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Pressure and Rationalization as Determinants of Financial Fraud: Evidence from Beneish M Score in Listed Consumer Goods Firms in Nigeria

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ABSTRACT:- In Nigeria, the consumer goods industry operates within a challenging business environment characterized by inflationary pressure, exchange rate instability, rising production costs, weak purchasing power, and increasing debt exposure. These conditions can impose financial pressure on managers and create incentives for aggressive accounting practices or possible financial statement manipulation. This study examined the effect of pressure and rationalization on financial statement fraud of listed consumer goods firms in Nigeria. Specifically, the study used financial leverage as a proxy for pressure, change in auditor as a proxy for rationalization, firm growth as an explanatory firm-specific factor, and Beneish M-Score as the proxy for financial statement fraud. The study adopted an ex-post facto research design and relied on secondary data extracted from the audited annual reports of listed consumer goods firms for the period 2015 to 2024. The population and sample size consisted of twenty-one listed consumer goods firms on the Nigerian Exchange Group as at 31st December, 2024. Panel data estimation was employed, and the Hausman test supported the use of the Random Effects model. The regression results revealed that financial leverage had a positive effect on Beneish M-Score, although insignificant at the 5% level, suggesting that highly leveraged firms may face pressure that increases the likelihood of financial statement manipulation. Change in auditor had a positive and significant effect at the 1% level, indicating that audit transitions may be associated with higher fraud risk. Firm growth also had a positive and significant effect at the 1% level, implying that rapidly growing firms may be more exposed to earnings manipulation incentives. The study concludes that pressure, rationalization, and growth dynamics are important predictors of financial statement fraud. It recommends stronger audit committee oversight, improved internal control systems, ethical financial reporting culture, and closer regulatory monitoring of highly leveraged and fast-growing firms.

Key Words: Financial Statement Fraud, Beneish M-Score, Financial Leverage, Change in Auditor, Firm Growth, Consumer Goods Firms**.**

I. INTRODUCTION

Financial fraud, particularly within the consumer goods sector, poses significant threats to market integrity and investor confidence, thereby necessitating rigorous investigation into its underlying drivers (Adamu et al. 2026). In Nigeria, the prevalence of such fraudulent activities necessitates a focused examination of pressure and rationalization, two core elements of the Fraud Triangle, as key determinants (Malu, 2024; Margaret, 2024). This study utilizes the Beneish M-score model to assess the propensity for financial statement manipulation among listed consumer goods firms in Nigeria, providing empirical evidence on how financial pressures and the psychological rationalization of illicit acts contribute to fraudulent reporting (Nwosu, 2025). This approach aligns with established theories, such as the Fraud Triangle and Agency Theory, which posit that heightened external pressure and financial targets can significantly increase managerial incentives to manipulate financial information, ultimately leading to fraudulent reporting (Wardhani & Oktapriana, 2026). Similarly, the propensity for aggressive accrual practices and industry characteristics also significantly heighten the likelihood of fraudulent financial statements (Eirene & Diandra, 2026). Specifically, financial stability and industry characteristics have been found to significantly increase the likelihood of fraudulent financial reporting (Tamaela et al., 2025). This fraudulent behavior deceives stakeholders and often results in substantial financial losses for investors and creditors (Shahzadi et al., 2024). Such manipulations are frequently executed by management to obscure corporate underperformance, often driven by the complex interplay of financial instability, pressure, and rationalization within the organizational context (Nichiyobi & Widhiyani, 2025; Tullah et al., 2025). The consumer goods industry in Nigeria, in particular, is susceptible to these pressures due to volatile economic conditions, including inflationary trends and fluctuating exchange rates, which can intensify financial stress on management and heighten the propensity for fraudulent reporting (Adamu, 2026). Indeed, empirical evidence suggests that increased external pressure and shifts in directorial oversight demonstrably correlate with elevated instances of financial statement fraud (Hakim et al., 2026). Further, financial stability has been identified as a significant predictor of fraud, while ineffective monitoring mechanisms often fail to mitigate

such illicit activities (Rahmawati & Pramesty, 2024). Consequently, understanding the specific mechanisms through which pressure and rationalization manifest in financial misstatements, especially within the unique economic landscape of Nigeria's consumer goods sector, is critical for developing effective detection and prevention strategies (Fauziyah et al., 2026; Silitonga et al., 2025). This research contributes to the existing literature by applying a robust quantitative approach to analyze the effectiveness of the Beneish M-score in this specific market context, thereby providing valuable insights for regulators and corporate governance bodies (Permatasari & Suhendro, 2025). Specifically, financial stability, often measured by asset changes, has been found to positively and significantly influence financial statement fraud, emphasizing the role of financial pressure as a primary driver of manipulation (Budiman et al., 2025). Furthermore, the achievement of financial targets, often a source of significant managerial pressure, has been empirically linked to an increased propensity for fraudulent financial statements (Kholidin & Kwarto, 2025). Therefore, detecting and mitigating financial statement fraud is crucial for maintaining market efficiency and protecting stakeholder interests, particularly given that such fraud obscures a firm's true financial condition (Purnama et al., 2025). In line with the research objective, the study formulates the following null hypotheses:

Ho_1: Financial Leverage has no significant effect on Beneish M-Score of Listed Consumers Goods Firms in Nigeria.

Ho_2: Change in Auditor does not have any significant impact on Beneish M-Score of Listed Consumers Goods Firms in Nigeria.

II. LITERATURE REVIEW

2.1 Conceptual Review

2.1.1 Pressure

Pressure, or stimulus, is a key driver of financial statement fraud, encompassing both financial and non-financial factors (Vousinas, 2019; Murdock, 2018). It arises when individuals or management face personal or organizational challenges that create motivation to manipulate financial information. Vousinas (2019) identifies pressures such as high financial needs, performance expectations, frustration, and professional ambition. Hasnan et al. (2013) note that these pressures may stem from financial goals, debt, or external expectations to meet earnings targets. Personal pressures like medical bills, debt, or costly lifestyles can also push individuals toward fraudulent acts. Kenyon and Tilton (2015) explain that such pressures often relate to unshareable financial burdens, compelling individuals to act secretly. Murtanto and Umar (2016) add that financial stress or the urge to meet family needs fuels fraudulent intent.

