ISSN 2250-3153

An empirical investigation of the Human Resources Nexus to Frauds in the Nigerian Banking Sector

IBOR, Bassey Ina

basseyibor@yahoo.co.uk

Department of Banking and Finance, Faculty of Management Sciences, University of Calabar, Nigeria

Abstract- The study investigated the phenomenon of banking sector frauds in Nigeria, staff involvement and the role of the human resource function in evolving curtailment strategies. It sought, particularly, to determine whether there is a relationship between the amounts of fraud loses in the banking sector and the cadre levels of employees. Using secondary data, estimated losses (EL) to fraud was regressed on number of fraud cases, total amounts and the categories of staff involved. The estimation of the model was based on the ordinary least squares (OLS) method after the necessary pre-testing of the annual time series data using the augmented Dickey-Fuller (ADF) and the Philips-Peron (PP) tests, taken side by side with the related descriptive statistics. The study revealed that the contribution of officers and accountants to fraud losses was the highest compared to the other categorized staff. The study model, considered good for prediction (DW=1.93), revealed that seventy seven percent of frauds are attributable to insiders and about 23% of fraud losses are attributable to non-insider related frauds and forgeries (R2=0.77). Based on the findings, it is recommended, inter alia, that the recruitment process be strengthened through a robust, IT-enabled selection, referencing and personnel lifestyle tracking system. Further, the work environment and job content must be enriched to curtail the opportunity to commit fraud presented when employees are allowed to have wholesome access to assets and information that allow them to both commit and conceal fraud.

Index Terms- Financial Fraud, Financial infrastructure, Financialization, Financial stability, Forensic audit, Profit mining, Money laundering, Systemically Important Financial Institution (SIFIs).

I. INTRODUCTION

The upsurge in the number of banks is, itself, a positive development because more people access and become aware of banking services than before. However, this rapid expansion has stretched regulators to the hilt, weakened the effect and scope of regulatory oversight and eased the standards of accountability and corporate governance (Ikpefan and Odularu, 2007). This has opened up the sector to insider abuses, undesirable practices and executive self-indulgences such as corrupt diversion of capital of banks by boards and top managements, earnings management, staff defalcations, procurement frauds, etc. Anya (2003) states that financial fraud (popularly called 419 in Nigeria) and other economic crimes involve intentional use of deceit, asset theft/ misappropriation by company directors and others in fiduciary positions or an employee, to deprive another of money, property or a legal right, for their own benefit. These fraud acts, not only incapacitate the banks' effective delivery of their economic functions but, also, pile pressure on the nation's scarce foreign exchange resources with no visible economic benefits being transmitted to the productive sector of the economy and the general public. According to Kelly (1976), corporate fraud is an illegal act "characterized by deceit, concealment, violation of trust and not dependent upon the application of threat of physical force or violence" (p.53). Fraud refers to the act or course of deception, an intentional concealment, omission, or perversion of truth, to (1) gain unlawful or unfair advantage, (2) induce another to part with some valuable item or surrender a legal right, or (3) inflict injury in some manner. Willful fraud is a criminal offense which calls for severe penalties, and its prosecution and punishment (like that of a murder) is not bound by the statute of limitations. However incompetence or negligence in managing a business or even a reckless waste of firm's assets (by speculating on the stock market, for example) does not normally constitute a fraud. Nigeria's predominantly underdeveloped economy is often attributed to the scourge of corruption that has corroded it (Adeyemi, 2012) and heightened beyond the imagination of regulatory initiatives and capability. Corruption denies the ordinary citizen the basic means of livelihood, it worsens unemployment and erodes the image of a nation and its citizens and thus, undermines banking sector's potential contribution to economic growth and development. Idolor (2010) and Ogunleye (2010) believe that, perhaps, no where are frauds more serious and more pronounced in Nigeria than in the banking sector where, according to him, they are one of the biggest single causes of bank failure and distress in the Nigerian banking system that led to the closure of many banks in the 1990s and 2008/2009. Bank frauds may be the after-effects of global corruption, but they impinge on the banks' financial health (Kroll, 2014).

Bank frauds have taken new dimensions with bank operators being at the root of it all. Also the bank's Chief executives have become reckless in spending to rent for themselves buildings in the name of official accommodation, acquire fleets of expensive cars/jets and employ a retinue of domestic servants or staffs. Bank executives have in pursuit of high personal financial rewards, acquisition of promotions or status and inordinate strategies to get ahead of competition thrown ethics into the dust. They have taken sufficient advantage of a society engendered with lax regulations, enforcement, secrecy and lack of ethical restraints. Their salaries and fringe benefits cannot, obviously, be supported by the present level of the national economy. The competitive operational environment, in which the banks function, more so with the 'new generation' ones, is characterized by the existence of under-exposed key management personnel drafted into service from some other institutions or under 'casualization' schemes, motivated only by the drive for deposit targets. It therefore, appears that the manpower resource base available to the banking industry has not been developed and professionalized at a sufficient rate to match the growth and sophistication of the industry. The depreciation of managerial quality has led to weak internal control, contravention of statutory regulations, bank portfolio problems, unethical credit policies and other unacceptable practices with catastrophic consequences on the industry and the economy at large.

The long-term survival, stability and development of the banking system depend on how frauds and fraudulent practices in the banks are handled. Along with this, none of the repeated regulatory warnings, financial penalties or occasional investigations has proved sufficient to curtail violation of rules, anti-social behaviour and other unethical malpractices exhibited by bank managers and employees in their pursuit of wealth. Globalization and the growth in e-payment systems offer bank fraudsters enticing opportunities to understand and exploit differences in national security standards. Therefore, the need to isolate the factors disposing bankers to fraudulent mindsets and indulgences is worthwhile, underlining the need for an empirical investigative study of the nexus between the phenomenon and human resource factors to contribute to knowledge in this area. This, the study hopes, will inform appropriate actions by regulators and human resource practitioners to avert the unwholesome leakages of the scarce investible resources by internal economic agents and their networks. Consequently, the objective of this study is to investigate the factors disposing the Nigerian banks and their personnel to fraud and fraudulent practices as well as empirically assess the relationship between the amounts of fraud losses in the banking sector and the cadre levels of employees involved in frauds.

