

**THE EFFECT OF FORENSIC ACCOUNTING ON FINANCIAL PERFORMANCE
IN DEPOSIT MONEY BANKS IN NIGERIA**

BY

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**BEING A RESEARCH PROJECT SUBMITTED TO THE DEPARTMENT OF
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CERTIFICATION

This to certify that this project, The Effect of Forensic Accounting on Financial Performance in Deposit Banks in Nigeria was carried out by me Salami, Olabisi Suliati (Matriculation Number:16020101026) and was duly supervised by Dr O.J. Akinyomi.

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DEDICATION

This project work is dedicated to GOD ALMIGHTY for his grace and mercy, protection and for seeing me through my stay at Mountain Top University. Also, to my wonderful family for their unquantifiable love, support and encouragement in everything I do. And also, to the entire Accounting & Finance Department

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ABSTRACT

Forensic accounting is the study and interpretation of accounting evidence used in administrative proceedings or for litigation purposes. Hence, the study examined forensic accounting and its effect on financial performance in combating fraudulent activities in Nigerian deposit banks. The study employed primary data obtained through survey research design with the aid of a well-structured questionnaire, the result of the study revealed that forensic investigation, forensic investigation and firm size contributed differently to the prediction of financial performance. The study concluded that forensic litigation was statistically significant in explaining changes in the financial performance of deposit money banks in Nigeria. It also discovered that the use of forensic financial information influenced and improved performance of commercial banks in Nigeria which has improved transparency in commercial banks hence it has curb financial fraud thus increasing profitability. The study, therefore, recommends that the management of the commercial banks should emphasize and enhance the use of forensic financial information as this will help in reducing fraud which has a positive effect on organizational performance. It also recommends that the management ensures that the bank adapts to new technological changes taking place in the world to ensure that they have a well-structured system to accommodate these changes, it is suggested that management put in place various types of fraud detection and prevention techniques, provide training programmes for employees and educate them on how to detect and prevent frauds

Keywords: Forensic Accounting, Deposit Money Banks, Fraud, Forensic Litigation, Financial Performance.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Every business organization aimed at achieving the set goals and objectives through the maximization of profit in a bid to enhance the shareholder's wealth. The organization has mission and visions that provide the directions and the height it tends to attain. However, there exist factors such as conflict of interest and bad leadership in which the interest of the organization is not incongruent with that of the individuals and that has to lead to the issue of fraud in business organizations. Bearing in mind the alarming rate of fraud and irregularities in an economy, an element of accounting is required where a new breed of forensic accountants whose focus is on fraud investigation and provision of litigation support against financial crimes are produced to eliminate fraud in the banking sector.

According to Ofiafoh and Otolor 2013, the devastating impact of corporate fraud is becoming widespread and noticeable on a large number of reported corruption cases, embezzlement, money laundering, racketing, fraudulent financial reporting, tax avoidance, forgers and other means through which both financial and economic dishonesty is being perpetrated. Fraudulent activities in Nigerian deposit banks have been recorded in various ways. For example, in past years the number and routine activities of fraud in banks in Nigeria have increased.

Banking in any economy is an irrefutable catalyst and a motor for growth and development given its financial intermediation role. This function enables the capital formation and that promotes economic growth. The banking sector is an economic segment dedicated to maintaining non-physical assets for others and investing in financial assets such as leveraged assets and generate more wealth. The sector also includes controlling banking activities through government insurance agencies for borrower mortgage services and credit cards, (Hall 2020). A money deposit bank is a business institution that has been given a central bank license to trade in money and hold valuables for members of the public (Molefe and Muzindutsi, 2016).

Banking is an industry that handles cash, credit, and other financial transactions. Banks provide a safe place to store extra cash and credit. They give deposit account, savings certificates, and checking accounts. Banks use these deposits to make loans like home

hypothecary company loans and car loans. The banking industry has always tried to diversify its risks by investing as widely as possible; It stops an unforeseen loan default from sinking the entire bank but this may cause other problems because the centre of the banking sector is confident. Without it, no one would deposit money, and banks would be unable to use that money to give loans, invest, and drive economic growth Hall (2020).

Banks have an important role in every nation's economy as the principal movers of its economic existence. The success of DMBs is very crucial to any economy. Within political-economic structures, the Nigerian banking sector is undeniably the most important because it provides the requisite lubricant to hold the wheel of the economy moving and it is an engine for economic growth. The financial performance of banks evolved from traditional banking with its attendance in low returns to modern electronic banking in the global world Ibarachukwu and Oko (2019).

The banking sector which is considered very volatile and sensitive has gone through some moments of deep-rooted crisis with the very recent being the abrupt removal and trial of five Chief Executive Officers and spontaneous dissolution of their boards Onyekwelu, Ugwu and Nnamani (2010). Forensic accounting is the speciality area of accounting that involves litigation services, expert determination, an inquiry by an appropriate authority, and the investigation of suspected fraud, irregularity or impropriety which could potentially lead to civil, criminal or disciplinary proceedings.

Odelabu (2014) in her study concluded that forensic investigation and litigation were statically significant in explaining changes in the financial performance of commercial banks and that the use of forensic financial information influenced and improved financial performance in commercial banks. The effects of firm characteristics on firm performance have gained attention in recent theoretical and empirical work. Firm size is a construct of scholarly interest since it traditionally has much explanatory power, and an understanding of its importance can be vital for managers who operate in today's competitive environments. Discussions of the role of firm size in explaining firm performance have been ongoing in the fields of business organization and industrial economics. Early research emphasizes the importance of scale economies and other efficiencies in larger firms. Nzioka(2013).

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. The term is also used as a general measure of a firm's overall financial health over a given period. Analysts and investors use financial

performance to compare similar firms across the same industry or to compare industries or sectors in aggregate. The financial performance identifies how well a company generates revenues and manages its assets, liabilities, and the financial interests of its stakeholders (Will, 2019).

1.2 Statement of the problem

The need for forensic accounting in the performance of the banking sector in Nigeria became a matter of urgency and high importance as a result of a detrimental decline in the performance of deposit banks in Nigeria. The various fraud cases experienced in the recent past especially in the banking sector in Nigeria has opened the eyes of many investors and the stakeholders in the country and corporate world generally. Bayo (2008) stated that a good number of banks in Nigeria have credibility problems and pointed out how some non - banking institutions manipulated their share prices in the Nigerian stock market. Also, the Nigerian Deposit Insurance Corporation (NDIC) in 2010 reported that frauds and forgeries involved in the banking sector amounted to N21 billion.

According to Odelabu (2014), the Managing Director of Nigeria Deposit Insurance Corporation (NDIC), Alhaj Umaru Ibrahim stated that in 2012, deposit money banks reported a total of 3,380 cases of attempted fraud and forgeries involving N18.04 billion to the corporation and a total loss of N4.5 billion was recorded during the year under review (2012). This represents a 43.7% rise compared to 2,352 cases in 2011. Subsequently, in the first quarter of 2013, 983 cases of attempted fraud involving N7.80 billion were reported, while the actual loss for the quarter was N2.05 billion. Ibrahim said cyber-related fraud instances accounted for 341 cases resulting in an actual loss of N75 million in the first quarter of 2013 (NDIC, 2013).

The rate at which financial irregularities in Nigeria is spreading especially in the Banking Sector has put the focus on the need for forensic accounting techniques to be utilized in solving the problems affecting the performance of the Nigerian deposit money banks. Therefore, the study aimed at unravelling the effect of forensic accounting through the forensic litigation and investigation to mitigate the issue of fraud in Nigerian Banks and to establish the overall effect of forensic accounting on the financial performance of Deposit Money Banks in Nigeria.

1.3 Objectives of the study

The main objective of the study is to investigate the effect of forensic accounting on financial performance in deposit banks in Nigeria. However, the following are the specific objectives:

1. Examine the relationship between forensic investigation and the financial performance of DMBs in Nigeria.
2. Ascertain the association between forensic litigation and financial performance of DMBs in Nigeria.
3. Determine the relationship between firm size and financial performance of DMBs in Nigeria.

1.4 Research Questions

The following are the research questions for this study:

1. What is the relationship between forensic investigation and the financial performance of DMBs in Nigeria?
2. To what extent is the association between forensic litigation and the financial performance of DMBs in Nigeria?
3. To what level is the relationship between firm size and financial performance of DMBs in Nigeria?

1.5 Research Hypotheses

H₀₁: There is no significant relationship between forensic investigation and the financial performance of DMBs in Nigeria.

H₀₂: There is no relevant association between forensic litigation and the financial performance of DMBs in Nigeria.

H₀₃: Firm size has no significant relationship with the financial performance of DMBs in Nigeria.

1.6 Significance of the Study

1. Since statutory auditors and internal auditors are referred to as watchdogs of financial reporting, yet there still exists a need for the service of a bloodhound that is the forensic auditor to detect and unearth frauds in accounting and to bring to limelight the activities of fraudsters to bring with specialized skills and knowledge.

2. Managers of industries, students and researchers will find the study as a reference material that will be useful in enhancing their skills and knowledge on the concept and effectiveness of forensic auditing in Nigeria;
3. The study will be useful in filling up and addressing the knowledge gap that has been in existence in business organizations for the timely unveiling of fraud;
4. The study will be significant in enhancing the detective, preventive and corrective measures or roles in an organization;
5. The study will be an addition and enhance the knowledge and skills of teachers, students and researchers on the importance and impacts of forensic accounting in reporting fraud and irregularities in the Nigerian business enterprise.
6. It will also assist the policymakers, regulators and any other institutions charged with the responsibility of ensuring stability in the financial institutions to formulate policies, rules and regulations for compliance to ensure soundness in the sector.

