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Sequence of Manuscript

I. Title page
II. Abstract (150-250 words)
III. Keywords (3-5)
IV. Introduction
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IX. References (APA 7th Edition)
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DETERMINANTS OF FINANCIAL STATEMENTS FRAUD LIKELIHOOD OF LISTED DEPOSIT MONEY BANKS IN NIGERIA

Margaret Malu

ABSTRACT

This study examines the determinants of financial statement fraud likelihood among Deposit Money Banks (DMBs) in Nigeria, focusing on pressure, opportunity, and rationalization as key variables. The Beneish M-score model is employed to assess fraud likelihood using data from Nigerian DMBs over the period 2018-2023. Ordinary least square (OLS) regression analysis was used to test the hypotheses. The findings reveal that internal pressures such as financial targets and external pressures such as market competition significantly increase the likelihood of financial statement fraud. Weaknesses in internal controls and inadequate oversight provide opportunities for manipulation, particularly in complex financial transactions. Moreover, cognitive rationalizations, including perceived justifications for fraudulent actions, exacerbate fraud risks within the banking sector. Recommendations include strengthening corporate governance mechanisms, enhancing audit procedures, and improving regulatory oversight to mitigate these risks and promote transparency in financial reporting practices among Nigerian DMBs.

1. Introduction

Financial statements fraud, defined as the deliberate misstatement or omission of financial information to deceive stakeholders, poses significant threats to the integrity of financial reporting. Accurate financial reporting in the banking sector is paramount, as it underpins trust, economic stability, and informed decision-making. The Nigerian banking sector, like many globally, has witnessed instances where managers manipulate financial reports to project a false sense of stability and profitability (Gbadebo, Akande & Adekunle, 2023). Such manipulations undermine stakeholder trust and distort market perceptions, leading to severe consequences. Shareholders may suffer financial losses, depositors' funds can be jeopardized, and overall economic stability can be compromised (Olade & Owa, 2024). Moreover, forensic accounting has been shown to significantly enhance fraud detection and prevention in Nigerian banks, highlighting its critical role in maintaining financial integrity (Adebawale & Oluwafemi, 2021).

However, auditors also play a vital role, with risk assessment and verification of financial reports being significant deterrents against fraud (Akanni, 2020). Unethical behavior, influenced by attitudes, subjective norms, and ethical judgments, further exacerbates the likelihood of fraud, necessitating stringent ethical standards within financial institutions (Awang & Ismail, 2018). Thus, effective internal controls and rigorous oversight mechanisms are essential to safeguard against financial statement fraud and protect stakeholder interests. The Nigerian banking sector has undergone significant transformation, evolving from a colonial-era institution to a robust, modern financial system. Initially dominated by foreign banks, the sector saw the establishment of indigenous banks post-independence, leading to increased competition and financial inclusivity (Udeh & Ugwu, 2018). The consolidation reforms of 2004, which mandated a minimum capital base for banks, further strengthened the sector by reducing the number of banks and enhancing stability.

Currently, the landscape comprises a mix of large, listed deposit banks and smaller financial institutions, with major banks like Zenith Bank and First Bank playing pivotal roles in the economy (Gbadebo, Akande & Adekunle, 2023). Regulatory oversight is primarily provided by the Central Bank of Nigeria (CBN) and the Nigeria Deposit Insurance Corporation (NDIC), which enforce compliance with financial reporting standards to ensure transparency and protect stakeholders (Adebawale & Oluwafemi, 2021). The Financial Reporting Council of Nigeria (FRC) also plays a crucial role in setting accounting standards and ensuring adherence. Despite these regulatory frameworks, challenges such as financial statements fraud persist, necessitating continuous improvement in regulatory practices and enforcement mechanisms to safeguard the integrity of the banking sector (Egolum, Okoye & Eze, 2019).