In order to achieve these objectives, the paper is divided into five sections. Section one is the introduction, section two is on literature review, while the third section is on research methodology. Section four discusses data presentation and analysis and section five presents the summary of findings, conclusion and recommendations.

For the purpose of this study the following hypotheses are to be tested.

Ho: There is no significant relationship between the level of frauds losses in the banking sector and the cadre levels of employees involved.

The significance of this study is that it goes beyond the usual search for a relationship between fraud and deposits of banks to empirically determine whether there is a relationship between the amounts of fraud loses in the banking sector and the cadre levels of employees involved. This should assist regulators locate within the human resource management (HRM) function appropriate strategies for stemming the tide of frauds in the sector. The unique contribution of this paper is its emphasis on building upon the methodology and findings of some previous studies in the area of bank fraud (in Nigeria), by conducting statistical test of significance which adds statistical validity and flavour to the findings. Such findings should further advance understanding in the areas of fraud causation, detection and prevention and raise interest for research in the area.

II. THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1 THEORETICAL FRAMEWORK

This investigation was conducted against the framework set by a number of theories including Cressey's Classical Theory of Fraud (better known as the Fraud Triangle), the fraud diamond theory and the Potato Chip Theory. Acknowledging that the costs of fraud are passed on to society in the form of increased customer inconvenience, opportunity costs, unnecessary spikes in the prices of goods and services, and succeeding criminal activities funded by past fraudulent gains, the study will also draw from the Fraud Management Lifecycle Theory (Wilhelm, 2004). This is to seek effective solutions that would significantly reduce the losses and societal costs associated with fraud (Abdulraheem, Isiaka and Muhammed, 2012). Understanding the likely theories behind the growing incidence of frauds and where these theories need to be further developed is crucial for properly addressing the current challenges and designing appropriate fraud curtailment systems for the future.

2.1.1 The Classical Theory of Fraud (better known as the Fraud Triangle):

Cressey (1919 – 1987) propounded the classical fraud theory, hypothesizing that: "Trusted persons become trust violators when they conceive of themselves as having a financial problem which is non-sharable, are aware this problem can be secretly resolved by violation of the position of financial trust, and are able to apply to their own conduct, in that situation, verbalizations which enable them to adjust their conceptions of themselves as trusted persons with their conceptions of themselves as users of the entrusted funds or property" (Cressey, 1953). Simply put, the propensities for fraud is a triangle of perceived non-sharable financial need (pressure), perceived opportunity to secretly resolve the financial pressure and perceived rationalization (ability to rationalize the illegal conduct and justify crime in their mind).

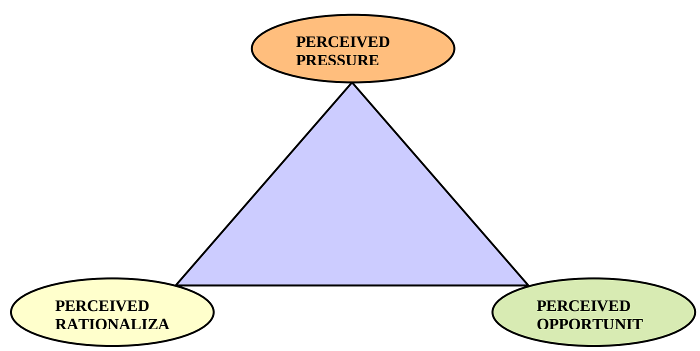

Figure 1: The Fraud Triangle (Cressey, 1953)

The most fundamental statement of this theory is that all three elements must co-exist for the violation of trust (fraud) to occur. In support of the fraud triangle view, the theory of fraud scale acknowledges that, when situational pressure and perceived opportunity are high and personal integrity is low, fraud is much more likely to occur. Although perceived pressure is generally financially driven, it may also be non-financial, while opportunities to act unethically may arise from the very structure of the organization or through employees' manipulation of the internal control systems. Further, rationalization sprouts from the perception that, although the action may not be socially acceptable, some unique, extraneous circumstances move the fraudster to justify it (Onanuga and Oshinloye, 2012). According to Chiezey and Onu (2013), pressures that move individuals to commit fraud are financial pressures (greed, high medical bills for self and dependents or debts), peer pressure vices (drugs, gambling and alcoholism), work-related pressures (high expectation for good results/targets at work or a need to cover up someone's poor results or to report results that are better than actual performance compared to the competition). Other pressures include frustration with job content or even a persistent urge to beat the system, as well as the opportunity and attitude to commit fraud. Perpetrators of fraud must believe that they can commit the fraud without being caught (or if caught, nothing untoward will happen): severity and probability of punishment relates to commission of fraud in the manner represented in Fig. 2 below.

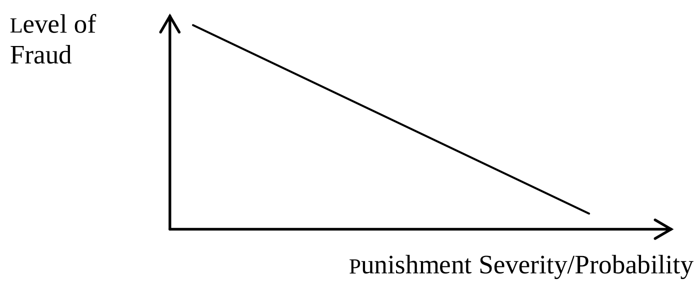

Fig. 2: Fraud–Punishment Graph (Source: Author)

The opportunity for fraud presents when employees are allowed to have access to assets and information that allow them to both commit and conceal fraud. Such perception is helped by weak internal control practices and various other factors such as apathy, ignorance, weak/ineffective sanctions regime and inadequate work infrastructure (Chiezey and Onu, 2013). The human resource function must grasp that when people are given a sufficiently powerful motivation (hyper motivated) to commit an act of fraud, they are generally more than capable to rationalize the act as not in fact conflict with their own ethical precepts and, therefore, go on to get stuck in the "rut". Accordingly, the need to balance the hyper-motivation to be successful at work and modest personal lifestyle/consumption must be emphasized as the orientation for action (Koslowski, 2009).

