



FORENSIC AUDITING PRACTICES AND FRAUD MITIGATION OF QUOTED DEPOSIT MONEY BANKS IN NIGERIA

ALADETAN OLUMIDE BABABO¹
CLIFFORD .O. OFURUM²
SOLOMON EGBE³

^{1,2&3}Department Of Accounting, Faculty of Management Sciences,
University of Port Harcourt, Choba Port Harcourt, Rivers State, Nigeria.

Abstract

The study sought to establish the relationship between forensic auditing practices and fraud mitigation from 2012-2022 for quoted DMBs in Nigeria. The selected predictor proxies included Fraud Investigation (FGN) and Fraud Litigation Support Services (FLS), whereas the criterion proxies were Corporate Governance (CTG), Internal Auditing (IAD) and Internal Control System (ICS). The study employed survey and ex-post facto research designs wherein primary and secondary data were used. The data spanned the period between 2012 and 2022. The data used for the analysis were ratings from questionnaires and the average figures from annual publish statement of account and Nigeria Stock Exchange statistical data. The data was analyzed using E-view-10 statistical software package. The study results established that secondary data proxies. The questionnaires were administered to the management staff of 24 quoted DMBs in Nigeria. Using panel OLS there exist a positive and significant relationship between the variables under investigation. It was recommended that the Management of DMBs Nigeria should put in place an internal control system that would allow each branch monitor its detailed daily financial operations, and NDIC in conjunction with CBN and other regulatory agencies should sustain the enforcement of compliance with the forensic auditing features to guarantee an enduring sanity in financial practices.

Keywords:

Fraud Investigation.Fraud Litigation Support Services.Corporate Governance
Internal Auditing.Internal Control System



Introduction

The banking industry is one of the biggest contributors to the economic development of any country (Matter & Eneizan, 2018). As the cornerstone of many national economies thrives the veritable role of Deposit Money Bank (DMBs) to the financial system. Osuka and Richard (2013) posit that deposit money banks among others play the roles of financial intermediation between the deficit and surplus units in an economy, monetary policy instrumentation and monetary policy stabilization.

Closely related to fraud mitigation is forensic auditing practice that emerged pursuant to financial fraud. Oyedokun (2018) opines that forensic auditing practice is the utilization of specialized investigative skills in carrying out an inquiry conducted in such a manner that the outcome will have application in a court of law. Vukadinoc, *et al.*, (2015) state that the focus of forensic audit is the investigation and detection of fraud and it involves two primary activities: fraud investigation and provision of litigation support services in the court of law.

Apparently, research results have remained inclusive on the causal relationship between forensic audit practices and fraud mitigation among quoted DMBs in Nigeria. Drawing support from a plethora of past empirical studies such as Enofe, *et al.*, (2017); Kaumar & Venkataraman (2020); Okiro & Abdi (2018); Matarneh, *et al.*, (2015). These empirical studies though not completely of Nigerian origin scarcely employed fraud investigation, provision of litigation support services, corporate governance, internal auditing and internal control system as proxies in their investigation as their results may not be similar. Most importantly, extant studies hardly factored the moderation of organizational justice.

The inherent challenges of forensic accounting practice and litigation support services are largely functional in different issues. First the issue of virtually no regulatory framework such as legislation, standards, professional forensic accounting bodies and other sources of authority could hamper the growth of this discipline in the accounting profession in the Nigerian environment. Amere reliance, adoption and importation of sources of authority developed for the practice of forensic accounting and litigation support services in developed economies may not be capable, suitable and reliable of achieving the desired result as it could suffer problems in an attempt to domesticate such standards to suit Nigerian environment. Furthermore, forensic accountants in Nigeria may also have difficulties in trying to interpret the provisions of standards and legislations used in the practice of forensic accounting such as in USA, Britain and Canada.

One factor that contributed to the growth in fraud research was the collapse of large US companies that engaged in fraudulent accounting-based corporate governance practices such as Enron, WorldCom and Tyco, including a Big-5 audit firm Arthur Anderson (Rezaee, 2004; Ball, 2009; Huber, 2012). Interestingly, a Big 5 audit firm, Arthur Anderson, helped Enron commit accounting fraud. In search for huge profits, Arthur Anderson played down its high audit standards while seeking huge profits and as a result faced the consequences of its actions. Subsequently, several fraud revelations emerged during the period which has changed the corporate governance structure of firms around the world in recent years, which also led to greater demand for the services of forensic accountants and fraud investigators. The main aim of this current study was to determine the relationship between forensic auditing practices and fraud mitigation of quoted deposit money banks in Nigeria.

Literature Review

Conceptual Review

Forensic auditing practice

Forensic auditing is the tripartite practice of utilizing accounting, auditing and investigative skills to assist in legal matters (Nwosu, 2015). It is a specialized field of accounting that describes engagements that result from actual or anticipated disputes or litigation. Forensic auditing can, therefore, be seen as an aspect of accounting that is suitable for legal review and offering the highest level of assurance (Apostolou, Hassell, & Webber 2000). Forensic auditing in the view of Zysman (2004), is the integration of accounting, auditing and investigative skills. This definition may however be incomplete as the area of application is not covered. Dhar & Sarkar (2010) define forensic auditing as the application of accounting concepts and techniques to legal problems. Howard and Sheetz (2006), gave a more comprehensive definition which states that forensic auditing is the process of interpreting, summarizing and presenting complex financial issues clearly, succinctly and factually often in a court of law as an expert. Crumbley (2003) defined forensic auditing as an accounting analysis that can uncover possible fraud that is suitable for presentation in court. Albretch (2001) described forensic auditing as the utilization of specialized investigative skills in carrying out an enquiry conducted in such a manner that the outcome will have application to the court of law. Forensic auditing is an activity that consists of gathering, verifying, processing, analyzing of, and reporting on data in order to obtain facts and evidence in a predefined context in the area of legal/financial disputes and/or irregularities and giving preventive advice.

Dimensions of forensic auditing practice

Fraud investigation: Corporate fraud is of great concern to organizations like the banks, government agencies and businesses that are saddled with the responsibility of protecting depositors of banks and other financial institutions. Mahdi and Zhila (2008) define fraud as the intentional misrepresentation, concealment or omission of the truth for the purpose of deception or manipulation to the financial detriment of an individual or an organization such as a bank, which also includes embezzlement, theft or any attempt to steal or unlawfully obtain or misuse the asset of the bank. Fraud can increase the operating cost of a bank because of the added cost of installing the necessary machinery for its provision, detection and protection of assets. It was noted by Nwaze (2008), that fraud is perpetrated in many forms and usually has insiders (staff) and outsiders conniving together to successfully implement the act. As noted by Akhidime and Ugbale-Ekatah (2014), cited in Okolie and Taiwo (2014), statutory audit appears to have shown a lack of concern and reflective attitude towards fraud fighting, thereby failing to offer the public desirable assurance to handle corruption and fraud. According to Hopwood, Young and Leiner (2013), fraud investigation is the systematic process of gathering and reviewing evidence for the purpose of documenting the presence or absence of fraud. It involves the engagement process, the evidence collection process, the reporting process and the loss recovery process. Albrecht and Albrecht (2001) described forensic fraud investigations as the utilization of specialized investigative skills in carrying out an enquiry conducted in such a manner that the outcome will have application to the court of law.

Fraud investigation is often referred to as forensic science, which is the application of forensic auditing to criminal or civil law. It is the practice of lawfully establishing evidence and facts that are to be presented in a court of law. Fraud investigation can also be explained

as the application of investigative and analytical skills for the purpose of resolving financial issues in a manner that meets standards required by courts of law. Fraud investigation is the act of utilizing science to establish facts or evidence which is to be used for crime-based trials or proceeding. Investigation is a search or inquiry for ascertaining facts; detailed or careful examination. It is a vital part of forensic accounting and auditing process but only applied when the event or transaction is beclouded. It is carried out when lapse has been established to ascertain who is responsible, the reason for the action including the extent of damage if any. It could be referred to as a detailed verification and clarification of doubt about a transaction or event (Oyedokun, 2013). Because of the unique legal aspects of forensic accounting investigations, there are special auditing protocols that must be followed since the audit conclusions and findings may be subject to challenge in an adjudication proceeding, or in more formal court proceedings.

