



Determinants of Financial Statement Fraud: An Empirical Analysis Based on the Fraud Star Theory in Indonesia

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Abstract: This study aims to analyse the determinants of financial statement fraud through the lens of the Fraud Star Theory. The research focuses on companies within the Consumer Non-Cyclicals sector listed on the Indonesia Stock Exchange (IDX). The final sample comprises 71 companies within the Consumer Non-Cyclicals sector, resulting in 213 firm-year observations spanning the 2021–2023 period. Hypothesis testing was conducted using panel data regression analysis via EViews 12 to examine the relationship between the Fraud Star elements and fraudulent financial reporting. The empirical results demonstrate that financial stability has a significant positive effect on financial statement fraud. Conversely, changes in auditors, changes in directors, and corporate integrity exhibit a significant negative effect, suggesting these factors may serve as deterrents to fraudulent activity. Interestingly, financial targets and ineffective monitoring were found to have no significant influence on the occurrence of fraud within this sector. Future research should explore alternative fraud models and extend the analysis to other categories of occupational fraud, such as asset misappropriation and corruption.

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INTRODUCTION

In recent years, corporate misconduct has become increasingly prevalent among firms listed on the Indonesian Stock Exchange (IDX), particularly regarding fraudulent financial reporting. Accounting fraud is defined as the deliberate misrepresentation of a company's financial records through the intentional misapplication of accounting principles, resulting in materially misleading financial statements (Jimenez Serrano et al., 2025; Zainal et al., 2021). According to the Association of Certified Fraud Examiners (ACFE, 2019), corporate fraud remains a pervasive issue within the Indonesian economy, ranking 85th out of 180 countries, accounting for 69.9% of corruption, with losses totalling IDR 373.65 billion. This was followed by asset misappropriation at 20.9% with losses totalling IDR 257.52 billion, and financial statement fraud

at 9.2% with losses totalling IDR 242.26 billion. Furthermore, the ACFE (2022) categorises occupational fraud into three main classifications, which are asset misappropriation, corruption, and financial statement fraud.

The rising incidence of financial reporting scandals in Indonesia is evidenced by fraudulent financial reporting activities within the non-cyclical consumption sector listed on the IDX. A prominent case involves PT Tiga Pilar Sejahtera Food Tbk (AISA), which faced severe financial distress following the discontinuation of its "IBU" products. This turmoil led to financial difficulties and the cessation of operations for three subsidiaries on 1 December 2017. In 2017, AISA's rice sales revenue decreased dramatically to IDR 2.49 trillion, representing a significant decrease of approximately 39% compared to the IDR 4.10 trillion reported in 2016. This drastic decline was primarily attributed to the "adulterated rice" (*Oplosan*) incident that surfaced in late 2017. Furthermore, during this period, the company failed to generate revenue from the agribusiness division, specifically crude palm oil, fresh fruit bunches, and palm kernels. This stands in contrast to 2016, when the agribusiness sector contributed IDR 36.9 billion to the company's total revenue (Wareza, 2019). Subsequently, the company's management faced criminal sanctions from the Bekasi District Court and complied with the court's decision.

The development of fraud theory reflects continuous efforts to better explain the factors that drive fraudulent behavior within organizations. The earliest conceptual framework was introduced by Donald Cressey through the Fraud Triangle Theory, which posits that fraud occurs due to the presence of three key elements: pressure, opportunity, and rationalization (Rasheed et al., 2023). As research progressed, this model was extended by David T. Wolfe and Dana R. Hermanson through the Fraud Diamond Theory, which introduced an additional element, namely capability, emphasizing that individuals must possess the necessary skills, position, and traits to successfully execute fraudulent acts (Ozcelik, 2020). Subsequently, Georgios L. Vousinas proposed the Fraud Hexagon Theory, expanding the model by incorporating two additional elements—ego or arrogance and collusion—thereby providing a more comprehensive explanation of fraud in modern organizational settings where misconduct may involve multiple actors and leadership characteristics (Saikhu et al., 2025). More recent developments have led to the emergence of the Fraud Star Theory, which further enriches the framework by incorporating the dimension of integrity or individual ethical values as a critical factor influencing whether individuals engage in or refrain from fraudulent behavior (Monteverde, 2021). Overall, the evolution of fraud theory demonstrates a shift from a relatively simple individual-centered perspective toward a more comprehensive framework that integrates capability, social interaction, and ethical integrity in explaining fraudulent activities within organizations (Amar et al., 2022; Gkegkas et al., 2025; Soltani et al., 2023).

Building on this case, the criminal sanctions imposed on AISA's management highlight the urgent need for robust mechanisms to detect fraudulent financial reporting at an early stage. Early detection of financial statement fraud is essential to protect the interests of investors, regulators, and other stakeholders, as well as to maintain the credibility of financial reporting in capital markets. In this context, this study adopts the Fraud Star Theory as the analytical framework to identify the determinants of fraudulent financial reporting. The Fraud Star model represents an advancement of earlier fraud frameworks, particularly the Fraud Triangle introduced by Donald Cressey and the Fraud Diamond developed by David T. Wolfe and Dana R. Hermanson, by incorporating additional dimensions that capture behavioral and ethical aspects influencing fraudulent behavior. By integrating elements such as pressure, opportunity, rationalization, capability, and integrity, the Fraud Star framework provides a more comprehensive perspective in explaining the occurrence of fraud within organizations.

Despite its conceptual advantages, empirical studies applying the Fraud Star framework remain relatively limited and show inconsistent findings. Several studies suggest that pressure and opportunity are the dominant factors influencing fraudulent financial reporting, whereas other studies highlight the importance of managerial capability and ethical integrity in facilitating or preventing fraudulent behavior. In addition, empirical evidence focusing on the Consumer Non-Cyclical sector remains scarce, particularly in the context of the post-pandemic economic environment during the 2021–2023 period. This gap indicates the need for further empirical investigation to better understand how the dimensions of the Fraud Star framework operate within specific industrial contexts.

Therefore, this study aims to analyse the determinants of financial statement fraud by employing proxies that represent the five dimensions of the Fraud Star framework. The novelty of this research lies in two main contributions. First, this study extends the application of Fraud Star Theory to the Consumer Non-Cyclical sector during the 2021–2023 period, a context that has received limited attention in prior literature. Second, this study introduces a refined measurement approach for the integrity dimension, which has often been insufficiently operationalized in previous studies. By developing a more comprehensive proxy to capture managerial integrity within the Fraud Star framework, this research seeks to improve the explanatory capability of fraud detection models. Consequently, the findings of this study are expected to contribute to the development of fraud detection literature while also providing practical implications for regulators, auditors, and corporate governance practitioners in strengthening early detection mechanisms for fraudulent financial reporting.

LITERATURE REVIEW AND HYPOTHESES

Agency Theory

Agency theory explains the relationship between principals and agents in situations where one party (the principal) delegates decision-making authority to another party (the agent) to perform tasks on their behalf. The theory was formally developed by (Jensen & Meckling, 1976; Puspitha & Yasa, 2018) who argue that conflicts of interest may arise because agents do not always act in the best interests of principals. In corporate settings, shareholders act as principals who entrust managers with the responsibility of managing the company's resources and operations. However, differences in objectives, risk preferences, and access to information may create agency problems, as managers may prioritise personal benefits such as compensation, job security, or reputation rather than maximising shareholder value (Lopes et al., 2025a). These conflicts are further exacerbated by information asymmetry, where managers possess superior knowledge about the firm's actual performance and financial condition compared to external stakeholders.

Within the context of financial reporting, agency theory suggests that managers may have incentives to manipulate accounting information in order to present favourable performance outcomes and maintain investor confidence. Such behaviour may arise when managers attempt to meet financial targets, avoid negative market reactions, or protect their positions within the organisation. Consequently, mechanisms such as corporate governance structures, external audits, and monitoring by boards of directors are introduced to mitigate agency conflicts and reduce opportunistic managerial behaviour (Al-Faryan, 2024; Biduri & Tjahjadi, 2024; Devi, 2024). Effective monitoring and control systems are therefore essential to align managerial actions with shareholder interests and to ensure the reliability and transparency of financial reporting. In this regard, agency theory provides an important theoretical foundation for understanding the motivations underlying financial statement fraud, particularly in situations where managerial incentives, performance pressures, and weak monitoring mechanisms interact to create opportunities for opportunistic reporting behaviour.