1.7 Scope of the Study

There are Twenty-two Deposit Money Banks in Nigeria out of which five of them will be considered for the study which includes Zenith Bank, Access Bank, GT Bank, EcoBank and UBA. However, due to time constraint, the focus of the study was Ogun State, Nigeria. The primary method of data collection will be adopted with the research instrument of the questionnaire. It was envisaged that the study may be constrained by inadequate support of the officials of the sampled banks, delayed response to questions, and non-provision of the requested information on the questionnaire due to the banks' obligation to maintain confidentiality.

1.8 Limitation of the study

The researcher envisaged to encounter the following challenges:

1. **Selected banks.** How to manage the staff and executive in the selected banks for the research;
2. **Time:** Time management to complete the project within the time approved;
3. **Finance:** It involved a huge amount of money.

1.9 Operational Definition of Terms

Audit: An independent examination of organizations records and books of account. It is an independent and regular examination and certification of the books of account of an enterprise, its records of transactions, physical inspection and verification of assets including stock-in-trade and other relevant documents by a team of qualified auditors. The objective is to express an opinion on the true and fair view of the financial statements as prepared by the board of directors.

Bank: There is no universal definition of a bank. It can be defined as an institution licensed by the government of a country to accept deposits from and perform other incidental financial services to its customers. It also includes payment of checks drawn or withdrawals made by customers on their accounts, provision of loans facilities, guarantee, or act as an intermediary on behalf of its customers and other services that may be considered as banking services.

Control: The power to influence people behaviour or the course of an event.

Court: A tribunal presided over by a judge, judges, or a magistrate in civil and criminal cases.

Expert Witness: a person who is permitted to testify at a trial because of special knowledge or proficiency in a particular field that is relevant to the case.

Financial Institutions: An establishment that conducts **financial** transactions such as investments, loans and deposits. Almost everyone deals with **financial institutions** regularly. Everything from depositing money to taking out loans and exchanging currencies must be done through **financial institutions**.

Financial performance: Financial performance is a subjective measure of how well a company can use assets from its primary business model to generate revenue and is also used as a general measure of the overall financial health of a company over a given period.

Firm size: Firm size refers to employee per establishment, employees per company, sales per firm, and value-added per firm.

Forensic: The use of scientifically proven procedures and techniques to carry out enquiries on fraud or any related crime.

Fraud: It is an intentional or deliberate act orchestrated to result in personal or financial gains through illegal deception. It could also be construed to mean an attempt by an

individual or organization to unlawfully mislead or deceive others to lay claims on unjustifiable accomplishments or credit.

Hacking: The use of a computer to gain unauthorized access to data or information of a particular organization.

Investigation: Carryout a systematic enquiry to establish the truth.

Irregularities: The state or quality of being irregular. Irregularity is not the same as fraud. It may or may not be a fraud. Irregularities can be one-off or systemic. A systemic irregularity is a recurrent error due to serious failings in management and control systems designed to ensure correct accounting and compliance with rules and regulations.

Law: The system of rules that a particular country or community recognizes as regulating the actions of its members and may enforce by the imposition of penalties. It is a statement of fact, deduced from observation to the effect that a particular natural or scientific phenomenon always occurs if certain conditions are present.

Litigation: It is the term used to describe proceedings initiated between two opposing parties to enforce or defend a legal right. *Litigation* is typically settled by agreement between the parties, but may also be heard and decided by a jury or judge in court.

Reporting: To give a spoken or written account of something that one has observed, heard, done, or investigated.

Technology: The application of scientific knowledge for practical purposes

Threats: A person or thing likely to cause harm, trouble or danger.

CHAPTER TWO

LITERATURE REVIEW

2. 0 Introduction

The purpose of the literature review is to examine the already existing studies that have been carried out and concluded to serve as a guide. The review of prior studies will provide the necessary in-depth analysis of the subject matter to improve on the methodology to be used for the study. The continuity or going-concern of any financial institution, most especially Money Deposit Bank, depends to a large extent on its ability to prevent frauds from scaling through its system. Such frauds ranging from financial misstatement to misappropriation of assets by employees must be adequately prevented. Forensic accounting is widely regarded as a speciality practice of accounting, auditing practice where investigative skills are used to analyze information that is suitable for use in a court of law.

2.1 Conceptual Review

2.1.1 Forensic Accounting

Forensic accounting services generally involves the application of special skills in auditing, accounting, quantitative method, finance, specific area of law, information and computer technologies research and investigative skills to collate, analyse and evaluate evidential matter which in the forensic area is called the EVIDENCE, Aigenohuwa (2017). Forensic accounting has been used since the time of the ancient Egyptians when Pharaoh had scribes account for his gold and other assets. The scribes worked in pharaoh's courts and were charged with fraud prevention and detection. Their role stayed much the same until the turn of the 20th century. As an accountant, they must know the latest accounting standards and procedures to be proficient in a much different financial reporting system being used and be able to provide recommendations that will strengthen internal controls. They also need to understand the different monetary units used internationally due to the different types used in foreign accounts or companies. As an auditor, they must perform a regular financial audit to

prevent possible situations that could lead to fraud. As an attorney, they must know the current federal and state laws and regulations and should be able to approve or disapprove suspicions of fraud. They can also be called to be an expert witness in a court trial so they can be able to communicate well and at a level that is understandable by individuals without accounting knowledge. As an investigator, they must investigate and gather evidence to be presented in a court of law, be able to investigate complaints, allegations, and tips of suspected fraud, must be able to sort, analyse, and compare data in support of an investigation; and must have a working relationship with the investigating and persecuting agencies involved Wikipedia (2019).

Forensic accounting services generally involves the application of special skills in auditing, accounting, quantitative methods, finance, specific area of law, information and computer technologies research and investigative skills to collate, analyse and evaluate evidential matter which in the forensic area is called the evidence Aiginenoluwa (2017). Forensic accounting promotes financial performance by providing confidence in the financial markets Amal (2019).

Forensic accounting, which is likewise called investigative accounting or extortion review, is a merger of criminological science and accounting Ekechuckwuet. al (2018). Forensic accounting comprises three different areas; investigative accounting, litigation support, and criminal investigation. In these areas, forensic accountants may be assigned.

Investigative accounting mainly focuses on alleged corporate fraud. Investigative accounting specialists know how to collect and manage evidence and interview suspects and witnesses (Singleton and Singleton, 2010).

Forensic accounting is the practice of utilizing accounting auditing and investigative skill to assist in a legal matter and the application of a specialized body of knowledge to the evidence of economic transaction and reporting suitable for establishing accountability or valuation of an administrative proceeding. In a wide sense, it can be said as the integrity of accounting auditing and investigative skill to abstain from a particular result Asaolu and Owojori 2009.

Forensic accounting is a practice of reviewing the books of a failed business or fraudulent one to determine what went wrong, how it went wrong, what led to the loopholes how funds left the system, how much funds that left and how the fraud was committed, by who, how many of them. Forensic accounting is the speciality area of accounting that describes matters

that result from actual or anticipated disputes or litigation (Olusola). Forensic accounting covers a comprehensive range of skills in the following three core areas:

- ❖ Litigation support
- ❖ Expert witnessing
- ❖ Fraud examination/investigation

Litigation support

Litigation support covers the following:

- Assistance in obtaining documentation necessary to support or refute a claim.
- Review of the relevant documentation to form an initial assessment of the case and identify areas of loss.
- Assistance with examination for discovery including the formulation of questions to be asked regarding the financial evidence.
- Attendance at the examination for discovery to review the testimony, assist with understanding the financial issues, and to formulate additional questions to be asked.
- Review of the opposing expert's damages reports and reporting on both the strengths and weaknesses of the position taken.
- Assistance with settlement discussions and negotiation.
- Attendance at trial to hear the testimony of the opposing expert and to assist with cross-examination.

Expert witnessing

Nigeria's judicial system is notoriously weak in the use of expert witnesses. Even in legislative hearings involving technical or professional issues, rarely are the opinions of experts invited or sought in those areas invited. Expert witnesses are granted privileged status in court trials. They are invited or permitted to render opinions or conclusions based on facts admitted into evidence and other pieces of information on which they choose to reasonably rely. The expert's privilege is a major exception to the "personal knowledge rule" which

normally limits witness testimony to matters of personal knowledge. The capacity to testify on anything on which they can reasonably rely permits experts to base their conclusions on their own experience, their technical knowledge, and sometimes even hearsay evidence that would not directly be admitted into evidence. This makes experts a powerful force in the courtroom (Herbert 2014).

Fraud examination/investigation

To investigate fraud, it's important to know what it is and what attributes are. Fraud is a derivative of the conventional assumption that human beings are opportunistic, which is guided by considerations of self-interest to make allowance for strategic behaviour. The strategic behaviour is the self-interest seeking with intentional deception made for personal gain or to harm another person (Herbert 2014).

Fraud is defined by ACFE is “deception or misrepresentation that an individual or entity makes knowing that the representation could result in some unauthorized benefit to the individual or the entity or some other party.”