Fraud litigation support services: Litigation is a term encompassing the use of court processes to resolve a dispute, in line with the rules in place in that jurisdiction. According to Harwood (2016), stages in litigation involves before litigation starts, preparing a case and finally, trial and enforcement. Before litigation begins various forms of preliminary investigations takes place also, various forms of alternative dispute resolution (ADR) are encouraged to be examined. It is encouraged that parties consider alternative means of resolving the disputes first. The more conventional alternative dispute resolution (ADR) for both parties are drafted and served accordingly, this is usually followed by defense and counter claims and replies by the parties involved. Allocations and directions for future conducts of the case are done, presentation of documents, statements by witnessing, expert reports and meetings with experts all form part of the preparation of cases for litigations. This stage is now followed by the trial and enforcement stage as well as appeals by the parties involved. The concept of litigation and business advisory adopted in this study is how the fear and possible avoidance of a court process as well as yielding to expert's objective and independent advice as a forensic accounting technique can serve as an instrument for mitigating as well as possible curbing of financial fraud in the banking sector by the perpetrators of these crimes (Harwood, 2016). options include: Arbitration is a confidential form of dispute resolution where one or more arbitrators decide a case rather than a court appointed judge. Mediation is a facilitated negotiation assisted by an independent third-party mediator appointed by the parties. An independent expert is appointed to resolve the matter by producing legally binding decision (Harwood, 2016). In preparing cases for litigation claim forms and particulars of claims.

Litigation support takes into cognizance the interpretation and representation of problems that are connected to helping current or imminent litigation. In this aspect of knowledge, the forensic accountant might be told to attach a supposed value for the loss caused by those involved in the legal conflict and also asked to help in providing solution to conflicts even before they go to court. Due to the knowledge of forensic accountants, they are usually intended to be proficient consultants and expert witness.

Fraud mitigation

The banking sector plays a very significant role in the development of any economy (Adeyemo, 2012). Banks in most economies are the principal depositories of the public's monetary savings, the nerve center of the payment system, the vessel endowed with the ability of money creation and allocation of financial resources and conduit through which monetary and credit policies are implemented (Idolor, 2010 and Akindele, 2011). The success of monetary policy, to a large extent, depends on the health of the banking institutions

through which the policies are implemented. Whatever problems that militate against the proper functioning of the banking sector will invariably have multiplier effects on the other sectors of the economy. This is one of the reasons it is essential to quickly diagnose ways to mitigate fraud as potential factors which may hamper the smooth functioning of the banking sector and urgently address such issues. Fraud has been identified as a major threat to the growth and development of the banking sector. In devising the general mitigation measures, the bank should appreciate the main feature of fraud, one of which is that fraud is rapidly increasing and it is a highly profitable industry. According to Ekeiqwe (2000), computer technology facilitates and accentuates the growth. Other features are that frauds involve misappropriation of assets and manipulation or distortion of data and most frauds result from basic failure and inadequacies of internal controls. This was rightly confirmed in a report by the Nigerian Deposit Insurance Corporation annual reports and statement of accounts, where it said that most frauds are committed by insider usually in collusion with outside third parties, and mostly are discovered by accident or tip offs rather than internal and external auditors. The measure of fraud mitigation chosen for this current study is internal control system.

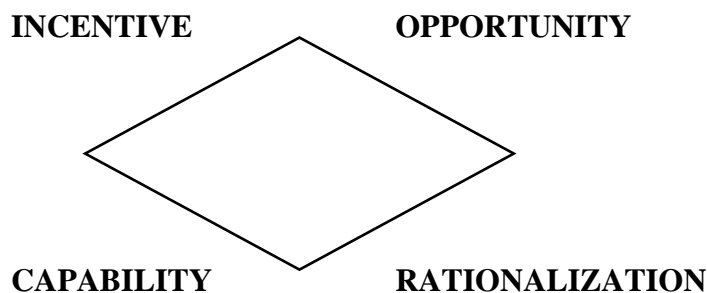
Measure of fraud mitigation

Internal control system: An internal control system refers to an integrated set of financial, operational, and other ongoing control processes developed and managed by the board of directors and senior management of a financial and credit institution to ensure that the objectives are met at all levels implemented. Therefore, if a financial and credit institution has an effective internal control system, it improves and promotes efficiency and effectiveness, maintaining its credibility and reputation. Of course, several functions of an effective internal control system are considered conceivable, some improving proper supervision and accountability of management and helping to spread empowering control culture, assisting in the decision making process and effective administration of the financial and credit institution, improving related mechanisms for proper management of risks in institutional activities, strengthening control structures and activities, including segregation of duties, observing the process of obtaining licenses and approvals, resolving discrepancies and reviewing operational performance, improving control measures to prevent, identify and correct failure in time, including errors, violations and embezzlements, improving proper communication and circulation and reliable information, among all levels of financial and credit institutions, improving and improving the timely and reliable reporting and information system of the financial and credit institution to the relevant persons and authorities, and finally, ensuring that all levels of the financial and credit institution adhere to the rules, regulations, oversight requirements, guidelines and directives, and enforce them effectively.

Internal control is a system structured within the corporation whose goal is to raise efficiency and effectiveness of activities. The system assures the conformity of activities within the laws and regulations and improve the reliability of financial reporting. Internal control system possesses vital importance for the institution to attain its ultimate objectives. Internal control system allows banks to foresee potential problems which may cause financial losses and thereby prevent or minimize any future losses. Researches on the causes of bank failures mainly concluded that an efficient and effective internal control system might prevent financial cost.

Theoretical Framework

Fraud diamond theory



Wolf and Hermanson (2004) introduced the fraud diamond model where they presented another view of the factors to fraud. The model adds fourth variable “capabilities” to the three-factor theory of fraud triangle. Wolf and Hermanson believed many frauds would not have occurred without the right person with right capabilities implementing the details of the fraud. They also suggested four observation traits for committing fraud: i. authoritative position in the organization. ii. capacity to understand and exploit the organization’s systems of accounting and internal control. iii. confidence that they will not be detected, or if caught, they will get out of it easily. iv. capability to deal with the stress created within and otherwise good person when he or she commits bad act. With the additional element presented in the fraud diamond theory affecting individuals’ decision to commit fraud, the organization and auditors need to better understand employees’ individual traits and abilities in order to assess the risk of fraudulent behaviours. In addition, better systems of checks and balances should be implemented and monitored to proactively minimize risks and losses as a result of fraudulent activities in the workplace. Hence, because of the capability of those who engaged in fraud and other form of atrocities, the service of a trained and experienced investigator like the forensic auditor is required to forestall the occurrence of such fraud.

The FDT was first presented by Wolfe and Hermanson in the CPA Journal (December 2004). It is generally viewed as an expanded version of the FTT. In this theory, an element termed capability has been added to the three initial fraud elements of the FTT. Wolfe and Hermanson (2004) argued that although perceived pressure or incentive might coexist with an opportunity to commit fraud and a rationalization for doing so, it is unlikely for fraud to take place unless the fourth element (capability) is also present. In other words, the potential perpetrator must have the skills and ability to commit fraud.

According to Wolfe and Hermanson (2004) opportunity opens the doorway to fraud, and incentive (pressure) and rationalization can draw a person toward it. However, the person must have the capability to recognize the open doorway as an opportunity and to take advantage of it by walking through, not just once, but repeatedly”. With the additional element presented in the FDT affecting individuals’ decision to commit fraud, the organization and auditors need to understand employees’ individual traits and abilities in order to assess the risk of fraudulent behaviours in the public sector. The elements of FDT are interrelated to the extent that an employee cannot commit fraud until all of the elements are present. The theory proposes that pressure can cause someone to seek opportunity, and pressure and opportunity can encourage rationalization. At the same time, none of these two factors, alone or together, necessarily cause an individual to engage in activities that could lead to fraud until the fraudster has the capability to do so (Hooper & Pornelli, 2010). The

additional element, that is, capability is what differentiates the FDT of Wolfe and Hermanson (2004) from the FTT of Cressey (1950).