Fraud Triangle Theory

(Cressey, 1953) explained that fraud triangle identifies pressure, opportunity, and rationalisation as core fraud drivers, while (Wolfe & Hermanson, 2004) extend this model by adding capability. These models assume that opportunity is constrained by internal control systems and external oversight. In Indonesia, however, ineffective monitoring, limited audit independence, and regulatory tolerance may expand opportunities beyond those predicted by classical models. Consequently, fraud elements that are theoretically distinct may interact differently under weak enforcement conditions, reducing the explanatory.

Fraud Diamond Theory

The fraud diamond theory was introduced in 2004 as an extension of the fraud triangle concept proposed by Wolfe & Hermanson (2004), with capability added as the fourth element to explain how fraud is executed and concealed. The model conceptualizes fraud as the interaction of pressure, opportunity, rationalization, and capability. However, the application of the fraud diamond theory is often treated as a universal assumption, implicitly assuming that internal controls, legal sanctions, and monitoring

mechanisms function effectively across institutional settings. In emerging markets such as Indonesia, differences in institutional enforcement—including uneven regulatory oversight, limited auditor independence, and variable governance quality—may alter the role of capability in facilitating fraud. Under weaker enforcement conditions, individuals with authority and access may exploit governance gaps more easily, thereby amplifying the influence of capability beyond what is predicted by the original model. Therefore, the explanatory power of the fraud diamond theory in Indonesia should be understood as context-dependent rather than universal, requiring empirical examination that accounts for institutional enforcement differences.

Fraud Star Theory

Fraud Star Theory integrates earlier fraud models by incorporating integrity as a constraint on fraudulent behaviour that operates through both moral and governance-based mechanisms (Siahaan, Umar, & Purba, 2019). Integrity is commonly defined as ethical commitment and professional competence (Eksandy & Sari, 2022), reflecting an individual's internalised moral values. However, (Bakri et al., 2015) emphasise that integrity is also shaped by external enforcement mechanisms, such as rewards and punishments, which discipline behaviour within organisational settings. Accordingly, this study conceptualises integrity not as a purely individual moral trait, but as an institutionalised ethical control embedded within corporate governance structures.

This conceptualisation underpins the measurement logic adopted in this study. Direct observation of individual moral values is empirically infeasible in archival research; therefore, integrity is operationalised through observable organisational mechanisms that translate ethical expectations into enforceable behavioural constraints. Reward–punishment systems serve as formal instruments through which organisations codify ethical standards, incentivise compliant behaviour, and sanction misconduct. In this sense, the presence and consistency of reward–punishment mechanisms indicate the extent to which integrity is not merely espoused, but actively enforced within the organisation. This distinction is particularly important in emerging markets such as Indonesia, where institutional enforcement varies substantially across firms and sectors. In contexts characterised by weak regulatory oversight, limited sanction severity, and symbolic governance compliance, internal moral restraint alone may be insufficient to deter fraudulent behaviour. Under such conditions, integrity becomes meaningful only when ethical norms are supported by credible and consistently applied enforcement mechanisms. Thus, the use of reward–punishment systems in this study captures the effectiveness of integrity as an organisational control, rather than attempting to proxy personal morality directly.

Empirical studies applying Fraud Star Theory have demonstrated that its elements do not exert uniform effects. (Siahaan, Umar, & Purba, 2019) found that pressure, opportunity, and rationalisation significantly influenced asset misappropriation, whereas integrity and capability were not significant. In contrast, (Faruqi et al., 2024) reported that rationalisation and capability were significant predictors, while pressure, opportunity, and integrity were not. Rather than interpreting these findings as universal contradictions, this study argues that they reflect differences in how integrity is operationalised and enforced, an issue that prior studies did not explicitly address. When reward–punishment mechanisms are weak or symbolic, integrity—as an institutional constraint—may fail to exert a deterrent effect, thereby yielding insignificant empirical results.

Accordingly, this study does not treat Fraud Star Theory as a linear, additive, or universally valid model. Instead, fraud determinants are conceptualised as context-sensitive mechanisms whose effectiveness depends on enforcement credibility and governance quality. Within this framework, integrity functions as a governance-based control whose explanatory power varies with the strength and consistency of organisational enforcement structures. The Fraud Star Theory integrates (Cressey, 1953) Fraud Triangle and (Wolfe & Hermanson, 2004) Fraud Diamond, identifying five elements—pressure, opportunity, rationalisation, competency, and integrity—that describe conditions under which fraud may occur (Siahaan, Umar, & Purba, 2019). These elements are not assumed to have equal explanatory power across institutional settings. In Indonesia, where monitoring effectiveness and enforcement credibility differ across firms, opportunity and capability may dominate in weakly governed environments, whereas integrity becomes

salient only when ethical standards are supported by credible reward–punishment mechanisms. Pressure captures the incentive to commit fraud and is operationalised through financial targets and financial stability (Skousen et al., 2009). Opportunity reflects structural conditions that allow fraud to occur, such as ineffective monitoring (Permata Sari & Kurniawan Nugroho, 2020), which are more pronounced in environments with weaker oversight. Rationalisation explains how management justifies misconduct (Apriliana & Agustina, 2017), while capability reflects the authority and skill needed to execute and conceal fraud (Marks & Melville, 2012; Wolfe & Hermanson, 2004). Integrity functions as a constraining mechanism, but its effectiveness depends on the credibility of enforcement mechanisms that translate ethical values into actual behavioural constraints (Bakri et al., 2015; Eksandy & Sari, 2022).

By explicitly incorporating institutional enforcement differences in Indonesia, this study re-examines the relative importance of Fraud Star elements in explaining financial statement fraud. The inconsistent findings reported by (Faruqi et al., 2024; Siahaan, Umar, & Purba, 2019) are interpreted not as empirical failure, but as evidence of theoretical boundary conditions that prior studies did not explicitly address. This perspective allows the study to move beyond the universal application of fraud theories by recognising that the effectiveness of fraud determinants depends on the institutional environment in which firms operate. By modelling enforcement strength as a contextual boundary condition, this study refines Fraud Star Theory and demonstrates that its elements do not function as universal or equally predictive mechanisms, but rather as context-dependent drivers whose explanatory power varies with governance quality and enforcement credibility in emerging market settings.

Financial Statement Fraud

Financial statement fraud, as defined by the American Institute of Certified Public Accountants (AICPA), refers to wilful acts or omissions, misstatements of material facts, or misleading accounting data that could influence users' economic decisions (Permata Sari & Kurniawan Nugroho, 2020). Fundamentally, fraud involves deliberate misappropriation of resources and manipulation of information to conceal misconduct. In most fraud studies, these definitions are implicitly treated as universally applicable across institutional settings. However, in emerging markets such as Indonesia, differences in regulatory enforcement, legal sanctions, and governance effectiveness may alter how fraud manifests and persists. Weak enforcement intensity, delayed legal processes, and symbolic compliance may reduce the deterrent effect of formal rules, allowing financial statement fraud to continue despite the presence of regulatory frameworks.

To identify fraud, prior literature has applied various behavioural and governance-based theories. This study employs Fraud Star Theory, which expands the Fraud Triangle (Cressey, 1953) and Fraud Diamond (Wolfe & Hermanson, 2004) by incorporating integrity as a fifth element (Siahaan, Umar, & Purba, 2019). While these theories were developed in contexts characterised by strong enforcement and effective monitoring, their application in Indonesia cannot be treated as a universal assumption. In Indonesia, institutional enforcement is often uneven across sectors and firms, potentially weakening the constraining role of integrity and amplifying opportunities for fraud through weak monitoring structures.