2.1.2 Investigative Accounting

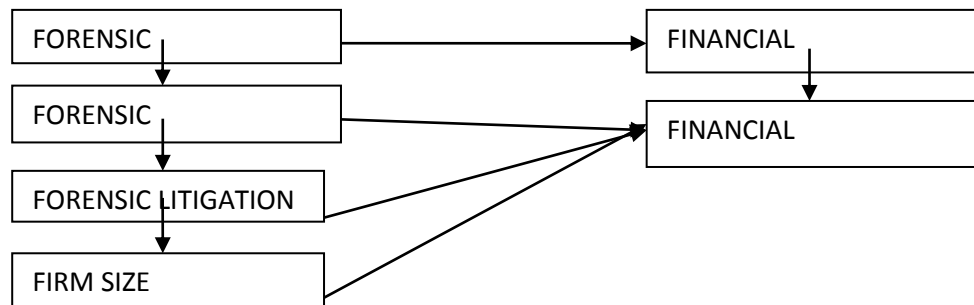
Investigative accounting entails the review of factual situation and provision of suggestion regarding possible courses of action, assistance with the protection and recovery of assets, co-ordination of other experts, including:

- Private investigator.
- Forensic document examiners.
- Consulting engineers.
- Assistance with the recovery of assets by way of a civil action or criminal prosecution.

Investigative accounting mainly focuses on alleged corporate fraud. Investigative accounting specialists know how to collect and manage evidence and interview suspects and witnesses (Singleton and Singleton, 2010).

The procedure of investigating accounting is not standard, may change according to the type of engagement. At the end of the investigation process, investigative accounting specialists

are required to prepare a report that may be used in the resolution of corporate fraud Ozcan (2019).



2.1.3 Historical Background of Forensic Accounting

Forensic accounting has been in existence for a long period despite the sudden recent interest being developed in the subject although it was not known as forensic auditing at that time. We gathered from the website of the Association of Certified Forensic Investigators (ACFI) of Canada that forensic accounting has its root in Canada. In ancient Egypt, the practice of forensic was at that time visible as the forensic accountants who inventoried Pharaoh's pyramid – grain, gold and other assets – were being referred to as the 'ears and eyes' of Pharaoh. Forensic accounting services generally involves the application of special skills in auditing, accounting, quantitative method, finance, specific area of law, information and computer technologies research and investigative skills to collate, analyse and evaluate evidential matter which in the forensic area is called the EVIDENCE, Aigenohuwa (2017). Peloubet (1946) emphasized that the combination of public and industrial accountants was involved in forensic auditing or accounting profession during the second world war in 1946. It was reiterated that Maurice, E. Peloubet, a partner in an accounting firm based in New York was the first professional to publish an article on forensic accounting in 1946.

In the early 1900s, the Federal Bureau of Investigation (FBI) engaged the services of forensic accountants to capture fraudsters or financial fraud experts such as Al-Capone. In recent time, the high profiles of corporate frauds, continuous disclosure requirement, stricter financial reporting and internal control regulations have led to an increase in the demand for

forensic accounting services. These developments have increased the public awareness of forensic accounting /auditing which had or is contributing to or enhancing positively the value of the global economy.

As earlier emphasized, the field of forensic accounting is not a new terrain, though it has grown in popularity in recent years. The forensic accounting profession is founded upon the need to understanding the mind of the fraudster to understand the rationale for engaging in fraudulent practices. In the 1940s, Donald Cressey, a sociologist and criminologist, came up with the reasons why financial fraudsters do what they do and he was widely known for his studies in organized crime. Cressey as a result of his understanding of frauds and rationale behind fraudulent activities developed the theory called 'Fraud Triangle'. The Fraud Triangle theory stated that three factors should be present for any fraud to occur which include, pressure, opportunity and rationalization. Employees laden with immediate financial needs are most of the time under pressure to relieve themselves of the financial burdens facing them. This financial need is often done with utmost secrecy and at the same time anxious to solve their problems quietly and as quickly as possible. When the pressure is hatched, the employees will be looking for a loophole in the control system, opportunity, to commit fraud with or without the fear of being caught. If at the end of the day, the fraudster is apprehended, he will give excuses, rationalization, for committing the offence. Such excuses include the unfair treatment in terms of remuneration packages being paid by the employer; other management teams are doing it and so why not him trailing the steps of the superior and so on. Frauds cannot be eradicated but the only antidote for fraud control is the effective internal control system and its continuous evaluation because as corporate organizations increase in size, the appetite to commit frauds equally grows.

2.1.4 Forensic accounting technique

- **Data mining**

Data mining is an analysis process used by forensic accountants and internal auditors to examine data sets or metadata to identify patterns, anomalies, and trends to answer business queries and provide predictive value for future events. Data mining software incorporates algorithms to explore, analyze, classify, relate, and partition data sets that are then used to develop different models to achieve the business objective. The firm may develop several models using different algorithms – including a predictive model, a classification model, and an exploration model – to identify the types of transactions, vendors, or personnel likely to be

associated with ‘purchase-related fraud’. Data mining techniques have become a great help and useful assistance in the process of detecting accounting frauds, especially when dealing with voluminous and complex financial data is a challenge for forensic accounting. The collapse of high-profile companies in the recent past owing to poor corporate governance, improper reporting and disclosures, unethical corporate practices, and credibility of some of the leading audit firms in question, have all paved the way for the extensive use of CAATs. Sighn and Mohapatra (2017)

- **Relative size factor**

The theory of relative size factor (or RSF) when applied to accounting figures has produced credible results in detecting errors as well as frauds. RSF is a test that (i) compares the top two amounts for each subset of accounting data by calculating the ratio between the largest amount in the subset / Second largest amount in the subset, i.e, $RSF = \frac{\text{Largest record in the subset}}{\text{Second largest record in the subset}}$, and (ii) identifies the subsets where the largest amount is out of line with other amounts for that subset. Useful for analysing data relating to inventory, payroll, accounts receivable and sales of the firm, the RSF helps to detect any unusual deviations from the normal range of limits fixed for the subset. For example, a high RSF in payroll data may indicate towards an overtime error and a high RSF for inventories may indicate towards a calculation or counting error. Further, the possibility of an error or fraud is very high where RSF is greater than 10. Sighn and Mohaptara (2017)

- **Analytical procedure**

Analytic procedures represent one of the most important detection techniques.²¹ SAS 56 (AU Section 329.02) defines these procedures as “evaluations of financial information made by a study of plausible relationships among both financial and non-financial data. A basic premise underlying the application of analytic procedures is that plausible relationship among data may reasonably be expected to exist and continue in the absence of conditions to the contrary.” Analytic procedures identify changes in amounts, ratios, trends, or relationships. They may also identify unusual transactions or events. Analytic procedures are used throughout the audit process for three primary purposes:

1. Preliminary analytic procedures are used to develop an understanding of the company and to direct attention to high-risk areas in determining the nature, timing, and extent of audit procedures.

2. Substantive analytic procedures are used to obtain audit evidence to evaluate account balances.

3. Final analytic procedures are used to assess the propriety of audit conclusions in an overall assessment of the presentation of the financial statement. Kenyon and Tilton (2011)

- **Red flags**

Auditors have found it hard to identify a case of fraud in advance due because it is often well hidden and usually the discovery occurs by chance. It is important that auditing use red flags to help identify potential fraud. Red flags are either events, situational pressure, opportunities or personal characteristics that can cause interest in frauds, whether on behalf of the company itself or for any personal gain (Romney, Albercht, Cherrington, 1980). Red flags indicate warning signs to auditors about certain situations occurring in the organizational environment (Uretsky, 1980).

- **Beneish law**

The Beneish M-score was developed in 1999 by M. Daniel Beneish of Indiana University's Kelley School of Business. Beneish used Compustat data from 1982 to 1992 to develop the model, which in out-of-sample tests correctly identified 76 per cent of frauds (that is, it missed 24 per cent of them), while generating 17.5 per cent of false alarms. The M-score model looks at eight key areas that can signal incentives or pressures to commit fraud: the number of days of sales in receivables index (DSRI); gross margin index (GMI); asset quality index (AQI); sales growth index (SGI); depreciation index (DEPI); selling, general and administrative expenses index (SGAI); leverage index (LVGI); and the ratio of total accruals to total assets (TATA). An M-score greater than -2.22 indicates a potential manipulator. Beneish recommends a cutoff point of -1.89 to balance the cost of Type II error (missing the fraud) over that of a Type I error (false alarm). A Type II error produces a much higher cost than a Type I because the impact of failing to discover a fraud could be detrimental, whereas the cost of a false alarm is lower, given that investors can allocate their capital to a large number of other stocks. (The M-score model has one limitation: Because financial institutions normally have leveraged capital structures, the M-score, which keys on leverage, cannot be used for them.) According to Beneish, companies identified as manipulators typically lose about 40 per cent of their market value on a risk-adjusted basis in a quarter. Assuming a typical equity gain of 1 to 2 per cent per quarter, it would take the gains of 20 to 40 non-manipulators in the same portfolio to offset this single loss. Therefore, the relative

error cost of Type II compared with a Type I is 20 to 40 times. Beneish derived his cutoff point of -1.89 from the relative error cost of 40 times. Koslov, Hurtado-Guarin, Trakulhoon (2018)

- **Benford law**

The genesis of Benford's Law began with an individual who did not have early formal education, yet observed an interesting phenomenon that would eventually revolutionize the field of auditing and fraud analysis. While the underlying principles of the law had been known for more than one hundred years, it was only recently that this technique was applied to auditing. Many accountants, auditors, and investigators are still not familiar with Benford's Law or its application, despite its practical uses. The application of Benford's Law in the field of auditing and investigation has gathered momentum primarily because of Mark Nigrini. Some tax agencies have reportedly incorporated the theory behind Benford's Law when analyzing income tax returns. Additionally, the internal audit departments of many Fortune 500 companies now apply the theory when analyzing data sets for anomalies and other potential errors. The field of public accounting is also starting to embrace and incorporate the theory of Benford's Law into their audit and investigative divisions. ACFE (2018).

