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Analysis Fraud Pentagon Against Financial Statement Fraud with Corporate Governance as A Control Mechanism

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ABSTRACT

This study examines the influence of Fraud Pentagon elements on financial statement fraud in healthcare companies listed on the Indonesia Stock Exchange, while investigating the role of corporate governance as a controlling mechanism. The sample comprises 11 companies with 33 total observations over the 2022–2024 period. A quantitative causal approach was employed, with the Beneish M-Score as the proxy for financial statement fraud and the Good Corporate Governance Score as the governance measure, analyzed through multiple linear regression using SPSS version 25. The findings indicate that financial stability, monitoring effectiveness, auditor change, and director turnover each exert a positive and significant effect on financial statement fraud. Conversely, the frequency of CEO photographs in annual reports does not yield a statistically significant result. Corporate governance demonstrates a negative and significant effect, confirming that stronger governance implementation meaningfully reduces the probability of financial statement manipulation. The model explains 77.4% of the variation in financial statement fraud, affirming that corporate governance constitutes the most effective fraud prevention strategy.

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INTRODUCTION

Financial statements serve as the primary instrument for communicating an entity's financial position and performance to stakeholders. For publicly listed companies, these reports transcend managerial decision-making tools to become vital information sources for investors, creditors, regulators, and the broader public (Maharani Putri et al., 2025). Consequently, financial reporting is mandated to adhere to applicable accounting standards and undergo independent external audits to ensure reliability and credibility.(Ngoc Hung et al., 2023)

However, the integrity of financial reporting remains persistently threatened by manipulation and fraud. The pressure to demonstrate superior performance, secure managerial bonuses, maintain organizational reputation, and attract investment capital frequently incentivizes management to engage in fraudulent practices (Jaswadi et al., 2024). This phenomenon aligns fundamentally with agency theory, which elucidates the inherent conflict of interest between principals (shareholders) and agents (management). Management possesses superior access to operational information compared to shareholders, creating information asymmetry that facilitates opportunistic behavior and financial manipulation.(Owusu et al., 2022)

Complementing this perspective, signaling theory posits that organizations endeavor to transmit positive signals to capital markets through their financial disclosures. This motivation drives management to portray consistently high or stable earnings, even when such representations diverge from economic reality. Consequently, financial statements may contain material misstatements constituting financial statement fraud, inflicting substantial harm on various stakeholder groups.(Pradipta & Putra, 2025)(Chen & Liu, 2021)

The Association of Certified Fraud Examiners (ACFE) estimates that organizations typically lose approximately five percent of annual revenue to fraud. Among fraud typologies, financial statement fraud proves particularly challenging to detect, as it is perpetrated by individuals possessing both authority and sophisticated knowledge of organizational accounting systems(Shahana et al., 2023). High-profile cases, including the earnings manipulation scandal involving PT Telkom Indonesia Tbk and alleged financial reporting irregularities in the Indonesian Ombudsman's CPO corruption case, underscore the pervasiveness of such practices across diverse sectors.(Ida Ayu Intan Nichiyobi & Ni Luh Sari Widhiyani, 2025)

To systematically understand fraud determinants, Crowe Horwath (Permatasari & Yulianti, 2025) introduced the Fraud Pentagon framework, comprising five elements: pressure, opportunity, rationalization, competence, and arrogance. This comprehensive model explains the motivational, environmental, and psychological factors driving managerial manipulation of financial reports. For instance, pressure to achieve earnings targets, weakness in internal controls (opportunity), moral justification of fraudulent actions (rationalization), technical proficiency in financial reporting (competence), and a superior attitude that disregards internal controls (arrogance) collectively create conditions conducive to financial statement fraud.

Despite the Fraud Pentagon's analytical comprehensiveness, fraud prevention cannot rely solely on individual-level factors. Effective deterrence necessitates robust control mechanisms that constrain opportunities and mitigate fraudulent motivations. Corporate governance emerges as a critical oversight system ensuring management actions align with shareholder and stakeholder interests. Governance principles encompassing transparency, accountability, independence, and fairness provide foundational pillars for cultivating an ethical organizational environment and preventing financial reporting manipulation.