Financial Targets and Financial Statement Fraud

Performance-based financial targets are commonly designed to align managerial actions with shareholder interests by encouraging managers to achieve predetermined performance benchmarks. However, when these targets are strongly associated with short-term financial outcomes and compensation schemes, they may intensify agency conflicts by shifting managerial focus toward personal incentives rather than the quality and transparency of financial reporting (Yesiariani & Rahayu, 2017). From the perspective of agency theory, managers possess informational advantages and discretion over financial reporting, which can create opportunities for opportunistic behaviour when organisational performance expectations become difficult to achieve. Under conditions of high performance pressure, managers may engage in earnings manipulation or fraudulent financial reporting to maintain the appearance of meeting organisational goals and market expectations.

Recent empirical studies provide evidence that aggressive financial targets may increase the likelihood of financial misreporting. Research by Amar et al., (2022); Gkegkas et al., (2025); Narsa et al., (2023) indicates that companies facing strong market performance expectations are more likely to manipulate financial reporting in order to avoid negative reactions from investors and analysts. Similarly, studies conducted by Dyck et al., (2024) highlight that financial incentives and performance pressures are important drivers of corporate misconduct and financial misrepresentation. More recent literature also suggests that the presence of ambitious financial targets may increase the probability of earnings management, particularly when organisational governance mechanisms are weak or monitoring effectiveness is limited. Empirical evidence further indicates that performance pressure arising from profitability targets may motivate managers to manipulate accounting information in order to maintain financial credibility and organisational reputation in capital markets (Farooq et al., 2025; Ramzan & Lokanan, 2024).

Despite the growing body of literature linking performance pressure to fraudulent reporting, many studies primarily focus on statistical relationships while providing limited explanation of the behavioural mechanisms through which financial targets translate into fraud risk (Soltani et al., 2023). Within the Fraud Star framework, financial targets can be interpreted as a form of pressure that motivates managers to conceal underperformance and maintain favourable financial perceptions among stakeholders. When performance expectations are high and organisational outcomes fail to meet these expectations, managers may face reputational, contractual, and financial consequences, which in turn increases the incentive to manipulate financial information. Therefore, financial targets may function as a critical motivational factor that increases the likelihood of fraudulent financial reporting. Based on this reasoning, the following hypothesis is proposed:

H1: Financial targets have a positive effect on financial statement fraud.

Financial Stability and Financial Statement Fraud

Financial stability reflects a firm's capacity to sustain operational and financial performance amid economic uncertainty and business shocks (Ballouk et al., 2024). In the context of agency theory, declining financial stability intensifies conflicts of interest between principals and agents because managers are responsible for maintaining organisational performance while shareholders demand stable or improving financial outcomes. When firms experience deteriorating financial conditions, managers may face pressure related to job security, compensation incentives, and reputational concerns. Under such circumstances, information asymmetry between managers and investors provides an opportunity for managers to obscure unfavourable financial conditions through strategic reporting behaviour. Empirical studies have shown that financial instability can create incentives for opportunistic financial reporting, particularly when firms attempt to maintain market confidence during periods of declining performance. For example, Habib Ahsan and Ranasinghe Tharanga find that financial distress and unstable performance increase the likelihood of earnings manipulation as managers attempt to avoid negative investor reactions. Similarly, Dyck et al., (2024) argue that deteriorating financial conditions often increase incentives for corporate misconduct, including financial misrepresentation.

Recent literature further supports the argument that financial instability functions as an important pressure factor in the occurrence of fraudulent financial reporting. Studies suggest that firms experiencing declining financial health or unstable financial performance are more likely to manipulate accounting information to maintain organizational legitimacy and protect managerial reputation. For instance, (Soltani et al., 2023) show that financially distressed firms tend to exhibit higher risks of financial statement fraud due to increased pressure on management to present favourable financial outcomes. Likewise, research by (Ramzan & Lokanan, 2025; Wahyuandari, 2025) highlights that firms facing financial instability often adopt aggressive reporting strategies to maintain investor confidence and avoid regulatory scrutiny. Other empirical evidence indicates that unstable financial conditions can motivate managers to conceal declining performance through accounting manipulation, particularly when monitoring mechanisms and governance structures are weak. However, inconsistent empirical findings in prior studies suggest that financial

instability does not automatically or mechanically result in fraudulent reporting. Instead, instability acts as a survival-oriented pressure mechanism that increases fraud risk when managers perceive limited legitimate options to restore performance and when governance oversight fails to constrain opportunistic behaviour.

Within the Fraud Star framework, financial stability represents a form of organisational pressure that may motivate managers to manipulate financial information in order to conceal deteriorating conditions from stakeholders. When organisational performance declines, managers may engage in fraudulent reporting as a rational response to agency conflicts because such actions can temporarily mask poor performance and mitigate potential sanctions from investors and boards of directors. Therefore, financial instability is expected to increase the likelihood of financial statement fraud by amplifying managerial incentives to conceal adverse financial conditions under information asymmetry. Based on this reasoning, the following hypothesis is proposed:

H2: Financial stability has a positive effect on financial statement fraud.

Ineffective Monitoring and Financial Statement Fraud

Ineffective monitoring reflects deficiencies in internal control systems and board oversight that weaken the detection and deterrence of opportunistic managerial behaviour (Putri & Qintharah, 2023). From an agency theory perspective, monitoring functions as a critical governance mechanism designed to reduce information asymmetry and constrain managerial discretion. Effective monitoring mechanisms—such as active board oversight, independent audit committees, and robust internal control systems—can increase the probability that opportunistic behaviour will be detected and sanctioned. However, when monitoring mechanisms are weak or ineffective, managers may gain greater discretion in financial reporting decisions, thereby increasing the likelihood of opportunistic behaviour. In such conditions, the agency conflict between shareholders and managers becomes more pronounced because principals have limited capacity to observe or verify managerial actions. Consequently, ineffective monitoring reduces the expected cost of fraudulent behaviour and may encourage managers to manipulate financial reports to serve personal or organisational interests. Recent research suggests that strong governance and monitoring systems play a significant role in preventing financial misreporting. For instance, studies by Aivaz et al., (2024); Lopes et al., (2025) indicate that effective corporate governance structures significantly reduce the probability of financial statement fraud by strengthening oversight over managerial decisions.

Empirical studies in recent years have consistently highlighted the importance of monitoring mechanisms in mitigating financial reporting fraud. Research by Mahdi Sahi et al., (2022); Roshanpoor et al., (2024) demonstrates that firms with weak governance and monitoring frameworks exhibit higher levels of financial misreporting due to reduced accountability and limited oversight of managerial actions. Similarly, studies by (Xanthopoulou et al., 2024) show that ineffective board monitoring and weak internal control environments significantly increase the likelihood of earnings manipulation and fraudulent reporting. Other empirical evidence also indicates that companies with less independent boards and weaker audit committee effectiveness tend to exhibit a higher risk of financial statement fraud because oversight functions are unable to effectively constrain managerial opportunism. These findings suggest that ineffective monitoring does not merely coexist with fraud risk but also facilitates the translation of performance pressure and managerial incentives into fraudulent financial reporting behaviour.

Furthermore, recent literature emphasises that monitoring effectiveness is not solely determined by the presence of governance structures but also by the extent to which these structures function substantively rather than symbolically. Research highlights that formal governance mechanisms may fail to prevent fraud if they lack enforcement capability, expertise, or independence. As a result, ineffective monitoring can create an organisational environment in which opportunistic managerial behaviour becomes more feasible because the perceived probability of detection and punishment remains low. Within the Fraud Star framework, ineffective monitoring represents an opportunity dimension that allows managers to exploit informational advantages and manipulate financial reporting when governance oversight is weak. Therefore, ineffective monitoring is expected to increase the likelihood of financial statement fraud by

lowering the perceived risk of detection and sanction associated with fraudulent reporting behaviour. Based on this reasoning, the following hypothesis is proposed:

H3: Ineffective monitoring has a positive effect on financial statement fraud.