2.1.2 Theory of fraud diamond

Providing an improvement on the Cressey's model, Wolfe and Hermanson (2004), in their theory of fraud diamond, theorized that an individual's capability, personality traits and abilities can play a major role in determining whether fraud may occur. They noted that, while opportunities can open the doorways to fraud and incentive with rationalization will attract people to it, such an individual must have the capability to recognize the open doorway as an opportunity and should be able to take an undue advantage of it. The introduction of the element of capability by Wolfe and Hermanson modified Cressey's Triangle into a diamond comprising the four inter-related, mutually reinforcing elements of pressure, opportunity, rationalization and capability. Agreeing with the theorists, I represent this new thinking in a diamond- shaped diagram as follows (Fig. 3):

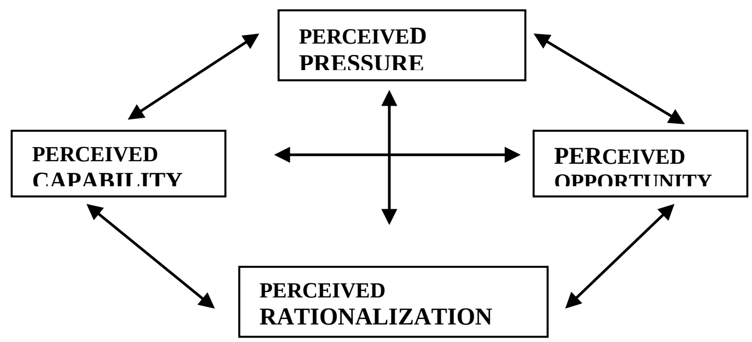

Fig. 3: The Fraud Diamond (Conceptualized By Author)

2.1.3 The Potato Chip Theory of Fraud

Another theory on which this study will rely is the Potato Chip Theory of Fraud. This theory shows that once an employee starts stealing, he tends to continue because he cannot stop at just one fraud because fraud has the potential of becoming sticky and addictive. The theory, therefore, likens fraud perpetrators to a person that eats a potato chip, but is never satisfied. So he gets bolder, keeps sipping and sipping, with the amounts getting larger and/or the occurrence more frequent, until he eventually slips, gets exposed and is caught or volitionally terminates his services from the bank (Barr, 2007). This theory supposes that if a bank officer nibbles a customer's account to pay off personal debts and perceives that he can continue without getting caught, he would ultimately become addicted to this source of extra income. As he matures in this indulgence, he starts larger and more frequent defalcations to satisfy luxury acquisitions, vacations, and other non-essential items. According to Onanuga and Oshinloye (2012), this indulgence may have begun from a non-sharable financial pressure but, would continue, even after the underlying problems have been sorted out. As a result, he becomes a predatory employee with thieving becoming the norm for him to the point where he would not have to rationalize it any longer, until finally caught. That is, once they have taken the first step towards unethical behavior, subsequent steps into deeper levels of malfeasance get progressively easier; getting the fraudster into a visceral state that leads him into acts that he would normally have deemed unacceptable.

2.1.4 The Fraud Management Lifecycle (FML)

The study also draws from the Fraud Management Lifecycle theory, which describes a network made up of eight interrelated, interdependent, and independent actions, functions, and operations (stages) which do not, necessarily, occur in a sequential or linear flow (Wilhelm, 2004). *Deterrence*, the first stage, is characterized by actions and activities targeted at stopping or preventing fraud before it is attempted by making the attempt to commit fraud unattractive, dreadful or career/life threatening. The second stage, *prevention*, involves actions and activities to prevent fraud from occurring. In *detection*, the third stage, actions and activities to uncover or reveal the presence of fraud or attempt, such as statistical monitoring programs are used to identify and locate fraud prior to, during, and subsequent to the completion of the fraudulent activity. The goal of the fourth stage, *mitigation*, is to stop losses from occurring or continuing to occur and/or to hinder a fraudster from continuing or completing the fraudulent activity, by blocking an account, for example. In the next stage, *analysis*, losses that occurred despite deterrence, detection, and prevention activities are identified and studied to determine the factors of the loss situation, using methods such as root cause analysis. The FML's sixth stage, *policy*, is represented by activities to create, deploy, evaluate and communicate policies to reduce the incidence of fraud. Balancing prudent fraud reduction policies with resource constraints and effective management of legitimate customer activity is also part of this stage. An example of a policy in this stage is the requirement of the Special Control Unit on Money Laundering (SCUML) that any cash transaction over N1,000,000 or its equivalent should be reported. *Investigation*, the seventh stage, requires obtaining enough evidence and information to stop fraudulent activity, recover assets or obtain restitution as well as provide evidence to support for the successful prosecution and conviction of the fraudster(s). Covert electronic surveillance is a method used in this stage. The final stage, *prosecution*, is the culmination of all the successes and failures in the FML. There are failures when the fraud succeeds and successes when the fraud is detected, a suspect identified, apprehended, and charges filed. This stage aims at asset recovery, criminal restitution, and conviction with its attendant deterrent value (Wilhelm, 2004). The hypothesis of this study is that fraud detection is but a single component in a comprehensive Fraud Management Lifecycle that includes all of the eight elements discussed above. When these stages are not successfully integrated and balanced, the benefits of advancements in fraud detection and overall fraud management technologies are muted (McRae, 2001; Ernst and Young, 2000).