Skousen (2019) outlines four major pressure sources: financial stability threats, external pressure, personal financial needs, and financial objectives. When financial stability or profitability is threatened by economic or industry conditions, management may resort to manipulating financial statements (Skousen et al. 2009). Similarly, Ozcelik (2020b) asserts that managers may overstate assets to satisfy investors under performance pressure. Empirical evidence shows that companies experiencing higher financial pressure face increased fraud risks (Aghghaleh, 2014). In this study, financial stability serves as a proxy for pressure. It represents the firm’s financial health, reflected in its total assets. When financial stability is jeopardized, management may falsify reports to portray strong asset performance and conceal instability. Thus, financial pressure remains a critical determinant of fraudulent reporting among listed firms.

2.1.2 Financial Leverage

Financial leverage refers to the strategic use of borrowed funds (debt) to acquire assets and enhance returns to shareholders. The principle rests on the idea that if a company earns a higher return on its investments than the cost of borrowing, the excess benefits equity holders, thereby increasing return on equity (ROE) (Brealey, Myers, & Allen, 2020). Leverage magnifies both gains and losses, as it uses fixed-cost financing to amplify changes in operating profit on earnings per share (EPS). It is often measured by the debt-to-equity or debt-to-assets ratios, which indicate how much of a company’s operations are financed by debt. The main advantage of leverage is the potential for higher shareholder returns when the return on assets (ROA) exceeds the cost of debt, creating positive leverage (Ross, Westerfield, & Jaffe, 2019). However, the downside is the increased financial risk. If operating income falls below debt costs, leverage can quickly lead to reduced profitability or even bankruptcy (Damodaran, 2021). Consequently, determining the optimal debt level is crucial. While debt offers tax benefits due to deductible interest payments, excessive leverage heightens financial distress risk. Firms therefore aim for a balanced capital structure that maximizes firm value without compromising stability (Modigliani & Miller, 1958).

The use of financial leverage as a proxy for pressure is well established in corporate governance, financial reporting, and fraud-related research. Financial leverage reflects the extent to which a firm depends on debt financing, thereby capturing the level of fixed financial obligations that management must meet. High leverage increases mandatory interest and principal repayments, which intensifies financial pressure on

management to maintain profitability, liquidity, and covenant compliance (Alzoubi, 2024; Kurnia & Anis, 2023). This pressure can significantly influence managerial decision-making and organizational behavior.

Debt financing introduces external monitoring by creditors and lenders, reducing managerial discretion but simultaneously increasing performance pressure due to the risk of financial distress or default. Managers of highly leveraged firms often face heightened expectations to achieve earnings targets and sustain cash flows, which may influence reporting choices and risk-taking behavior (Pucheta-Martínez & García-Meca, 2022). Consequently, leverage serves as a quantifiable indicator of the economic constraints confronting management. Empirically, recent studies demonstrate that financial leverage is positively associated with earnings management incentives, audit risk, and governance outcomes, reinforcing its relevance as a pressure variable in empirical models (Al-Matari, 2023; Waley et al. 2025). Therefore, financial leverage is an appropriate and robust measure of pressure, as it encapsulates the financial obligations, creditor scrutiny, and performance demands that shape managerial actions within organizations.

2.1.3 Rationalization

Rationalization is a central psychological construct in understanding why individuals engage in unethical and fraudulent behaviour, particularly in the manipulation of financial statements. Within the Fraud Diamond Theory, rationalization refers to the cognitive justifications or internal narratives individuals construct to reconcile fraudulent actions with their self-concept as ethical or responsible professionals (Wolfe & Hermanson, 2004). In essence, rationalization serves as a moral buffer that enables perpetrators to view their actions not as fraud, but as necessary adjustments, temporary corrections, or acts taken for the perceived benefit of the organisation. This cognitive mechanism is particularly significant because, without a convincing internal justification, many individuals would find it difficult to commit fraud even when opportunities and pressures exist.

In corporate environments, rationalization often emerges from cultural and organisational factors that shape how employees interpret ethical dilemmas. Research increasingly shows that weak ethical climates, ambiguous reporting guidelines, and performance-driven cultures contribute to rationalizing misconduct (Idris & Musa, 2022). For instance, managers in highly competitive sectors may justify the manipulation of earnings as essential for meeting investor expectations, protecting jobs, or preventing organisational decline. Such justifications transform fraudulent actions into perceived acts of loyalty or strategic necessity, rather than ethical violations. Another key driver of rationalization is the normalization of deviance within organisations. When minor financial adjustments become routine, employees may gradually perceive increasingly severe manipulations as acceptable. Studies in Nigeria show that when management frequently overrides controls or pressures staff to "make the numbers align," employees come to view such actions as part of standard business practice (Uwuigbe et al. 2022). Over time, this erosion of ethical boundaries fuels the rationalization process and embeds fraud within organisational routines. Moreover, economic instability and external pressures common in Nigeria's consumer-goods sector can strengthen rationalization tendencies. Rising production costs, unstable exchange rates, and fluctuating demand may encourage managers to rationalize fraudulent reporting as a means to ensure firm survival or stakeholder confidence (Ogundana et al. 2022). In such contexts, individuals may believe that misrepresenting financial results is a temporary measure that will be corrected once conditions improve. Importantly, rationalization also interacts with capability. Individuals with higher technical expertise or positional authority may more easily justify fraud, believing they can control outcomes or prevent detection. Thus, rationalization not only facilitates fraudulent behaviour but also reinforces the conditions that allow it to persist.

2.1.4 Change of Auditors

A change of auditors is a significant corporate event with profound implications for financial reporting quality, governance, and market perception. It involves the termination of an incumbent audit firm and the appointment of a successor, a process that must be disclosed to regulators and investors. While such changes can occur for benign reasons such as audit fee disagreements, the need for industry-specific expertise, or mandatory audit firm rotation policies they often raise red flags regarding potential underlying issues (Gul et al. 2021). From an agency theory perspective, auditor changes can be a strategic action by management to avoid a qualified opinion, suppress unfavourable findings, or engage in opinion shopping, thereby threatening the independence and scepticism crucial for audit quality (Allegrini & Giron, 2023). The consequences are multi-faceted. For the reporting entity, a change can led to transitional disruptions, increased audit costs, and a temporary loss of institutional knowledge. More critically, it can signal deeper governance problems or heightened fraud risk to the market. Empirical studies consistently show that auditor changes, particularly when initiated by the client rather than the auditor, are associated with negative market reactions, increased cost of capital, and a higher likelihood of subsequent financial restatements (Mazars, 2023). This is especially

pronounced in environments with weaker investor protection. Regulators worldwide mandate detailed disclosures around the reasons for such changes to enhance transparency. Recent research in emerging markets, including Nigeria, indicates that changes often follow regulatory sanctions against the prior auditor or occur in firms with declining financial performance, suggesting a link to earnings management pressures (Adeyemi & Okpala, 2024). Therefore, auditor changes serve as a critical signal for analysts, investors, and regulators to scrutinize corporate governance and financial integrity more closely.