Change in Auditor and Financial Statement Fraud

Auditor rotation is intended to mitigate the risk of impaired auditor independence resulting from prolonged auditor–client relationships (Qintharah, 2020). From an agency theory perspective, external auditors serve as an important monitoring mechanism that reduces information asymmetry between principals and agents by enhancing the credibility of financial reporting. Effective external auditing increases the probability that financial misstatements will be detected, thereby constraining opportunistic managerial behaviour. However, long-term relationships between auditors and clients may create familiarity threats that weaken professional scepticism and reduce audit effectiveness. To address this issue, many jurisdictions have implemented mandatory auditor rotation policies. In Indonesia, auditor rotation is regulated through Financial Services Authority Regulation No. 13/POJK.03/2017, which aims to maintain auditor independence and strengthen the reliability of financial reporting. Empirical studies suggest that strong external auditing mechanisms can significantly reduce the risk of fraudulent financial reporting (Amar et al., 2022; Wei et al., 2022).

Recent literature also indicates that auditor changes may enhance audit quality by introducing a fresh perspective and greater professional scepticism in the audit process. Newly appointed auditors tend to conduct more rigorous examinations because they are not influenced by prior relationships with management (Khamainy et al., 2021a; Yarana, 2023). Although auditor changes are sometimes associated with auditor shopping, this interpretation is less relevant in regulated environments where rotation is mandatory. In such contexts, auditor changes are more likely to reflect regulatory compliance or efforts to improve audit quality rather than attempts to conceal financial misreporting. From an agency theory perspective, the appointment of a new auditor increases scrutiny and raises the expected cost of opportunistic managerial behaviour, thereby reducing the likelihood of fraudulent financial reporting. Within the Fraud Star framework, auditor change can therefore function as a governance mechanism that strengthens external monitoring and limits opportunities for financial statement fraud (Mahdi Sahi et al., 2022; Roshanpoor et al., 2024; Yarana, 2023; Yousefi Nejad et al., 2024). Based on this reasoning, the following hypothesis is proposed:

H4: Change in the auditor has a negative effect on financial statement fraud.

Change in Director and Financial Statement Fraud

Capability refers to the authority, expertise, and strategic position required to execute and conceal fraudulent activities (Wolfe & Hermanson, 2004). From an agency theory perspective, directors play a crucial role in mitigating agency conflicts by overseeing managerial actions and ensuring that corporate decisions align with shareholder interests. Therefore, changes in directors do not necessarily indicate an increased risk of fraud; instead, they often represent governance interventions aimed at improving organisational performance and strengthening oversight mechanisms. Leadership changes are frequently implemented to enhance organisational quality, restructure governance, or appoint individuals with stronger professional expertise, which can ultimately improve internal control systems and financial reporting quality (Alifa & Rahmawati, 2022; Navila Rahma & Permata Sari, 2023; Permata Sari & Kurniawan Nugroho, 2020). Empirical evidence also suggests that governance renewal through leadership restructuring may enhance transparency and strengthen monitoring practices, thereby reducing the likelihood of opportunistic managerial behaviour (Sari et al., 2022; Wei et al., 2022).

Recent studies further indicate that newly appointed directors often introduce stronger oversight and new governance perspectives that increase managerial accountability. Such changes may improve internal supervision and reduce managerial discretion in financial reporting (Burkhardt et al., 2020; Khamainy et al., 2021b; Sihombing & Eirene Panggulu, 2022). Although leadership transitions may

temporarily create greater managerial discretion, this risk largely depends on the strength of corporate governance mechanisms. When director changes are motivated by governance improvement, new leadership can function as a corrective governance mechanism that strengthens internal controls and raises the expected cost of misconduct. Empirical research also shows that stronger board oversight and leadership restructuring are associated with lower levels of financial misreporting. Within the Fraud Star framework, director change can therefore be interpreted as a governance-enhancing mechanism that reduces managerial opportunism and limits opportunities for fraudulent financial reporting. Accordingly, the following hypothesis is proposed:

H5: Change in the director has a negative effect on financial statement fraud.

Integrity and Financial Statement Fraud

Agency theory posits that conflicts of interest between principals and agents arise due to information asymmetry and divergent incentives, creating opportunities for opportunistic behaviour. In organisational contexts, integrity functions not only as an individual ethical attribute but also as a governance mechanism that increases the expected cost of misconduct (Siahaan, Umar, & Purba, 2019). Integrity becomes effective when ethical standards are translated into enforceable organisational practices that discipline managerial actions and reduce opportunistic behaviour. Prior studies indicate that organisations with strong ethical governance frameworks and integrity-based cultures tend to exhibit higher financial reporting quality and lower levels of financial misreporting (Wei et al., 2022). In such environments, ethical values are embedded within governance structures that guide managerial decision-making and enhance organisational accountability.

In this study, integrity is operationalised through reward–punishment systems that institutionalise ethical expectations by linking compliant behaviour to incentives and misconduct to sanctions. From an agency theory perspective, such mechanisms reduce managerial discretion by altering the cost–benefit considerations associated with opportunistic behaviour (Adetunji Paul Adejumo & Chinonso Peter Ogburie, 2025; Nindito et al., 2024). When reward and punishment systems are consistently enforced, managers face higher expected penalties for misreporting, thereby reducing incentives to exploit informational advantages or performance pressure. Empirical studies also suggest that firms with stronger ethical cultures and governance enforcement mechanisms are less likely to engage in fraudulent financial reporting (Hernandez Aros et al., 2026; Jaswadi et al., 2022; Wibowo & Putra, 2023). However, integrity that is merely symbolic without practical enforcement is unlikely to deter fraud. Therefore, integrity institutionalised through effective reward–punishment mechanisms is expected to reduce the likelihood of financial statement fraud by strengthening ethical discipline within corporate governance structures. Based on this reasoning, the following hypothesis is proposed:

H6: Integrity has a negative effect on financial statement fraud.

METHODS

This study employs a quantitative research approach to examine the relationship between Fraud Star determinants and financial statement fraud using secondary archival data. Quantitative methods are appropriate for testing theoretically derived hypotheses through statistical inference across firms and time (Sugiyono, 2016). The study relies on audited annual financial statements and annual reports obtained from the Indonesia Stock Exchange and official company websites to ensure data reliability and consistency. All variables are operationally defined to enhance measurement clarity and replicability.

Table 1. Definitions of Variables Operational

Variable	Definition Operational	Indicator	Scale
Dependent Variable			
<i>Financial Statement Fraud</i>	Financial statement fraud is the presentation of financial statements that contain material misstatements that harm users of financial statements. (Achmad, Ghozali, & Pamungkas, 2022a)	The proxy in this study uses the F-Score Model. F-Score Model calculation = Accrual Quality + Financial Performance. Then you can determine it using the results of the F-Score. If the F-score value > 1, the company is indicated to have committed financial statement fraud. If F-score < 1, then there is no indication of financial statement fraud.	Ratio
Independent Variables			
<i>Financial Target</i>	A financial target is a specific goal related to a company's financial performance, such as revenue, profit, or growth, that is set by management and used to guide decision-making and measure progress (Yesiariani & Rahayu, 2017b)	$FT = \frac{\text{Profit After Tax}}{\text{Total Asset}}$	Ratio
<i>Financial Stability</i>	Financial stability refers to a condition in which an individual, institution, or entire financial system can withstand economic shocks or disruptions without a significant impact on its ability to function effectively. (Jao et al., 2020)	$FS = \frac{\text{Total Asset } (t) - \text{Total Asset } (t - 1)}{\text{Total Asset } (t)}$	Ratio
<i>Ineffective Monitoring</i>	A business condition is when there is poor internal control (Himawan & Karjono, 2019)	$INF = \frac{\text{Total Independent Commissioner}}{\text{Total Board of Commisioner}}$	Ratio
<i>Change in Auditor</i>	Change in auditor refers to a company's auditor being replaced, which can be viewed as a means of eradicating indications of fraud discovered by the prior auditor (Tessa, 2016)	A code of 1 (one) is assigned to indicate a change in the Public Accounting Firm during the research period of 2021-2023, while a code of 0 (zero) is used to indicate the absence of such a change.	Nominal
<i>Change in Director</i>	The replacement of the old board of directors with a new one is referred to as a change in directors, which aims to enhance the performance of the previous management. (Kurniawan & Maju Simatupang, 2024)	In the 2021-2023 timeframe, a change in directors is assigned a code of 1, whereas a code of 0 is assigned if there is no change in directors within the company during that period.	Nominal
<i>Integrity</i>	Integrity is a quality, characteristic, or condition where a person shows quality, hard work, and adequate competence in everything he did. (Siahaan, Umar, & Br, 2019).	The integrity measurement uses a dummy variable, namely, if there is a company that has a Reward and Punishment System for employees during the 2021-2023 period, it is given code 1 (one). If the company does not have a Reward and Punishment System for employees during the 2021-2023 period, it is coded 0 (zero).	Nominal

Financial statement fraud is proxied using the Fraud F-Score model. Conceptually, the F-Score is designed as a fraud-risk indicator rather than a binary fraud occurrence measure. In this study, the F-Score is treated as a continuous dependent variable to capture variation in the intensity of fraud risk, rather than a dichotomous classification of fraud versus non-fraud. This specification is methodologically appropriate because the research objective is to explain how governance and behavioural factors incrementally increase or decrease fraud risk. Dichotomising the F-Score would obscure meaningful variation in misstatement risk and reduce statistical power. Accordingly, the continuous treatment of the F-Score aligns with its conceptual role as a probabilistic risk metric rather than a definitive fraud label.