Prior empirical investigations have produced mixed findings regarding the Fraud Pentagon's influence on financial statement fraud. Some studies identify pressure and rationalization as significant determinants, while others emphasize the role of competence or arrogance (Rahmadania et al., 2026). This inconsistency reveals a research gap warranting further investigation. Moreover, limited scholarship has examined corporate governance as a moderating mechanism in the Fraud Pentagon-financial statement fraud relationship. Recent systematic literature reviews underscore corporate governance as a pivotal factor, with weak governance structures enabling fraud while robust mechanisms such as effective audit committees and board diversity mitigate risks. This study addresses these gaps by investigating how governance mechanisms interact with Fraud Pentagon elements to influence fraudulent financial reporting. (Dwinanda & Utama, 2025)(Devi, 2024)

LITERATURE REVIEW

Jonathan T. Marks (2012) Pentagon Fraud is framework that explains that fraudulent actions occurred Because the existence of five factors main, namely pressure, opportunity, rationalization, competence, and arrogance. (Aileen & Salim, 2025) Crowe Horwath International Fraud Pentagon is development from Fraud Triangle and Fraud Diamond with add element competence and arrogance, because the perpetrator of fraud does not only need pressure and opportunity, but also superior abilities and traits to do as well as hide cheating.(Yosef & Sumarna, 2024)

Financial statement fraud is form fraud committed through manipulation report finance with objective misleading stakeholders interests. The Association of Certified Fraud Examiners (ACFE, 2020) states that type of fraud This is fraudulent financial reporting category, which is usually done with method confess income fictitious, deletion cost, engineering asset or concealment liabilities. Impact from financial statement fraud not only in the form of loss financial, but also lowers credibility company, damaging reputation management, as well as reduce Investor confidence in the capital market, financial statement fraud Donald R. Cressey (Hidayat & Triyono, 2022) understood as the form of fraud committed in context reporting finance for fulfil pressure certain. According to Rezaee Financial statement fraud is the intentional, deliberate misstatement or omission of financial data that is reported in financial statements, which misleads users and causes economic harm.(Novita et al., 2025)

Corporate governance according to Cadbury System Committee that directs and controls company, related with guard balance between objective economic and social, as well as between objective individuals and communities. Governance framework company aim for push use source Power in a way efficient and, at the same time, obligatory accountability on management source Power the purpose. is for align interest individuals, companies, and society. (Dahya & McConnell, 2007). Corporate governance is a system that directs and controls corporations to create shareholder value while considering stakeholder interests. It is based on transparency, accountability, responsibility, independence, and fairness. Key mechanisms include the board of commissioners and audit committee, which supervise management and ensure compliance with accounting standards. The internal control system helps prevent and detect fraud, while regulatory compliance ensures adherence to OJK regulations and ethical standards. Effective governance strengthens oversight, improves transparency, enhances accountability, and reduces fraud risks, thereby supporting sustainable corporate performance.(Mansour et al., 2022)

METHODOLOGY

Based on theories that have been presented on in connection with various factors that have been identified in accordance with theories and also those found in research previously, then framework conceptual in study This can depicted in image. In framework conceptual can depicted that variables independent are pressure, opportunity, rationalization, competence, arrogance, while variables dependent is financial statement fraud. Research this also uses corporate governance as mechanism controller.

