, shareholders, and other stakeholders (KNKG, 2021). Supervision is more effective when conducted by independent commissioners who are not linked to the board of directors or major shareholders. Those without shares or business ties to the company can better oversee the board's actions, ensuring they fulfill their responsibilities and protect shareholder interests. A higher ratio of independent commissioners to total commissioners leads to improved oversight, which can help reduce fraud in the organization (Mentari & Indriani, 2024). This is consistent with (Mulyadi et al., 2021) not consistent with Wibowo & Putra, (2023), Achmad et al., (2022), Mentari & Indriani, (2024), Sitoresmi et al., (2024), Hidayah & Saptarini, (2019), Rahayuningsih & Sukirman, (2021), and Kusumawati et al., (2021).

The statistical analysis of the arrogance indicator, measured by the number of CEO photographs has a coefficient value of -0.112. As evidenced by a p-value of 0.113, which exceeds the threshold of 0.05 it revealed that this variable does not have a significant impact on fraudulent financial reporting, (H8 is rejected). This finding aligns with the studies conducted by Hidayah & Saptarini (2019), Wibowo & Putra (2023), Achmad et al. (2022), Syafira & Cahyaningsih (2022), Situngkir & Triyanto (2020), Ariyanto et al. (2021), Agusputri & Sofie (2019), and Pramesti & Kusumawati (2023). The inclusion of the CEO's photograph in the annual report is meant to reflect transparency regarding the CEO's role in the company's operations, rather than an indication of arrogance, as noted by Situngkir & Triyanto (2020) and Achmad et al. (2022). However, these results contradict the findings of Sitoresmi et al. (2024), Puspitha & Yasa (2018), and Haqq & Budiwitjaksono (2020).

For the last hypothesis, statistical testing is conducted on the rationalization indicator factor, which pertains to the change in external auditors, producing the outcome that the Change in Auditor has a coefficient value of -20.338 and shows no significant impact on Fraudulent financial reporting, with a p-value of 0.995 exceeding the 0.05 threshold (H9 rejected). This is consistent with Syafira & Cahyaningsih, (2022), Situngkir & Triyanto, (2020), Wibowo & Putra, (2023), Pramesti & Kusumawati, (2023), Hidayah & Saptarini, (2019), Rahayuningsih & Sukirman, (2021), and Ariyanto et al., (2021) but not in line with Hastuti et al., (2023), and Puspitha & Yasa, (2018), Mentari & Indriani, (2024), Yusniarti et al., (2021), and Fitriyah & Novita, (2021). As outlined in Auditing Standard 240 (Revised 2021), the key duty of preventing and detecting fraud rests with the entity's governance and management. The auditor's role is to pinpoint and evaluate the risk of significant misstatements in financial statements caused by fraud, gathering adequate evidence and addressing any suspected or confirmed fraud during the audit (IAPI, 2021). All public accounting firms, whether part of the Big Four or not, adhere to Auditing Standard 240 to ensure that changes in auditors ensuring that changes in auditors do not compromise the integrity of financial statements.

Conclusion

The finding of this research indicate ineffective monitoring demonstrates a significant and positive effect on the probability of fraudulent financial statements. The independent board of commissioners lead to better company monitoring and lower chances of financial fraud. Oversight is more efficient when carried out by independent commissioners who have no ties to the board of directors or significant shareholders. In line with agency theory, independent monitoring ensures that stakeholder interests are taken into account. Other finding are the financial targets, personal financial needs, financial stability, audit quality, changes in directorship, industry characteristics, CEO photograph frequency, and auditor turnover do not have a significant impact on fraudulent financial statements. This study is limited to cyclical and non-cyclical companies in Indonesia. Future research could include other sectors for a more comprehensive analysis, comparing with similar developing countries that have similar gross domestic product indicators.

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