Meanwhile, Integrity is conceptualised as an organisational governance mechanism that constrains opportunistic behaviour rather than as an individual moral trait (Siahaan, Umar, & Purba, 2019). Given the limitations of archival data, integrity is operationalised as institutionalised ethical enforcement reflected in reward–punishment systems. From an agency theory perspective, these mechanisms increase the expected cost of misconduct by linking ethical compliance to incentives and violations to sanctions, thereby reducing managerial discretion under information asymmetry. This operationalisation captures the effectiveness of ethical enforcement and ensures alignment between the theoretical construct of integrity and its empirical measurement.

Population and Sample

The population comprises Consumer Non-Cyclicals sector firms listed on the Indonesia Stock Exchange during the 2021–2023 period. Purposive sampling is employed to ensure that only firms with complete and comparable financial disclosures are included (Sugiyono, 2016). Based on these criteria, 71 firms are selected, generating a balanced panel of firm-year observations over three years. Although fraud research is often constrained by limited observable cases, the adequacy of the sample in this study is supported by the panel structure of the data, which increases the effective number of observations by exploiting both cross-sectional and temporal variation. Panel datasets are widely recognised as enhancing statistical power and estimation efficiency compared to purely cross-sectional designs, particularly when examining governance and behavioural variables that evolve over time. Accordingly, the study relies on firm-year observations rather than raw firm counts to ensure sufficient analytical power.

Table 2. Sample Collection Criteria

No	Explanation	Total
1	Consumer Non-Cyclicals sector companies listed on the Indonesia Stock Exchange in 2021 – 2023.	111
2	Companies that do not disclose audited yearly financial statements on the Indonesian Stock Exchange in Rupiah currency.	(2)
3	Companies that lack complete data regarding the study's variables from publications during the 2021-2023 timeframe.	(38)
4	During the research period, the company experienced delisting from the IDX	(0)
	Total Sample	71
	Total Sample for Three Years (71 x 3)	213

The Consumer Non-Cyclicals sector is selected based on theoretical relevance rather than data availability. Firms in this sector operate in relatively stable demand conditions and are less exposed to macroeconomic cycles compared to cyclical industries. As a result, fluctuations in reported financial performance are less likely to be driven by external demand shocks and more likely to reflect internal governance quality, managerial incentives, and monitoring effectiveness. This sectoral focus allows the study to isolate fraud determinants proposed by Fraud Star Theory—particularly pressure, opportunity, and integrity—while minimizing confounding effects from extreme business cycle volatility.

Data Analysis Technique

The study employs panel data regression analysis using EViews 12. Panel data combine cross-sectional and time-series information, allowing the analysis to control for unobserved firm-specific

characteristics while capturing temporal changes in governance and financial conditions (Mohd Ghazali et al., 2023). The panel design is theoretically justified because fraud risk is inherently dynamic. Determinants such as financial pressure, monitoring effectiveness, leadership changes, and integrity mechanisms evolve over time rather than remaining static. Panel regression enables the study to distinguish persistent firm traits from time-varying fraud determinants, thereby strengthening causal inference compared to cross-sectional models. The purpose of this panel data regression analysis is to determine whether there is a correlation between financial targets, financial stability, ineffective monitoring, changes in auditor, changes in director, and integrity with financial statement fraud.

Several independent variables—such as auditor change and director change—are modelled as dummy variables, reflecting discrete governance events. The inclusion of dummy variables in linear panel regression is methodologically appropriate, as they capture structural and institutional shifts that are inherently binary. Linear panel models allow for direct interpretation of marginal effects while accommodating both continuous and categorical predictors. With the regression equation as follows:

$$FFS = \alpha + \beta_1 FT + \beta_2 FS + \beta_3 INF - \beta_4 AUCHANGE - \beta_5 DCHANGE - \beta_6 INT + \varepsilon$$

Note:

FFS	: Financial Statement Fraud occurs if the F-Score value > 1, and if the F-score < 1 then there is no financial statement fraud.
α	: Constant
β_1 - β_8	: Independent variable regression coefficient
FT	: Financial Target
FS	: Financial Stability
INF	: Ineffective monitoring
AUCHANGE	: Change in Auditor
DCHANGE	: Change in Director
INT	: Integrity
ε	: Error term (combined element)

In this research, the analysis used is panel data. Before estimating with panel data, it is necessary to choose an appropriate model, including the common effects model, fixed effects model, and random effects model. The following is an explanation of the three models in the study carried out by (Iqbal & Ahmad, 2021), namely, the Common Effect model (CEM), which is a simple model for estimating panel data that combines cross-sectional data and time series data. The CEM model uses the Ordinary Least Squares (OLS) approach necessary to test classical assumptions. The Fixed Effect model (FEM) is a model that assumes there are differences in intercepts from each individual (company), but the same slope between individuals (companies). The technique used in the FEM is Least Squares Dummy Variable (LSDV). LSDV is included in Ordinary Least Squares (OLS) to test classical assumptions. Random Effect model (REM) is a model that assumes each company has different intercepts, where intercepts are included in random or statistical variables. The model utilises the Generalized Least Squares (GLS) method to handle coincident autocorrelation and correlation between observations for each variable.

Several tests were carried out to choose the most appropriate and suitable model to be used in this study. According to Badawi (2018), there were three stages of testing, which included the Chow test, to determine which model is more appropriate between the common effect and fixed effect. The second is the Hausman test, which is performed after the Chow test to determine if the appropriate model is fixed effect or random effect. Thirdly, the Lagrange multiplier test is finally used to choose between random effect and common effect models based on the chi-squared distribution with degrees of freedom equivalent to the number of independent variables.

This study provides an incremental methodological contribution by integrating Fraud Star Theory with panel-based fraud-risk modelling in an emerging market context. Unlike prior studies that apply fraud determinants as static or universally additive predictors, this research explicitly models fraud risk as a continuous outcome that evolves over time, while incorporating governance dynamics and institutional

enforcement variation. The combined use of a continuous F-Score, panel data design, and governance-based proxies enables a more nuanced examination of fraud risk intensity rather than binary fraud occurrence, thereby extending the methodological application of Fraud Star Theory. Model fit is evaluated using the adjusted R-squared statistic. Joint significance of the independent variables is assessed using the F-test, while individual parameter significance is evaluated using t-tests at a 5% significance level (Apriliana & Agustina, 2017; Kuncoro, 2004). These tests collectively assess both the explanatory power and robustness of the estimated model.