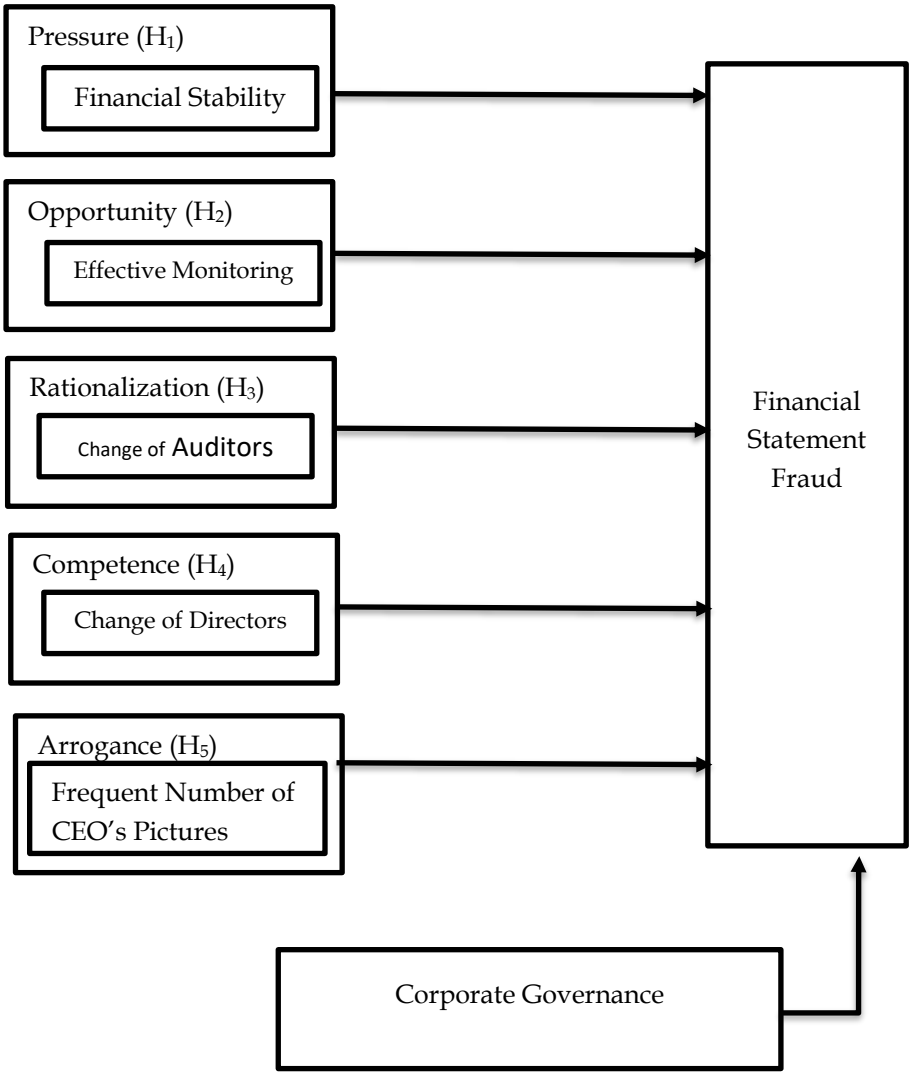

Figure 1. Framework Conceptual

Development Hypothesis

1. The Influence of Financial Stability on Financial Statement Fraud

Empirical evidence from a number of studying previously supported connection. Rahmatika et al. (2020) found that financial stability has an effect significant positive against financial statement fraud in companies banking on the IDX. In line with matter In addition, Bawekes et al. (2021) and Saputra and Kusumaningrum (2020) also proved that that instability measured finances through change in total assets is predictor strong occurrence fraud report finance (Agusputri & Sofie, 2019) participate confirm findings similar to the company infrastructure. Conditions finances that are not stable create incentive for management for serve report misleading finances in order to maintain reputation and access to funding external. Based on argument theoretical and support empirical said, the hypothesis following formulated:

H1: Financial stability has an effect positive against financial statement fraud.

2. The Effect of Effective Monitoring on Financial Statement Fraud

In the perspective of agency theory, the mechanism supervision functioning for align interest agent and principal at a time reduce asymmetry information. When supervision walk with good, management face more obstacles big for do manipulation. In contrast, supervision does not effective reflected from lack of proportion commissioner independent or low frequency meeting the audit committee creates room free for action cheating.

Study Rahmatika et al. (2020) and Bawekes et al. (2021) showed that ineffective monitoring is one of the the most consistent determinant in predicting financial statement fraud. Wulandari and Adi (2023) further carry on find that audit committee with frequency high level meetings and members who have qualification accountancy proven effective lower risk cheating. (Magdalena & Dananjaya, 2021) also emphasized that weakness function supervision become factor main factor that allows fraud to occur without detected. With Thus, there is no supervision effective can concluded as conditions that are direct facilitate occurrence fraud report finance. The proposed hypothesis is:

> H2: Ineffective monitoring has an effect positive against financial statement fraud.

3. The Influence of Change of Auditors on Financial Statement Fraud

Although part study finds that change of auditors no always influential significant against financial statement fraud as put forward by (Randi & Faradiza, 2022) a number of other researches remains identify pattern change of auditors that is not common as signal warning early existence cheating. Ultimate and (Magdalena & Dananjaya, 2021) take notes that repeated auditor changes in term short increase risk manipulation reporting finance. Based on argument mentioned, the hypothesis developed is:

> H3: Change of auditors has an effect positive against financial statement fraud.

4. The Influence of Change of Directors on Financial Statement Fraud

Tessa and Harto (2016) proved that that change board of directors influential positive significant against fraudulent financial reporting. Sumbayak et al. (2023) also found that changes in the rank's leadership executive correlated with improvement risk manipulation report finance. Lestari and Harto's (2022) research strengthen findings This with show that change directors accompanied by weakening supervision enlarge probability occurrence fraud. Based on matter this, the hypothesis formulated is:

> H4: Change of directors has an effect positive against financial statement fraud.

5. The Influence of Frequent Number of CEO's Pictures on Financial Statement Fraud

From the perspective psychology organization, personality narcissistic in leader's executive associated with taking risky decisions high, low empathy to stakeholder's interests, as well as belief strong that rule No valid for himself. Characteristics This create conducive conditions for occurrence fraud reporting finance, because the CEO with arrogance tall tend evaluate action manipulative as right prerogative they.

Although a number of researches like (Fitriyah & Novita, 2021) No find significance element arrogance, research (Ghaisani & Supatmi, 2023) succeed prove that frequency CEO photo in report annual influential significant against financial statement fraud.(Agusputri & Sofie, 2019) also confirmed the influence of arrogance on company's sector technology that has characteristics strong and centralized leadership. The difference results between research the open room testing more further, especially in the context of different industries. Based on the above arguments, the hypothesis proposed is:

> H5: Frequent number of CEO's pictures is influential positive against financial statement fraud.