Capability: this is the situation of having the necessary traits or skills and abilities for the person to commit fraud. It is where the fraudster recognized the particular fraud opportunity and ability to turn it into reality. Position, intelligence, ego, coercion, deceit and stress, are the supporting elements of capability (Wolfe and Hermanson 2004). According to Bressler and Bressler (2007) as cited by Mackevicius and Giriunas (2013) not every person who possessed motivation, opportunities, and realization may commit fraud due to the lack of the capability to carry it out or to conceal it. Albrecht, *et al.* (1995) opine that this element is particularly important when it concerns a large-scale or long-term fraud. Furthermore, Albrecht, *et al.* (1995) believe that only the person who has an extremely high capacity will be able to understand the existing internal control, to identify its weaknesses and to use them in planning the implementation of fraud.

Position/function: Wolfe and Hermanson (2004) state that the person's position or function within the organization may furnish the ability to create or exploit an opportunity for fraud not available to others. In research conducted as an analysis of U.S. Public Companies, Beasley, *et al.* (1999) as quoted by Wolfe and Hermanson (2004) found that corporate CEOs were implicated in over 70 percent of publicly-company's accounting frauds. They also report that many organizations do not implement sufficient checks and balances to mitigate their CEO's capabilities to influence and perpetuate frauds. Additionally, when people perform a certain function repeatedly, such as bank reconciliations or setting up new vendor accounts, their capability to commit fraud increases as their knowledge of the function's processes and controls expands over time.

Intelligence/creativity and ego: the fraudster is someone who understands and capable of exploiting internal control weaknesses and using the position; function or authorized access to the greatest advantage. Intelligent, experienced, creative people with a solid grasp of controls and vulnerabilities, commit many of today's largest frauds. This knowledge is used to leverage the person's responsibility over or authorized access to systems or assets (Wolfe & Hermanson 2004). According to the Association of Certified Fraud Examiners (2003), 51% of the perpetrators of occupational fraud had at least a bachelor's degree, and 49% of the fraudsters were over 40 years old. In addition, managers or executives committed 46% of the frauds based on the Association's recent study. The fraudster has a strong ego and great confidence that he will not be detected, or believes that he could easily take himself out of trouble if caught. Such confidence or arrogance can affect one's cost benefit analysis of engaging in fraud. The more confident the person, the lower the estimated cost of fraud will be (Wolfe and Hermanson 2004:40). In an article entitled, "The Human Face of Fraud" it is noted that, one of the common personality types among fraudsters is the ego. An egoistic person refers to someone who is "driven to succeed at all costs, self-absorbed, self-confident and narcissistic" (Duffield and Grabosky, 2001). "The Psychology of Fraud" notes that, in addition to financial strain, an aspect of aspect of motivation that may apply to some or all types of fraud is ego/power. Wolfe and Hermanson (2004) quoting Sutherland (1977) "Theory of White-Collar Criminals" state that, "as fraudsters found themselves successful at this crime, they began to gain some secondary delight in the knowledge that they are fooling world, that they are showing their superiority to others". The individuals committing fraud must have a strong ego and great confidence that they will not be detected. The common personality types include someone who is driven to succeed at all costs, self-absorbed, self-confident, and often-narcissistic (Rudewicz, 2011). According to the Diagnostic and Statistical Manual of Mental Disorders (DSMMD), as cited by Rudewicz (2011) narcissistic

personality disorder is a pervasive pattern of grandiosity, a need for admiration and a lack of empathy for others. Individuals with this disorder believe they are superior or unique, and they are likely to have inflated views of their own accomplishments and abilities.

Empirical Review

Banda (2020) conducted a study evaluating the factors affecting the performance and growth of microfinance institutions in Zambia. In her conclusions, she recommended that an effective internal audit team is critical to the performance and growth of an institution and that is why this study is aimed at finding the effect of internal audit on the financial performance of commercial banks in Zambia.

Katemena (2020) in his study on the analysis of the role of corporate governance in combating financial corruption in state-owned enterprises of Zambia found that the presence of internal control systems is critical in combating corruption and can have an effect on how enterprises operate. This study seeks to examine the extent to which the internal audit can impact the financial performance of commercial banks in Zambia.

Inyada, *et al.* (2019) examined the effect of Forensic Audit on Bank Fraud in Nigeria. The unprecedented increase in cases of bank frauds in Nigeria has made the application of forensic audit an indispensable tool in the audit cycle. Forensic audit skills are contemporary and diagnostic audit tools that help in the detection, prevention and reduction of frauds. Forensic audit skills give not only greater and current insight into the banks' internal control measures and risk management techniques but also made available the technical capability for the detection, prevention and reduction of frauds. The survey design was employed and the sample of the study was 128 out of a population of 165. The data were analyzed using the ordinary least square (OLS) regression model. The findings show that forensic audit helps in an enhanced bank fraud detection and prevention. Furthermore, the results show that forensic audit is not just an effective tool but also an efficient tool for the detection, prevention and reduction of bank fraud in Nigeria. It is therefore recommended that forensic audit should be highly embraced by specialized institutions like bank and insurance companies to ensure that fraud cases are speedily detected and adequately prevented. Also, a separate body should be speedily detected and adequately prevented. Also, a separate body should be forensic auditors. The major critic in this study was that investigation was not taking note of and does not express expectation Gap.

Zalatar (2019) studied the gender influences of customers in understanding the quality of services from Philippine commercial banks. This article examines the quality of service of Philippine commercial banks from the perspective of their customers. This examines the importance of paying attention to the five dimensions of service quality and examines how gender differences affect customer expectations and understanding of the quality of banking services. The results of surveys and statistical tests show that gender differences affect the relative importance of five dimensions, as well as customer expectations and perceptions of service quality in banks. This research is useful in creating customer-related strategies that increase customer perception of the quality of banking services.

Araqi, *et al.* (2018) examined the "effect of major weaknesses of internal controls on investment inefficiency". The aim of this study is to investigate the effect of major weaknesses of internal controls on investment inefficiency. The research findings show that there is a significant positive relationship between major weaknesses in internal controls and investment inefficiency. In fact, the results show that the existence of major weaknesses in

internal controls leads to inefficiency of investment in companies, and ultimately the need for managers to implement effective internal controls in the organization.

Liu, *et al.* (2018) presented a paper entitled Employee Quality, Monitoring Environment, and Internal Control. They examined the impact of ICEs on the quality of internal control. Using specific data from Chinese companies, they found that ICE quality had a significant effect on the quality of internal control. They examined the effect of monitoring this result and found that it had a greater impact on companies with accurate monitoring environments, especially when companies have a higher organizational control system (CSOX), organizational ownership, or more importance to internal control. Their findings suggest that ICEs play an important role in the design and implementation of internal control systems. Their study is interesting for both senior executives who want to improve the quality of internal control of companies and officials who want to understand the mechanisms of internal control.

Chunli Liu, *et al.*; (2018) Determining bank legal fees for internal controls and operational risk is the title of a study studied by McNulty (2017). Excessive litigation (significantly higher than counterparts) against a bank indicates operational risk, as it often indicates a lack of a strong internal control system. They examined the relationship between bank performance and poor internal control using legal fees as a proxy and found that legal costs were the main determinants of loan losses and stock returns. Banking regulators must report legal fees in call reports to help identify weakly controlled entities. The current report creates the asymmetry of unnecessary information because investors are unaware of the operational risk, which leads to a mistake in the price of bank securities.

Fenderski and Grayley (2018) presented "the effectiveness of internal controls and the risk of falling stock prices." In high-quality internal control companies, due to the effective monitoring on managers' behavior, managers' ability to hide bad company news is limited, which in turn reduces spreading bad news to the market and, thereby reducing the company's stock price falling risk. Therefore, based on this argument, this study examines the relationship between the effectiveness of internal control and the risk of falling stock prices of companies. The research findings show that the effectiveness of internal control reduces the risk of falling stock prices of companies. The research findings, while filling the research gap in this area, can be useful for investors, capital market lawmakers, and auditors of decision-making auditing market regulation.