RESULTS AND DISCUSSION

Descriptive Statistical Analysis

The study includes independent variables such as financial targets, financial stability, ineffective monitoring, change in auditor, change in directors, and integrity, and the dependent variable is financial statement fraud. Descriptive statistics are used to provide a summary of the data, including measures such as mean, minimum, maximum, sum, range, variance, and standard deviation. The study analysed 213 firm-year observations from companies in the consumer non-cyclicals sector. The descriptive statistics indicate considerable variation in financial statement fraud (FFS), as reflected by a standard deviation that exceeds the mean. This suggests that fraud risk is not evenly distributed across firms but tends to concentrate in certain companies, highlighting the importance of firm-level governance characteristics. These results can be presented in tables, pie charts, or graphs. The statistical analysis used in the study is presented in the table below:

Table 3. Results of Descriptive Statistics

	FFS	FT	FS	INF	AUCHANG E	DCHANG E	INT
Mean	0.087746	5.092441	4.188638	0.404930	0.093897	0.413146	0.892019
Maximum	5.510000	96.08000	62.77000	0.830000	1.000000	1.000000	1.000000
Minimum	-3.160000	-51.75000	-59.09000	0.170000	0.000000	0.000000	0.000000
Std. Dev	0.810758	15.15294	15.68849	0.108596	0.292372	0.493558	0.311088
Observations	213	213	213	213	213	213	213

Based on Table 3, the descriptive statistics indicate considerable variation in financial statement fraud and several explanatory variables across the sampled firms, reflecting heterogeneous organisational conditions within the sector. The wide dispersion of financial targets and financial stability suggests differing levels of financial pressure and organisational performance among firms, which may influence managerial behaviour in financial reporting. In contrast, ineffective monitoring shows relatively low variability, indicating that most firms possess similar formal governance structures, implying that differences in fraud risk are more likely related to the effectiveness of monitoring rather than its structural presence. Governance-related variables also reveal that auditor changes occur in a relatively small proportion of firms, suggesting a tendency to maintain auditor continuity, while director changes are more frequent, reflecting governance renewal through leadership restructuring. Meanwhile, most firms report implementing reward–punishment systems as part of their ethical governance framework; however, the persistence of fraud variation despite the widespread adoption of such mechanisms suggests that governance practices may differ in their effectiveness across organisations. Overall, these findings indicate that fraud risk is shaped by differences in organisational conditions and governance effectiveness rather than merely by the existence of formal governance structures.

Classical Assumption Testing

Classical Assumption testing is a set of statistical tests for the assumptions of multiple linear regression analysis, which include normality, linearity, homoscedasticity, and the absence of multicollinearity. These tests are important because violations of these assumptions can lead to biased or

inconsistent regression coefficients and inaccurate statistical inference. The classic assumption test is being carried out to test the assumptions in multiple linear regression modeling, so that the data can be analysed further without producing biased data. This study includes tests of normality, multicollinearity, heteroscedasticity, and autocorrelation. Diagnostic tests confirm that the regression model satisfies key classical assumptions, including normality, absence of multicollinearity, homoscedasticity, and no autocorrelation. These results indicate that the estimated coefficients are statistically reliable and suitable for hypothesis testing.

Panel Data Model Selection

The Chow test is essential in deciding which model is suitable between the common effect and the fixed effect. The results of the Chow test can be observed through the Cross-Section F-value. If the significance value is greater than 0.05, then the common effect model is chosen. However, if the significance value is less than 0.05, then the fixed effect model is chosen. The following are the results of the Chow test shown in Table 7.

Table 7. The Result of the Chow Test

Redundant Fixed Effects Tests			
Equation: Untitled			
Test cross-section fixed effects			
Effects Test	Statistic	d.f.	Prob.
Cross-section F	1.565009	(70,136)	0.0134
Cross-section Chi-square	125.850663	70	0.0000

Note: Prob Value > 0,05 = REM, Prob Value < 0,05 = FEM

Table 7 displays the Chow test results, which show a cross-section F-value of 0.0134 and a significance value lower than the predetermined of 5% level, indicating that H0 is rejected and H1 is accepted. Therefore, based on the Chow test results, the appropriate model to use is the FEM. Following the Chow test with the FEM selection, the Hausman test is conducted to determine the better model between the fixed effect and the random effect model. The Sig. Prob value that is used to interpret the Hausman test results is where if the Prob value > 0.05, then the random effect is used, and if the Prob value < 0.05, then the fixed effect is used. The following results of the Hausman Test are shown in Table 8.

Table 8. The result of the Hausman Test

Correlated Random Effects - Hausman Test			
Equation: Untitled			
Test cross-section random effects			
Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	18.992248	6	0.0042

Note: Prob Value > 0,05 = REM, Prob Value < 0,05 = FEM

The significance value obtained from the Chow test is 0.0042, which is less than the predetermined significance level of 0.05 or 5%. Therefore, the null hypothesis (H0) is rejected, and the alternative hypothesis (H1) is accepted. Hence, the appropriate model to use is the FEM. The Lagrange multiplier test is performed to choose the best model between the random effect and common effect models. However, in this study, the Lagrange multiplier test was not conducted because the best model had been determined through the Chow and Hausman tests, which is the FEM. Therefore, there was no need to perform the Lagrange multiplier test.

Panel data regression was employed to capture both cross-sectional and time-series variations across firms. The Chow and Hausman tests indicate that the Fixed Effect Model is the most appropriate specification, suggesting that unobserved firm-specific characteristics significantly influence fraud risk. This finding is theoretically meaningful because fraudulent behaviour is often shaped by internal

governance structures, managerial practices, and organisational culture that remain relatively stable over time. Controlling for these firm-level effects strengthens the model’s ability to explain variations in financial statement fraud.

Panel Data Regression Equation

The suitable regression model is the FEM, and the EViews 12 software was used to conduct the FEM panel data regression. Table 9 displays the results of the regression.

Table 9. The result of the Fixed Effect Model Test

Variable	Coefficient	Variance	Uncentered VIF	Centered VIF
C	0.789751		0.208501	3.787753
FT	-0.011021		0.002298	-4.796123
FS	0.011633		0.001345	8.647154
INF	-0.460402		0.299057	-1.539510
AUCHANGE	-0.243601		0.067270	-3.621239
DCHANGE	-0.158653		0.047194	-3.361721
INT	-0.470566		0.182472	-2.578838

Based on Table 9, the equations in this study are as follows:

$$FFS = 0.789751 - 0.011021 FT + 0.011633 FS - 0.460402 INF - 0.243601 AUCHANGE - 0.158653 DCHANGE - 0.470566 INT + \epsilon$$

The intercept of the FEM is 0.789751, indicating that if all independent variables are zero, the financial statement fraud will be 0.789751. The coefficient for the financial target variable (FT) is negative -0.011021, which implies that a one-unit increase in the financial target variable will lead to a decrease in financial statement fraud by 0.011021 units, and vice versa. The financial-stability variable (FS) has a positive coefficient of 0.011633, indicating that a one-unit increase in the financial stability variable leads to an increase in financial statement fraud by 0.011633 units and vice versa. The ineffective monitoring variable (INF) has a negative coefficient of -0.460402, implying that an increase in the ineffective monitoring variable by one unit will result in a decrease in financial statement fraud by 0.460402 units, and vice versa. Similarly, an increase in the change in auditor variable (AUCHANGE) by one unit will lead to a decrease in financial statement fraud by 0.243601 units, and vice versa. An increase in the change in the director variable (DCHANGE) by one unit will result in a decrease in financial statement fraud by 0.158653 units, and vice versa. Finally, the integrity variable (INT) has a negative coefficient of -0.470566, indicating that an increase in the integrity variable by one unit will result in a decrease in financial statement fraud of 0.470566 units, and vice versa.

Determination Coefficient (R2)

The adjusted R-squared is used to determine the impact of independent variables on the regression analysis with multiple independent variables. This study selected the adjusted R-squared value. The results of the coefficient of determination test (R-squared) are presented in Table 10.

Table 10. The result of the Fixed Effect Model Test

Root MSE	0.560634	R-squared	0.789533
Mean dependent var	0.251359	Adjusted R-squared	0.671919
S.D. dependent var	1.579936	S.E. of regression	0.701616
Sum squared resid	66.94803	F-statistic	6.712921
Durbin-Watson stat	2.745588	Prob(F-statistic)	0.000000

According to Table 10, the value of the Adjusted R-squared is 0.671919, which indicates that the variables financial target, financial stability, ineffective monitoring, change in auditor, change in director, and integrity can account for 67% of the variance in financial statement fraud. The remaining 33% is attributed to other variables that are not included in the panel data regression model used in this study.