6. Corporate Governance as a Control Mechanism

Within the framework of agency theory, corporate governance functions as instrument main for reduce agency costs and narrow down asymmetry information between management and shareholders shares. Strong corporate governance mechanisms cover composition of the board of commissioner's adequate independence, an active and competent audit committee, and ownership significant institutional can weaken connection between the conditions underlying fraud with action real cheating.

Study (Tjen et al., 2020) prove in a way empirical that corporate governance moderates (weakens) the influence of financial stability and ineffective monitoring on fraud report finance (Ndruru & Hutapea, 2022) find that ownership institutional and commissioner independent in a way consistent lower risk manipulation finance (Yuvin & Sormin, 2022) also confirmed effectiveness of corporate governance in dampen impact elements of fraud.(Ibrahim et al., 2022) in a way specific show that high corporate governance scores lower probability the occurrence of financial statement fraud. Based on findings mentioned, the hypothesis proposed is:

> H6: Corporate governance has a negative influence on financial statement fraud.

Operational Definition and Measurement of Variables

1.Independent Variables

This study employs the Fraud Pentagon framework as the independent variable, encompassing five dimensions: pressure, opportunity, rationalization, competence, and arrogance. Pressure is proxied by financial stability (ACHANGE), measured as the percentage change in total assets. Opportunity is

captured through effective monitoring (BDOUT), calculated as the ratio of independent commissioners to total board commissioners. Rationalization is represented by change of auditor (CoA), a dummy variable coded 1 if auditor replacement occurs. Competence is measured by change of director (CoD), similarly coded as a dummy variable. Arrogance is operationalized through the frequent number of CEO's pictures (CEOpic) appearing in annual reports, measured as a ratio scale.

2. Dependent Variable

Financial statement fraud constitutes the dependent variable, defined as material misstatements resulting from manipulation, falsification, or alteration of accounting records. This study employs the Beneish M-Score model to detect fraud likelihood, with a threshold of -2.22 serving as the discriminant criterion. Companies scoring above -2.22 are classified as manipulators (coded 1), while those scoring below are classified as non-manipulators (coded 0). The M-Score incorporates eight financial ratios: DSRI, GMI, AQI, SGI, DEPI, SGAI, LVGI, and TATA, providing a comprehensive earnings manipulation detection mechanism widely validated in prior empirical research.

3.Moderating Variable

Good Corporate Governance (GCG) serves as the moderating variable, measured through a composite score derived from 26 indicators across five pillars: shareholders' rights (5 items), board of commissioners (6 items), directors (5 items), disclosure and transparency (5 items), and corporate responsibility (5 items). Each indicator receives a binary score (1 if fulfilled, 0 otherwise), with the final GCG score calculated as the proportion of fulfilled indicators multiplied by 100, yielding a continuous scale from 0 to 100. This comprehensive scoring system captures governance quality holistically, enabling examination of whether robust governance mechanisms attenuate the relationship between Fraud Pentagon elements and financial statement fraud occurrence.

Method of Collecting Data

Study This use approach quantitative with approach causal analysis done to company public listed on the Indonesia Stock Exchange (IDX) in the healthcare sector during a number of period time, namely 2022-2024 period. Data testing was carried out for test influence Pentagon Fraud variable against possibility the occurrence of financial statement fraud and the role of corporate governance as mechanism controller.

This study uses five Fraud Pentagon-based independent variables: pressure (financial stability), opportunity (effective monitoring), rationalization (auditor switching), competence (changes in directors), and arrogance (CEO picture frequency). The dependent variable is financial statement fraud measured by the Beneish M-Score; a score above −2.22 indicates potential manipulation. Corporate governance, measured by the Good Corporate Governance score, acts as a moderating variable influencing the relationship between Fraud Pentagon elements and financial statement fraud.

Population in study This is company healthcare sector listed on the Indonesia Stock Exchange (IDX). Research sample taken from all over company a fulfilling healthcare sector criterion certain criteria the covering public

companies listed on the IDX, consistent is at in healthcare sector during three year in succession, and publish report finance and reports annually (annual report) on an annual basis complete on the official BEI website during period 2022–2024. In addition, the company must own completeness of required data in accordance variables study throughout period observation the for ensure validity analysis.

Data and Data Sources

This study utilizes secondary data, defined as research information obtained indirectly through intermediary media. The secondary data comprises financial statements and annual reports of healthcare sector companies listed on the Indonesia Stock Exchange (IDX), covering a three-year observation period from 2022 to 2024. All data were systematically retrieved from the official IDX website at https://www.idx.co.id/ensuring consistency and reliability in the data collection process for subsequent analysis.