Methodology

Research Design: The survey and the ex-post facto research designs was employed in this study. The former allows the use of questionnaires, while the latter is suitable where the subject of study is already in existence.

Population of the Study: The target population for this study comprised of thirty-three quoted DMBs as provided in the fact-book of the Nigerian Stock Exchange (NSE) during the period 2012 to 2022. A population of study refers to the entire members of the target group with similar attributes from which the sample of interest is drawn. Therefore, the target population for this study comprised of all quoted DMBs that currently trade shares in the Nigerian Stock Exchange (NSE). However, available information from the Nigerian Stock Exchange (NSE) office showed that the following thirty-three (33) DMBs are currently

quoted and legally permitted by the Securities and Exchange Commission to issue securities in Nigeria.

Sampling Procedure: The census sampling procedure was employed on the chosen sampling frame of twenty-four (24) quoted DMBs in Nigeria as there was no use for sample size determination and the remaining nine banks do not possess published financial statements. The suitability of this method for this research is to give every subject in this finite population an equal chance of appearing in the selection.

Data Collection Method: The primary and secondary sources of data collection were used for this research. Therefore, this research employed the data triangulation method. Corporate governance variable utilized secondary data, while the other variables used primary data sources.

Questionnaire Design: Well-structured 5-point Likert scale questionnaire was designed and administered to the management staff of quoted DMBs in Nigeria. The respondent provided responses on fraud investigation, fraud litigation support services, internal auditing, internal control system and organizational justice of their respective banks.

Operational Measures of Variables: Forensic auditing practices (FAP) was used as the predictor variable. It consisted of two dimensions. Namely fraud investigation (FGN) and fraud litigation support services (FLS). These proxies were operationalized by respondents' ratings.

Fraud mitigation (FMT) was employed as the criterion variable. It comprised of one measure, namely corporate governance, operationalized by internal audit quality, internal auditing (IAD) and internal control system (ICS) which were operationalized by respondents' ratings.

Moderator Variable

Organizational justice (OGT) was employed as the moderator variable. It was operationalized by respondents' ratings.

Model Specification

Functional forms

$$CTG = f(FGN, FLS) \quad \dots \quad 1$$

$$IAD = f(FDN, FLS) \quad \dots \quad 2$$

$$ICS = f(FDN, FLS) \quad \dots \quad 3$$

Econometric form

$$CTG = \mu_0 + \mu_1 FGN + \mu_2 FLS + \dots + \mu_{1,t} \quad \dots \quad 4$$

$$IAD = \lambda_0 + \lambda_1 FGN + \lambda_2 FLS + \dots - \mu_{1,t} \quad \dots \quad 5$$

$$ICS = X_0 + X_1 FGN + X_2 FLS + \dots + \mu_{1,t} \quad \dots \quad 6$$

From equation 4, 5, and 6, it is expected apriori that $\mu_1, \mu_2, \lambda_1, \lambda_2, X_1, X_2 > 0$

Where:

CTG- corporate governance, IAD = internal auditing, ICS= internal control system, FGN= fraud investigation, FLS = fraud litigation support services, FAP = forensic auditing practices, FMT = fraud mitigation

$\mu_0, \beta_0, \lambda_0$ = regression constant, $\mu_1, \mu_2, \lambda_1, \lambda_2$ X_1, X_2 = regression coefficients, μ_0, t = error term, * = statistical interaction.

Data Analysis Technique: Three types of data analytical techniques contained in the regression format of E-view 10.0 version statistical software was employed. They include descriptive, inferential and causality tests. These tests were done in the form of univariate, bivariate and multivariate categories at 0.05 significance level for 2-tailed tests.

Validity and Reliability: These tests were carried out using Cronbach alpha tool. Items that scored more than 0.5 were selected.

Decision Rule

P-value \geq 0.05 level of significant = reject Null hypothesis and accept if otherwise.

Results and Analysis

Presentation of Data: The stacked panel data consisted of the fraud investigation, fraud litigation support service, corporate governance, internal auditing and internal control system. The moderator variable was organizational justice. The sources of the data were derived from respondents’ ratings extracted from the 5-point Likert questionnaire as well as the annual financial reports of the respective banks during the period 2012 to 2022.

Descriptive Statistics (Diagnostic Results)

To access underlying trend amongst employed data, the study employed the descriptive statistics as a form of Univariate Analysis.

Table 1: results of descriptive statistics.

Residual Diagnostic Result from 2012-2022

	CTG	IAD	ICS	FGN	FLS	OGJ
Mean	78.65144	4.354930	67.12459	6831757	455790.7	1.357719
Median	62.82000	11.34000	9.840000	866197.5	128597.9	12.000000
Maximum	773.3800	13.33000	6739.000	6.66E+04	44729309	61.00000
Minimum	0.000000	0.010000	0.020000	0.030000	0.040000	2.000000
Std. Dev.	77.01277	14.386689	96.45563	30044999	10558708	7.541798
Skewness	7.026855	7.760632	62.60525	10.08966	12.99889	0.510900
Kurtosis	15.90145	10.28575	332.8846	111.9488	196.3358	4.069225
Jarque-Bera	5200.126	1982.086	2967132.	330968.5	1025889.	58.96643
Probability	0.000000	0.000000	0.000000	0.000000	0.000000	0.000000
Sum	14949.90	6347.060	8203.340	8.97E+09	5.82E+08	4401.000
Sum Sq. Dev.	328995.9	62436.67	2475235.	4.73E+18	2.00E+16	2838.677
Observations	240	240	240	240	240	240

Source:E-view 10 Output (Authors Computation)

The dataset produced in the univariate descriptive analysis above showed a total of 240 observations with 24DMBs in Nigeria. From the descriptive analysis, corporate governance (CTG) in Nigeria required an average of 78.65144. Internal auditing (IAD) produced an average outcome of about 4.354930 and 67.12459 for internal control system (ICS) respectively. Forensic investigation (FGN) stands as the variable with the highest average of 6831757 as compared to forensic litigation service (FLS) 455790.7 and organizational justice (OGJ) 1.357719. Also, the descriptive statistical result showed that organizational justice

(OGJ) produced an average moderating influence of 1.357719 during the period 2012 to 2022. The median value in the dataset for corporate governance (CTG), internal auditing (IAD) and internal control system were 62.82000, 11.34000 and 9.840000 respectively. While fraud investigation, fraud litigation support services and organizational justice had median values of 866197.5, 128597.9 and 12.000000 respectively.

Fraud investigation (FGN) showed the maximum value of $6.66E+04$, while corporate governance (CTG) had the minimum value of 0.000000 in the dataset. The standard deviation which signified the level of risk indicate that fraud investigation (FGN) had the highest risk response rate of 30044999, while fraud litigation support service (FLS) produced a risk response or standard deviation of 10558708. The test for model adequacy using Skewness and Kurtosis (K) required the coefficients of probability distribution functions of a normally distributed variable, $S = 0$ and $K = 3$. Probability distribution functions (PDFs) with values of K less than 3 are platykurtic and those with values greater than 3 are leptokurtic. Therefore, from the descriptive output. It was confirmed that corporate governance (CTG), internal auditing (IAD), internal control system (ICS), fraud investigation and fraud litigation support services are moderately skewed to the right respectively. The outcome for variables with positive (right) skewness implied that the average value was higher than the median value of the group.

Unit Root Test (Augmented Dickey Fuller)

Due to shocks inherent in time series variables, and also shocks that could be found in the error terms (other variables not captured by the model), the research therefore captured the stationarity of the employed variables, since a stationary variable is useful in forecasting and predicting and has a great possibility of the effect if shock to die out gradually, while non-stationary data are not suitable for long run test.