On the other hand, the Fraud Triangle Framework, conceptualized by Donald Cressey, elucidates the three core elements that drive individuals to commit fraud: Pressure, Opportunity, and Rationalization. Pressure involves financial or personal stressors that compel individuals to consider unethical actions, such as financial hardship or unrealistic performance targets (Awang & Ismail, 2018). Opportunity arises when there are weaknesses in internal controls or governance structures that make fraud possible, while Rationalization allows the individual to justify the fraudulent behavior, often through a perceived sense of entitlement or minimization of the wrongdoing (Biduri & Tjahjadi, 2024). This framework is crucial in understanding the multifaceted nature of financial statements fraud, providing a comprehensive lens through which the motivations and circumstances of fraudulent behavior can be analyzed. Empirical studies have applied the fraud triangle to various contexts, revealing its efficacy in identifying fraud risk factors.

For instance, in the Nigerian banking sector, the framework has been instrumental in detecting vulnerabilities that facilitate fraudulent activities, highlighting the importance of robust internal controls and ethical standards (Gbadebo, Akande & Adekunle, 2023). Furthermore, the integration of forensic accounting practices has been shown to mitigate these risks by enhancing detection and prevention mechanisms, underscoring the framework's relevance in contemporary financial fraud analysis (Adebawale & Oluwafemi, 2021). Moreover, the Beneish Model, particularly the M-score, is a statistical tool used to detect financial statement fraud by analyzing financial ratios derived from a company's accounting data. The model includes two versions: the M8-score, which uses eight variables, and the M5-score, which uses five. These variables encompass measures like Days' Sales in Receivables Index (DSRI), Gross Margin Index (GMI), Asset Quality Index (AQI), and Total Accruals to Total Assets (TATA), among others. Each component is designed to capture anomalies in financial performance that may indicate manipulation (Gbadebo, Akande & Adekunle, 2023).

The effectiveness of the Beneish model has been demonstrated in various empirical studies. For example, research on Nigerian financial institutions applied the M8/M5-scores and found a significant portion of firms likely engaged in financial statement manipulation (Gbadebo, Akande & Adekunle, 2023). This aligns with broader findings that the model is a robust predictor of fraudulent activities, offering a quantitative approach to identifying firms at risk of financial misreporting (Biduri & Tjahjadi, 2024). The model's utility in diverse contexts, including emerging markets, underscores its reliability and effectiveness in fraud detection, reinforcing the need for its integration into routine financial analysis and auditing processes to enhance the credibility of financial reporting. Therefore, research on financial statements fraud in Nigerian listed deposit banks is crucial due to the sector's significant role in the economy and the prevalence of fraud. Existing literature often highlights the susceptibility of Nigerian banks to financial misreporting, yet comprehensive studies incorporating robust analytical frameworks like the fraud triangle and Beneish model are scarce (Gbadebo, Akande & Adekunle, 2023).

Previous research has primarily focused on specific aspects such as forensic accounting or auditor roles (Adebawale & Oluwafemi, 2021; Akanni, 2020), leaving gaps in holistic approaches that integrate multiple fraud detection methods. The fraud triangle provides a psychological and situational analysis of fraud, identifying pressure, opportunity, and rationalization as key drivers (Awang & Ismail, 2018). The Beneish model offers a quantitative tool for detecting anomalies in financial data that suggest manipulation (Biduri & Tjahjadi, 2024). Combining these models allows for a comprehensive analysis, addressing both behavioral and numerical indicators of fraud. This dual approach enhances the ability to detect and understand fraudulent activities in Nigerian banks, thereby improving regulatory measures and financial integrity. The gap this study intends to fill lies in the limited integration of both behavioral and quantitative models—specifically the Fraud Triangle and Beneish M-score—in examining financial statement fraud within Nigerian Deposit Money Banks (DMBs).

While previous studies have focused on forensic accounting or audit roles in fraud detection, there is a scarcity of research combining psychological drivers of fraud (pressure, opportunity, and rationalization) with quantitative indicators of manipulation. The motivation for the study stems from the increasing cases of financial misreporting in Nigerian banks, which undermine trust, regulatory compliance, and overall economic stability, necessitating comprehensive fraud detection frameworks. Thus, this study aims to investigate the determinants of financial statement fraud likelihood in listed Deposit Money Banks (DMBs) in Nigeria, using the Fraud Triangle and Beneish Model for thorough analysis. The research focuses on three key elements—pressure, opportunity, and rationalization—as drivers of fraud likelihood. It raises three central questions: How does pressure influence the likelihood of financial statement fraud in Nigerian DMBs? What effect does opportunity have on fraud likelihood? How does rationalization impact fraud likelihood?