Model Feasibility Test

The feasibility of the model was tested using the F-test, which determines if the independent variables can collectively influence the dependent variable at a significance level of 0.05. Based on Table 10, the F-test yielded a Prob. (F-statistic) value of 0.000000, smaller than the significance level of 0.05, and an F-statistic value of 6.712921, greater than the F-table value of 2.05. Thus, H0 is rejected, and H1 is accepted, indicating that financial targets, financial stability, ineffective monitoring, change in auditor, change in director, and integrity collectively have a significant impact on financial statement fraud, and the model is feasible.

t Test

The t-test was conducted to determine the individual significance and the extent of influence of each independent variable on the dependent variable, with results summarised in Table 11.

Table 11. The result of the Statistical test t

Variable	Coefficient	Variance	Uncentered VIF	Centered VIF
C	0.789751		0.208501	3.787753
FT	-0.011021		0.002298	-4.796123
FS	0.011633		0.001345	8.647154
INF	-0.460402		0.299057	-1.539510
AUCHANGE	-0.243601		0.067270	-3.621239
DCHANGE	-0.158653		0.047194	-3.361721
INT	-0.470566		0.182472	-2.578838

The first hypothesis, stating that financial targets affect financial statement fraud, is rejected as the t-test results show a probability value greater than the significance level and a negative coefficient, indicating an insignificant effect. However, the second hypothesis stating that financial stability affects financial statement fraud is accepted, as financial stability demonstrates a significant positive effect with a probability value smaller than the significance level and a positive coefficient. Conversely, the third hypothesis stating that ineffective monitoring affects financial statement fraud is rejected because ineffective monitoring shows a probability value greater than the significance level and a negative coefficient, indicating an insignificant effect on financial statement fraud.

The fourth hypothesis proposes that a change in auditor (AUCHANGE) reduces the likelihood of financial statement fraud. This hypothesis is supported, as the probability value of 0.0004 is significantly lower than the significance value of 0.05. Furthermore, the t-count of -3.621239 falls well below the t-table value of 1.971547, and the negative coefficient of -0.243601 confirms that the hypothesis is accepted. Thus, the change of auditor has a significant inverse relationship with fraudulent reporting. Similarly, the fifth hypothesis is accepted, demonstrating that a change in director also has a negative impact on financial statement fraud. This is evidenced by a strong probability value of 0.0010 and a t-count of -3.361721, paired with a negative coefficient of -0.158653, suggesting that leadership or director changes may disrupt fraudulent patterns. Finally, the sixth hypothesis is accepted, confirming that integrity (INT) serves as a significant deterrent to financial statement fraud. With a probability value of 0.0110 and a t-count of -2.578838, the results show that as integrity levels increase, the occurrence of fraud decreases, as indicated by the negative coefficient of -0.470566. Therefore, integrity has a negative effect on financial statement fraud.

The regression results reveal that the model explains approximately 67% of the variance in financial statement fraud, indicating strong explanatory power for governance-based research. This suggests that the

selected Fraud Star components capture important determinants of fraudulent reporting. Beyond statistical significance, several variables demonstrate meaningful effect sizes. Integrity and ineffective monitoring show relatively large coefficients compared to other predictors, indicating that governance mechanisms play a substantial role in shaping fraud risk. These findings emphasise that practical relevance should be considered alongside statistical significance when evaluating fraud determinants.

The Effect of Financial Targets on Financial Statement Fraud

Based on the panel data regression results, the first hypothesis (H1) is rejected, indicating that financial targets had no significant effect on financial statement fraud in non-cyclical consumer sector companies listed on the IDX from 2021 to 2023. This finding is consistent with research by Apriliana & Agustina (2017) and Handoko et al. (2022), which suggests that financial targets have no significant effect on the prediction of fraudulent financial reporting. While agency theory explains that management may use various means to demonstrate good performance to stakeholders, the use of Return on Assets (ROA) as a performance proxy in this study did not appear to trigger fraudulent behavior. This suggests that as long as ROA targets remain reasonable and achievable, they do not create undue pressure on managers. Consequently, any increases in profitability likely result from improved operational quality rather than the manipulation of financial statements.

The absence of a significant relationship between financial targets and financial statement fraud suggests that performance pressure alone is insufficient to induce fraudulent behaviour. While agency theory predicts that incentive-based contracts may motivate opportunism, the findings indicate that such incentives only become problematic when combined with enabling governance weaknesses (Ismail Khan & Muhammad Hapiz, 2022). This challenges the deterministic assumption embedded in many fraud models that pressure automatically escalates into misconduct (Achmad, Ghozali, Rahardian, et al., 2022). A plausible theoretical interpretation is that financial targets function as a disciplining mechanism when perceived as attainable, but transform into a fraud driver only under conditions of organisational strain. In the relatively stable non-cyclical consumer sector, predictable demand may buffer managerial pressure, thereby weakening the behavioural pathway from targets to manipulation (Herbenita et al., 2022a). This finding refines Fraud Star Theory by suggesting that pressure is conditional rather than universally predictive, reinforcing the need to examine interaction effects between incentive structures and governance quality. Substantively, the near-zero coefficient implies that increasing financial targets does not meaningfully alter fraud risk within this context, highlighting the limited practical relevance of pressure when organisational controls remain intact.

The Effect of Financial Stability on Financial Statement Fraud

Panel data regression results indicate that the second hypothesis (H2) is accepted, meaning financial stability had a positive impact on financial statement fraud in non-cyclical consumer sector companies listed on the IDX from 2021 to 2023. The positive effect of financial stability provides an important theoretical extension to agency-based fraud explanations. Rather than viewing fraud purely as a response to financial distress, the result suggests that managers may manipulate reporting to preserve the appearance of stability, particularly when market expectations are high (Nurulita et al., 2023). This supports the notion of reputation-driven opportunism, where managers prioritise continuity signals to avoid negative investor reactions. Fraud, therefore, may emerge not only from survival pressure but also from the strategic maintenance of organisational legitimacy (Yulianti & Wulandari, 2025). The magnitude of the coefficient indicates a meaningful increase in fraud risk as stability pressures intensify, underscoring its substantive importance beyond statistical significance. This helps reconcile prior contradictory findings by demonstrating that stability becomes hazardous when it evolves into a performance narrative that managers feel compelled to defend (Khamainy et al., 2021b). Accordingly, the study advances fraud theory by repositioning financial stability from a protective indicator to a potential reputational risk factor.

This finding is supported by (Alan Darmasaputra & Winda Mulia, 2025; Aulia & Zulaeha, 2024; Herbenita et al., 2022b), although it contradicts research by (Ozcelik, 2020; Permata Sari & Kurniawan Nugroho, 2020), which found no such effect. These results align with agency theory regarding the

conflicting interests between stakeholders and agents; while investors seek high returns, management pursues high rewards for their performance. This pressure encourages management to maintain perceived financial stability at any cost, even by manipulating financial statements to mask poor performance, thereby confirming that financial stability can positively influence financial statement fraud.

The Effect of Ineffective Monitoring on Financial Statement Fraud

The panel data regression results indicate that the third hypothesis (H3) is not supported, meaning the ineffective monitoring variable had no impact on financial statement fraud in non-cyclical consumer sector companies listed on the IDX from 2021 to 2023. Contrary to theoretical expectations, ineffective monitoring does not significantly influence fraud risk. However, interpreting this result as evidence of governance irrelevance would be misleading. Instead, the finding points toward a critical distinction between formal governance structures and functional oversight (Nabila Musfi & Soemantri, 2024). Agency theory assumes that monitoring mitigates opportunism, yet this assumption depends heavily on enforcement quality. When supervisory mechanisms exist primarily to satisfy structural requirements, their behavioural impact may be limited (Anami et al., 2023). Thus, the insignificance observed here suggests that fraud opportunity is less about the presence of controls and more about their operational credibility.