Data Quality Testing

1. Normality Test

The normality test examines whether regression residuals follow a normal distribution, as a well-specified model requires normally or near-normally distributed data. Detection employs both graphical analysis and statistical testing. Graphical analysis evaluates data dispersion along the diagonal axis or through residual histograms; data following the diagonal line indicates normality. The Kolmogorov-Smirnov (K-S) non-parametric test serves as the statistical approach, where significance values exceeding 0.05 (5%) indicate normally distributed residuals, confirming the regression model satisfies the normality assumption.

2.Classical Assumption Tests

Multiple regression analysis requires fulfillment of several assumptions to yield unbiased and reliable estimates. These tests are essential as regression models cannot be indiscriminately applied to all datasets. This study conducts three classical assumption tests: autocorrelation test to detect correlation among residuals, multicollinearity test to examine correlations among independent variables, and heteroscedasticity test to assess variance equality across residuals

3. Uji Autokorelasi

Autocorrelation test in linear regression detects correlation between error nuisance periods t and t-1, which ideally No happened. Detection using Durbin-Watson with criteria: d value between du and 4–du indicates free autocorrelation; d < dl or d> 4–dl respectively indicates autocorrelation positive or negative; whereas values in the doubt zone (dl<d<du or 4–du<d<4–dl) result in conclusion No convincing.

4. Multicollinearity Test

Multicollinearity test detect correlation between variables independent in the regression model, which should be No happened. Testing using Variance Inflation Factor (VIF) and Tolerance. Tolerance measures variability variables that are not explained variables other. Criteria: free multicollinearity if Tolerance > 0.10 or VIF < 10, whereas happen multicollinearity if Tolerance < 0.10 or VIF > 10.

Heteroscedasticity Test

Heteroscedasticity test identify inequality residual variance between observation in the regression model. The ideal model is homoscedasticity, meaning residual variance remains constant. Detection use Scatterplot graph between mark prediction and residual. Criteria: if dot, dot, dot form pattern regular (wavy, wide), occurs heteroscedasticity; if point spread random above and below number 0, no happen heteroscedasticity.

Hypothesis Testing

Hypothesis testing study use analysis regression moderation with SPSS 22. Approach This maintain integrity sample and control influence moderator variable. The model tests influence variables independent pentagon fraud (financial stability, effective monitoring, change of auditors, change of director, frequent number of CEO's pictures) on financial statement fraud, with good corporate governance score as variables moderation. Equality regression:

$$Y=\beta0+\beta1ACHANGE+\beta2BDOUT+\beta3CoA+\beta4CoD+\beta5CEOpic+\beta6CG+\varepsilon$$

1. Coefficient test determination (R^2)

Coefficient test determination (R^2) measures ability variables free in explain variables bound. The R^2 value ranges from between zero and one. Small values show ability limited, whereas mark approach One means almost all over variation variables independent give required information for explain variables dependent. Adjusted R^2 is used for further evaluation accurate in the model with many predictors.

2. Statistical t test

t -statistic test evaluates the influence of each variable independent to variables dependent individually. Testing use level significance of 10% ($\alpha=0.1$). The decision is based on the p-value: if the p-value < 0.1, H0 is rejected, meaning influence significant; if p-value > 0.1, H0 is accepted, meaning influence No significant. This test important for determine contribution every predictor in the regression model.

RESEARCH RESULT

This study utilizes secondary data from healthcare firms listed on the Indonesia Stock Exchange (2022–2024), selected for their complex accruals and susceptibility to manipulation. Applying strict criteria consistent listing, complete financial reports, and relevant data yielded 11 companies (33 observations). Data from https://www.idx.co.id/ were processed using SPSS. Variables examined include financial stability (ACHANGE), effective monitoring (BDOUT), auditor changes (CoA), director changes (CoD), CEO photo frequency (CEOpic), corporate governance (GCG), and fraud measured via Beneish M-Score.

Descriptive Statistical Analysis

Descriptive statistics provide an overview of data characteristics for each research variable, encompassing minimum, maximum, mean, and standard

deviation values. Table 4.1 presents the analysis results. The M-Score variable, proxying financial statement fraud, exhibits a mean of 0.06 with standard deviation 0.242, indicating only approximately 6% of total observations are classified as fraudulent. Pressure measured through financial stability (ACHANGE) shows a mean of 0.08, reflecting positive asset growth among healthcare companies, suggesting moderate pressure to maintain financial stability. Opportunity proxied by effective monitoring (BDOUT) demonstrates a mean of 0.46, approaching the minimum 30% regulatory requirement from OJK, indicating close proximity to minimum oversight standards.(sugiyono, 2018)

Rationalization represented by auditor changes (CoA) averages 0.09 with standard deviation 0.292, indicating only 9% of observations experienced auditor switching a pattern consistent with financial and healthcare sectors where long-term auditor relationships persist for efficiency and audit continuity. Competence measured through director changes (CoD) averages 0.36, suggesting approximately 36% of observations experienced leadership transitions, potentially signaling instability affecting financial reporting quality. Arrogance proxied by CEO photo frequency (CEOpic) averages 1.55 with minimal range (1-2), indicating limited variation insufficient to distinguish narcissistic tendencies effectively. Corporate governance (GCG) reveals remarkably high mean of 91.96 with standard deviation 12.397 and range 54-100, demonstrating that sampled healthcare companies generally implement governance principles adequately, though some remain suboptimal. The relatively low standard deviation across most variables suggests homogeneous characteristics among healthcare sector firms, while GCG's larger variation indicates differing governance maturity levels across companies.