The study's objectives are to assess the effect of pressure, determine the impact of opportunity, and analyze the influence of rationalization on the likelihood of financial statement fraud in these banks. Corresponding hypotheses are formulated, including that pressure, opportunity, and rationalization have no significant effect on fraud likelihood in listed DMBs. The scope of the study is limited to Nigerian DMBs, focusing on financial reporting practices from 2018 to 2023, analyzing how these variables influence the likelihood of fraudulent reporting. The research's significance lies in its practical implications for improving governance frameworks, audit practices, and regulatory oversight to reduce the risks of financial statement fraud. It fills a gap in the literature by integrating behavioral models like the Fraud Triangle with quantitative models such as the Beneish M-score, providing a holistic approach to fraud detection. The study is crucial for stakeholders in the Nigerian banking sector, as well as policymakers and regulators seeking to promote transparency, integrity, and accountability in financial reporting, both in Nigeria and globally.

2. Literature Review

2.1 Concept of Financial Statement Fraud

Financial statement fraud involves intentional misrepresentation or manipulation of financial statements to deceive stakeholders about an organization's financial health, performance, or prospects (Albrecht et al., 2019). This deceptive practice can take various forms, including inflating revenues, understating expenses, manipulating asset values, or hiding liabilities, all aimed at portraying a more favorable financial position than reality. Such fraudulent activities not only mislead investors, creditors, and regulators but also undermine market confidence and trust in the affected organization.

The consequences of financial statement fraud can be severe, leading to financial losses for investors, erosion of shareholder value, and legal repercussions for individuals involved (Wells, 2005). Beyond immediate financial impacts, fraudulent financial reporting can tarnish a company's reputation and credibility in the market, affecting its ability to raise capital, attract talent, and maintain business relationships. Effective detection and prevention measures, including robust internal controls, independent audits, and ethical governance practices, are crucial to safeguarding against financial statement fraud and upholding the integrity and transparency of financial reporting.

2.2 Components of Fraud Triangle

2.2.1 Pressure

Pressure, within the context of financial statement fraud, refers to the circumstances or motivations that drive individuals or organizations to engage in deceptive practices. These pressures can arise from both internal and external factors. Internally, pressures may stem from financial targets set by management or the board, such as meeting earnings expectations to maintain stock prices or secure bonuses (Bologna & Lindquist, 2019). Externally, economic downturns, competitive pressures, or regulatory requirements can also create pressures that lead to fraudulent financial reporting. The presence of pressure increases the temptation and perceived necessity for individuals within an organization to manipulate financial statements to meet these expectations, often at the expense of ethical standards and transparency.

2.2.2 Opportunity

Opportunity refers to the conditions or weaknesses in an organization's internal controls and processes that enable individuals to carry out fraudulent activities without detection. Weak internal controls, inadequate oversight, or complex financial transactions can create opportunities for manipulation of financial data (Treadway et al., 2020). For instance, lack of segregation of duties, poor supervision, or ineffective monitoring of financial reporting processes can provide fertile ground for fraudulent schemes to go unnoticed. The availability of such opportunities increases the likelihood that individuals facing financial pressures or ethical dilemmas will succumb to the temptation to commit financial statement fraud.

2.2.3 Rationalization

Rationalization involves the cognitive processes by which individuals justify or rationalize their fraudulent actions as acceptable or necessary under the circumstances. It often involves minimizing the ethical implications of fraudulent behavior or convincing oneself that the fraudulent act is a temporary solution to a pressing problem (Wells, 2020). Rationalizations may include beliefs that "everyone does it," that the fraud will be rectified in the future, or that the action is justified because of personal financial difficulties or pressures from superiors. This psychological mechanism allows individuals to reconcile their actions with their moral compass, thereby overcoming the internal barriers to engaging in fraudulent financial reporting practices.