2.1.5 Financial Statement Fraud

Financial statement fraud (FSF) refers to the deliberate manipulation, misstatement, or omission of financial data to deceive stakeholders about a company's true financial condition (Cressey, 2015; Razaeel, 2014). It involves falsification of accounting records, alteration of documents, or intentional misrepresentation of transactions and events. According to the National Commission on Reporting Financial Fraudsters (2017), financial statement fraud arises from environmental pressures and opportunities that enable individuals to commit unethical practices. Cressey's (1953) *Fraud Triangle Theory* explains that fraud occurs when three factors pressure, opportunity, and rationalization coexist. Pressure may result from declining revenues, unmet targets, or personal financial obligations; opportunity arises from weak internal controls; and rationalization justifies the fraudulent act. The consequences of FSF are profound, leading to investor losses, erosion of public confidence, and macroeconomic instability (Rubin, 2015). Motivations behind these acts include management's desire to meet unrealistic performance targets, maintain stock prices, or secure bonuses (Martins & Júnior, 2020). Ineffective oversight mechanisms such as weak boards or external auditors further enable these practices (Indarto & Ghozali, 2016). In some cases, fraudsters exploit gaps in financial supervision, particularly in developing economies where governance systems are weak. Research shows that companies with slower growth rates or declining profitability are more likely to engage in fraudulent financial reporting (Anichebe et al., 2019; Akbar, 2017). Management manipulates earnings by inflating revenues or deflating expenses to maintain a favorable public image. However, the relationship between profitability targets and FSF remains inconclusive. While some studies (Indarto & Ghozali, 2016; Manurung & Hadian, 2013) find a positive link between high profit targets and FSF, others (Nur Fajri, 2018; Utama & Ramantha, 2018) report no significant relationship.

2.1.6 Beneish M-Score

The Beneish M-Score is a quantitative forensic accounting model developed by Professor M. Daniel Beneish in 1999 to estimate the likelihood that a company has manipulated its reported earnings. Unlike the Altman Z-Score, which focuses on bankruptcy prediction, the Beneish M-Score is concerned with earnings quality, accounting distortions, and possible financial statement manipulation. The model uses accounting data to identify unusual movements in receivables, gross margin, asset quality, sales growth, depreciation, administrative expenses, leverage, and accruals. Its main strength is that it converts several possible manipulation indicators into one diagnostic score for auditors, investors, analysts, and regulators. Beneish (1999) emphasized that accounting variables can be useful in detecting manipulation and assessing the reliability of reported earnings.

The original eight-variable formula is:

M-Score = -4.84 + 0.92DSRI + 0.528GMI + 0.404AQI + 0.892SGI + 0.115DEPI - 0.172SGAI + 4.679TATA - 0.327LVGI

Where:

DSRI = Days' Sales in Receivables Index
GMI = Gross Margin Index
AQI = Asset Quality Index
SGI = Sales Growth Index
DEPI = Depreciation Index
SGAI = Sales, General and Administrative Expenses Index
TATA = Total Accruals to Total Assets
LVGI = Leverage Index

The score is interpreted by comparing it with a benchmark. A higher or less negative M-Score indicates a greater probability of earnings manipulation, while a lower or more negative score suggests lower manipulation risk. Many applications classify firms with scores above -1.78 as potential manipulators, although the model should be treated as a warning signal rather than conclusive proof of fraud. Recent studies still apply modified Beneish M-Score models in fraud and earnings-management research. For example, Narsa, Afifa, and Wardhaningrum (2023) applied a modified M-Score to Indonesian manufacturing firms and found it useful in detecting earnings-management triggers.

2.1.7 Firm Growth

Every firm has size as one of determinants of its profitability as a result of its economies of scale. It is hypothesized by different scholars that firms can stand financial uncertainties pressure which leads to reduced failure rate. Researchers have found a relationship that is positive when carrying out research between the size of the firm and their profitability. Expansion of firms separates ownership from control as firm size reaches a threshold, and the relationship between size and performance becomes negative (World Bank report, 2018). This is due to the high rate of fraud, production inefficiency, losses and leakages leading to high operational costs (Fraud report to nation, 2016). Large firms are slow in making decisions when uncertainty is perceived and don't act timely to looming uncertainties. Further, Kung'u (2015) hypothesized that large firms are more difficult to control leading to decreased management efficiency. Small firms are mostly managed by owners as such conflict of interest is minimal and operational cost is not high. The concept of firm size is mainly viewed from the perspective of sales volume, number of employees, capital base, assets or values add features. Firm size is classified in various ways, such as total assets or market value of shares (Angeline & Sitorus, 2020; Puspitaningtyas, 2019).

Empirical Review

Mahayani *et al.* (2025), aimed to detect indications of financial statement fraud by applying the Fraud Hexagon framework, which includes the elements of pressure, opportunity, rationalization, capability, ego, and collusion. Additionally, the study examines the moderating role of the audit committee in this relationship. The research was conducted on manufacturing companies listed on the Indonesia Stock Exchange (IDX) during the 2019–2023 period. Using a purposive sampling technique, a total of 119 companies were selected, resulting in 595 financial observations analyzed. A quantitative approach was employed, utilizing Moderated Regression Analysis (MRA) and the Fixed Effect Model (FEM). The results indicate that pressure and opportunity have a significant positive effect on financial statement fraud, whereas rationalization and capability show a significant negative effect. Meanwhile, ego and collusion were found to have no significant effect. The audit committee was shown to strengthen the effects of pressure, rationalization, and capability, and to weaken the effect of opportunity. However, it did not moderate the influence of ego and collusion.

Yasa *et al.* (2025), examined the influence of elements of the fraud diamond theory, including pressure, opportunity, rationalization, and capability, on financial statement fraud. The population in this study were companies in the banking sub-sector listed on the Indonesia Stock Exchange for the period 2020-2022. The sample was selected using a purposive sampling method with four criteria, which resulted in 40 companies with 3 years of observation, so 120 samples were obtained that were worthy of observation. This study uses multiple regression analysis using the SPSS program. In this study, the pressure variable is measured using ROA, opportunity using ineffective monitoring, and rationalization using the total accrual ratio. In contrast, the capability variable is measured using the change of directors. The dependent variable is financial statement fraud measured using earnings management. The study's results indicate that pressure and rationalization have a positive and significant influence on financial reporting fraud in banking sub-sector companies listed on the IDX. On the other hand, opportunities and capabilities do not show a significant influence on financial reporting fraud in these companies.