Data Quality Testing

1. Normality Test

The Kolmogorov-Smirnov test examined whether regression residuals followed normal distribution, with results presented in table 1. The asymptotic significance (2-tailed) value of 0.200 exceeds the 0.05 threshold, indicating normally distributed residuals. Thus, the normality assumption is satisfied, confirming the regression model is appropriately specified. This finding validates the data quality for subsequent hypothesis testing, as non-normal residuals would compromise statistical inference validity and parameter estimation reliability.

Table 1. Normality Test

Unstandardized Residual	Threshold	Notes
0,200	0,05	Normal

2. Multicollinearity Test

Multicollinearity testing detects strong correlations among independent variables, as regression models should be free from such issues. Detection employs Variance Inflation Factor (VIF) and tolerance values. Results show all variables have tolerance exceeding 0.10 and VIF below 10, with Opportunity

demonstrating the highest tolerance (0.941) and Competence the lowest (0.426), while Competence exhibits the highest VIF (2.347) and Opportunity the lowest (1.063). These findings confirm no multicollinearity exists among independent variables, indicating the regression model is appropriately specified and suitable for hypothesis testing.(sugiyono, 2018).

Table 2. Multicollinearity Test Results

Variable	Tolerance	VIF	Notes
Pressure	0,747	1,339	Not multicollinearity
Opportunity	0.941	1,063	Not multicollinearity
Rationalization	0.459	2,177	Not multicollinearity
Competence	0.426	2,347	Not multicollinearity
Arrogance	0.766	1,306	Not multicollinearity
GCG	0,826	1,211	Not multicollinearity

3. Heteroscedasticity Test

The Glejser test examined whether residual variance differs across observations by regressing absolute residual values against independent variables. Significance values exceeding 0.05 indicate no heteroscedasticity. Results show all variables exhibit significance above 0.05: Pressure (0.562), Opportunity (0.136), Rationalization (0.382), Competence (0.658), Arrogance (0.822), and GCG (0.064). These findings confirm homoscedastic residuals, indicating the regression model satisfies the heteroscedasticity assumption and is therefore appropriately specified for reliable hypothesis testing.(sugiyono, 2018).

Table 3. Results of Heteroscedasticity Test

Variable	Sig.	Limit	Notes
Pressure	0.562	> 0.05	Not heteroscedasticity
Opportunity	0.136	> 0.05	Not heteroscedasticity
Rationalization	0.382	> 0.05	Not heteroscedasticity
Competence	0.658	> 0.05	Not heteroscedasticity
Arrogance	0,822	> 0,05	Not heteroscedasticity
GCG	0,064	> 0,05	Not heteroscedasticity

4. Autocorrelation Test

The Durbin-Watson test examined whether residuals correlate between periods, yielding a DW value of 1.924. With upper bound (DU) of 1.900 and (4-DU) of 2.100, the condition DU < DW < (4-DU) is satisfied (1.900 < 1.924 < 2.100). This confirms no positive or negative autocorrelation exists in the regression model, indicating residuals are independent across observations and the model satisfies the autocorrelation assumption for valid inference.(sugiyono, 2018)

Table 4. Autocorrelation Test Results

DU	DW	(4-DU)	Notes
1,900	1,924	2,100	Not occur autocorrelation

Hypothesis Testing

1. Multiple Linear Regression Analysis

Multiple linear regression examined the influence of Pressure, Opportunity, Rationalization, Competence, Arrogance, and corporate governance (GCG) on financial statement fraud measured by Beneish M-Score using SPSS version 25. The resulting regression equation is $Y = 33.898 + 1.075X_1 + 0.979X_2 + 0.183X_3 + 0.163X_4 + 0.220X_5 – 22.249X_6$. The constant of 33.898 indicates M-Score when all independent variables are zero. Positive coefficients for Pressure (1.075), Opportunity (0.979), Rationalization (0.183), Competence (0.163), and Arrogance (0.220) suggest direct relationships with fraud likelihood, while GCG's negative coefficient (-22.249) demonstrates that improved governance substantially reduces financial statement fraud probability, consistent with theoretical expectations.(sugiyono, 2018)