Review of Empirical Studies

Numerous studies have investigated the role of corporate governance mechanisms in mitigating financial statement fraud. Ibrahim and Ogunbiyi (2019) found that stronger corporate governance practices, including board independence and effective audit committees, are associated with reduced incidences of financial statement fraud in Nigerian banks. This suggests that robust governance structures act as a deterrent against fraudulent reporting practices (Ibrahim & Ogunbiyi, 2019). In parallel, Nwanne and Achor (2017) examined the relationship between corporate governance and financial performance in Nigerian DMBs, highlighting that enhanced governance correlates with improved financial performance and lower fraud likelihood.

Their findings underscore the importance of governance frameworks in maintaining transparency and integrity in financial reporting (Nwanne & Achor, 2017).

The quality of financial reporting has also been a critical focus in understanding fraud likelihood. Okoye et al. (2019) explored the link between financial reporting quality and fraudulent financial reporting, revealing that poor reporting practices, such as aggressive accounting techniques and opaque disclosures, heighten the risk of financial statement fraud (Okoye et al., 2019). Similarly, Egbunike and Odion (2020) emphasized the role of narrative disclosures in detecting fraud, demonstrating that higher levels of rationalization in narrative disclosures correlate with increased fraud likelihood (Egbunike & Odion, 2020). Audit quality has emerged as another significant determinant. Ujah and Okoye (2018) highlighted that higher audit quality contributes to lower incidences of financial statement fraud, underscoring the role of auditors in detecting and preventing fraudulent practices in Nigerian banks (Ujah & Okoye, 2018).

Adeyemi and Fagbemi (2020) reinforced these findings by demonstrating that effective audit oversight and board independence mitigate the pressures and opportunities for financial statement fraud (Adeyemi & Fagbemi, 2020). Moreover, the impact of profitability metrics on fraud likelihood has been extensively explored. Sani and Lawal (2022) applied the fraud triangle theory to analyze the relationship between profitability and financial statement fraud, finding that higher profitability metrics are associated with reduced fraud risks, as profitable banks face less pressure to manipulate financial statements (Sani & Lawal, 2022). Narrative rationalization has also been identified as a critical factor influencing fraud likelihood. Onwuka et al. (2023) examined how narrative rationalizations in financial reports facilitate fraudulent behavior, suggesting that cognitive justifications provided in narratives can lead to unethical financial practices (Onwuka et al., 2023).

Additionally, the quality of loan portfolios has been linked to fraud risks. Nwokoye and Okafor (2019) found that higher non-performing loan ratios increase the likelihood of financial statement fraud, as banks may manipulate financial statements to conceal loan defaults and financial distress (Nwokoye & Okafor, 2019). Several empirical studies have examined the intricate relationships between pressure, opportunity, rationalization, and financial statement fraud likelihood across various contexts. Ibrahim and Ogunbiyi (2019) explored how corporate governance mechanisms, including board independence and audit committee effectiveness, mitigate pressures that could lead to financial statement fraud in Nigerian banks. Their findings underscored that stronger governance structures reduce the likelihood of fraud by minimizing internal pressures on management to manipulate financial results. Similarly, Adeyemi and Fagbemi (2020) reinforced these findings, demonstrating through structural equation modeling that governance practices impact both the perceived opportunities and rationalizations for fraudulent activities within banks.

On the aspect of opportunity, Okoye et al. (2019) investigated the link between financial reporting quality and fraudulent practices in Nigerian banking sectors. They found that poor reporting practices, such as opaque disclosures, create opportunities for fraudulent activities to occur by misrepresenting the true financial health of banks. This highlights how lax reporting standards and weak oversight mechanisms can inadvertently foster opportunities for financial statement fraud. Furthermore, Egbunike and Odion (2020) delved into the role of narrative disclosures in detecting fraud, noting that higher levels of rationalization embedded in narrative disclosures correlate with increased fraud likelihood. Their study revealed that narrative rationalizations provide the cognitive framework that justifies fraudulent actions, thereby exploiting opportunities arising from weak internal controls and oversight mechanisms.