2.1.5 Forensic Process and methodology

2.1.4.1 Conducting an Investigation

The procedures involved in carrying out forensic investigation are, in many respects, similar to the step by step approach in conducting a normal audit assignment though with some additional deliverables (Nigrini, 2011). The procedures are as briefly described below.

2.1.4.2 Planning the Audit

The forensic auditor must make sure that his staff or personnel have the necessary skills and experience to carry out forensic auditing job. This is premised on the fact that forensic investigations are designed for a specialist in various aspects of accounting and information technology and as such requires detailed skills in fraud examination procedures and sound knowledge in the legal system (Nigrini, 2011, Kwok, 2008). It also requires adequate training in interviewing and interrogation techniques and maintenance of safety of evidence obtained in the course of the fraud investigation.

The forensic auditor would also consider the engagement of experts in complex or technical areas if such expertise could not be sourced within. The financial implication of engagement will also be considered and approved.

In planning the audit, according to McNally (2005), the following steps should be taken into consideration:

- a. Assessment of business risks. The forensic auditors should pay close attention to those items that are likely to threaten the management's ability to achieve its stated objectives. Fundamentally, consideration should be given to both the business risks and organizational operating environment before designing audit procedures.
- b. The confirmation of the appropriateness or reasonableness of accounting policies and processes. When an audit plan is being designed, it is expected of forensic auditors to devote sufficient time in the reviewing and understanding of relevant accounting policies in use in an organization or company under investigation or scrutiny. It must be understood that accounting policies are the procedures put in place for revenue recognition, capitalization, inventory accounting or valuation, valuation, consolidation, and impairment. In an ideal situation, flowcharts and other necessary documentation that would assist forensic auditors to gain a quick understanding of existing accounting policies and controls are promptly provided by respective organizations.
- c. The identification of areas where special audit could be considered necessary. In planning the audit, special attention should be devoted to areas that are highly risky or complex or that would have a high likelihood of error depending on the nature of the enterprise under consideration. The auditors can approach the assessment of the business risks of the company and its accounting policies and procedures to determine areas where special attention would be appropriate.
- d. There is a need to establish a materiality limit. In accounting, an item is material when it has substantial value. The materiality concept is often relative to the size of the firm that is being audited because what is material to company A may not be material to company B though; they may be in the same industry. As a result of this reason, many audit firms sometimes devise a means of measuring materiality like the use of a

particular item as a percentage of total assets or a percentage of revenue as their materiality threshold.

- e. Development of quality investigative procedures. This includes the use of trend and ratio analysis in the evaluation of the reasonableness of financial statements. Trend analysis looks for irregularities or variances over a while. Ratio analysis is used in comparing the financial condition or health and performance of a particular company with industry averages.

- f. Development of quality audit procedures. Audit procedures can be categorized into two which include: a test of adequate internal controls and substantive testing. The tests of the quality of internal controls are majorly designed to evaluate the effectiveness of the company's controls or policies in detecting or preventing or correcting material misstatements or errors. Internal control is meant for corrective, detective and preventive measures. In a nutshell, the better a company's control system, the less substantive testing needs to be carried out by the auditors. In a statutory audit, if the test of internal controls suggests weakness, the reports or the work of the internal auditors will not be relied upon. Substantive tests are direct tests of transactions consummated by the company during the financial period under review or the end of the year balances outstanding on the financial statements. Auditors always ensure that substantive testing is carried out in greater details in areas where special attention is required at the time the test of internal control was carried out.

- g. Re-evaluation of the audit plan. The auditors should not restrict to a particular plan throughout the audit exercise but ensure its continuous reassessment throughout the audit exercise. The auditor should ensure instantaneous adjustment or expansion to the audit plan or procedure if investigative procedures trigger any potential risks or material issues likely to alter the issuance of a clean audit report.

2.1.6 The objective of the investigation

The objective of the assignment must be communicated to the investigating team to adequately plan their work to realize the purpose of the investigation (Kwok, 2008). The objectives of the investigation include but not limited to the following:

- a) The identification of various fraud types that have been in operation, determination of duration such fraud has been in existence in the system and the techniques being used to conceal it from being unravelled.
- b) The identification of staff involved and their status within the system.
- c) The quantification of the financial loss suffered by the organization from inception to date.
- d) The compilation of audit evidence to support litigation in the law court.
- e) Rendering professional expertise to guide against the reoccurrence of frauds.

The use of information technology, computer-assisted audit techniques, in gathering evidence is very critical in ensuring success in a fraud investigation.

2.1.6.1 Evidence Gathering

To obtain relevantly and up to date evidence, a forensic auditor must have good knowledge and understanding of various types of frauds that had scaled through the system and the techniques or means through which they were perpetrated. The evidence should, therefore, be adequate to eventually reveal the identity of the culprit, the mechanism through which the fraud is being perpetrated, and the financial loss suffered by the organization. It is pertinent for the team to be skilful in evidence gathering to support court cases failing which the evidence would be challenged in court, or even become unacceptable. Fraud Investigators must guide against documents from being falsified, damaged or destroyed by the suspected fraudster (Carvey, 2009; Bejtlich& Rose, 2008).

The following techniques can be used to gather evidence. It includes:

- a) Test of controls which help in identifying weaknesses in the system that pave way for the perpetuation of the fraud.

- b) The analysis of trends over time through the use of analytical procedures. It allows for comparative analysis among different sections or units/departments of the organization.
- c) The application of computer-assisted audit techniques. It helps in identifying the timing, location of files or data altered in the computer system and respective staff or officers involved.
- d) Tailored discussions and interviews with affected staff.
- e) The use of substantive techniques such as reconciliations, cash counts and reviews of documentation.

The ultimate aim of the processes undertaken by the forensic investigators is to obtain a confessional statement from the fraud perpetrators. It is expected that the forensic audit teams would have sufficiently gathered ample evidence before confronting alleged fraudster for testimonial confession (Singleton & Singleton, 2010). This is one of the reasons the forensic auditors must be thorough in interview skill which is sine-qua-non for effective evidence gathering.

2.1.6.2 Reporting

The audit team is expected to submit their reports to the Head of forensic audit unit for onward advice to the management for implementation of recommendations (FBI, 2013; Milosavljević, and Grubor, 2009; Singleton & Singleton, 2010). The report will contain the findings of the investigation, the audit evidence, full details of frauds discovered, amount of loss suffered, detailed information on the perpetrators and appropriate sanctions in line with sanction grid or best practice. The report will include recommendations for improvements to controls within the organization to prevent reoccurrence in the future.

2.1.6.3 Court proceedings

If the investigation leads to legal proceedings against the suspect or fraudster, all members of the investigative team will be involved in executing the lawsuit. The evidence gathered during the fraud investigation will be presented at the law court and any member of the audit team could be called upon to testify based on the evidence before the court which must be

carried out professionally (FBI, 2013; Milosavljević, & Grubor, 2009; Singleton & Singleton, 2010). This would be expected to be done in such a way that complex accounting issues must be handled and explained succinctly implications to the understanding of non-accountants or those who have a phobia for figures.

In summary, it could be seen from the aforementioned processes that a forensic audit engagement is a specialized area which requires sound technical know-how and experiences not only in accounting, auditing, information technology techniques but also requisite knowledge in legal proceedings.

It is therefore imperative that forensic auditors must receive and acquire adequate training in all areas of his work and at the same time ensure continuous mandatory professional development to cope with the 21st-century challenges in financial matters.

2.1.7 Skills of a Forensic Auditor

An effective forensic auditor must be an erudite fraud investigator and should be able to x-ray fraud from different perspectives of human and individual, economic, social, regulatory, legal, organizational, cultural and environmental point of view (Winch, 2007).

A forensic auditor should be able to exhibit competency in the discharge of his duties which include the following:

1. A critical review of internal controls. A forensic auditor must be able to assess the strengths and weaknesses of the controls in ensuring that frauds are brought to the lowest ebb.
2. A critical review of financial statements. The forensic auditor must have a full understanding of the working of the finance and operations functions of the

organization. The forensic auditor must be able to follow through every transaction to the point of origin to place responsibility.

3. The forensic auditor must have an enquiry mind. A forensic auditor must be able to gather and preserve evidence to prevent losses, discourage fraudulent transactions and do such a thing that will preserve the continuity of the organization.
4. The forensic auditor must have detail and sound knowledge of management, administrative, organizational policies, procedures, and practices.
5. The forensic auditor must be proficient in information technology. The forensic auditor is expected to be 21st-century information technology compliant which will equip him to conduct a complex investigation in the e-commerce and computerized accounting systems environment (Gallet, 2010).
6. The forensic auditor must be a psychologist. This will enable the forensic auditor to have a thorough understanding of the motive, art or thinking behind criminality. The forensic auditor should be able to set up preventive measures that will discourage fraudulent practices and motivate and encourage employees to be productive.
7. Must have been versatile and experienced in both the civil and criminal laws, the administration and procedures of courts and complexities of the country's legal system.

Other non-core skills expected of a forensic auditor (Wallace, 1991) include the following:

1. A sound professional judgment.
2. Must be able to look beyond numbers and have substantial knowledge of the situation.
3. Be curious, persistent and creative.
4. Must be able a good listener, smart and pay attention to the minutest details and as well as a good observer.
5. Must be able to maintain his composure when standing at the law court as an expert witness.

Also, a forensic auditor must be a professional man and possess requisite professional qualifications awarded by professional bodies such as Association of Certified Fraud Examiners (ACFE), Institute of Chartered Accountants of Nigeria (ICAN) and other recognized professional bodies.