2.1.5 Other theories relevant to the study

Additionally, this work is premised on the theses of other theories considered germane to the human capital-fraud nexus. These theories include, but not limited to: The social control/bond theory, the Social learning theory, the Rotten Apple theory, theory of work place deviance, theory of hyper motivation, tip-of-the-iceberg theory, addition-by-subtraction theory, the cognitive theory and the 'American' dream theory.

The *social control/social bond theory*, developed by Travis Hirschi in 1969, is that exploiting the process of socialization and social learning helps to build self-control in individuals; thus, reducing the inclination to indulge in behaviors recognized as anti –social. The theory proposes that an individual's relationships, commitments, values, norms, and beliefs foster a lawful environment and encourage him not to break the law (Hirschi and Gothfredson, 2002). The human resource imperative here is that the work environment must be woven around inter and intra staff relationships that internalize moral codes to foster long term personnel commitment and bonding to the organization and its values. Without doubt, if moral codes are internalized with individual employees tied in and having a stake in their wider community (i.e. organization) then, they will voluntarily limit their propensity, and be less likely, to commit deviant or criminal acts. According to Schubert (2015), there are four canons for this theory: attachment to other individuals, commitment to following rules, involvement by typical social behaviours and belief in a basic value system. The *Social learning theory* on fraud holds that, if deviant behaviors are reinforced and alternative behaviors are not reinforced as strongly, then an individual is likely to engage in fraudulent/deviant behaviors. The *Differential Association Theory* put forward by Edwin Sutherland (1883 – 1950), states that the development of criminal behaviour arise from association with those who commit crime, learnt like any other subject or trade, involving all the mechanisms that are involved in any other learning (Sutherland, 1947; Sutherland and Cressey, 1960). Further that such learning takes place in a process of communication with other persons within intimate personal groups, particularly peers (Scarpitti, Nielsen and Miller, 2009). The thesis of *the Rotten Apple theory* is that good and bad conducts within corporate organizations are infectious, such that fraudulent actions by supervisors and top management can easily be emulated by their subordinates in the same way their good conducts would be emulated. The human capital management challenge, given this theory, is that whenever a "rotten and fraudulent apple" is identified in the organization, it must be quickly plucked off to ensure it does not contaminate the other good fruits on the tree. The *theory of work place deviance* postulates that employees steal primarily as a result of workplace conditions, and that a lowered rate of employee theft is a by-product of a management team that is responsive to employees' plights. The *theory of 'a tip of the iceberg'* posits that whenever fraud is discovered, it must be fully investigated and probed to its foundation, no matter the size because a massive fraud may be underneath disguised as a minor one and even as an innocent error. The *theory of low hanging fruits* describes a situation of frauds of minor value but with high frequency. The temptation of managers, in such cases, is high to overlook frauds of low amounts in the cause of investigations, which can be dangerous because frauds of low amounts and high frequency can equally be devastating to the going concern status of the entity ultimately. The *addition by subtraction theory* posits that whenever any person is found guilty of fraud, he or she must be fired, irrespective of the amount involved and his or her position within the organization. *The cognitive theory* asserts that fraudsters are naturally intelligent and are imbued with high intelligent quotient, requiring managements to watch out for those staff that are categorized as 'smart', 'wiz-kid' or 'indispensable' in their organizations. Last, but not least important, *the 'American' dream theory* notes that in the corporate environment, a strong pressure to succeed is mounted on executives to pass through a narrowly defined way, in order to post an impressive level of accomplishment. Accordingly, desperate managers pass through the fraudulent path to achieve a measure of success when others could not. This theory places a burden on corporate managers to ensure that performance targets on employees are responsibly and realistically set.

2.2 REVIEW OF RELATED LITERATURE

Although senior employee alertness and audits are essential to combating fraud, these mechanisms become weaker when senior employees themselves are the culprits (Kroll, 2014). This, perhaps explains why repeated warnings, financial penalties or occasional investigations, by the regulator, is insufficient to curtail violation of rules, anti-social behaviour and other unethical malpractices exhibited by bank managers in their pursuit of wealth. Without doubt, internal audits are less likely to be able to uncover fraud or criminal indulgences when senior or middle management is involved. Therefore, whistle-blowing and forensic audit must be embraced as important means to expose wrongdoing by the human resources function.

2.2.1 Major Causes of Frauds

The causes of frauds in banks have been classified under two generic factors namely: institutional or internal factors and environmental or societal/external factors. Institutional causes of frauds include excessive workload, poor staffing – in terms of technical competence and staff strength, inadequate or lack of staff training, poor management culture, frustration, inadequate financial infrastructure, poor accounting and internal control systems (Usenideh, 2014). Environmental causes of frauds, on the other hand, include poor and warped social values, the get-rich-quick disposition, slow and tortuous legal process, lack of effective deterrent or punishment and at times reluctance on the part of the individual bank to report frauds due to the perceived negative publicity it could create for the image of the institution. Generally, therefore, frauds come by three elements, namely: the ***will*** to commit the fraud, the ***opportunity*** to execute the fraud and the ***exit*** (escape) from sanctions against successful or attempted fraud or deviant behaviour (Hur-Yagba, 2003), very much in sync with the Fraud Triangle Theory. In their investigation of the factors that could be critical in strengthening fraud prevention systems in electronic banking, Usman and Shah (2013) found that frauds in e-banking services are caused by various compromises in security ranging from weak authentication systems to insufficient internal controls. That means, beyond technology, internal controls, customer and staff education need to be considered. Lannacci and Morris (2000) believe the causes of vulnerability to financial crimes include the lack of good record keeping in the country. It is believed (CBN, 2014) that bank managements embark on unethical acts and frauds to enable their banks, at least temporarily, hide capital deficiency; evade sanctions for breach of the regulatory lending limits; hide or disguise the telltales of illiquidity; minimise payment of premium to NDIC, cash reserve obligation to the CBN and tax to the relevant Tax Authorities. Other reasons are to present healthy credit portfolio and hide the weaknesses which the risk assets surreptitiously harbour; meet up with peer standards and industry performance benchmarks and paint rosy pictures of their state of affairs before the investing public and potential depositors. Furthermore, it affords the opportunity to shrink deposits and reduce their loan portfolio; and obtain arbitrage income from round-tripping of foreign exchange which are acquired from the CBN with fictitious documentation.