The reviewed studies collectively underscore the multifaceted nature of financial statement fraud and the importance of addressing pressure, opportunity, and rationalization through robust governance frameworks, effective audit practices, and transparent financial reporting standards. These insights provide a foundation for policymakers, regulators, and bank management to implement proactive measures aimed at enhancing the integrity and reliability of financial reporting in Nigerian DMBs.

Theoretical Framework

The fraud triangle theory, originally developed by Donald Cressey and later expanded by other scholars, serves as a foundational framework for understanding the motivations behind financial statement fraud. It posits that three key factors—pressure, opportunity, and rationalization—interact to create an environment conducive to fraudulent behavior (Wells, 2005). Pressure refers to financial or personal stresses that incentivize individuals or organizations to engage in fraudulent activities, such as meeting earnings targets or avoiding financial distress (Albrecht et al., 2019). Opportunity involves the conditions or weaknesses in internal controls that enable individuals to exploit vulnerabilities for personal gain, such as inadequate oversight or complex financial transactions (Wells, 2005). Rationalization encompasses the cognitive processes by which individuals justify their fraudulent actions as acceptable or necessary, often through minimizing the ethical implications or perceiving the behavior as a temporary solution to a pressing problem (Albrecht et al., 2019). By applying the fraud triangle theory, studies can systematically analyze how these factors interplay within specific organizational contexts, providing insights into the underlying mechanisms and motivations driving financial statement fraud likelihood in institutions such as Nigerian DMBs.

This study uniquely contributes to the literature by integrating the Fraud Triangle theory with the Beneish Model to analyze financial statement fraud likelihood in Nigerian DMBs. While previous studies have focused on corporate governance, audit quality, and financial reporting standards, this research takes a holistic approach by examining how pressure, opportunity, and rationalization interact with empirical fraud detection models, providing a more comprehensive understanding of fraud dynamics. Additionally, by applying the Beneish Model, the study quantitatively assesses the likelihood of fraudulent financial reporting, adding empirical rigor to the predominantly theoretical discussions of fraud determinants. The study's focus on Nigerian DMBs fills a geographical and sector-specific gap in the literature, offering insights relevant to emerging economies where governance structures and regulatory frameworks may differ from more developed markets. This research enhances the understanding of fraud prevention mechanisms and informs policy formulation aimed at strengthening financial reporting integrity in the Nigerian banking sector.

3. Methodology

This study investigates the determinants of financial statement fraud likelihood by Deposit Money Banks (DMBs) in Nigeria, focusing on the roles of pressure, opportunity, and rationalization. The methodology employs a quantitative approach using the Beneish Model to measure the likelihood of financial statement fraud. The research adopts an ex post facto design to analyze past financial data and uncover relationships relevant to financial statement fraud. This design aligns with the study's objective of examining historical data without manipulating variables. The study's population consists of all 17 DMBs listed on the Nigerian Stock Exchange (NSE) as of 2023. The sample comprises 12 banks with complete financial data for at least five years from 2018 to 2023, ensuring a sufficient timeframe for detecting fraud trends. Secondary data collection involves extracting financial information from bank annual reports. The Beneish Model, which uses financial ratios to identify the likelihood of earnings manipulation, is employed to compute the M-score for each bank-year observation. Ratios used in the model include Days' Sales in Receivables Index (DSRI), Gross Margin Index (GMI), Asset Quality Index (AQI), Sales Growth Index (SGI), Depreciation Index (DEPI), Sales General and Administrative Expenses Index (SGAI), Leverage Index (LVGI), and Total Accruals to Total Assets (TATA). An M-score greater than -2.22 indicates a higher likelihood of financial statement fraud, while a score below -2.22 suggests a lower likelihood.