Table 2: Summary Output of Unit Root Output (Augmented Dickey Fuller)

Variable	ADF t-statistics	Critical Value 5%			Order of Integration	Prob.
		1%	5%	10%		
D(FGN)	-5.974884	-4.284580	-3.562880	-3.215265	I(1)	0.0001
D(FLS)	-4.084763	-3.724070	-2.986223	-2.632603	I(1)	0.0177
D(CTG)	-4.637202	-3.724070	-2.986223	-2.632602	I(1)	0.0009
D(IAD)	-5.974884	-4.284580	-3.562880	-3.215265	I(1)	0.0000
D(ICS)	-4.084763	-3.724070	-2.986223	-2.632602	I(1)	0.0000

Source: E-view 10 Output (Authors Extractions).

Using the critical values of (1%), (5%) and (10%), it can be identified that all variables are stationary at the first difference (1) showing a great level of co-integration amongst variables, since the prerequisite of co-integration is the integration of all variables at same level. This parameter therefore leads to the co-integration of employed variables.

Error Correction Model

To adjust for discrepancies between the long and the short run, the study proceeds to the error correction estimate utilizing the Bayesian VAR Estimates Model

Table 4: Bayesian VAR Estimates Model

Corporate Governance

Bayesian VAR Estimates

Date: 11/30/23 Time: 23:09

Sample (adjusted): 2012 2022

Included observations: 200 after adjustments

Prior type: Litter man/Minnesota

Initial residual covariance: Univariate AR

Hyper-parameters: Mu: 0, L1: 0.1, L2: 0.99, L3: 1

Standard errors in ()& t-statistics in []

	CTG	IAD	ICS	FGN	FLS
CTG(-1)	0.079653 (0.09096) [0.87567]	-0.015541 (0.01628) [-0.95476]	0.001190 (0.02072) [0.05744]	-0.014351 (0.01698) [-0.84506]	-0.004740 (0.01042) [-0.45486]
CTG(-2)	-0.010028 (0.04894) [-0.20492]	-0.004157 (0.00875) [-0.47534]	0.000462 (0.01113) [0.04150]	-0.003695 (0.00912) [-0.40497]	-0.001163 (0.00560) [-0.20775]
IAD(-1)	-0.299039 (0.41106) [-0.72747]	0.442707 (0.07462) [5.93262]	-0.099021 (0.09445) [-1.04835]	0.336179 (0.07747) [4.33973]	0.002037 (0.04748) [0.04290]
IAD(-2)	-0.052863 (0.25768) [-0.20515]	0.090375 (0.04692) [1.92598]	-0.023409 (0.05919) [-0.39548]	0.065365 (0.04852) [1.34723]	-0.029497 (0.02977) [-0.99088]
ICS(-1)	-0.033346 (0.38366) [-0.08691]	-0.114231 (0.06925) [-1.64971]	0.184359 (0.08883) [2.07540]	0.065356 (0.07223) [0.90477]	0.087588 (0.04435) [1.97479]
	-0.024412	-0.037015	0.047030	0.008906	0.026003

ICS(-2)	(0.20934)	(0.03778)	(0.04854)	(0.03941)	(0.02419)
	[-0.11661]	[-0.97986]	[0.96901]	[0.22601]	[1.07506]
FGN(-1)	-0.324398	0.228582	0.178031	0.414427	0.132273
	(0.42051)	(0.07596)	(0.09660)	(0.07968)	(0.04862)
	[-0.77144]	[3.00942]	[1.84302]	[5.20081]	[2.72047]
FGN(-2)	-0.084913	0.026276	0.047133	0.074805	0.011611
	(0.24934)	(0.04500)	(0.05727)	(0.04737)	(0.02881)
	[-0.34055]	[0.58394]	[0.82295]	[1.57907]	[0.40306]
FLS(-1)	-0.306858	-0.054249	0.476967	0.420450	0.439066
	(0.65202)	(0.11765)	(0.14990)	(0.12286)	(0.07579)
	[-0.47063]	[-0.46107]	[3.18185]	[3.42237]	[5.79310]
FLS(-2)	-0.070420	-0.055688	0.160709	0.104513	0.091366
	(0.40531)	(0.07313)	(0.09311)	(0.07631)	(0.04726)
	[-0.14907]	[-0.76143]	[1.72604]	[1.36962]	[1.93335]
C	11603.60	1552.035	453.3831	2105.625	88.74698
	(3679.28)	(663.131)	(844.062)	(692.279)	(424.442)
	[3.69736]	[2.49126]	[0.54070]	[3.04014]	[0.20673]
R-squared	0.319566	0.852352	0.855112	0.931583	0.880374
Adj. R-squared	-0.203845	0.738776	0.743660	0.878954	0.788354
Sum sq. resids	2.44E+09	1.11E+08	1.13E+08	1.00E+08	48835841
S.E. equation	13713.06	2922.788	2951.015	2779.834	1938.196
F-statistic	0.610546	7.504720	7.672459	17.70111	9.567199
Mean dependent	7705.292	5597.042	4249.958	9847.000	2993.083
S.D. dependent	12498.25	5718.618	5828.586	7989.957	4213.011

Source: E-view 10 Output (Authors Computation).

The significant negative value of the $ecm(-1)$ coefficient in table 4.7 indicates that FGN responds to disequilibrium with an adjustment period of 1 year (10.07981). Hence, 7.981% deviations from equilibrium in the previous year are adjusted back to equilibrium in the current year. This shows a long-run error correction among the variables.

Testing of Hypotheses

Hypotheses 1

H₀₁: There is no significant relationship between fraud investigation and internal control system of quoted DMBs in Nigeria.

Table 5: Panel OLS regression result for FGN, FLS and ICS

Dependent Variable: ICS

Method: Least Squares

Date: 11/30/23 Time: 18:17

Sample: 1 240

Included observations: 240

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	7.315922	0.556078	13.15630	0.0000
FGN	1.09E-09	1.53E-08	2.071514	0.9431
FLS	3.24E-09	7.20E-08	2.044981	0.9642
R-squared	0.735822	Mean dependent var		6.783704
Adjusted R-squared	0.014862	S.D. dependent var		6.739920
S.E. of regression	6.689649	Akaike info criterion		6.665099
Sum squared resid	8234.257	Schwarz criterion		6.750859
Log likelihood	-624.8518	Hannan-Quinn criter.		6.699842
F-statistic	1.709040	Durbin-Watson stat		1.998127
Prob(F-statistic)	0.149791			

Source: E-view 10 Output (Authors Extractions).

Equation Summary: $R^2=0.73$, $DW=1.99$

The E-view result above established a positive relationship between fraud investigation and internal control system with estimated coefficient of 7.315922. The coefficient equally indicated that fraud investigation increased by 3.24E-09 as internal control increased by constant term of 7.315922. The $R^2=0.73$ confirmed the strength of the model as 73% change in internal control system could be attributed to fraud investigation. While the remaining 27% was caused by other factors not captured in the model but covered by the stochastic error term. Whereas an F-statistic value of 0.709040 greater than Prob(F-statistic) value of 0.149791 indicates a significant relationship in relation to the overall model

Using the critical value approach of +1.96 and -1.96 and applying the decision rule with t-statistic 2.044981 greater than +1.96 at 0.05 alpha and for a 2-tailed test showed that H_{01} was significant and thus rejected, while H_{A1} was accepted.

Hypotheses 2

H₀₂: There is no significant relationship between fraud litigation support services and internal control system of quoted DMBs in Nigeria.

Table 6: Panel OLS regression result for FLS, FGN and ICS

Dependent Variable: ICS

Method: Least Squares

Date: 11/30/23 Time: 18:15

Sample: 1 240

Included observations: 240

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3.827347	1.224192	3.126427	0.0021
FLS	6.42E-08	3.36E-08	1.907501	0.0580
FGN	-3.39E-08	1.58E-07	-0.213813	0.8309
R-squared	0.620540	Mean dependent var	3.499471	
Adjusted R-squared	-0.000753	S.D. dependent var	14.72156	
S.E. of regression	14.72710	Akaike info criterion	8.243355	
Sum squared resid	39907.31	Schwarz criterion	8.329115	
Log likelihood	-773.9970	Hannan-Quinn criter.	8.278098	
F-statistic	0.964639	Durbin-Watson stat	1.920357	
Prob(F-statistic)	0.428189			

Source: E-view 10 Output (Authors Extractions).