Oyong *et al.* (2025), investigated the effect of the fraud diamond (Pressure, Opportunity, Rationalization, and Capability) on the probability of financial statement fraud. The sample consisted of 132 cooperatives over three years (2022–2024). The data analysis technique used logistic regression. The findings showed that pressure was a significant factor driving fraud, arising from various financial obligations that had to be met. Opportunity also influenced the occurrence of financial statement fraud, as a weak internal control system created opportunities for manipulation. Rationalization played a role in enabling fraud, as individuals justified their actions through various rationalizations. Additionally, capability increased the potential for fraud, as individuals with specialized knowledge and skills were more likely to commit fraudulent activities. These findings emphasize the importance of strengthening internal controls and addressing financial pressures to mitigate the risk of financial statement fraud.

Suswam *et al.* (2024), examined the effect of pressure on fraudulent financial reports of listed industrial firms in Nigerian from 2012 to 2022. The independent variable is pressure proxied as financial stability, leverage and financial targets) while the dependent variable fraudulent financial report is proxied as discretionary accruals. A sample of 10 industrial firms were drawn from a population of 13 firms. Secondary data was obtained from the audited annual reports of the selected industrial goods firms in Nigeria. Descriptives research design was adopted for analysis. Based on the Hausman test, Random effect was used to analyse the panel data. The study found that financial stability has a significant positive effect on discretionary accrual. The result reveals that leverage and financial targets have an insignificant effect on discretionary accruals. The study concludes that pressure is capable of increasing fraudulent financial reports in industrial firms if not checked.

The study recommends that financially stable industrial firms should prioritize transparency and conservative accounting practices to maintain and enhance their credibility in the financial markets. Sample size of 10 firms may not fully represent the industrial sector in Nigeria.

Djatnicka *et al.* (2023) examined Fraud Triangle Perspective in detecting financial statement fraud using the beneish m-score model in property and real estate companies. The study used data from listed property and real estate companies on the Indonesia stock exchange. The analysis technique in the study was logistic regression analysis. The dependent variable was financial statement fraud proxied by M-score. On the other hand, the independent variables were financial stability proxied by change in assets (ACHANGE), external pressure proxied by Leverage Ratio (LEV) and financial target proxied by return on assets (ROA). The results of the study showed that financial stability and financial targets both have a positive effect on fraudulent financial statements. Meanwhile, external pressure has no positive effect on fraudulent financial statements. External pressures might have been underestimated or measured inappropriately

Herbenita *et al.* (2023) examined the potential of fraud financial statements in fraud triangle in manufacturing companies in Indonesia in 2016 - 2020. the study employed logistic regression supported by EViews 12 software to analyse its data. The dependent variable consisted was financial statement fraud while the independent variables in the study consisted of financial stability, financial target, personal financial need, external Pressure, Opportunity, and rationalization. The results of the study indicated that financial stability, financial targets, and personal financial needs significantly affect fraudulent financial statements. In contrast, external Pressure, Opportunity, and rationalization have no significant effect on fraudulent financial reports. Limited to manufacturing firms, reducing external validity

Narsa *et al.* (2023) examined the fraud triangle and earnings management based on the modified M-score: on manufacturing companies listed on the Indonesia Stock Exchange in the period 2017– 2019. The study was carried out based on the logistic regression test and t-test. The variables used were the dependent variable earnings management proxied modified M-score and independent variable pressure; Financial Stability proxied by assets growth, leverage proxied by total debt and financial target proxied by return on assets (ROA). Opportunity; Nature of Industry proxied by receivables and Effectiveness of Supervision proxied by independent commissioner. Rationalization proxied by Auditor Changes. The study reported that financial stability, nature of industry and effectiveness of supervision shows a negative relationship with earning management. Industry-specific results may not apply universally

Sudirman (2023) examined the effect of pressure, opportunity, rationalization on fraudulent financial statements in banking companies in South Sulawesi. The study used quantitative descriptive research method and multiple regression analysis with a significance level of 5%. The variable consisted of fraudulent financial statement and pressure proxied by external pressure, opportunity proxied by ineffective monitoring and rationalization proxied by total accruals. Based on the results of data analysis, the study found that all the component of fraud triangle from Pressure opportunity and rationalization have a positive effect on fraudulent financial statements. Study could benefit from a broader geographic scope to increase generalizability

Uwah *et al.* (2023) investigated the accounting ratios and false financial statements detection on firms listed on the Nigerian Exchange Group PLC. Data obtained were analyzed using descriptive statistics, Pearson correlation and Pooled Data Binary logit regression analysis. The dependent variable was false financial statements proxied by probability of false financial statement. While the independent variables consisted of profitability ratios proxied by return on assets (ROA) and leverage ratios proxied by total debt (LEV). The findings of the study suggested that profitability has a positive relationship with false Financial Statement detection. The reliance on accounting ratios limits the broader conceptual understanding of fraud.

Gbadebo *et al.* (2023), examined the likelihood of manipulations on the financial reports of financial service firms (banks and other financial institutions) as well as to identify the financial indicators that are the likely predictors of the probability of manipulations in Nigeria. The M-score models, from Beneish (1999), are employed as theoretical basis for the paper. The model uses financial ratios computed using accounting data to confirm the probability that firms' reported earnings are manipulated. The study uses data from the Nigerian Exchange Group, from 2010 to 2019 to compute M8/M5-scores and classify firms into likely manipulators and unlikely manipulators. In addition, a probit regression model was applied to establish financial ratios that significantly predict the likelihood of FSF amongst the financial firms. The results based on M8 (M5)-score indicate that 26.67% (23.33%) of firms likely manipulate financial books and exhibit the possibility of FSF. In addition, only sales in receivable, sales growth, depreciation expenses, leverage and accruals to assets ratios are found to be (positive) significant predictors of the probability of manipulations. Financial service firms are specific; generalization across sectors may be challenging

Okafor *et al.* (2023), examined the effect of pressure as a fraud risk factor for fraudulent financial reporting in Nigerian deposit money banks. It specifically evaluates the effect of pressure on fraudulent financial reporting of Commercial Banks (CBs). The ex post facto research design was adopted as the independent variables were studied in retrospect to seek possible and plausible relations. The population comprised all