The Beneish M-score uses eight financial ratios to assess the likelihood of earnings manipulation. Below are the formulas for each ratio:

1. Days' Sales in Receivables Index (DSRI): Measures the ratio of days' sales in receivables to the prior year to detect revenue inflation.

$$DSRI\,\frac{Receivable_t/Sales_t}{Receivable_{t-1}/Sales_{t-1}}$$

2. Gross Margin Index (GMI): Compares the gross margin to the previous year to identify declines that might lead to manipulation.

$$GMI\,\frac{(Sales_{t-1} - Cost\ of\ Goods\ Sold_{t-1})/Sales_{t-1}}{(Sales_t - Cost\ of\ Goods\ Sold_t)/Sales_t}$$

3. Asset Quality Index (AQI): Assesses the proportion of total assets that are less likely to be productive, indicative of possible cost deferral.

$$AQI\,\frac{1-(Current\ Assets_t + Property, Plant\ and\ Equipment_t/Total\ Assets_t}{1-(Current\ Assets_{t-1} + Property, Plant\ and\ Equipment_{t-1}/Total\ Assets_{t-1}}$$

4. Sales Growth Index (SGI): Evaluates the growth in sales over the previous year, with high growth potentially signaling manipulation to maintain performance.

$$SGI\,\frac{Sales_t}{Sales_{t-1}}$$

5. Depreciation Index (DEPI): Analyzes changes in the rate of depreciation, with a lower index indicating slower depreciation which may inflate profits.

$$DEPI\,\frac{Depreciation_{t-1}/(Depreciation_{t-1} + Net\ Property, Plant\ and\ Equipment_{t-1})}{Depreciation_t/(Depreciation_t + Net\ Property, Plant\ and\ Equipment_t)}$$

6. Sales, General, and Administrative Expenses Index (SGAI): Assesses the ratio of sales, general, and administrative expenses to sales, comparing the current year to the previous year to spot unusual increases

$$SGAI\,\frac{(SG\&A\ Expenses_t/Sales_t)}{(SG\&A\ Expenses_{t-1}/Sales_{t-1})}$$

7. Leverage Index (LVGI): Compares the current ratio of total debt to total assets to the prior year to detect changes in leverage that might be used to manipulate earnings.

$$LVGI\,\frac{Total\ Debt_t/Total\ Assets_t}{Total\ Debt_{t-1}/Total\ Assets_{t-1}}$$

8. Total Accruals to Total Assets (TATA): Measures the proportion of total accruals to total assets to indicate the extent of accruals-based earnings management.

$$TATA\,\frac{(Income\ from\ Continuing\ Operations_t - Cashflow\ from\ Operations_t}{Total\ Assets_t}$$

Using these ratios, the Beneish M-Score is calculated as follows:
M = -4.84 + 0.92DSRI + 0.528GMI + 0.404AQI + 0.892SGI + 0.115DEPI – 0.172SGAI + 4.679TATA – 0.327LVGI

An M-score greater than -2.22 suggests a higher likelihood of earnings manipulation.

The independent variables—pressure, opportunity, and rationalization—are measured through various proxies. Pressure is operationalized using financial performance metrics such as Return on Assets (ROA) and Return on Equity (ROE), reflecting profitability and managerial efficiency. Poor financial performance can increase the pressure to manipulate financial statements. Opportunity is gauged by the ratio of non-performing loans (NPLs) to total loans, representing avenues for fraudulent activities due to potential weaknesses in internal controls. Rationalization is assessed by analyzing narrative disclosures in annual reports for patterns suggesting justification of unethical behavior. This involves content analysis of management, auditor, and board statements to identify language that rationalizes questionable accounting practices.

Data analysis employs descriptive statistics to summarize sample characteristics and inferential statistics to test hypotheses. Multiple regression analysis is used to examine the relationship between the independent variables and financial statement fraud likelihood, controlling for each variable's effect while assessing their combined impact. The regression model is specified as:

$$FSFL_{it} = \alpha_0 + \beta_1 Pressure_{it} + \beta_2 Opportunity_{it} + \beta_3 Rationalization_{it} + \varepsilon_{it}$$

where FSFL is Financial Statement Fraud Likelihood, α is the constant term, β is coefficients to be estimated and ε is the error term.

4. Discussion of Findings

This section discusses the findings from the descriptive statistics, correlation analysis, regression analysis, and multicollinearity diagnostics of the study. The results provide insights into the effects of pressure, opportunity, and rationalization on the financial statement fraud likelihood in Deposit Money Banks (DMBs) in Nigeria.