Equation Summary: $R^2=0.62$, $DW=1.92$

The E-view result above established a positive relationship between fraud litigation support services and internal control system with coefficient of 3.827347. This value further implied that fraud litigation support services decreased by $-3.39E-08$ as internal control system increased by a constant term of 3.827347. $R^2=0.62$ confirmed the 62% change in internal control system was attributed to fraud litigation support services. While the remaining 38% was apportioned to other factors not captured in the model but covered by the stochastic error term. A Durbin Watson of 1.99 close to 2 implied the lack of serial autocorrelation in the model meaning that the model is of good fit. Also, an F-statistic value of 0.964639 greater than Prob(F-statistic) value of 0.428189 indicates a significant relationship in relation to the overall model

Using the critical value approach of +1.96 and -1.96 and applying the decision rule with t-statistic -0.213813 greater than -1.96 at 0.05 level of significance and for a 2-tailed test showed that H_0 was significant and thus rejected, while H_A was accepted.

Discussion of Findings

- i. Positive and significant relationship between fraud investigation and internal control system. This finding showed that fraud investigation exhibited the required potential to change internal control system. It also showed that an increase in fraud investigation leads to an increase in internal control system. This finding supported the result by Ironkwe&Ordu (2015), Mwazo, *et al.* (2017).
- ii. Positive and significant relationship between fraud litigation support services and internal control system. This finding showed that fraud litigation support services could change the internal control system of quoted DMBs within the period under investigation. More so, the result indicates that fraud litigation support services move

in like direction with internal control system. This finding supported the result by Ejoh (2017), Ntongo (2013).

Conclusion

This study examined the relationship between forensic auditing practices and fraud mitigation in Nigeria for the period 2012–2022. The study investigated the long run and short run relationship between the variables by using Johansen Co-integration and Error Correction Model (ECM) approach. The empirical results disclosed that forensic auditing practice proxies are all important determinants of fraud mitigation in terms of internal control system both in the short run and the long run as these variables have randomness and fixed effect. Thus, the study concluded that the dependent variable has positive relationships in the short-run and in the long-run with the independent variables as these variables are found to be statistically significant in predicting the fraud mitigation. This study concluded that there is a significant relationship between the predictor variables (fraud investigation and fraud litigation support services) and criterion variable (internal control system).

Policy Recommendations for Banks

1. The Management of DMBs Nigeria should put in place an internal control system that would allow each branch monitor its detailed daily financial operations.
2. The NDIC in conjunction with CBN and other regulatory agencies should sustain the enforcement of compliance with the forensic auditing features to guarantee an enduring sanity in financial practices.

References

- Aaron, P., David, C & Chris, D. (2009). *Hacking exposed: computer forensics*. McGraw Hill
- Abdi, H., Chin, W. W., Vinzi, V. E., Russolillo, G., & Trinchera, L. (2013). New perspectives in partial least squares and related methods. *Springer Proceedings in Mathematics & Statistics*, 56, (56). 1-351.
- Achaka, B.A. (2004). *Fraudulent practices and financial regulatory audit of terminal benefit of employees, tax revenues and monetized allowance, paper presented at ICAN national workshop*. Jos. 7-10 August. Adamu joji Publishers, Kano. Nigeria.
- Adepate, O. (2010). Laws on forensic investigation". *The Nation Newspaper*, July 27.
- Adetiloye, C., Owkoyo, F.N. & Taiwo, C.B. (2016). Fraud prevention, mitigation and management practices in Nigeria firms. *Journal of Business and Management*, 11(3), 7-14.
- Adeyemi, B. & Adenugba, A., (2011). Corporate Governance in the Nigerian financial sector: the efficacy of internal control and external audit. *Global Conference on Business and Finance Proceedings*, 6(2), 699-707.
- Agbelusi, T.O. (2006) Fraud malpractice in the banking industry. *Business Times* 12th April 2006.
- Aksoy, T. (2007). *Basel II ve İç Kontrol*. Ankara, Basak Publishing.
- Alao, A.A. (2016). Forensic auditing and financial fraud in Nigeria deposit money banks (DMBs). *European Journal of Accounting, Auditing and Finance Research*, 4(8), 1-19.

- Albrecht, W. S., Albrecht, C. & Albrecht, C. C. (2008). Current trends in fraud and its detection: a global perspective. *Information Security Journal*, 17(2), 12-30. Retrieved from www.ebscohost.com on 11th June, 2014.
- Albrecht, W. S., Hill, N. C., & Albrecht, C. C. (2006). The ethics development model applied to declining ethics in accounting. *Australian Accounting Review*, 16(1), 30-40.
- Albrecht, C., & Albrecht, U. (2001). Can Auditors Detect Fraud? A Review of Research Evidence. *Journal of Forensic Accounting* 1(11), 1-2.
- American Institute of Certified Public Accountants (AICPA). (2008). Considerations of fraud in a financial statement audit. Statement on Auditing Standards (SAS) No. 99, 1719-1770. Retrieved from <https://www.aicpa.org/Research/Standards/AuditAttest/DownloadableDocuments/AU-00316.pdf>
- Amudo, A. & Inanga, E.L. (2009). Evaluation of internal control systems: a case study from Uganda, *International Research Journal of Finance and Economics*, 2(7), 1450-2887.
- Anderson, U.L. & Koonce, L. (1995), Explanation as a method for evaluating clientsuggested causes in analytical procedures, *Auditing Journal*, 14 (2), 124-129.
- Apostolou, B., Hassell, J.M., & S.A. Webber (2000). Forensic expert classification of management fraud risk factors, *Journal of Forensic Accounting*, 1 (18), 11-92.
- Asukwo, P.E. (1999). Bank Frauds: A Look at the Nigerian Banking Clearing System, *ICAN News*,
- Awoyemi, E.O. (2009), A Guide to Government Accounting and Internal Audit, onibonoje publishers, Ibadan Nigeria.
- Ball, R. (2009). Market and political/regulatory perspectives on the recent accounting scandals, *Journal of Accounting Research*, 47 (2), 277-323.
- Bell, T.B. & Carcello, J.V. (2000), A decision aid for assessing the likelihood of fraudulent financial reporting, *Auditing: A Journal of Practice & Theory*, 19, 1, 169-184.
- Bies, R.J., 2001. Interactional (in)justice: the sacred and the profane. In: Greenberg, J., Cropanzano, R. (Eds.), *Advances in Organizational Justice*. Stanford University Press, Stanford, pp. 89–118.
- Boulescu (2003) An empirical test of Bentham's theory of the persuasiveness of evidence", *Auditing: Journal of Practice and Theory*, 15(1).1–22.
- Brockner, J., 2002. Making sense of procedural fairness: how high procedural fairness can reduce or heighten the influence of outcome favorability. *Academy of Management Review* 27 (1), 58–76.
- Chakrabarty, R. (2013). Tools to detect financial fraud, *International Journal of Engineering Research and Technology*, 2(9). 3085-3094.
- Chen, C.C., 1995. New trends in rewards allocation preferences: a Sino-U.S. comparison. *Academy of Management Journal* 56 (2), 408–428.
- Cheng, J.-H., & Chen, M.-C. (2016). Influence of institutional and moral orientations on relational risk management in supply chains. *Journal of Purchasing and Supply Management*, 22(2), 12-21.
- Chi-Chi, O.A & Ebimobowei, A. (2012). Fraudulent activities and forensic accounting services of banks in Port-Harcourt, Nigeria. *ICAN journal*, 2014.
- COSO Report (2002). Effective internal control system for fraud detection, a paper intended for presentation at the First National Conference on Ethical Issues in Accounting, organized by the Department of Accounting BUK From 6- 10 January, 2003 (Unpublished).