Table 5. Multiple Linear Regression Results

Variables	B	Beta	t Count	Sig t	Notes
(Constant)	33,898	-	3,852	0.001	-
Pressure	1,075	0.457	4,697	0,000	Significant
Opportunity	0.979	0.432	4,978	0,000	Significant
Rationalization	0.183	0.375	3,025	0.006	Significance
Competence	0.163	0.335	2,597	0.015	Significance
Arrogance	0.220	0.187	1,942	0.063	Not Significant
GCG	-22,249	-0.365	-3.941	0.001	Significance
F-count	19,220	-	-	-	-
Say F	0.000	-	-	-	-
R Square	0,774	-	-	-	-
Dependent Variable M-Score					

2. Partial Hypothesis Testing (t-Test)

The t-test examined each independent variable's individual effect on financial statement fraud at 95% confidence (α=0.05). Financial stability (Pressure) shows coefficient 1.075 (t=4.697, p=0.000), confirming positive significant influence (H1 accepted). Fluctuating asset conditions intensify managerial pressure to manipulate reports, consistent with (Rahmatika et al., 2019) Effective monitoring (Opportunity) demonstrates coefficient 0.979 (t=4.978, p=0.000), indicating weak oversight from low independent commissioner proportion increases fraud likelihood (H2 accepted), aligning with(Oktarigusta,

2017). Auditor changes (Rationalization) yield coefficient 0.183 (t=3.025, p=0.006), confirming opinion-seeking behavior as fraud rationalization (H3 accepted), consistent with Pamungkas and Chaerul (2021). Director changes (Competence) show coefficient 0.163 (t=2.597, p=0.015), reflecting leadership transition vulnerabilities (H4 accepted), supporting Tessa and Harto (2016). CEO photo frequency (Arrogance) exhibits coefficient 0.220 (t=1.942, p=0.063), not significant (H5 rejected), likely due to limited photo variation and strong governance in healthcare. Corporate governance demonstrates coefficient -22.249 (t=-3.941, p=0.001), confirming significant negative effect on fraud (H6 accepted), consistent with Putri et al. (2024) and Lestari and Harto (2022).

3. Simultaneous Hypothesis Testing (F-Test)

The F-test examined whether all independent variables jointly influence the dependent variable. Results reveal F-statistic of 19.220 with significance value of 0.000, substantially below the 0.05 threshold. This confirms that Pressure, Opportunity, Rationalization, Competence, Arrogance, and Corporate Governance collectively exert significant influence on financial statement fraud measured by Beneish M-Score. The findings indicate the regression model demonstrates robust predictive capability for explaining financial statement fraud phenomena among healthcare sector companies listed on the Indonesia Stock Exchange.

Table 5. F Test Results (ANOVA)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	0,946	6	0,158	19,220	0,000
Residual	0,213	26	0,008	-	-
Total	1,159	32	-	-	-

4. Coefficient of Determination (R^2)

The coefficient of determination measures the model's explanatory power for dependent variable variation. Results show R Square of 0.816 and Adjusted R Square of 0.774, with the latter providing more accurate assessment by accounting for variable count and sample size. This indicates the six independent variables Pressure, Opportunity, Rationalization, Competence, Arrogance, and Corporate Governance—collectively explain 77.4% of financial statement fraud variation as proxied by M-Score. The remaining 22.6% is attributed to unexamined factors including organizational culture, accounting information system quality, industry-specific regulatory pressures, and other relevant variables beyond this study's scope.

Table 6. Results of the Coefficient of Determination (R^2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0,903	0,816	0,774	0,09056

DISCUSSION

Overall, these findings substantiate the relevance of Fraud Pentagon Theory within Indonesia's healthcare sector. Four of five elements Pressure, Opportunity, Rationalization, and Competence demonstrate positive and significant effects on financial statement fraud. Financial stability's significance confirms that asset fluctuations incentivize misleading reporting to maintain investor confidence and capital access, particularly relevant in capital-intensive healthcare industries requiring continuous investment. Weak supervisory effectiveness from board commissioners creates exploitable opportunities, suggesting that OJK's 30% independent commissioner requirement remains insufficient without substantive oversight capacity and commitment.

Auditor changes significantly influence fraud, indicating opinion shopping concerns in Indonesia's healthcare context where companies may seek more accommodative audit treatment. New auditors lacking comprehensive client knowledge become vulnerable to managerial manipulation. Director turnover reflects organizational power dynamics where leadership transitions accompanied by management reorganization potentially alter accounting policies and internal controls, with new management tempted to engineer favorable financial results. Conversely, arrogance measured through CEO photo frequency shows no significant effect, likely due to narrow data variation (1-2 photos) inadequately distinguishing narcissistic tendencies. More comprehensive arrogance measurements including relative CEO compensation or textual analysis of annual report communication styles remain necessary.