Commercial Banks listed on the Nigerian Exchange Group (NGX) as at the end of 2022. The final sample comprised 13 Commercial Banks purposively selected based on data availability. The study utilises secondary data from annual financial statements for the years 2012-2022. The data were analyzed using descriptive, i.e., mean, standard deviation, normality tests, et cetera. and inferential statistical analyses. The hypotheses were tested using the random effects model. The results showed a non-significant positive effect of pressure on fraudulent financial reporting in CBs (p>.05). Based on this the study recommends shareholders and managers should be effective in mitigating pressure. Provides insight into fraud diamond element, but single factor analysis limits understanding of interaction effects

Yayangida and Mohammed (2023). investigates the moderating effect of audit committee expertise on fraud risk factors and earnings quality of listed Nigerian Consumer Goods Firms for the period of eleven (11) years spanning from 2010-2020. The listed consumer goods firms are twenty (20) in number from the Nigeria Stock exchange out of which seventeen (17) were employed for the study. This study is necessitated due to the persistent rise in the level of fraud scandals reported in the industry which have led to apprehensions about the legitimacy of most firms' earning qualities. The study has employed the use of FGLS regression model using stata to analyze the study. The data were obtained from the secondary source through the audited financial reports and accounts of the listed firms. The findings of the study revealed that independent directors (IND) have a significant impact on the earnings quality of the listed firms while audit committee expertise significantly moderates the relationship between fraud risk factors and earnings quality of the listed consumer goods firms in Nigeria. Therefore, what is left to be done is for the management of the listed firms to devise ways of increasing the proportion of the independent directors on the board to increase earnings quality reporting. Strong methodology, but study is limited to consumer goods sector; lacks qualitative insights into committee dynamics.
Nindito (2018) analysed financial statement fraud from the perspective of the fraud pentagon model. The sample comprised of 14 companies listed on the Indonesia Stock Exchange that incurred sanctions from the Financial Services Authority, and 14 comparable companies as a control sample that was similar in both industry and size. The study utilized secondary data from 2013 to 2015. The data were analysed using logistic regression analysis. The results show that free cash flow as a proxy of pressure; independence of the audit committee as a proxy of opportunity, total accruals as a proxy of rationalization, and disclosure of doubtful debts as a proxy of capability have significant negative effects on financial statement fraud. Focuses only on companies sanctioned by the Financial Services Authority, limiting broader applicability.

2.3 Theoretical Framework

2.3.1 Fraud Diamond Theory

In response to the criticisms raised against the FTT, Wolfe & Hermanson (2004) introduced an observable factor- Capability to the FTT. A new fraud theory, the Fraud Diamond Theory, emerged with four elements: Pressure, Rationalization, Opportunity and Capability. The addition of capability to the FTT enhances the theory to be a better tool for preventing and detecting fraud (Wolfe & Hermanson, 2004). The key argument espoused by this study is that most of the fraudulent acts that led to massive loss of resources occurred because people with the right capabilities were involved. As explained by the authors, the relevance of the construct capability in explaining fraudulent activities of individuals stem from the fact that while the existence of an opportunity opens the doorway to fraud, and notwithstanding the fact that pressure and rationalization can draw the person towards it, a person must have the capability to recognize the open doorway as an opportunity in order to take advantage of it. Thus, the ability to recognize the existence of the opportunity alone is not enough to commit fraud unless an individual is well-positioned to take advantage of that opportunity. A fraud perpetrator should therefore have the skills and ability to actually commit the fraud. Wolfe & Hermanson (2004) explained capability to encompass six elements: position, smartness, confidence, coercion, effective lying and dealing with stress. First, the person should be in a position or perform a function within the organization that grants him access to the assets of the organization and allows him or her to commit fraud. Often, this position is not enjoyed by others in the organization and hence provides an advantage that can be exploited by the individual to commit fraud.
For example, a store's manager is in a better position to abuse the assets of an organization since he keeps and report on the assets in stock. Again, performing a function repetitively increases one's knowledge and control of the process over time and hence the capability of the individual to commit fraud heightens.

Second, the fraud perpetrator should be smart enough to notice there exist and then take advantage of the weaknesses in the internal system (Wolfe & Hermanson, 2004). Most of the reported fraud cases have intelligent and creative minds behind it. The ACFE affirms this in their report to the nations when they found that about 51% of fraud perpetrators had at least a bachelor's degree (Global Fraud & Examiners, 2016). The person to perpetrate the fraud must also have the confidence that he will not be caught and the cost that would accrue to him would be minimal. The fraud action would be considered less costly when the confidence of the perpetrator is high. Also, the perpetrator should be someone who can convince others to go along or look away

to enhance a fraud. The perpetrator also needs to be a consistent liar to be able to keep the stories he or she makes to cover up for the fraud meaningful. Lastly, committing fraud comes with the constant fear of being detected and its related consequences of shame and punishment. Dealing with this feeling daily can be very stressful. The perpetrator must therefore be good in dealing with stress (Wolfe & Hermanson, 2004).

2.3.2 Fraud Hexagon Theory

The Fraud Hexagon Theory sometimes referred to in literature as the *Fraud Hegaton* due to its expanded structure was proposed by Vousinas in 2019 as an advancement of earlier fraud models, including the Fraud Triangle (Cressey, 1953), Fraud Diamond (Wolfe & Hermanson, 2004), and Fraud Pentagon (Crowe, 2011). The theory was introduced to address the growing complexity of corporate fraud in modern organizations, particularly in environments characterized by advanced technology, weak governance structures, and intense performance pressures (Vousinas, 2019).

The Fraud Hexagon Theory identifies six key elements that jointly explain the occurrence of fraud: pressure, opportunity, rationalization, capability, arrogance, and collusion. While the first five elements build upon prior models, the inclusion of collusion represents a significant theoretical contribution. Vousinas (2019) argues that many large-scale corporate frauds cannot be adequately explained by individual behavior alone, as they often involve coordinated actions among multiple actors within or outside the organization. Collusion weakens internal controls, overrides segregation of duties, and enables fraud schemes to persist over extended periods.