2.2.2 Typology of Frauds

Three forms of fraud conceptually present in Nigerian banking industry and indeed in every organization (Adebisi, 2009). These are the internal, external and a combination of internal and external frauds. *Internal fraud:* This is a fraud made against an organization by an insider- say a staff. If the staff is not capable of starting and concluding the whole process, he may carefully put together a select fraud 'syndicate' within the organization. *External Fraud:* This is a fraud perpetrated by outsiders. This is the exact anti-thesis of the first form (internal fraud). *Combination of Internal and External Fraud:* Usually through collusion, this form of fraud in a bank can be committed by a bank customer, bank staff or a combination of staff and customer or third parties; very common (CBN, 2014) and comes with a higher success rate than the first two. In 2014 alone, out of the 10,621 fraud cases reported Nigerian deposit money banks, 465 cases were linked to staff representing a decline of 31.82% in fraud cases perpetrated by staff members when compared with 682 in 2013, while losses arising from this class of frauds rose marginally by 4.1% from N3.04 billion in 2013 to 3.17 billion in 2014 (NDIC, 2014). According to Kanu and Okorafor (2013), fraudulent transactions in organizations such as banks could equally be classified into three broad categories, namely flow, victims or Act (Olaoye, 2009). *Flow fraud refers to* the value and frequency of a fraud and could be a *smash and grab* type in which the frauds are infrequently committed, but of high value over a short time period or *a drib* fraud which is a repetitive, high frequency occurrence, involving small amounts. *Victims fraud* classification refers to the people affected or incurring a loss as a result of the fraud and is also divided into two, namely: against the company and against outsiders. *'Against the company'* frauds are perpetrated against the organization (e.g. the bank), meaning that the resultant loss is borne by the bank. On the other hand, the *'against the outsiders'* fraud has its victims as the outsiders (customers, etc.) who transact business with the bank. Finally, the *Act frauds* class describes the action that takes place during a fraud: the people involved in the act and the methods used or the manner by which these people perpetrated the fraud. The perpetrators could be either bank employees, executive management or board members, armed robbers or other outsiders, sometimes in collusion with insiders (NDIC, 2013). Notwithstanding their categorization, frauds in the Nigerian banking sector were executed through diverse means, including fraudulent withdrawals from customers' accounts, suppression and conversion of customers' deposits, theft, illegal funds transfer, cheque defalcations, and fraudulent ATM withdrawals. In most cases, these frauds were perpetrated by outsiders, "although there were instances where bank employees were also culpable" (CBN, 2014; 19). While the aforementioned frauds are perpetrated for personal gains, the role played by companies in promoting fraudulent practices, to increase their pecuniary gains at the expense of both the government and the populace, cannot be overemphasized (Sikka, 2005; Otusanya, 2011).

2.2.3 Means through which Frauds are perpetrated in Nigerian banks.

The most important and common means, according to NDIC (2013), Benson and Edwards (2006), Nwaze (2009) and Adebisi (2009) through which frauds are perpetrated in the Nigerian banking industry are: *Mail fraud, which is* a process whereby the content of a duly authorized mail originated in a bank is converted to the benefit of illegitimate recipient.