2.1.8 The Importance of forensic auditing

According to Gallet, (2010), Winch (2007), Mukoro, Yamusa & Faboyede (2013), the following are the importance of forensic auditing:

- i. **Objectivity and credibility:** As a result of the independence of forensic auditors, they tend to be more objective in their reports to management on audit findings. The professional ethics expected of the members make their judgment and opinion more credible and third parties rely on their professional opinion.
- ii. **Accounting expertise and industry knowledge:** Forensic auditors, as financial fraud expertise, sometimes bring their wealth of experience and deep understanding of the industry being investigated to play in handling frauds or crimes any business organization may be confronting or exposed to.
- iii. **Management by exception:** With the provision of the necessary manpower resources, forensic auditors are central to the provision of a broad-based in-depth investigation to unveil or check-mate any fraud most especially during re-organization or restructuring of any organization. This allows the executive management to concentrate on the strategic need or intent of the organization.
- iv. **It enhances effectiveness and efficiency:** This arises from the standpoint of an in-depth experience of forensic auditors in fraud investigation through a thorough analysis of transactions emanating from any segment of an organization. Their operations would bring about cost savings by rooting out fraud from every transaction.

2.1.9 Challenges of forensic auditing

- i. **Confidentiality challenge:** Forensic auditors including other members of the team engaging in forensic auditing assignment are not mandated or expected to expose the confidentiality of their findings to third parties. This is supported by the code of professional ethics but this stipulation may be violated if external experts are involved.

- ii. Negative publicity. The discovery of fraud in an organization is likely to portend negative image for an organization most especially where the fraudster threatens the company to safeguard himself from the trial. This could directly or indirectly affect the reputation and investor relations of the company.
- iii. It is expensive. Forensic auditing can be too expensive to implement because of the requisite accounting software requirement. The cost of maintaining forensic auditors are quite high most especially if external forensic auditors are involved in a trial. This could lead to an increase in overheads which the concerned organization may not be able to bear.
- iv. A lot of employee loyalty. Most organizations engage the services of external forensic auditors to examine their books of accounts. Naturally, some loyal or ethical employees may feel unappreciated when their jobs or roles are being subjected to scrutiny for fraud by a third person. It would be extremely difficult for the employers to win or continue to enjoy the loyalty or trust of such categories of staff if at the end of such audit exercise no fraud is identified and reported.

2.2 Theoretical review

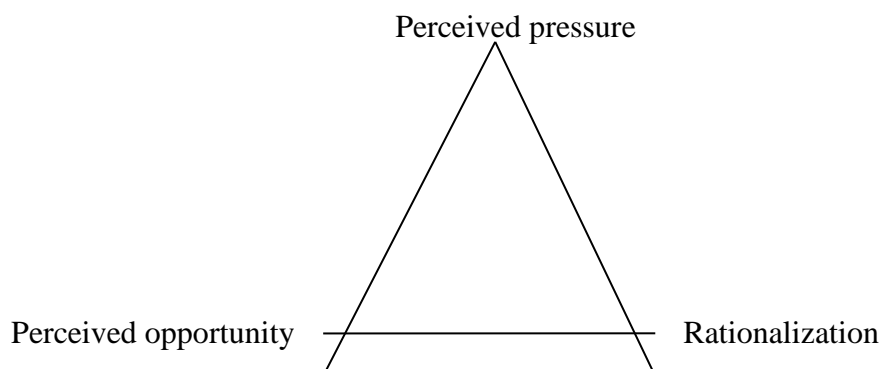
2.2.1 The Fraud Diamond Theory

This theory is an improvement in the existing fraud triangle. It is believed that the fraud triangle could be enhanced to improve both fraud prevention and detection by considering the fourth element. In addition to addressing incentive, opportunity, and rationalization, the Wolfe and Hermanson's four-sided fraud diamond" also considers an individual's capability personal traits and abilities that play a major role on whether fraud may occur even with the presence of the other three elements. Many frauds especially some of the multibillion-dollar ones would not have occurred without the right person with the right capabilities in place. Opportunity opens the doorway to fraud and incentive. The fraud diamond theorists believed when people perform a certain function repeatedly, such as bank reconciliations or setting up new vendor accounts, their capability to commit fraud increased as their knowledge of the function's processes and controls expands over time. Secondly, the right person for fraud is smart enough to understand and exploit internal control weaknesses and to use position, function, or authorized access to the greatest advantage (Okafor & Agbiogwu, 2016).

The fraud triangle is one of the effective tools that enable forensic accountants to evaluate fraud risk (Ozcan, 2019). This theory was introduced by Wolf and Hermanson (2004). The model added a fourth variable “capabilities” to the three-factor theory of fraud triangle (pressure, opportunity, and rationalization). Wolf and Hermanson believed many frauds would not have occurred without the right person with the right capabilities implementing the details of the fraud. 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’ traits and abilities to assess the risk of fraudulent behaviours. Also, 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 forms of atrocities, the service of a trained and experienced investigator like the forensic auditor is required to forestall the occurrence of such fraud (Asusu 2019).

The FTT and FDT attempt to identify elements that lead perpetrators to commit fraudulent acts. Enterprises spend a significant amount of time and effort to enforce internal controls to prevent and deter fraud. The FTT and FDT both capture psychological and causative factors of fraud occurrence. They identify those circumstances that propel or induce human behaviour to fraud. In an organizational contest, weak internal controls, for example, will facilitate a mind that is already fraudulently disposed to commit fraud. However, it is more important to identify factors that lead employees to commit fraudulent acts, which can be used to install controls catered towards preventing and deterring those factors. The FTT consists of three components that are necessary for fraud to occur (Malimage, 2019).

The three elements of fraud summarized by Cressey (1953) are commonly presented in a diagram. The top element of the diagram represents the pressure or motive to commit the fraudulent act while the two elements at the bottom are perceived opportunity and rationalization (Wells, 2011).



The fraud triangle

2.2.1.1 Received pressure

Perceived pressure refers to the factors that lead to unethical behaviours. Every fraud perpetrator faces some pressure to commit unethical behaviour. These pressures can either be financial or non-financial (Abdullahi and Mansor, 2015). Financial pressures may result from poor personal financial management, unemployment, and gambling habits (Malimage, 2019).

2.2.1.2 Perceived opportunity

Perceived opportunity is the second element in the FTT, which allows individuals to commit fraud due to inadequate internal controls and governance systems. Organizations do not have control over their employees' financial pressures or their rationalization aspects, but they can ensure that there are no internal control weaknesses that can be exploited by the employees to commit fraud. Once an employee perceives that there is an opportunity to commit fraud such as lack of segregation of duties, weak internal controls, and audits not being performed regularly, conditions are ripe for him or her to commit fraud. The perceptions are heightened when one of the other factors such as pressure/incentive and/or rationalization is present. It is also important to note that, like perceived pressure, the opportunity is also a perception of the perpetrator (Wells, 2011 in Malimage 2019). The second necessary element of fraud to occur is a perceived opportunity. Opportunity is created by ineffective control or governance system that allows an individual to commit organizational fraud. In the field of accounting, this is termed as internal control weaknesses. The concept of perceived opportunity suggests that people will take advantage of the circumstances available to them (Kelly and Hartley, 2010). The nature of perceived opportunity is like perceived pressure in the sense that the opportunity does not have to be real too. However, the opportunity exists in the perception and belief of the perpetrator. In most cases, the lower the risk of being caught, the more likely it is that fraud will take place (Cressey 1953 in Abdullahi & Manoor 2015). An opportunity has two aspects: (i) the inherent susceptibility of the organization to manipulation, and (ii) the organizational conditions that may warrant a fraud to occur. For example, if there is an inadequate job division, weak internal control, irregular audit, and the like, then the conditions will be favourable for the employee to commits fraud (Abdullahi&Manoor 2015).

2.2.1.3 Rationalization

Rationalization is the third component of the FTT, which refers to the justification of fraudulent behaviour as morally acceptable by the perpetrator. When an individual can rationalize fraudulent behaviour, a bridge is created between pressures/incentives and opportunities, and the fraud triangle is created. Organizations must reduce opportunity with strong internal controls and enforcement while reducing perceptions of rationalization and pressure/incentives through training, awareness programs, and sanctions. The strength of each component and the context of the situation may moderate if and how fraud is committed and the extent of the fraud. This provides an opportunity for fraud researchers to identify how these components impact fraudulent behaviour in different contexts (Howe and Malgwi, 2006). The rationalization is the third element of the FTT. This concept indicates that the perpetrator must formulate some morally acceptable idea to him before engaging in unethical behaviour. Rationalization refers to the justification and excuses that immoral conduct different from criminal activity. If an individual cannot justify dishonest actions, it is unlikely that he or she will engage in fraud. Some examples of rationalizations of fraudulent behaviour include “I was only borrowing the money”, “I was entitled to the money because my employer is cheating me.” Additionally, some fraudster excuses their action as “I had to steal to provide for my family”, “some people did it why not me too” (Cressey, 1953 in Abdullahi et. al 2015).