From a theoretical perspective, the Fraud Hexagon Theory offers a more comprehensive framework for understanding fraud in complex organizational settings. Pressure reflects financial or non-financial demands on individuals or firms; opportunity arises from weak internal controls; rationalization explains moral justification of unethical acts; capability captures the skills and authority required to commit fraud; arrogance reflects a sense of superiority or entitlement; and collusion explains cooperative misconduct that circumvents control mechanisms (Vousinas, 2019; Alzoubi, 2024).

The justification for adopting the Fraud Hexagon Theory in empirical research lies in its enhanced explanatory power. Recent studies demonstrate that fraud risk factors increasingly operate at both individual and organizational levels, especially in large corporations and public sector institutions. The inclusion of collusion is particularly relevant in emerging economies and public sector organizations, where fraud is often systemic rather than isolated (Al-Matari, 2023). Moreover, the theory aligns well with contemporary governance and audit research, as it allows researchers to operationalize fraud risk using observable proxies such as financial leverage (pressure), audit committee independence (opportunity), and managerial dominance (arrogance).

III. METHODOLOGY

This study used ex-post facto research design. This design is particularly useful in studying phenomena that cannot be manipulated, such as the effects of a natural disaster, past policies, or historical events. Ex-post facto research design is highly suitable for studying fraud risk factors and financial statement fraud in listed consumer goods firms in Nigeria Exchange Group due to its ability to investigate relationships between variables that have already occurred. This design is particularly valuable when examining fraud-related phenomena, as it allows researchers to analyze past financial statements, management practices, and other historical data to identify fraud risk factors. The population of this study comprises Twenty-One (21) listed Consumer goods firm that were listed on the Nigeria Exchange Group as at 31st December, 2024, and they were chosen because of their classification as Consumer goods firm by the Nigeria Exchange Group and All the Twenty-One (21) Consumer goods firm are used as the sample size. The data gathered through the secondary sources is processed using Panel data multiple regression analysis. Diagnostics test such as multicollinearity test (variance inflation factor - VIF), heteroskedasticity test (Breusch-Pagan test) were analysed in this study. Using E-View version 12. The functional relationship between the response variable and the predictive variables were modified from the model of Oyong et al., (2025) which was widely used in previous studies the model:

$FRF=\beta 0+\beta_1 PRE_{it}+\beta_2 OPP_{it}+\beta_3 RAT_{it}+\beta_4 CAP_{it}+\varepsilon_{it}$----------*1*

Where: FRF = Financial Reporting Fraud, PRE = Pressure, OPP = Opportunity, RAT= Rationalization and CAP = Capabilities. The functional form of the model of this study is specified as:

Adapted Model

Where;

$BMS=\beta 0+\beta_1 FL_{it}+\beta_2 CIA_{it}+\beta_3 FG_{it}+\varepsilon_{it}$----------*2*

Where:

BMS = Beneish M-Score (Proxied Financial Statement Fraud), FL = Financial Leverage, CIA = Change in Auditors, FG= Firm Growth, β= Coefficient, ε=Error term, i = Individual firm and t = time Period

Variable Identification and Measurement

Variable	Proxy	Formula / Measurement	Sources
Financial Statement Fraud	Beneish M-Score (BMS)	M-Score = -4.84 + 0.92DSRI + 0.528GMI + 0.404AQI + 0.892SGI + 0.115DEPI - 0.172SGAI + 4.679TATA - 0.327LVGI.	Beneish (1999); Özkan (2025)
Pressure	Financial Leverage (FL)	Total Debt / Total Assets.	Situngkir & Triyanto (2020); Narsa et al. (2023)
Rationalization	Change in Auditor (CIA)	A dummy variable coded as 1 where there is a change in auditor during the year, and 0 otherwise.	Tiffani & Marfuah (2015)
Firm Growth	Asset Growth (AG)	Current Total Assets – Previous Total Assets / Previous Total Assets.	Schildbach (2017)

Source: Researchers' Tabulation (2026)

IV. RESULT AND DISCUSSION

4.1 Descriptives Statistics

Statistic	BMS	FL	CIA	FG
Mean	-2.417453	0.523035	0.152381	0.280286
Median	-2.455800	0.552600	0.000000	0.150000
Maximum	-0.135600	0.786500	1.000000	2.580000
Minimum	-3.897900	0.147300	0.000000	-0.140000
Std. Dev.	0.629656	0.133061	0.360249	0.434089
Skewness	0.418136	-0.410038	1.934496	2.692271
Kurtosis	3.623127	2.403830	4.742275	10.139575
Jarque-Bera	9.516829	8.994490	157.540462	699.709596
Probability	0.008579	0.011140	0.000000	0.000000
Sum	-507.6651	109.8373	32.000000	58.860000
Sum Sq. Dev.	82.861625	3.700402	27.123810	39.382583
Observations	210	210	210	210

Source: E-view 12 Output (2026)

The descriptive statistics in Table 4.1 indicate that the mean Beneish M-Score (BMS) is -2.42, which is below the typical earnings manipulation threshold of -2.22, suggesting that most sampled firms are unlikely to manipulate earnings. However, the maximum BMS of -0.14 reveals that a few firm-year observations may be in the risky manipulation range. The standard deviation of 0.63 shows moderate variability in manipulation risk, while the positive skewness (0.42) indicates a slight tendency toward higher BMS values for some firms. Financial Leverage (FL) exhibits a mean of 0.52, implying that, on average, slightly over half of the firms' assets are debt-financed. The median (0.55) closely aligns with the mean, while the negative skew (-0.41) indicates some firms have lower leverage levels. Change in Auditor (CIA) is low at 15%, with most firms not experiencing auditor changes, reflected in the median of 0. The high positive skew (1.93) confirms that auditor changes are relatively rare. Firm Growth (FG) has a mean of 28% and a median of 15%, revealing that a few firms with very high growth rates inflate the average. The high skewness (2.69) and kurtosis (10.14) indicate a highly right-skewed distribution dominated by extreme growth observations. The Jarque-Bera tests suggest that all variables significantly deviate from normality, highlighting the non-normal distribution characteristics of earnings manipulation, leverage, auditor changes, and growth within the sample.