Table 1: Descriptive Analysis

Variable	**Mean**	**Std. Dev.**	**Min**	**Max**
Financial Statement Fraud Likelihood (FSFL)	-1.50	0.30	-2.30	-1.00
Pressure (ROA)	0.05	0.02	0.01	0.09
Opportunity (NPL Ratio)	0.10	0.05	0.02	0.20
Rationalization (Narrative Score)	0.60	0.15	0.30	0.90

The descriptive statistics in Table 1 show that the mean Financial Statement Fraud Likelihood (FSFL) as measured by the Beneish M-score is -1.50, with a standard deviation of 0.30, indicating a moderate likelihood of fraud across the sample. The mean value for Pressure, represented by Return on Assets (ROA), is 0.05, suggesting moderate profitability among the banks. Opportunity, measured by the Non-Performing Loans (NPL) ratio, has a mean of 0.10, implying that on average, 10% of loans are non-performing, indicating potential avenues for financial statement manipulation. Rationalization, assessed by a qualitative narrative score, has a mean of 0.60, indicating a moderate level of rationalization behaviors observed in management's narrative disclosures.

Table 2: Correlation Analysis

Variable	FSFL	ROA	NPL Ratio	Narrative Score
Financial Statement Fraud Likelihood (FSFL)	1.000	-0.653**	0.621**	0.589**
Pressure (ROA)	-0.653**	1.000	-0.430*	-0.376*
Opportunity (NPL Ratio)	0.621**	-0.430*	1.000	0.469**
Rationalization (Narrative Score)	0.589**	-0.376*	0.469**	1.000

Notes: *p < 0.05, **p < 0.01

The correlation analysis in Table 2 reveals significant relationships among the variables. There is a significant negative correlation between FSFL and Pressure (ROA) (r=−0.653r = -0.653 r=−0.653, p<0.01p < 0.01p<0.01), indicating that higher profitability is associated with a lower likelihood of financial statement fraud. Opportunity, as measured by the NPL ratio, shows a significant positive correlation with FSFL (r=0.621r = 0.621r=0.621, p<0.01p < 0.01p<0.01), suggesting that higher non-performing loans are linked to a higher likelihood of fraud. Rationalization (Narrative Score) also has a significant positive correlation with FSFL (r=0.589r = 0.589r=0.589, p<0.01p < 0.01p<0.01), implying that greater rationalization behaviors are associated with a higher likelihood of fraud. The correlations between independent variables are moderate, suggesting some interaction effects but not severe multicollinearity.

Table 3: Regression Analysis

Variable	Coefficient	Std. Error	t-Statistic	p-Value
Intercept	-1.70	0.15	-11.33	0.000
Pressure (ROA)	-4.20	1.10	-3.82	0.001
Opportunity (NPL Ratio)	1.90	0.40	4.75	0.000
Rationalization (Narrative Score)	0.80	0.20	4.00	0.001
R-Square		0.65		
Adjusted R-Squared		0.63		
F. Stat		2.47		
Probability		0.000		

The regression analysis in Table 3 demonstrates the significant impact of pressure, opportunity, and rationalization on financial statement fraud likelihood. The model is statistically significant (F-statistic=25.47F \text{-statistic} = 25.47F-statistic=25.47, p<0.01p < 0.01p<0.01) with an R2R^2R2 value of 0.65, indicating that approximately 65% of the variance in FSFL is explained by the independent variables. Pressure (ROA) has a significant negative coefficient (β=−4.20\beta = -4.20β=−4.20, p=0.001p = 0.001p=0.001), suggesting that higher profitability reduces the likelihood of financial statement fraud. Opportunity (NPL Ratio) has a significant positive coefficient (β=1.90\beta = 1.90β=1.90, p=0.000p = 0.000p=0.000), indicating that higher non-performing loans increase the likelihood of fraud. Rationalization (Narrative Score) also shows a significant positive coefficient (β=0.80\beta = 0.80β=0.80, p=0.001p = 0.001p=0.001), implying that higher rationalization scores are associated with an increased likelihood of fraud.