2.2.2 Fraud Preventative Theory

This thesis began by evidence of forensic accounting services as essential for effectiveness in the performance of Commercial Banks. Forensic accounting services were also discussed as particularly important in the present technologically advanced yet fragile economic conditions. Intentions are the best predictor of any planned behaviour and understanding the antecedents of intentions provides practical insights into the behaviour (Ajzen and Fishbein 1980). Therefore, Fraud preventative theory was proposed to curb the behavioural intention of any individual to fraud (Ekechukwu et.al, 2018). A bank owes a duty to its customers to keep accurate records of all the transactions effected against the account in question. Thus, a bank statement serves a vital role in meeting the bank’s accountability to its clients and is a fundamental aspect of modern banking Goosen, Pampallis, Van der Merwe and Mdluli, (1999). Willemse (2004) is of the perception that financial investigation is the identification and documentation of the movement of money during and after a crime. It establishes the link between where the money comes from, who gets it, when it was received, and where it was stored or deposited. This can provide proof of unlawful activity such as money laundering,

rackeering, corruption, and terrorist financing, as well as identify and trace assets for asset forfeiture purposes, in effect addressing the proceeds of unlawful activity. According to Akintoye (2008), forensic litigation support in commercial banks aids of nature in a matter involving existing or pending litigation or represents the factual presentation of economic issues related to existing or pending litigation. It deals primarily with issues related to the qualification of economic damages sustained by parties involved in legal disputes and can assist in resolving the dispute and can assist in resolving disputes, even before reaching or getting to the courtroom. A good example of a litigation support assignment would be calculating the economic loss resulting from a breach of contract. According to Carrier (2003), the study attempts to analyze digital forensic as the use of scientifically derived and proven methods toward the preservation, collection, validation, identification, analysis, interpretation, documentation, and presentation of digital evidence derived from digital sources to facilitate or further the reconstruction of events found to be criminal, or helping to anticipate unauthorized actions shown to be disruptive to planned operations. This definition covers the broad aspects of digital forensics from data acquisition to legal actions. Abretch (2010) conducted a study on Fraud and Forensic Accounting in a Digital Environment. The study differs from the present study in various ways; it employed a literature review methodology/desk while the present study uses a field survey methodology. Another difference is that the study did not cover the effect of forensic ICT on the financial performance of commercial banks in Nigeria.

Abdullahi & Mansor (2015) in their future fraud research say further research can be conducted based on the use of the classical fraud theory especially FDT being a new version of FTT. Moreover, both the two theories converged on the three of the elements as pressure to commit fraud; Opportunity to exploit the organizational weaknesses as well as the rationalization which is a way to justify the course of action by the fraudster. Considering the diverged element 'capability' which is an addition over the three mentioned elements, this makes it quite clear to pave the way or sources for further research to be conducted, such as the influence of capability towards committing fraud.

2.3 Empirical Review

Mawutor et.al (2019) in their study: Fraud and performance of deposit banks defined performance as the result of activity and the appropriate measure selected to assess corporate performance and is considered to depend on the type of organization to be evaluated.

Ibanichukwa & Oko (2019) in their study: Electronic fraud and financial performance of quoted commercial banks stated that the concept of financial performance and researches into its measurement is well advanced within finance management fields.

Singleton & singleton as mentioned in the effect of forensic accounting investigation in detecting financial fraud by Sule et. al considered forensic accounting as a form of comprehensive fraud investigation and analyzing anti-fraud control through an audit of accounting records in search of evidence of fraud. They further emphasized that forensic accounting investigation includes writing a report to management or court of law to determine certain evidence and the forensic accountant should serve as an expert in a court.

The concept of financial performance and research into its measurement is well advanced within the finance and management fields. The assessment of financial performance is primarily based on various methods of financial analysis. Ibanichuka & Oko (2019) in Electronic Fraud and Financial Performance of Quoted Commercial Banks in Nigeria.

Peterson (2015) carried research on forensic accounting and fraud: A review of literature and policy implications. In this review, apart from practical and policy issues that were discussed, other several issues such as the nature of fraud, forensic accounting, core and enhanced skills of the forensic investigators as well as issues with forensic education were examined. He concluded that while forensic accounting is gaining significant research interests among academics, progress in forensic accounting research is being deepened and that it would depend on the extent to which fraud perpetrators leave traces. He posited that the thorough understanding and knowledge of the fraud perpetrators in accounting standards, auditing techniques and investigative skills will pose a serious challenge for the regulators to unearth frauds because they would not leave any trace. He among other things concluded that while it would remain a supervisory and policy issue in the coming years, the progress in the forensic accounting literature would also depend on the extent to which forensic accounting informs practice and policy.

This conclusion is a clear departure from the objective of this research. This professional skills and proficiency of forensic auditor will leave no room for fraudulent practices to thrive. The application of forensic auditing principles and technical expertise will cause an organization to be steps ahead of any fraudsters and create an unhealthy environment to perpetrate fraud. If by chance any fraud scaled through, as there is no perfect system, the perpetrator will be treated as criminal to deter reoccurrence and serve as a deterrent to others.

Elias (2014) carried out a study on the use of forensic accounting in fraud detection and control. The study employed theoretical analysis and literature review using secondary data in carrying out the research. The importance of forensic accountants and their roles in minimizing and eliminating fraudulent financial activities were critically examined.

The study maintained that forensic accounting expertise, techniques and principles will enhance timely detection, investigation and prosecution of perpetrators of financial crimes failing which would endanger the soundness of the economy. The study emphasized the need for forensic accountants to be adequately trained and the necessity on the part of the Judge to recognize them as an expert in the field. The study further opined that to perform their tasks efficiently forensic accountants must possess sufficient knowledge and skills in accounting, auditing, verbal and written communication, and information technology.

This study brings out the importance of forensic accounting and the skills that they must possess without highlighting the processes involving in realizing or justifying the engagement of a forensic accountant in detecting and control frauds which this project is aimed at achieving.

Ogutu & Ngahu (2016) carried out a study on the application of forensic accounting skills in the mitigation of fraud with particular reference to the practice accounting firms in Nakuru County, Kenya. The study noted that in recent years, forensic accounting has experienced substantial growth and vital tool in the detection, prevention and alleviation of economic crimes globally. They employed two theories, fraud triangle and diamond, for their theoretical review. The research used descriptive survey research design and the target population was limited to 25 accounting firms. The researcher made use of a questionnaire as an instrument of data collection. The data were analyzed through the use of frequency distribution tables, bar graphs and pie charts.

The study discovered various areas where forensic accounting could be useful which include fraud prevention and detection, bankruptcy, insolvency and reorganization, financial statement misrepresentation, economic damage calculations, and family disputes. It also highlighted the attributes a forensic accountant must possess such as analytical skills, auditing skill, investigative and fraud skills, high ethical standard, confidence, inquisitive mind and scepticism. While the study is limited to practice accounting firms, the researchers do not state how the stated objectives can be achieved but only stated the areas where forensic accountants could be engaged in.

Odelabu (2014) in her study concluded from the study findings that forensic investigation and forensic litigation were statistically significant in explaining changes in the financial performance of DMBs in Nigeria. It was also possible to conclude that the use of forensic financial information influenced and improved the performance of DMBs in Nigeria.

Ezejiofor, Nwakoby, and Okoye (2016) in their study findings on the Impact of forensic accounting in combating fraud in the Nigerian banking industry discovered that Forensic accounting is an effective tool for addressing financial crimes in the banking system. Also, the forensic audit necessitated in ensuring corporate governance in corporate organizations.

Onodi, Okafor & Onyali (2015) carried out similar research on the impact of forensic investigative methods on corporate fraud deterrence in the Nigerian banks. In executing the research work, a survey research design was adopted and primary and secondary data were used for the study. While primary data were sourced through interviews and administration of copies of questionnaire, secondary data were sourced from the fraud and forgery reports in the banking sector as documented by Nigerian Deposit Insurance Corporation (NDIC) and Central Bank of Nigeria (CBN). Descriptive statistics, regression analysis and Z-test statistical tools were employed to analyze the data collected. The study concluded that there was a significant relationship between forensic investigative methods and corporate fraud deterrence. The findings emphasized that the services of an expert such as forensic auditors are inevitable in timely prosecution of fraudsters or culprits of frauds. The researchers made it clear that many auditors and professional accountants in Nigeria are yet to develop the necessary capacity, skills and requisite knowledge in forensic investigative methods.

Alao (2016), in his research on forensic auditing and financial frauds in Nigerian Deposit Money Banks (DMBs), concluded that forensic audit has a significant effect on financial fraud control in Nigerian (DMBs) and that forensic audit report significantly enhances court adjudication on financial fraud though, the researcher maintained that the application of forensic audit to tackle financial fraud is still at the infant stage. The study which covered DMBs and accounting firms in Abeokuta adopted a cross-sectional survey design of which population comprised the staff of banks and audit firms in Abeokuta. The study used a purposive sampling technique for questionnaire administration while logistic regression analysis was used for data analysis.

While we support the researcher that the concept of forensic auditing is still at its infant stage and its importance in enhancing court adjudication in financial fraud matters, the narrowness of the study to Abeokuta metropolis would be enhanced in this report.

Efiong, Inyang, & Joshua (2016), in their study on the Effectiveness of the Mechanism of Fraud Prevention and Detection in Nigeria, noted that though the problem of fraud is ubiquitous its prevalence in Nigeria most especially in the public service is becoming unbearable. They maintained that there have been many works of literature on and researches carried out on how to fight frauds in various organizations. They concluded that the application of forensic accounting skills and techniques have been discovered to be a potent way of ameliorating the consequences of fraud even though its adoption is more pronounced in developed countries of the world. Their research was motivated on the need to evaluate or assess the contribution of forensic accounting techniques in checking the prevalence of in Nigeria. The study gathered quantitative data from accounting practitioners through the use of a questionnaire. The study identified mechanisms through which frauds could be prevented and detected. Such mechanisms include the formulation and implementation of an effective and efficient internal control system, a frequent audit of operations and enforcement of corporate governance. Their findings revealed that forensic accounting techniques are the least among the fraud detection mechanisms being used in Nigeria. They, therefore, concluded that the fraud prevention and detection mechanisms currently in use are grossly inadequate to effectively deal with fraud challenge in Nigeria and therefore advocated for the adoption of forensic techniques.