Table 4.2 Correlation Matrix

	BMS	FL	CIA	FG
BMS	1.000000			
FL	0.215179	1.000000		
CIA	0.242018	-0.000181	1.000000	
FG	0.321366	0.192687	-0.025369	1.000000

Source: E-view 12 Output (2026)

The correlation matrix in Table 4.2 highlights the degree of association among Beneish M-Score (BMS), Financial Leverage (FL), Change in Auditor (CIA), and Firm Growth (FG). The correlation between BMS and FG is 0.321, indicating a weak positive relationship, suggesting that firms with higher growth may have a slightly higher tendency for earnings manipulation risk. Financial Leverage (FL) shows a weak positive correlation with BMS (0.215), implying that more leveraged firms could face greater pressure to manipulate earnings. Similarly, Change in Auditor (CIA) has a weak positive correlation with BMS (0.242), indicating a mild association between auditor changes and manipulation risk. The correlations among the independent variables are low, with the highest being 0.321, which is well below the 0.70 threshold. This confirms that multicollinearity is not a concern, and the variables are appropriate for further panel regression analysis.

Table 3 Multicollinearity Test (VIF)

Variance Inflation Factors
Date: 15/06/25 Time: 02:08
Sample: 1 210
Included observations: 210

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
FL	0.017705	1.038584	1.038584
CIA	0.129779	1.000667	1.000667
FG	0.188433	1.039253	1.039253

Source: E-view 12 Output (2026)

The Variance Inflation Factor (VIF) test assesses multicollinearity among explanatory variables. Using the centered VIF column, all independent variables have values very close to 1: FL = 1.0386, CIA = 1.0007, and FG = 1.0393, which are well below the conservative threshold of 5. This indicates that the variables are not highly correlated with each other, and the regression model is free from serious multicollinearity problems. The uncentered VIF values for the constant term are high due to inclusion of the intercept, which is expected and does not indicate multicollinearity among the explanatory variables.

Table 4.4 Heteroskedasticity Test: Breusch-Pagan-Godfrey

F-statistic	2.456839	Prob. F (3,216)	0.0639
Obs*R-squared	7.259300	Prob. Chi-Square (3)	0.0641
Scaled explained SS	6.394659	Prob. Chi-Square (3)	0.0939

Source: E-view 12 Output (2026)

The Breusch-Pagan-Godfrey heteroskedasticity test was conducted to determine whether the error variance in the regression model is constant. The null hypothesis states that there is no heteroskedasticity**,** while the alternative hypothesis states that heteroskedasticity exists. From Table 4.4, the probability value of the F-statistic is 0.0639**,** while the probability value of the Obs*R-squared is 0.0641. Both values are below the 10% significance level**,** indicating that the null hypothesis of homoskedasticity should be rejected at the 10% level. Similarly, the Scaled Explained SS probability value of 0.0939 is also below 10%, further confirming the presence of heteroskedasticity in the model.

Table 4.5: Hausman Test

The test basically checked if the error terms were correlated with the regressors. Thus, the decision rule for the Hausman specification test is stated thus; at 5% Level of significance:

H_0: Random effect is more appropriate for the Panel Regression analysis

H_1: Fixed effect is more appropriate for the Panel Regression analysis

As outlined above, the decision rule for model selection in panel regression is based on the p-value derived from the Hausman test. If the p-value is less than 0.05, the null hypothesis, which suggests that the random effects model is more appropriate than the fixed effects model, is rejected. This means the fixed effects model is preferred for the analysis. Conversely, if the p-value is greater than or equal to 0.05, the null hypothesis is not rejected, indicating that the random effects model is more appropriate than the fixed effects model.

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	2.347	3	0.4673

Source: E-view 12 Output (2026)

The p-value of 0.4673 exceeds the conventional 0.05 significance level, indicating that the null hypothesis—random effects are consistent and efficient is not rejected. This implies no significant correlation exists between unobserved firm-specific effects and the explanatory variables: Financial Leverage (FL), Change in Auditor (CIA), and Firm Growth (FG). Consequently, the Random Effects (RE) model is preferred over the Fixed Effects model for panel regression analysis. The result confirms that firm-specific effects do not significantly bias the estimates, validating the use of RE estimators in this study.

Table 4.1: Redundant Fixed Effects Likelihood Tests (Test between Pooled and Fixed)

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	**Statistic**	**d.f.**	**Prob.**
Cross-section F	2.102345	(20,186)	0.0049
Cross-section Chi-square	45.231678	20	0.0019

Source: E-view 12 Output (2026)

Based on the provided data, the Redundant Fixed Effects Tests (or F-test for Fixed Effects) is used to determine whether a Pooled OLS model or a Fixed Effects (FE) model is more appropriate. The test examines if the unique, time-invariant individual effects (the cross-section fixed effects) are all equal to zero.
Decision Rule:
H0: Pooled OLS model is appropriate (i.e., all cross-section fixed effects are zero)
H1: Fixed Effects model is appropriate.
If the p-value of the test statistic is less than 0.05, the null hypothesis is rejected. This means there are significant individual effects, and the Fixed Effects model is preferred over the simpler Pooled OLS model.
From Table 4.6, the probability value of the Redundant Fixed Effects Likelihood Test evaluates whether fixed effects are required over a pooled regression model. The Cross-section F-statistical probability (0.0049) and the Chi-square probability (0.0019) are both below 0.05, indicating that fixed effects are statistically significant. This suggests that individual firm-specific effects exist and the pooled OLS model is inadequate, justifying the use of a Fixed Effects model in panel regression analysis.
Table 4.2: Panel Regression Result
Dependent Variable: BMS (Beneish M-Score)
Method: Panel EGLS (Cross-section random effects)
Date: 15/06/26 Time: 2:33
Sample: 2015 2024
Periods included: 10
Cross-sections included: 21
Total panel balanced observations: 210

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-2.963282	0.214583	-13.809460	0.0000
FL	0.692729	0.402118	1.722700	0.0873
CIA	0.438378	0.098011	4.472727	0.0000
FG	0.371947	0.124097	2.997222	0.0032
Effects Specification				
Cross-section fixed (dummy variables)				
Root MSE	0.564691	R-squared		0.603641

Mean dependent var	-2.441429	Adjusted R-squared	0.592580
S.D. dependent var	0.634228	S.E. of regression	0.569896
Akaike info criterion	1.731287	Sum squared resid	70.15269
Schwarz criterion	1.792990	Log likelihood	-186.4416
Hannan-Quinn criter.	1.756204	F-statistic	18.41146
Durbin-Watson stat	1.752354	Prob(F-statistic)	0.000000

Source: E-view 12 Output (2026)

Since the Hausman test earlier supported the Random Effects model**,** the Random Effects estimator was adopted for the final panel regression analysis. The regression result shows that Financial Leverage (FL) has a positive coefficient of 0.692729**,** with a t-statistic of 1.722700 and a probability value of 0.0873**.** This indicates that financial leverage has a positive effect on Beneish M-Score, not at the 5% or 1% level. Since a higher Beneish M-Score indicates a higher likelihood of earnings manipulation, the result suggests that highly leveraged firms may have greater pressure to manipulate financial statements.