Tellering frauds involve the act of stealing from counted cash by a bank staff. This could come in the form of pilfering, teaming and lading and deposit suppression. Others include unauthorized withdrawals, vault/till cash manipulations and the manipulation of foreign currency in tellers till or vault. *Advance Fee ("419") Fraud* operates to trick prospective victims into parting with funds by persuading them that they will receive a substantial benefit, in return for providing some modest payment in advance. This usually involves an agent approaching a bank, a company or an individual with an offer to access large funds for services purportedly rendered or contracts executed or to be rendered/executed. The collaboration of an accomplice is sought through the agent who must receive a fee or commission "in advance". As soon as the agent collects the fee, he disappears, and the funds or the underlying assets never get to the target bank or individual. This is popularly known as "419" in Nigeria, in reference to the section of the criminal code covering such criminal activities. Over the past years, Nigeria has become notorious for financial crime as "advance fee fraud has brought the nation into disrepute" (Adeyemi, 2004:103). *Cheque Kiting* involves the unauthorized use by depositors of undeserved credits in their accounts. The purpose of cheque kiting is to falsely inflate the balance of a checking account in order to allow written cheques that would otherwise bounce, to be cleared (Idowu, 2009; Lundin, 2013). This way, the cheque 'kiter' uses the collected funds interest-free for a short time to overcome a temporary cash shortage or to utilize the funds permanently. Cheque kiting can be described as 'paper hanging' – where the account is not replenished, or 'playing the float/payday loan' - where it is covered by payday (The Free Dictionary, 2013). *Account Opening Fraud* involves the deposit and subsequent cashing of fraudulent cheques, with the fraudster asking to open a transaction (current or savings) account with false identification but unknown to the bank. The person opens the account with a small initial deposit of cash or cheque. Generally, within a few days, the person will deposit a number of dud cheques and obtain cash in return, either by cashing the fraudulent items outright or by withdrawing cash as soon as funds are available with the connivance of bank staff. In the last few years many banks have lost money through corporate and personal account opening frauds, due to banks' laxity in applying their standard account-opening controls, including the KYC methodology. *Letters of credit Fraud* arise when forged or fraudulent documents (e.g. bank drafts, etc.) are presented to the confirming or issuing bank with fake endorsements against which payment is demanded and procured. Also frauds in this category are effected through suppression of an underlying settlement instrument so that at the expiration of the applicable clearing period the collecting bank gives value as though the paying bank had confirmed it good for payment. Accompanying banker's cheque or draft and shipping documents may also be substituted to enable the fraudster divert the fund to a wrong beneficiary or account. At the basic level, a letter of credit fraud is a type of scam in which the executor attempts to make money via a spurious business transaction or tells victims he would ship goods to them in exchange for payment, only to disappear after receiving the payment (Buckley and Gao, 2002). *Money Transfer Fraud,* on the local or international platforms, e.g. Money gram, Western union etc could include identity fraud and fake confirmation, resulting from a deliberate fraudulent request initiated purposively to defraud or by illegally altering a genuine funds transfer request (Ojo, 2008). A genuine request can be altered by changing the beneficiary's name or account number or changing the amount of the transfer. *Loan Frauds* underlie the fact that loans are the commonest type of credits granted by banks in Nigeria and experience shows that their vulnerability to fraudulent manipulation begins as soon as the first requests are made. However, most loan frauds are perpetuated with the active collaboration of bank employees (CBN, 2014). The commonest types of loan frauds are: manipulation of properly granted facilities, granting of unauthorized facilities, excess above approved limits/expired facilities and swapping of credit facilities. Others are the selling of bank draft or certified cheque against insufficient funds, giving of false financial accounts by some deceptive customers, as well as giving of false guarantees and presentation of false collaterals, etc. Also, loan frauds occur when credit is extended without due authorization or to a borrowing customer who has exceeded his credit ceiling or who has, *at initiation*, misinformed the bank of his true contact details and personal financial circumstances. Some fraudulent staff in a bid to conceal such transactions could present falsified statements and documents to Examiners or feed such accounts with fictitious entries to portray them as being serviced. Other categories of loan fraud include granting of credits on the strength of overvalued or non-existent, multiple pledged, stolen or counterfeit collaterals and extension of credits in violation of regulatory stipulations. Loan fraud could also be perpetrated by bank customers where loan is obtained on the strength of false financial statement or where the loan proceeds are diverted. Other fraud channels include *Counterfeit Financial Instruments* perpetrated through illegal counterfeiting of commercial and financial instruments. Modern photographic and printing equipment have greatly aided criminals in reproducing good quality forged instruments. This involves the use of total counterfeits or copying, forging or altering genuine documents (e.g. stock or bonds, treasury notes, cashiers' cheques, bankers acceptances, or certificates of deposits, even legal tender) as to amount, pay out date, payee or terms of payment. *Cheque/Clearing frauds* are perpetrated through stolen cheque books/leaves and subsequent forging of account holder's signature or alteration of payee or amount payable; substitution of clearing cheques, et cetera. Because cheques have become a major vehicle for the operation of the payment system world-wide, notwithstanding the growing use of cash-less channels, fraudsters have found a haven in it through which millions of naira is lost annually.

Most clearing frauds are perpetrated through suppression of payment instruments so that at the expiration of the clearing period applicable to the instrument the collecting bank gives value as though the paying bank had confirmed the instrument good for payment and, accordingly, credit the fraudster's account and is immediately withdrawn. *Money Laundering* is the process by which proceeds of illegitimate businesses are channeled into the financial system in order to conceal their true origin. This fraud scheme ensures that the sources or use of money illegally obtained are concealed by converting the cash into untraceable transactions in banks. At times, in a desperate effort to disguise such transactions, the funds could be moved between several institutions and across boundaries. According to Hopwood, Leiner and Young (2012), money laundering fraud goes through three stages of placement, layering and integration. *Telex Fraud* involves the alteration of the transfer instructions (message), though often coded, to enable diversion of funds to an account not originally intended. The rapid development in information technology and globalization has had serious impact on banking practice in the country, driving the way banking businesses are conducted in the country as more and more banks move to automate their back office and clients' services. The rapid development carries with it the risk of *computer/cyber* fraud (Helsby, 2014) as there seemed to be no longer discernable boundary nor perimeter along which to erect the defenses to keep corporate data within and inaccessible to computer hackers outside. *ATM Frauds/Skimming* involves installing surreptitious surveillance equipment on ATMs that allowed the fraudster to record customers' account information and PINs, create their own bank cards, and steal from customer accounts. In addition, skimming, that some experts believe costs banks hundreds of millions of Naira annually, typically involves the use of a hidden camera, installed on or near an ATM, to record customers' entry of their PINs into the ATM's keypad or scoops information from a bank card's magnetic strip whenever a customer uses the machine (FBI, 2011). It may also involve the banks' staff deliberately not dispensing money on the ATM, but registering same in the electronic Journal (NDIC, 2013). Another area of staff complicity if financial fraud is in *Earnings Management/Financial statement fraud*, defined as the practice of companies manipulating their earnings in order to match a predetermined object and variously called income smoothing, aggressive accounting, financial reengineering, creative accounting and window dressing, etc. Earnings management involves intentionally recognizing or measuring transactions and other events and circumstances in the wrong accounting period or recording fictitious transactions both of which may constitute fraud (Atu, Gbenga and Atu, 2011). Earnings management also, according to Schipper (1989) and Healy and Wahlen (1999), involves the purposeful intervention in the external financial reporting process, with intent of obtaining some private gain and in structuring transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers. NDIC (2014) reports that the increase of 7.6% in expected/actual loss from frauds and forgeries reported by deposit money banks in 2014 was mainly due to the astronomical rise in the incidence of web-based (online banking)/ATM and fraudulent transfer/withdrawal of deposit frauds, attributed to the weak IT infrastructure signaling a need for the banks to improve electronic payments controls and security. In Nigeria, the regulatory authorities - the Central Bank of Nigeria (CBN) and the Nigerian deposit insurance corporation (NDIC) - have identified and reported frauds and forgeries routinely under-listed fourteen (14) prevalent modes through which deposits are frittered away in Nigerian banks. This includes:(1) ATM fraud, 2) Fraudulent transfers/withdrawal of deposits, 3) Suppression of customers deposits, 4) Internet banking fraud, 5) Fraudulent conversion of cheques, 6) Presentation of stolen cheques, 7) Unauthorized credit, 8) Presentation of forged cheques, 9) Outright theft by staff, 10) Diversion of bank charges (commission and fees), 11) Lodgment of stolen warrants, 12) Foreign currency theft, 13) Non-dispensing of money but registered by the electronic journal, 14) Outright theft by outsiders/Armed Robbery attacks, (NDIC, 2013). The data on this fraud types are used in this study.