Ozcan (2014) in his research stated that in the early years of forensic accounting, tax authorities employ forensic accounting practices to detect tax evasion by firms. In many famous fraud cases such as the Ponzi scheme and Al Capone, forensic accounting demonstrated its effectiveness. In the early development stage of forensic accounting, the major client of firms specialized in the field of forensic accounting was government institutions. Today, forensic accountants have vital roles in the economic crime unit. Big- 4 auditors, Deloitte, PricewaterhouseCoopers, KPMG, and Ernst and Young, have taken important steps in reestablishing the nature and dynamics of forensic accounting.

The importance of forensic auditing cannot be underestimated as a result of the global persistent perpetration of fraud in organizations. The service of forensic auditors should be

employed in Nigerian banks. This could be done by amending the existing statutes, thereby making forensic auditors one of the audit team. (Zacharia, Masoyi, Ernest & Gabriel 2014).

Engaging a forensic accountant early in cases involving complex economic issues can lead to success. The attorney and forensic accountant can partner to efficiently and effectively tackle a case on all fronts. The forensic accountant can provide detailed and effective lines of cross-examination for depositions while assisting the attorney with interpreting and understanding an opposing expert's report and opinions, thus strengthening defence counsel's position both in settlement negotiations and at trial (Ejoh&Ukpe 2017). Madhi, Behnaz, Mansoureh & Neda (2014) in their research stated that financial performance is of more significance when comparing two firms. However, other features such as firm size and age are also important, and their relation with firm's financial performance should be studied, the size of the firm is also one of the important variables taken in many disclosure studies so they suggested that since firm size (total assets value) and its financial performance are positively and significantly associated, firms should pay considerable attention to their assets' development through their shareholders. In the current business environment, the need for forensic accounting has emerged because independent auditors and internal auditors fail to detect complex accounting irregularities. Forensic accountants should have deep knowledge about methods to identify potential indicators of financial information manipulation (Ozcan 2019).

Firm size is an important characteristic to gain performance. Large firms have more resources and capacity to undertake more product lines and higher production capacity together with organizational resources. This enables the firm to improve its financial performance since it can mitigate risks Alvarez and Barney, (2001) in Omar (2015).

Measuring the performance of banks has been a controversial issue over the years. Determining the performance of banks is usually very subjective and strongly dependent on the aspect which is to be investigated Mawutor et.al (2019). Performance as defined by Hunger and Wheelan(1997) in Ifionu & Keremah, (2016). "the result of activity and the appropriate measure selected to assess corporate performance is considered to depend on the type of organization to be evaluated and the objective to be achieved through that evaluation

CHAPTER THREE

METHODOLOGY

3.0 Introduction

This chapter focuses on research methodology and research design for the study. It states the sample selection process, methods of data collection and analysis, the segmentation of variables into dependent and independent variables and the formulation of model specification for the study.

3.1 Research Design

This research work is focused on the effect of forensic accounting on the financial performance of deposit money banks (DMBs) in Nigeria. The survey research design was adopted to collate the data necessary to achieve the objectives of the study. This research design was used because it allows the researcher to collect specific information from the target group (bankers) on the subject matter of the study. The data used for this study were obtained from the primary source through the administration of structured ‘closed-ended’ questionnaire. The multiple regression analysis was employed in the analysis of data obtained to confirm the influence of forensic accounting on bank performance. This is based on the fact that regression analysis measures the effects of one variable on another variable and at the same time shows the likely significant relationship between two variables.

3.2 Population of Study

There are twenty-two (22) Money Deposit Banks (DMBs) operating in the country and licensed by the Central Bank of Nigeria. For the purpose of this study, only five (5) banks with international and national authorization, representing 22.7% of the total commercial banks operating in the country were considered for the study. This is premised on their branch network with extensive geographical spread, a large number of employees with multi-lingual and diversities, large customers’ base, the high volume of transactions and the use of a high level of technology.

3.3 Sample Unit

The sample unit consists of 5 selected banks in Nigeria at the time of the research. The sample will include the following banks:

- Access bank
- Guarantee trust bank
- Zenith bank
- Ecobank
- United Bank of Africa

3.4 Sampling Technique

Sampling helps in deriving accurate generalization based on the proportion selected. The sampling technique adopted by this research study will be simple random sampling. Based on the total number of banks (22) that is accredited by the Central Bank of Nigeria, only 5 selected banks would be used for this study.

3.5 Sample Size Determination

The sampling procedure that will be adopted for this research will be simple random sampling. This method grants the liberty to randomly select respondents (samples) out of the 5 selected banks (population) which is 10% of the population as recommended by Ezejelue and Ogwo (1990). That way, bias will be reduced to the barest minimum if not eliminated.

3.6 Method of Data collection

In carrying out this study, both the primary source of data was adopted. The primary data was used in the analysis of findings based on the responses received from copies of questionnaire administered to unveil the validity of the research subject matter. The data was obtained from the responses given by the employees of the selected banks.

3.7 Research instrument

The use of closed-end questionnaire was employed in the collection of data for this study to ascertain the influence of forensic auditing in fraud control. The questionnaire was planned with the use of 6-point Likert scale ranging from 'strongly agree' to 'strongly disagree' i.e. strongly agree – 6, agree -5, fairly agreed -4, disagree -3, fairly disagreed - 2 and strongly disagree – 1. In the course of administering the questionnaire, the purpose of the research was

duly explained to the respective respondents and the confidentiality of their opinion was assured. The questionnaire was structured in an unambiguous and precise manner to pave way for desired responses in achieving the objectives of the research. The questionnaire was segmented into two parts. While Part A focused on personal data of the respondents, part B focused on the subject matter of the research. The responses got from the questionnaire was processed and analyzed to address the research questions

3.8 Pilot Study

A pilot test of the questionnaire was conducted to confirm the suitability of the content, design and structure of the questionnaire. The questionnaire used in the study consisted of a series of Likert-scale.

3.8.1 Validity of Research Instrument

The questionnaire will be properly scrutinized by the supervisor of this research and senior accounting lecturers in my institution to prove the validity of the research instrument (questionnaire) before administration.

3.8.2 Reliability of Test

Reliability study aims at the consistency of the instrument used in data collection. This study will make use of the Cronbach's alpha coefficient to evaluate the research instruments' reliability and inspect internal consistency. This will ensure a reliable outcome from the data analysis by conducting a pilot study on the research instrument.

3.9 Method of Data Analysis

The technique used in this study is the ordinary least square method (OLS) of multiple regressions as it is well known as the best linear unbiased estimator (BLUE). Econometric tools such as multiple regressions would then be employed in analyzing data collected to determine the effect of forensic accounting on financial performance in deposit banks in Nigeria.

3.10 Model Specification and Measurement of Variable

$$FP=f(FA)$$

$$FP=f(FI,FL,FZ)$$

$$FP=\alpha_0 + \beta_1FI + \beta_2FL + \beta_3FZ + \epsilon_0$$

FP= Financial Performance

FA= Forensic Accounting

FI= Forensic Investigation

FL= Forensic Litigation

FZ= Firm Size

α = constant

ε = Error/disturbance

β =slope (gradient) showing rate dependent variable is changing for each unit change of the independent variable.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.0 Introduction

In order to provide answers to the issues highlighted in the objectives of this research, this chapter analyzes the primary data gotten from the questionnaire administered and the results therefrom are stated below. The analysis of the results is categorized into three sections which include the personal data of the respondents, the test of the hypotheses with the use of statistical packages for social sciences (SPSS) where regression analysis and correlation were employed.

4.1 Data Presentation

There are twenty-two (22) commercial banks operating in Nigeria. We sampled five (5) banks for the purpose of the research representing 22.7%. Seventy copies of questionnaire were distributed among the five banks out of which every of the questionnaire was returned and processed representing 100%. The distribution of the copies of the questionnaire and their responses are as shown in the table below.

Table 4.1: Distribution of Questionnaire

SN	Banks	Copies of Questionnaire		Variance
		Distributed	Returned	
1	Zenith Bank	14	14	-
2	UBA	14	14	-
3	Access Bank Plc	14	14	-
4	GTB	14	14	-
5	Eco Bank	14	14	-
	Total	70	70	-

Source: Field Survey 2020.

4.1.1 Analysis of Personal Data

Qualifications	Frequency	Per cent
OND	06	8.6
HND	35	50.0
BSC	22	31.4
MSC	07	10.0
Total	70	100.0

The table 4.1.1 above revealed that respondents with OND were 8.6%, the respondents with HND were 50.0%, while BSc. qualification holders were 31.4% and MSc. holders were 10.0%.

Table 4.1.2 Respondents Working Experience

Experience	Frequency	Per cent
0-5	34	48.6
6-10	20	28.6
11-15	06	8.6
16-20	02	2.9
21Above	08	11.4
Total	70	100.0

The table 4.1.2 shows that 48.6% of the respondents have had 5years and below working experience, 28.6% were between 6-10years of experience, 8.6% were 11-15years experienced, 2.9% were 16-20years experienced and 11.4% were 21years and above experienced

Table 4.1.3

Qualifications	Frequency	Per cent
Fund Transfer	02	2.9
Marketing	21	30.0
Operations	38	54.3
Customer Care	09	12.9
Total	70	100.0

Table 4.1.3 revealed that 2.9% of the respondent work in the funds' transfer department, 30.0% work in the marketing department, 54.3% work in the operations department while 12.9% works at the customer care department.