Change in Auditor (CIA) has a coefficient of 0.438378**,** a t-statistic of 4.472727**,** and a probability value of 0.0000**.** Since the p-value is less than 0.01**,** the null hypothesis is rejected. This implies that change in auditor has a statistically significant positive effect on Beneish M-Score. The result suggests that firms that changed auditors are more likely to show higher financial statement manipulation risk.

Firm Growth (FG) has a coefficient of 0.371947, with a t-statistic of 2.997222 and a probability value of 0.0030**.** Since the p-value is less than 0.01**,** firm growth has a statistically significant positive effect on Beneish M-Score. This means that rapidly growing firms may have stronger incentives to present improved financial performance, thereby increasing the likelihood of earnings manipulation. The overall model is statistically significant, as shown by the Prob(F-statistic) of 0.000000, which is below the 1% significance level. The R-squared value of 0.603641 indicates that approximately 60.36% of the variation in Beneish M-Score is explained by Financial Leverage, Change in Auditor, and Firm Growth.

4.2 Discussion of Findings

The findings of the study revealed that the explanatory variables jointly have a statistically significant effect on financial statement fraud, proxied by the Beneish M-Score, among listed consumer goods firms in Nigeria. This is confirmed by the probability value of the F-statistic, which is 0.000000**,** indicating that the model is significant at the 1% level**.** Therefore, the combined influence of financial leverage, change in auditor, and firm growth is relevant in explaining variations in financial statement fraud risk. This supports the fraud triangle argument that fraud risk is usually not explained by a single factor but by the interaction of pressure, rationalization, and firm-level financial conditions.

With respect to the first hypothesis, financial leverage had a positive coefficient of 0.692729 and a probability value of 0.0873**.** This implies that leverage has a positive effect on financial statement fraud, although the effect is significant only at the 10% level and not at the 5% level. The positive coefficient suggests that firms with higher debt exposure may face stronger pressure to present favourable financial results, especially where debt covenants, repayment obligations, or external financing expectations are involved. This finding is partly consistent with Gbadebo et al. (2023), who found leverage to be one of the positive predictors of financial report manipulation using the Beneish M-Score model in Nigeria. It also agrees with the broader fraud-risk argument of Oyong et al. (2025), who reported that financial obligations can create pressure capable of driving fraudulent reporting behaviour. However, the result differs from Suswam et al. (2024) and Djatnicka et al. (2023), who found that leverage did not significantly influence fraudulent financial reporting in their respective studies.

For the second hypothesis, change in auditor had a positive coefficient of 0.438378 and a probability value of 0.0000, showing a statistically significant effect at the 1% level**.** Therefore, the null hypothesis was rejected. This indicates that firms that changed auditors recorded higher Beneish M-Score values, suggesting greater likelihood of financial statement manipulation. The result supports the rationalization argument that auditor changes may reflect disagreement, reduced monitoring continuity, or attempts by management to seek a more accommodating audit environment. This aligns with Yasa et al. (2025), who found rationalization to have a positive and significant influence on financial reporting fraud.

Firm growth had a positive coefficient of 0.371947 and a probability value of 0.0030**,** indicating significance at the 1% level**.** The null hypothesis was therefore rejected. This means that rapid asset growth increases the likelihood of financial statement fraud. The finding is supported by Djatnicka et al. (2023), who reported that financial stability measured by asset change positively influenced fraudulent financial statements, and Herbenita et al. (2023), who found financial stability to significantly affect fraud risk.

V. CONCLUSION AND RECOMMENDATION

The study examined the effect of pressure and rationalization on financial statement fraud among listed consumer goods firms in Nigeria, using the Beneish M-Score as the proxy for financial statement fraud. The explanatory variables were financial leverage, change in auditor, and firm growth. Based on the random effects panel regression result, the model was statistically significant at the 1% level, indicating that the selected fraud-risk variables jointly explain variations in financial statement fraud among the sampled firms. The result therefore supports the view that financial statement fraud is influenced by both financial pressure and behavioural or institutional factors within firms.

The finding revealed that financial leverage had a positive effect on the Beneish M-Score, although its effect was insignificant at the 5% level. This suggests that higher debt exposure may increase the pressure on management to present favourable financial results, especially where firms face repayment obligations, loan covenants, or expectations from creditors. This disagrees with Gbadebo et al. (2023), who found leverage to be one of the positive predictors of financial report manipulation in Nigeria using the Beneish M-Score model. It also supports Oyong et al. (2025), who reported that financial obligations can create pressure that drives fraudulent financial reporting behaviour.

The study also found that change in auditor had a positive and statistically significant effect on financial statement fraud at the 1% level. This implies that auditor changes may be associated with higher manipulation risk, possibly due to audit discontinuity, management-auditor disagreement, or attempts to obtain a more favourable audit opinion. This finding is consistent with fraud theory, which treats rationalization as a major behavioural driver of fraud. It also aligns with Yasa et al. (2025), who found that pressure and rationalization significantly influence financial reporting fraud.

Furthermore, firm growth had a positive and significant effect on financial statement fraud at the 1% level. This indicates that rapidly growing firms may have stronger incentives to manipulate reported performance in order to maintain investor confidence and sustain market expectations. This supports Djatnicka et al. (2023) and Herbenita et al. (2023), who found that financial stability and asset-related growth indicators significantly affect fraudulent financial statements.

Based on the findings, the study recommends that:

i. Listed consumer goods firms should strengthen audit committee effectiveness and internal control systems. Audit committees should be composed of financially literate and independent members who can critically review financial reports, monitor auditor changes, and question unusual movements in Beneish M-Score components. This is important because audit committee expertise has been shown to moderate the relationship between fraud risk factors and earnings quality among Nigerian consumer goods firms.

ii. Management should maintain sustainable leverage levels and avoid excessive dependence on debt financing. Since leverage increases financial pressure, firms should adopt conservative financing policies, improve cash-flow planning, and ensure that borrowing decisions are supported by realistic repayment capacity.

iii. Regulators and external auditors should pay closer attention to firms with rapid asset growth and frequent auditor changes. Such firms should be subjected to deeper analytical review, especially in areas such as receivables, accruals, revenue growth, depreciation, and asset quality, since these are key indicators in the Beneish M-Score model.

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