This interpretation moves beyond speculative regulatory explanations and contributes to theory by introducing the concept of symbolic governance, where oversight mechanisms appear adequate but lack deterrent force. Consequently, opportunity should be reconceptualised not as a binary condition but as a continuum shaped by monitoring effectiveness. The minimal coefficient further indicates that variations in board oversight produce negligible changes in fraud probability, reinforcing the argument that governance quality outweighs governance form. This rejection is consistent with research by (Aulia & Zulaeha, 2024; Dwianto et al., 2024) which suggests that independent commissioners are often appointed merely to fulfill IDX regulations or formal provisions rather than as a functional necessity for good corporate governance. This aligns with agency theory, where an information asymmetry exists because managers possess deeper operational knowledge than principals. Furthermore, because the majority shareholders play a primary role in overseeing board performance, the presence of an independent board of commissioners does not serve as a definitive indicator for determining the level of financial statement fraud.

The Effect of Change in Auditors on Financial Statement Fraud

Panel data regression results indicate that the fourth hypothesis (H4) is accepted, suggesting that a change in auditor has a negative impact on financial statement fraud in non-cyclical consumer sector companies listed on the Indonesia Stock Exchange (IDX) from 2021 to 2023. The negative association between auditor change and fraud supports the monitoring role emphasized in agency theory. Auditor rotation appears to strengthen independence, disrupt informational familiarity, and elevate the perceived likelihood of detection (Yousefi Nejad et al., 2024). Importantly, the finding suggests that auditor change operates as a preventive governance signal rather than merely a regulatory outcome.

Firms that rotate auditors may be signalling commitment to reporting credibility, thereby discouraging managerial opportunism (Sari et al., 2022). The effect size indicates a non-trivial reduction in fraud risk, highlighting the practical relevance of external audit mechanisms. This helps clarify inconsistent prior evidence by suggesting that auditor rotation should be interpreted within a governance-strengthening framework rather than a suspicion-driven one. Theoretically, the result reinforces the importance of external monitoring in complementing internal controls, positioning auditor independence as a central pillar of fraud prevention.

These findings are consistent with research by (Dwianto et al., 2024; Sasongko & Wijyantika, 2019), which indicates a negative relationship between auditor changes and fraud. In this context, changing auditors serves to improve external audit performance and prevent fraudulent reporting rather than to evade detection. This aligns with agency theory, as stakeholders seek satisfactory performance while management works toward that goal. Furthermore, Financial Services Authority Regulation Number 13/POJK.03/2017 mandates a rotation of audit services every three consecutive years; consequently, regular auditor changes are associated with a lower incidence of financial statement fraud.

The Effect of Change in Directors on Financial Statement Fraud

Panel data regression results indicate that the fifth hypothesis (H5) is supported, meaning the change in director variable has a negative impact on financial statement fraud in non-cyclical consumer sector companies listed on the Indonesia Stock Exchange (IDX) from 2021 to 2023. Director turnover is found to reduce the likelihood of fraudulent reporting, offering a nuanced refinement to the capability dimension of Fraud Star Theory. While managerial capability is often framed as an enabler of fraud, the evidence suggests that leadership renewal can instead function as a corrective governance response (Sari et al., 2022). From an agency perspective, replacing directors represents an adaptive mechanism through which principals realign managerial incentives and restore oversight effectiveness (Achmad, Ghozali, & Pamungkas, 2022).

Capability, therefore, should not be treated as inherently risky; its influence depends on whether authority is exercised opportunistically or accountably. The substantive magnitude of the coefficient indicates that leadership restructuring meaningfully lowers fraud exposure, suggesting that governance dynamism may be more important than governance stability (Khamainy et al., 2021b). This finding challenges static interpretations of board effectiveness and reframes director change as a strategic governance intervention rather than a disruption. This study supports agency theory regarding the differing interests between principals and agents, where stakeholders (principals) replace incompetent directors with more capable individuals to protect their interests. Consistent with research by Alifa & Rahmawati (2022), Eksandy & Sari (2022), and (Septriani, 2018), director changes in this context are not intended to conceal existing fraud, but rather result from board supervision of management performance. These transitions allow for improved management quality and reduced fraudulent reporting through the recruitment of more competent leadership. Consequently, regular changes to more qualified directors tend to decrease the level of financial statement fraud within a company.

The Effect of Integrity on Financial Statement Fraud

The results of the study indicate that the sixth hypothesis (H6) is supported, confirming that integrity has a negative influence on financial statement fraud in non-cyclical consumer sector companies listed on the Indonesia Stock Exchange (IDX) from 2021 to 2023. Integrity demonstrates a significant and economically meaningful negative relationship with fraud, highlighting the critical role of ethical enforcement within corporate governance (Mayangsari & Santoso, 2024). By operationalising integrity through reward–punishment systems, the study captures how ethical expectations are translated into enforceable organisational practices.

Agency theory traditionally emphasises monitoring; however, the findings suggest that normative controls may be equally influential in constraining opportunistic behaviour. When misconduct carries tangible consequences and ethical compliance is incentivised, the cost-benefit calculus underlying fraud shifts substantially (Lotfi et al., 2021). Among the examined variables, integrity exhibits one of the stronger deterrent effects, indicating that ethical infrastructure is not merely symbolic but behaviourally consequential. This supports an emerging view that fraud prevention requires both surveillance and value-based governance (Rahmawati et al., 2025). Theoretically, the study extends Fraud Star Theory by positioning integrity not simply as a moral attribute but as an institutional control mechanism with measurable behavioural impact.

This research aligns with agency theory, where the relationship between stakeholders (principals) and management (agents) is governed by a contract requiring the agent to act responsibly in the principal's best interests. These findings are supported by research from (Mawardi et al., 2020), Siahaan et al. (2019), and Umar et al. (2021), which suggests that individuals with high integrity are less likely to be swayed by pressure or the temptation to commit fraud. Although integrity remains difficult to measure accurately through standard indicators, the study concludes that as an employee's integrity increases, the likelihood of fraudulent activity decreases.

CONCLUSION

This study contributes to the development of fraud literature by challenging the conventional assumption that the determinants within Fraud Star Theory operate as universally predictive drivers of fraudulent behaviour. The findings indicate that the influence of fraud determinants is context-dependent and influenced by the effectiveness of corporate governance mechanisms. In particular, pressure-based incentives such as financial targets do not automatically lead to fraudulent reporting unless supported by enabling governance conditions, thereby extending agency theory from a purely incentive-driven perspective toward a governance-contingent framework. Furthermore, financial stability is reconceptualised as a reputational construct rather than solely an indicator of organisational strength, suggesting that managers may manipulate financial reporting to maintain the appearance of stability and sustain market confidence. The results also reveal that ineffective monitoring structures may function symbolically rather than substantively when oversight mechanisms are not actively enforced. In addition, managerial capability—proxied by changes in directors—may serve as a corrective governance mechanism rather than facilitating fraud. By operationalising integrity through reward–punishment systems, this study further reframes integrity from an abstract ethical concept into an observable institutional control, thereby strengthening the theoretical linkage between behavioural ethics and corporate governance within the Fraud Star framework.

Empirically, using a sample of 71 consumer non-cyclical sector companies listed on the Indonesia Stock Exchange during the 2021–2023 period, this study finds that financial stability has a significant positive effect on financial statement fraud, indicating that firms experiencing growth or financial fluctuations may face greater incentives to misrepresent their financial performance. Conversely, changes in auditors, changes in directors, and corporate integrity demonstrate significant negative effects on fraudulent reporting, suggesting that governance renewal and integrity-based control systems can function as effective deterrents to fraud. Meanwhile, financial targets and ineffective monitoring do not exhibit a statistically significant influence in this sector. These findings imply that regulators, auditors, and investors should prioritise strengthening corporate governance practices and integrity-based control mechanisms to mitigate fraud risk in the Indonesian capital market. However, this study is subject to several limitations, particularly its focus on a single industry sector and a relatively short observation period of three years. Therefore, future research is recommended to extend the analysis to other sectors and incorporate additional moderating variables—such as digital transformation, audit committee expertise, or governance quality—to provide a more comprehensive understanding of fraud prevention mechanisms in companies listed on the Indonesia Stock Exchange.

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