2.2.4 Enablers of Fraud

There are many causes of fraud, depending on the enabling environment (legal, social control systems, organizational structure, etc.), but this are generally classed into social, technological, personal, management and legal (Nwaze, 2009; Adebisi, 2009; Benson and Edwards, 2006), which are briefly discussed here.

Social Enablers/Causal dimensions of banking sector fraud: Social circumstances around the organization of employee space could dispose the bank to fraudulent activities. Such enablers could include, but not limited to: Disproportionately high value placed by the wider society on accumulation of wealth without regard for the source (Ayozie, 2012) and the growth of financialization world wide (Epstein, 2002); a reward system that favours dishonest staff such that honest staff are regarded as slow and less valuable to the system; official nepotism enabling only 'highly heeled' people or staff related to people with high net worth and sensitive political positions (with high deposit potential) to be favoured and non recognition of professionalism, making the possession of relevant professional qualification meaningless. This way some very intelligent staff get aggrieved or dissatisfied and, in venting their dissatisfaction, constitute a doorway and threat to the organization's ethical framework.

Technological causal dimensions: The growing use of technology by banks has made their operations (and also fraud) easier and therefore, a critical disposing factor in execution of financial fraud. This is because, among other externalities: technology has substantially reduced the cost of perpetrating fraud; documents replication/cloning and identity theft are perfectly facilitated by technology and its derived applications; ICT has removed physical boundaries such that banking sector fraud can be perpetrated across far flung nations, over the 'cloud'; technology has substantially reduced the time it takes to initiate and conclude fraud, so proceeds from fraudulent activities can be obtained real time with ease, e.g. via cash-less or e - money transfer channels; e-frauds are difficult to detect or prevent and post-event tracking of perpetrators and/or proceeds could prove daunting, requiring special skills to unravel; ICT evolves quickly such that once an ICT-based fraud method is detected and an antidote developed, new methods are perfected and deployed; and the ICT appreciation gap between today's eclectic youth and the older generation (seen as the resource holders) as well as the pressure from successful peers, has disposed them to ICT-based fraudulent acts for financial gain or 'vendetta'. *Legal causal dimensions:* The Nigerian legal system is weak in its processes and sanctions for fraudulent behaviour and so conduces the environment for fraud. This is because fraud causes are treated lightly as 'bailable offences' requiring the 'due process of law'. The very long 'due process' of investigation before the culprits are even brought before the law and booked often provides an alibi of 'want of evidence' by the court to discharge the fraudster, to the detriment of the society. This slow and tortuous process causes delays in the prosecution of fraud cases, such that the party frustrated by long adjournments and delays might likely abandon a case, and this will lead to miscarriage of justice (Ayozie, 2014). This is helped, according to Alashi (1994), by the corruption and decay in the legal, law enforcement and judicial system evidenced by fraudulent activities of prosecuting officers and connivance with judges to assist fraudsters and, in most cases, procure their release. *Personal causal dimensions:* The following are personal issues that have been found to cause, influence or encourage fraud: professional corporate criminals, who not only perpetrate fraud themselves, but go around recruiting interested people with impaired character; insatiable appetite for adventure -criminal or otherwise, which drive people to steal if they have opportunities, notwithstanding their status or material possessions; employees, who are brought up with varying standards of moral at home; wrong choice of friends or mentors that link an employee to fraudulent people who entice them with generous cash or material gifts before the "subject" is introduced to them; persons, who are from good homes, attend good schools and have very good or refined religious backgrounds, but have weak minds/self-confidence and can easily be convinced; existence of backers or crime fathers: Some fraud-minded employees believe in the capacity of their "crime fathers", friends or parental influence to slow down investigation. These "backers" are usually influential and may call on their big friends in high places to rescue their children or "boys" from justice and in the process, the entire syndicate members are usually let off the hook (Ibor, 2015). *Management causal dimensions:* Management actions or inactions that could cause or create a fertile ground for fraud in banks include**:** management failure to institute rigorous character checks during recruitment of staff from reliable sources such as schools attended, previous employers, etc; inadvertent placement of high premium on paper qualification over performance, causing certificate manipulation and other fraudulent acts; low remuneration package when the organization is perceived through its publications and utterance of key officials to be capable of paying better than current package; weak internal controls, untimely checks and un-reconciled accounts/books; delay or total neglect of regular internal and external audits and their exceptions. Others are the use of inexperienced or casual workforce in strategic positions to save or reduce costs; near total neglect of staff training and retraining; lack of serious penalties on culprits, such as prompt dismissal when fraud takes place and the fraudsters are found; substandard or lack of security equipment, like fireproof safe, to keep security items and secured telephone, fax and e-mail or internet facilities to contact third parties; loose or generous approval authorization limits in an organization; unrestricted access to the computer room/database and placing of higher or multiple responsibilities and confidence on one staff, perceived by management to be efficient or competent. Such individual often have so much authority vested on him, widening the opportunity window available to him should he want to commit fraud. It is noteworthy that habits "die hard" and so, frauds that could be attributed to personal causes are the most difficult to correct. The social system can be modified, technological solutions may be devised, the law can be adjusted and corporate management can include ethical standards in their operating manual, but human personal traits are difficult to control.