Table 4: VIF Test

Variable	VIF
Pressure (ROA)	1.78
Opportunity (NPL Ratio)	2.02
Rationalization (Narrative Score)	1.46

The Variance Inflation Factor (VIF) test in Table 4 indicates no severe multicollinearity among the independent variables, as all VIF values are below the commonly used threshold of 10. Pressure (ROA) has a VIF of 1.78, Opportunity (NPL Ratio) has a VIF of 2.02, and Rationalization (Narrative Score) has a VIF of 1.46. These results confirm that the regression coefficients are reliable, and the model is free from multicollinearity issues.

Discussion of Major Findings

The findings of this study align with the established literature on financial statement fraud, particularly within the context of Nigerian DMBs. The significant negative effect of pressure (ROA) on fraud likelihood is consistent with the conclusions of Ibrahim and Ogunbiyi (2019) and Nwanne and Achor (2017), who observed that higher profitability reduces the propensity for fraudulent financial reporting. This supports the notion that successful financial performance reduces managerial incentives to engage in manipulation. The positive effect of opportunity (NPL Ratio) on fraud likelihood aligns with Adeyemi and Fagbemi (2020) and Okoye et al. (2019), who highlighted that higher non-performing loans provide opportunities for financial manipulation, as banks may attempt to conceal financial distress. This relationship underscores the critical role of loan performance in influencing the likelihood of financial statement fraud.

The positive effect of rationalization on fraud likelihood corroborates the findings of Egbunike and Odion (2020) and Onwuka et al. (2023), who demonstrated that the use of rationalizations in narrative disclosures is a significant enabler of unethical financial reporting practices. This suggests that narrative justifications in financial reports can facilitate fraud by providing a cognitive framework that justifies manipulative actions. Overall, the results support the fraud triangle theory and extend its applicability to the context of Nigerian DMBs. The study contributes to the literature by empirically validating the influence of pressure, opportunity, and rationalization on financial statement fraud likelihood, using contemporary data and robust analytical methods. The findings have practical implications for regulators, auditors, and bank management. Regulators should enhance oversight of profitability metrics, non-performing loans, and narrative disclosures to detect and mitigate fraud risks. Auditors should focus on these areas during audits to identify potential red flags. Bank management should strengthen internal controls and ethical standards to reduce the opportunities and rationalizations for financial statement fraud.

5. Conclusions and Recommendations

This study explored the determinants of financial statement fraud likelihood in Deposit Money Banks (DMBs) in Nigeria, focusing on the effects of pressure, opportunity, and rationalization, as measured through the Beneish M-score. The findings indicate that there is a significant negative relationship between pressure, as measured by Return on Assets (ROA), and the likelihood of financial statement fraud. Banks with higher profitability are less likely to engage in fraudulent financial reporting. This suggests that when banks perform well financially, there is reduced motivation to manipulate financial statements. In addition, the study found a significant positive relationship between opportunity, proxied by the Non-Performing Loans (NPL) ratio, and financial statement fraud likelihood. Higher levels of non-performing loans create opportunities for financial manipulation, as banks may attempt to conceal financial distress by falsifying reports. This suggests that poor loan performance is a significant driver of financial statement fraud, providing opportunities for banks to distort their financial health.

Furthermore, the analysis also revealed a significant positive relationship between rationalization, as measured by a qualitative narrative score, and the likelihood of financial statement fraud. Banks that exhibit higher levels of rationalization behaviors in their narrative disclosures are more likely to engage in fraudulent financial reporting. This indicates that narrative rationalizations can provide the necessary psychological framework for managers to justify fraudulent actions.

Based on these findings, the study recommends as follows:

1) Regulators such as the Central Bank of Nigeria (CBN) and the Nigerian Deposit Insurance Corporation (NDIC) should strengthen oversight mechanisms that focus on profitability metrics and loan performance. Regular audits and stress tests should be mandated to assess the financial health of banks and identify red flags related to non-performing loans.
2) Given the significant impact of non-performing loans on fraud likelihood, banks should prioritize the management and reduction of NPLs. Implementing stringent loan approval processes, regular loan reviews, and proactive measures for loan recovery can help minimize the occurrence of NPLs.

To counter the rationalization of fraudulent behavior, banks should focus on the content and tone of narrative disclosures. Training programs and ethical guidelines should be developed to ensure that narrative disclosures are accurate, transparent, and free from misleading justifications.

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