Corporate governance demonstrates the most substantive finding with a coefficient of -22.249, exerting substantial negative influence on fraud likelihood. This underscores that strengthening governance through qualified independent commissioners, enhanced audit committee competence, and robust internal control procedures represents the most effective fraud prevention strategy. The significant moderation effect confirms that governance mechanisms attenuate Fraud Pentagon's influence, suggesting policymakers and practitioners should prioritize comprehensive governance reforms over individual fraud element mitigation. Healthcare companies with higher GCG scores maintain stronger oversight and transparency, reducing opportunities for earnings manipulation despite existing pressures.

CONCLUSIONS AND RECOMMENDATIONS

This study examined Fraud Pentagon elements (Pressure, Opportunity, Rationalization, Competence, Arrogance) and corporate governance's role on financial statement fraud in healthcare firms listed on the Indonesia Stock Exchange (2022–2024). Results demonstrate that financial stability (Pressure) significantly increases fraud likelihood, as asset fluctuations incentivize manipulation to maintain investor confidence. Ineffective monitoring (Opportunity) through low independent commissioner proportions similarly enhances fraud opportunities by weakening board oversight. Auditor changes (Rationalization) and director changes (Competence) both exhibit significant positive effects, reflecting opinion-shopping behaviors and leadership transition

vulnerabilities that create conditions conducive to financial reporting manipulation.

Conversely, CEO photo frequency (Arrogance) shows no significant influence, likely due to limited data variation and proxy inadequacy in capturing narcissistic traits within healthcare's highly regulated environment. Corporate governance demonstrates substantial negative influence (-22.249 coefficient), confirming robust governance mechanisms effectively reduce fraud probability through strengthened oversight, transparency, and accountability. The model explains 77.4% of fraud variation, with simultaneous testing confirming all variables collectively influence financial statement fraud, validating Fraud Pentagon relevance in Indonesia's healthcare sector.

These findings offer theoretical contributions by extending Fraud Pentagon application to healthcare contexts while empirically confirming corporate governance as the most potent fraud deterrent mechanism. Practically, regulators should mandate enhanced independent commissioner composition and audit committee qualifications, while companies must prioritize governance infrastructure investments. Future research should develop more comprehensive arrogance measurements and explore additional moderating variables such as whistleblowing systems and organizational culture to strengthen fraud prevention frameworks in emerging market contexts.

Recommendations

Based on the findings, regulators including the Financial Services Authority (OJK) should strengthen mandatory requirements for independent commissioner composition beyond the current 30% minimum, particularly for healthcare sector companies with complex accrual accounts. OJK should also mandate audit committee members possessing accounting qualifications and implement stricter oversight of auditor changes, requiring mandatory disclosure of rationales for switching audit firms. Healthcare companies must proactively enhance internal control systems and establish independent oversight committees with direct reporting access to board commissioners, ensuring governance mechanisms function substantively rather than merely fulfilling regulatory formalities. Additionally, companies should invest in comprehensive whistleblowing systems to detect early warning signs of financial reporting irregularities.

For future research, scholars should develop alternative, more refined measurements for the arrogance construct beyond CEO photo frequency, potentially incorporating textual analysis of annual report narratives or relative CEO compensation metrics to better capture narcissistic personality traits. Longitudinal studies with extended observation periods and expanded samples across multiple sectors would enhance generalizability of findings. Further investigation examining moderating variables such as organizational culture, audit quality, and regulatory enforcement intensity is essential to comprehensively understand financial statement fraud dynamics. Researchers should also consider industry-specific characteristics influencing fraud vulnerability, as healthcare's unique regulatory environment, capital intensity,

and complex revenue recognition practices create distinct fraud risk profiles requiring specialized fraud detection frameworks.

ADVANCED RESEARCH

Building upon this study's empirical confirmation of Fraud Pentagon relevance in Indonesia's healthcare sector, future investigations should develop comprehensive arrogance measurement frameworks incorporating multi-dimensional narcissism indicators. Scholars could employ natural language processing techniques to analyze CEO communication patterns in annual reports, relative compensation ratios, and media coverage frequency as alternative proxies. Additionally, examining sector-specific characteristics particularly healthcare's unique regulatory intensity, capital expenditure patterns, and revenue recognition complexities would enhance understanding of how industry contexts moderate fraud pentagon relationships. Cross-country comparative studies between developed and emerging markets could further illuminate how institutional environments influence fraud dynamics.

The moderating role of governance mechanisms warrants deeper exploration through testing additional variables such as audit committee effectiveness, whistleblowing system implementation, and organizational ethical culture. Longitudinal research designs with extended observation periods could capture fraud patterns across varying economic cycles, while qualitative approaches including case studies and executive interviews would provide richer contextual understanding. Machine learning applications combining Beneish M-Score with alternative fraud detection models could improve predictive accuracy. Ultimately, developing industry-specific fraud risk assessment tools integrating pentagon elements with governance quality indices would yield practical instruments for regulators and practitioners in emerging market contexts

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