- Cressey, D. R. (1953). *Other people's money*. Montclair, NJ: Patterson Smith, 1-300.
- Cropanzano, R., Li, A., Benson III, L., 2011a. Peer justice and teamwork processes. *Group and Organization Management* 36 (5), 567–576.
- Cropanzano, R., Stein, J.H., Nadisic, T., 2011b. *Social Justice and the Experience of Emotion*. Routledge, New York.
- Crumbley, D. L (2003). *Forensic and Investigative Accounting*. CCH Publishing.
- Crumbley, D.L. (2009). *So, what is forensic accounting?* The ABO Reporter.
- Cugueró-Escofet, N., Rosanas, J.M., 2013. The justice design and use of management control systems as requirements for goal congruence. *Management Accounting Research* 24 (1), 23–40.
- Dandago, K.I. (2009), *Auditing in Nigeria: A Comprehensive Text*,
- Degboro, D., &Olofinsola, J.(2007). Forensic accountants and the litigation support engagement. *Nigerian Accountant*, 40(2), 49-52.
- Dele, O. Y. (2016). Role of internal audit in Nigeria local governments: A case study of Ijebu Ode local government of Ogun state, Nigeria. *Journal for Studies in Management and Planning* 2(2), 41-49. Online at <http://g/journals/index.php/JSMaP/http://edupediapublications>.
- Demirel, Y & Yucel, L (2013). The effect of organizational justice on organizational commitment: A study on automotive industry. *International Journal of Social Sciences*, 11 (3), 26-36.
- Dhar, P., & Sarkar, A. (2010). Forensic accounting: an Accountant's vision. *Vidyasagar University Journal of Commerce*, 15(3), 93-104. Retrieved from https://pdfs.semanticscholar.org/3f26/337b3959dff766a7464410de67b86398329.pdf?_ga=2.2298243.929263868.1585807898-2100778558.1584432533
- Egbunike, P. A. &Egbunike, F.C. (2017). An empirical examination of challenges faced by internal auditors in public sector audit in south-eastern Nigeria. *Asian Journal of Economics, Business and Accounting* 2(3), 1-13.
- Ewa, U. E, &Udoayang, J. O. (2012). The impact of internal control design on banks' ability to investigate staff fraud, and life style and fraud detection in Nigeria. *International Journal of Research in Economics & Social Sciences*, 2 (12), 32-44
- Ewofe, A.O. Abilogun, T.O. Omoolorun, A.J. &Elaiho, E.M. (2017). Bank fraud and preventive measures in Nigeria an empirical review. *International Journal of Academic Research in Business and Social Sciences*, 7(7), 41-51.
- Eyisi, A.S. &Agbaeze, E.K. (2014). The impact of forensic auditors in corporate governance, *International Journal of Development and Sustainability*, 3(2), 404– 417.
- Fatt, Khi, & Heng. (2010). A Study of Relationship between organizational justice and job satisfaction. *International Journal of Business and Management*, 2(4), 102-127.
- Fernandes, &Awamleh. (2010). A Study of Relationship between Organizational Justice and Job Satisfaction. *International Journal of Business and Management*, 2(3), 103-117.
- Fynefaceph, A.N.D. &Aladeji, O.E. (2013). Fraud prevention, mitigation and management practices in Nigeria firms. *Journal of Business and Management*, 11(3), 7-14.
- Gardner, R. M. (2005). *Practical crime scene processing and investigation*. Washington DC: CRC Press.
- Garfinkel, S. (2006). Forensic feature extraction and cross-drive analysis. <http://www.simson.net/clips/academic/2006.DFRWS.pdf>.
- Greenberg, J. (1990). Organizational justice: yesterday, today, and tomorrow. *Journal of Management*, 16(2), 399-432.

- Harwood A (2016). An examination of the impact of obedience pressure on perceptions of fraudulent acts and the likelihood of committing occupational fraud. *Journal of Forensic Studies Accounting Business, Winter 1*(1), 1-9.
- Hashim, K. F. (2012). *Understanding the determinants of continuous knowledge sharing intention within business online communities*. Auckland University of Technology.
- Hayes, A. F. (2013). *Introduction to mediation, moderation, and conditional process analysis*. New York and London.
- Hirst, D.E. & Koonce, L. (1996), Audit analytical procedures: A field investigation. *Contemporary Accounting Research, 13* (2), 457-486.
- Hollensbe, E.C., Khazanchi, S., Masterson, S.S., (2008). How do I assess if my supervisor and organization are fair? Identifying the rules underlying the entity-based justice perceptions. *Academy of Management Journal 51* (6), 1099–1116.
- Hooper, M. J., & Pornelli, C. M. (2010). Detering and detecting financial fraud: a platform for action. <http://www.thecaq.org/docs/reports-and-publications/detering-and-detecting-financial-reporting-fraud-a-platform-for>
- Hopwood, W., Young, G. and Leiner, J. (2013). *Forensic Accounting and Fraud Examination*, New York: McGraw Hill.
- Huber, D.W. (2012), Is forensic accounting in the United States becoming a profession? *Journal of Forensic and Investigative Accounting, 4*(1), 255-283
- Ironkwe, U. I. & Ordu, P.A. (2015). The impact of internal controls on financial management: a case of production companies in Nigeria. *International Journal of Economics, Commerce and Management United Kingdom, III* (12), 103-132.
- Johnson, R. E., Rosen, C. C., & Chang, C. H. (2011). To aggregate or not to aggregate: steps for developing and validating higher-order multidimensional constructs. *Journal of Business and Psychology, 26*(3), 241–248.
- Kaval, H. (2005). *Muhasebe Denetimi*, Ankara, Gazi Publishing House.
- Keskin, D.A. (2006). *İç Kontrol Sistemi Kontrol Öz Değerlendirme*, Istanbul, Beta Publishing House.
- Kumar, S.M. & Venkataraman, R. (2020). An empirical study on forensic accounting for corporate fraud management. Retrieved from <https://researchgate.net/publication/338792720>.
- Lavelle, J., Rupp, D.E., Brockner, J., (2007). Taking a multifoci approach to the study of justice, social exchange, and citizenship behavior: the target similarity model. *Journal of Management 33* (6), 841–866.
- Lister, L. M. (2007). A Practical Approach to Fraud Risk: Internal Auditors.
- Maarten, V. H. (2010). Technology crime investigation. <http://www.daemon.be/forensics.html>. Retrieved 18, August.
- Mackevicius, J., & Giriunas, L. (2013). Transformational research of the fraud triangle. *EKONOMICA, 92*(4), 150-163.
- Mahdi, S. & Zhila, A. (2008). Fraud detection and audit expectation gap: empirical from Iranian bankers. *International Journal of Business and Management, 3*(10): 65-67.
- Matar, A. & Eneizan, B.M. (2018). Determinants of financial performance in the industrial firms: evidence from Jordan. *Asian Journal of Agricultural Extension, Economics and Sociology, 22*(1) 1-10.
- Matarneh, A.J. Moneim, U. A & Al-Miner, M. (2015). The intellectual convergence between the forensic audit and the external auditor toward the professionalism in Jordan. *International Journal of Business and Management, 10*(11), 138-148.