Table 4.1.4 Respondents' organizational performance

Qualifications	Frequency	Per cent
Low	43	61.4
Moderate	01	1.4
High	26	37.1
Total	70	100.0

From the table 4.1.1, it could be depicted that 61.4% of the sample banks have a low financial performance, while 1.4% have moderate financial performance and 37.1% have a high financial performance.

Table 4.1.5 Descriptive Statistics

Variables	Mean	Std. Deviation	N
Forensic Investigation and Performance (FIP)	11.82	5.80	70
Forensic Litigation(FL)	9.48	4.10	70
Size of Bank (SB)	13.74	1.40	70
Financial Performance (FP)	9.58	3.12	70

The table indicated that size of bank has the highest mean of 13.74 with a standard deviation of 1.40, followed by Forensic Investigation and Performance with a mean score of 11.92 with a standard deviation of 5.80, Financial Performance had a mean value of 9.58 with a standard deviation of 3.12 while Forensic Litigation has 9.48 with a standard deviation of 4.10.

Table 4.5.6 Correlation analysis of Forensic Investigation (FI), Forensic Litigation, Size of bank and Financial Performance.

	FI	FL	SB	FP	
Pearson Correlation	FI	1.000	.291	.089	.071
	FL	.291	1.000	.018	.328
	SB	.089	.018	1.000	.141
	FP	.071	.328	.141	1.000
Sig. (1-tailed)	FI	.	.007	.232	.279
	FL	.007	.	.440	.003
	SB	.232	.440	.	.123
	FP	.279	.003	.123	.

Table 4.5.2 above shows the correlation analysis Forensic Investigation (FI), Forensic Litigation, Size of bank and Financial Performance. The table revealed that there exists a significant relationship between forensic investigation and forensic litigation with a correlation coefficient of 0.291, $p = 0.007 < 0.05$. The result also indicated a significant relationship between the financial litigation and firm's performance with $r = 0.328$, $p = 0.003 < 0.05$. The table disclosed that Firm size has insignificant and weak correlation with firm's performance with $r = 0.141$, $p = 0.123 > 0.05$. Finally, the table revealed that there is an insignificant correlation between the forensic investigation and firm's performance with $r = 0.071$, $p = 0.279 > 0.05$.

Table 4.5.7: Multiple Regression Analysis Results of Forensic Investigation (FI), Forensic Litigation, Size of bank and Financial Performance.

Model summary

R= .308

R^2 =.095

R^2 (Adjusted) = .054

Standard Error of Estimate =5.645

F=.004, P<0.05

Model		Unstandardized		Standardize	T	p.
		Coefficients		d		
		B	Std. Error	Beta		
1	(Constant)	2.757	.6940		.397	.692
	FL	.434	.176	.307	2.469	.004
	SB	.418	.491	.101	.850	.001
	FI	.81	.233	.044	.350	.001

a. Predictors: (Constant), FL, SB, FI

b. Dependent Variable: FP

Table 4.5.7 revealed that FL, SB and FI had positive multiple correlations with FP ($R=.308$). The Adjusted R Square value of .054 indicated that FL, SB and FI jointly contributed 5.4% to the variability in financial performance (FP). This implies that the remaining 93.6 % is due to residuals, that is, those variables not included in this study. The result revealed that the adjusted R square value was significant at ($F=.004$, $p<.05$). The result of relative contributions of the independent variables to the prediction revealed that FL, SB and FI contributed differentially to the prediction of FP. However, FL($\beta=.434$; $t=2.469$; $p<0.05$), SB ($\beta=.418$; $t=.850$; $p<0.05$) and FI ($\beta=.081$; $t=.350$; $p<0.05$) are all potent significant positive contributors to the financial performance (FP).

NULL HYPOTHESES

ACCEPT REJECT

H₁: There is no significant relationship between forensic investigation and the financial performance of DMBs in Nigeria.

✓

H₂: There is no relevant association between forensic litigation and the financial performance of DMBs in Nigeria.

✓

H₃: Firm size has no significant relationship with the financial performance of DMBs in Nigeria.

✓

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.0 Introduction

The purpose of this study is to ascertain the effect of forensic accounting on the financial performance of deposit money banks in Nigeria. This chapter gives an overview of the study, it provides the summary of work done, descriptive and empirical findings, conclusion, and as well as recommendations made and suggestions for further studies.

5.1 Summary

The study focuses on examining the effect of forensic accounting on the financial performance of deposit money banks in Nigeria, several reviews were carried out on forensic accounting in other properly construct the topic. The first section started to provide a context on Forensic Accounting and the modifications it has undergone as well as details on the financial performance of the banks in Nigeria in recent years. It was indicated that Forensic Accounting plays a vital role in the deposit money banks by encouraging the transparency of financial activity that is being performed by those Banks.

The survey research design was adopted for this study. This research was carried out using five (5) licensed DMBs in Nigeria which was determined using the simple random technique. The data used for this study were obtained through a primary source which was the administration of a structured ‘close end’ questionnaire.

The independent variable (forensic accounting) was represented by a forensic investigation, forensic litigation and firm size and the independent variable (financial performance) which is measured by bank performance.

The hypotheses of the study were tested using correlation and multiple regression analyses. The correlation was used to measure the association between the variables while multiple regression analysis was used to measure the relationship between the variables.

5.2 Conclusion

The purpose of the study is to investigate the effect of forensic accounting on the performance of deposit money banks in Nigeria. This study concludes that forensic litigation was statistically significant in explaining changes in the financial performance of deposit money banks in Nigeria. It also discovered that the use of forensic financial information

influenced and improved performance of commercial banks in Nigeria which has improved transparency in commercial banks hence it has curb financial fraud thus increasing profitability.

5.3 Recommendations

The study recommends that the management of the commercial banks should emphasize and enhance the use of forensic financial information as this will help in reducing fraud which has a positive effect on organizational performance. It also recommends that the management ensures that the bank adapts to new technological changes taking place in the world to ensure that they have a well-structured system to accommodate these changes. Furthermore, it is suggested that management put in place various types of fraud detection and prevention techniques, provide training programmes for employees and educate them on how to detect and prevent frauds. Also, attractive bonus schemes and incentives should be considered for employees to reduce if not eliminate employee's opportunity to commit fraud. Finally, appropriate sanctions should be applied when fraud is detected. Where persecution is the appropriate sanction, proper Forensic procedures need to be followed during the investigation and trained experts like the Professional Forensic Accountants should conduct the investigation, where there is evidence of fraud, appropriate disciplinary action following the Provision of Public Service Rules should be implemented.

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Appendix

**MOUNTAIN TOP UNIVERSITY
COLLEGE OF HUMANITIES MANAGEMENT AND SOCIAL SCIENCES
DEPARTMENT OF ACCOUNTING AND FINANCE**

**EFFECT OF FORENSIC ACCOUNTING ON FINANCIAL PERFORMANCE IN
DEPOSIT MONEY BANKS IN NIGERIA QUESTIONNAIRE**

Dear Participants,

I am an undergraduate student in the Department of Accounting and Finance, Mountain Top University. I am presently carrying out a research on “**EFFECT OF FORENSIC ACCOUNTING ON FINANCIAL PERFORMANCE IN DEPOSIT MONEY BANKS IN NIGERIA**”. This questionnaire is for research purpose.

Kindly respond to this questionnaire items by ticking (√) the opinion that represents each of the items. All information provided will be treated with absolute confidentiality.

Thank you for your co-operation.

Yours Faithfully

SECTION A

INSTRUCTION

Please tick your response against the following questions appropriately in each of the categories.

Degree: OND() HND () B.Sc () MSC () PHD ()

Working experience: 0-5years () 6-10years () 11-15years () 16-20years ()
20years and above ()

Department: Internal audit () Funds transfer () Marketing () Operations ()
Customer care ()

Organizational financial performance: High () low () moderate ()

Section B

The subsequent questions should be answered in the following manner:

AGREED (A), STRONGLY AGREED (SA), FAIRLY AGREE(FA), DISAGREED (D), STRONGLY DISAGREED (SD), FAIRLY DISAGREE (FD) should be ticked in as appropriate.

1. Forensic investigation and performance

S/N	Items	A	SA	FA	D	SD	FD
1.	The forensic accountants in this bank have been involved in investigating managerial fraud						
2.	The forensic accountants in this bank have been involved in investigating non-managerial employees fraud						
3.	The forensic accountants in this bank have been involved in customer-related fraud						
4.	The forensic accountants in these banks have been involved in investigating the misuse of non-financial resources						
5	The forensic accountants in this bank have been involved in investigating the misuse of financial resources						

2. Forensic litigation

S/N	Items	A	SA	FA	D	SD	FD
6.	The forensic accountants in this bank have been involved in designing and implementing internal control procedures						
7.	The forensic accountants in this bank have been involved in evaluating the adequacy of the internal control system						
8.	The forensic accountants in this bank have been involved in developing corporate compliance programs						
9.	The forensic accountants in this bank have been involved in reviewing the opposing expert's reports on damages and the strength and weakness of the positions taken.						
10.	The forensic accountants in this bank have been involved in assisting in securing documentation necessary to support or rebut a claim						

3. Size of your bank

S/N	Items	A	SA	FA	D	SD	FA
11.	Small						
12.	Medium						
13.	Large						
14.	Very large						

4. Financial performance

S/N	Items	A	SA	FA	D	SD	FA
15.	The bank profitability has grown due to forensic accounting						
16.	The bank profitability has increased over the past 5years						
17.	The bank profitability has surpassed the budgets						
18.	The bank profitability has surpassed the industry average						

19.	The bank profitability is expected to improve in the next 10years						
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