- Mohyeldin, A., & Tahire, S. (2007). Links between justice, satisfaction and performance in the workplace. *Journal of Management Development*, 26 (4), 294-311.
- Moyes G., Lin, P. & Landry-Jr, R. (2005). *Raise the red flag: internal auditor*, Prentice: 47-51.
- Ngwenya, B. & Kakunda, R. (2014). Challenges of internal auditing in the public sector organizations and their effect on internal auditors' job satisfaction: a case study of public institutions in Chingola district, Zambia. *International Journal of Research in Computer Application & Management* 4(12), 1-3. Online at <http://ijrcm.org.in/>
- Ntongo, V. (2012). Internal controls, financial accountability and service delivery in private health providers of Kampala district. An MBA thesis submitted at Makerere University.
- Nwaze, C. (2008). Quality and internal control challenges in contemporary Nigeria banking. *Zenith economic quarterly, Zenith bank plc*, 3(2): 21-32.
- Nwosu, M.E., (2015). Forensic auditing and financial accounting in Nigeria: An assessment. *International Journal of Economics and Management Studies*, 2(7),6-11
- Obaretin, O. (2010). Effectiveness of the application of forensic accounting services in Nigerian organizations. *Journal of Management Sciences*, 1(1), 171-184.
- Okezie A. (2012). An analysis of fraud in Nigerian Banks. *American Charter of Economics and Finance*, 1 (2), 60-73.
- Okiro, K. & Abdi, G.A. (2018). The impact of forensic audit services on fraud detection among commercial banks in Kenya. *International Journal of Creative Research and Studies*, 2(10), 34-50.
- Okolie, A. & Taiwo, A. (2014). *The application of information technology to forensic investigations in Nigeria*. Department of Accounting, Ambrose Alli University, Ekpoma, Nigeria.
- Olalere, A. A. (2013). *The mediating effect of contextual characteristics on collectivist dynamics and entity-based creativity among faculty in higher education*. Clemson University.
- Olatunji, O.C. (2009). Impact of internal control system in banking sector in Nigeria. *Pakistan Journal of Social Sciences*, 6(4), 181-189.
- Onodi, B. E., Okafor, T. G., & Onyali, C. I. (2015). The impact of forensic investigative methods on corporate fraud deterrence in banks in Nigeria. *European Journal of Accounting, Auditing and Finance*, 3(4), 69-85. Retrieved from <https://www.eajournals.org/journals/europeanjournal-of-accounting-auditingand-finance-research-ejafr/vol-3issue-4-april-2015/theimpact-of-forensicinvestigativemethods-on-corporate-frauddeterrence-in-banks-in-nigeria/>
- Onoh, J.U. (2002). *Dynamics of money banking and finance in Nigeria: An emerging market*, Aba, Astra Meridian publishing.
- Osuka, B.O. & Richard, C.O. (2013). The determinants of financial performance of quoted banks in Nigeria. A study of selected deposit money banks (2001-2010). *International Journal of Educational and Research*, 1(10), 1-18.
- Oyedokun, G. E. (2013). *Audit, investigation and forensic accounting: Similarities and differences*. Being a lecture delivered at the Institute of Chartered Accountants of Nigeria's forensic accounting certification program.
- Oyedokun, G. E. (2018). Forensic investigation and forensic audit methodology in a computerized work environment. Retrieved from <https://researchgate.net/publication/3154339>

- Ozili, P.K. (2015). Forensic accounting and fraud: A review of literature and policy implications, *International Journal of Accounting and Economics Studies*, 3 (1), 63-68.
- Ozten. S. & Kargin S. (2012). *Bankacılıktaki İç Kontrol Faaliyetleri Kapsamında Krediler Kontrolü Ve Muhasebeleştirme Süreci*, Afyon Kocatepe University Publishing.
- Patel, V. K. (2012). *Extended stakeholder orientation: influence on innovation orientation and firm performance*. Kennesaw State University.
- Peloubet, M. E. (1946). Forensic accounting: its place in today's economy. *Journal of Accountancy*, 1(6), 458-462.
- Porter (2013). *The effects of financial fraud and liquidity on financial performance of Commercial Banks in Kenya*. University of Nairobi Depository,
- Pule-Pule, M. W. (2014). Impact of internal audit management on public sector administration in the North West province. an MBA mini-dissertation submitted at the Graduate School of Business and Government Leadership at the Mafikeng Campus of the Northwest University, South Africa.
- Rae, K., and Subramaniam, N. (2008). Quality of internal control procedures: antecedents and moderating effect on organizational justice and employee fraud. *Managerial Auditing Journal*, 23(2), 104-124
- Reed II, A., Aquino, K., (2003). Moral identity and the expanding circle of moral regard toward out-groups. *Journal of Personality and Social Psychology* 84 (6), 1270–1286.
- Rezaee, Z. (2005). Causes, consequences, and deterrence of financial statement fraud". *Critical Perspectives on Accounting*, 16 (3), 277-298.
- Rupp, D.E., Shao, R., Jones, K.S., Liao, H., (2014). The utility of a multi-foci approach to the study of organizational justice: a metanalytic investigation into the consideration of normative rules, moral accountability, bandwidth-fidelity, and social exchange. *Organizational Behavior and Human Decision Processes* 12 (3), 159–185.
- Ryan, N. (2015). Fraud prevention, introduction, implementation and control. *Review of Finance Journal*, 13(2), 115-145.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research methods for business students*. Pearson Education Limited (Fifth).
- Sekaran, U. (2006). *Research method of business: a skill-building approach*. Macmillan Publishers.
- Serem, E.K. (2016). The relationship between internal management controls and efficiency of service delivery of commercial banks in Kenya. MBA thesis submitted at University of Nairobi, Kenya.
- Seuring, S., & Müller, M. (2008). From a literature review to a conceptual framework for sustainable supply chain management. *Journal of Cleaner Production*, 16(15), 1699-1710.
- Shahbaz, M. S., Chandio, A. F., Oad, M., Ahmed, A., & Ullah, R. (2018). *Stakeholders' management approaches in construction supply chain*, Macmillan Publishers.
- Sharma, A. and Panigrahi, P.K. (2013). A review of financial accounting fraud detection based on data mining techniques. arXiv preprint arXiv:1309.3944.
- Shaw, J.C., Wild, E., Colquitt, J.A., (2003). To justify or excuse? a meta-analytic review of the effects of explanations. *Journal of Applied Psychology* 88 (2), 444–458.
- Socol, A. (2011), Internal banking control and audit: a comparative approach in the Romanian banking sector. *Annales Universitatis Apulensis Series Oeconomica*, 13(2), 396-403.

- Springer, L., & Wan, H. L. (2016). *Organizational Justice and citizenship behaviour in Malaysia*. Singapore: Springer.
- Talbot, B. (2017). Auditing and resources management in Nigerian public sector: a study of local governments in Rivers State. an unpublished MBA Thesis at University of Port Harcourt Business School, Nigeria.
- Tharenou, P., Donohue, R., & Cooper, B. (2007). *Management research methods*. Cambridge: Cambridge University Press.
- Tyler, T.R., (2006). *Why people obey the law*. Princeton University Press, Princeton.
- United Nations Development Programme. (2016). Human development report 2016. United Nations Development Programme. <https://doi.org/eISBN:978-92-1-060036-1>.
- Vance, S. (1983). *Corporate leadership: Boards, directors and strategy*. New York: McGraw-Hill.
- Vinzi, V. E., Chin, W. W., Henseler, J., & Wang, H. (2011). *Handbook of partial least squares: concepts, methods and applications*. London:
- Vona, I. W. (2008). *Fraud risk assessment: building a fraud audit programme*: Hoboken, New Jersey: John Wiley and Sons.
- Vukadinoc, A, knezevic, G & Mizdvakovic, F. (2015). The characteristics of forensic audit and differences in relation to external audit. *Contemporary Financial Journal*, 2(2), 202-205.
- Webster (2012). Proactive measures to guard against fraud/cash theft in the banking industry and in organizations. *NDIC Quarterly*, 17(3/4).
- Whitten, G. D., Kenneth, W. G., &Zelbst, P. J. (2012). Triple-A supply chain performance. *International Journal of Operations and Production Management*, 32(1), 28–48.
- Wolf, D.T. & Hermanson, D.R. (2004). The fraud diamond: considering the four elements of fraud, *The Certified Public Accountants Journal*, 17(3), 4-17.
- Wolfe, D., & Hermanson, D. R. (2004). The fraud diamond: considering four elements of fraud. *The CPA Journal*, 74 (12), 38-42.
- Woolf, E. (1985), *Auditing today*, Prentice Hall Ltd., London, UK.
- Yavuz, S.T. (2002), İçKontrolFonksiyonununBileşenleri – İçKontrolMerkeziTeftiş'ten (İçDenetim'den) Farklı Bir Mekanizmamıdır?,*BankacılarDergisi*, 4 (2), 39-56.
- Zachariah P., Masoyi, A. D., Ernest, E. I.and Gabriel, A.O. (2014) Application of forensic auditing in reducing fraud cases in Nigeria Money Deposit Banks, *Global Journal of Management and Business Research: D Accounting andAuditing*, 14(3), 12-32.