2.2.5 Extent/Effect of Frauds in the Nigerian Banking System

According to Adebisi (2009), whenever there is a successful fraud incident, certain things happen in quick succession that will leave considerable social and psychological effects as painful memory or lasting scars on the organization, staff, government and the society at large. The incidence of frauds in our banking system has continued to be of grave concern to the Regulatory Authorities going by the magnitude of loss recorded by the system to the fraudsters over the years (see Appendices 1-3). The experience with those banks that were closed between 1994 and now clearly showed the trends as well as the damaging impact of frauds on the affected banks and the entire Nigerian financial services industry. In one of such closed banks, over N1.6 billion was outstanding in its books as frauds/unauthorized lending distributed among its several branches. Also, in another failed bank, the sum of over N461 million was outstanding in its book as amount lost through fraud. Many of the banks-in-liquidation as well as many still in operation had suffered a great deal from the impact of frauds. For example, between 1994 and 2014, there were 36,918 fraud cases reported, involving over N303.9 billion, out of which over N80.31 was lost with 9090 staff involved (NDIC, 2014). The actual or expected loss amount of the reported cases of frauds and forgeries represent those whose probability of recovery was low as well as those not fully covered by Fidelity Insurance Bond. Balanced against the argument that perhaps only a fraction of such incidences are reported, the heavy toll frauds have had on the vibrancy of the banking system is no longer in doubt. It is noteworthy that as Regulatory Authorities are busy exploring and fashioning out strategies to curtail the strangle-hold of frauds on the banking system, the fraudsters are busy "engineering new methods and tricks" to further wreak havoc on the system through fraud; a situation that human resource managers would need deliberately to seek redress to. There is no gainsaying the fact that just as most banks engage in legitimate activities, some of them are known to indulge in illegal and unauthorized activities. Such behaviours, no doubt, have the potential of increasing risk to depositors' funds. Jafaru and Iyoha (2012) citing Aikhorin (1994) state that the effect of sharp practices (notably frauds and forgeries) on banks is a loss resulting in depleted profit and, depending on the size and strength of the bank, it could be forced to close down if the frequency and size of the frauds are high and persistent.

2.2.6 The Recent dimensions in Bank Frauds

The CBN is empowered, under the Banks and other financial institutions Act (BOFIA) to supervise and regulate the activities of Nigerian banks and financial institutions under to section 61, as well as other routine or special examinations of banks to assess their financial health (Idigbe and Kalu, 2010). Beside the traditional fraudulent malpractices that could occur as a result of weak internal control and inadequate computer securities there has been a new dimension to bank frauds in the recent years, "management fraud", characterized by lack of transparency in financial reporting and in transactions on the part of Board, management and officers banks with their clients and unsuspecting members of public (Wilks and Zimbelman, 2004). Indeed, some of the banks whose Foreign Exchange Authorized Dealership Licenses were suspended by CBN recently were found to have used the accounts of some customers to bid for foreign exchange without the knowledge or consent of such customers. Such fraudulently acquired foreign exchange was subsequently round tripped and sold in the parallel market (CBN, 2015). Reports of on-site examinations of banks have continued to reveal the growing trends in unethical balance sheet management by banks. These days, end of month or end of year “financial engineering” involving window dressing through earnings management by banks, is common place (Schipper, 1989). Healy and Wahlen (1999) say that earnings management occurs when managers use judgment in financial reporting and structuring of transactions to alter financial reports to either mislead some stakeholders about the underlying economic performance of the company or to influence contractual outcomes that depend on reported accounting numbers (Atu, Gbenga and Atu, 2011). Banks were also known to have financed their recapitalization through short term funds such as Commercial Papers (CPs) raised from the money market. In another breath, some related banks have evolved the strategy of “cross dealings” transactions to conceal their violations of single obligor limits and/or forestall loan loss provisioning by bringing the outstanding balances on the affected accounts within prescribed limit to be reversed to the status quo soon after the exit of the Examiners or the turn of the reporting period. The manipulation and spread of bank frauds, unethical and professional conducts presently in the commercial banks and within all cadres of bank staff (directors, managers and staff of all levels) is gradually eroding the public confidence in the Nigerian banking system (Ayozie, 2014). The challenges/negative impact posed by the growing trends in frauds on our banking system is no doubt enormous and would require the genuine endeavour of all concerned to curtail. Compliance must be grown to drive awareness of the banks that they are vulnerable to the presence and complexity of regulatory breaches, conflicts of interests and market collusion, including the rise in sophistication of cyber fraud. To this end, information sharing amongst all the stake-holders and the current on-site supervision approach - Risk Based Examination - (Kumar and Sharma, 2011) remain a welcome development. Recognizing that no meaningful achievement could be recorded without the collaborative efforts of all concerned, collaborations to facilitate understanding and reduce areas of distrust on the one hand and nurture opportunity for information sharing on the other hand as well as incorporating forensic skills into the current audit model seem more urgent at this time, than ever, to avert the confusion of corporate fraud (Uthman, Abdul-Baki and Iyanda, 2013).

2.3 EMPIRICAL REVIEW OF EARLIER STUDIES

Notable among the studies carried out in the area of fraud is that by the Financial Institutions Training Centre, Lagos (FITC: 1985), which investigated the relationship between sizes of bank frauds and the ages of such banks. The study concluded that experienced staff swindles the bank of larger sums of money compared to their relatively inexperienced counterparts and that falsification of accounts and suppression of entries was the commonest methods employed to defraud banks. Iyiegbuniwe (1999), carried out a study of frauds on Nigerian banks using a 10 year sample data set, collected from NDIC annual reports and analyzed without resort to econometric methodology. The failure to apply the necessary econometric tools has the possibility of producing spurious results (Kanu and Okorafor, 2013). Akinfala (2005) studied the relationship between job involvement/ experience factors and fraudulent behaviors amongst serving and convicted bankers. He found the level of job involvement to be a function of three factors: motivation, identification and a feeling of pride that people achieve in their jobs. Nwude (2006) did a study on bank frauds, involving an interaction with bank staff of various cadres with structured questionnaire to identify the fraud forms and characteristics in the banking industry. In a different study, Otusanya (2008) investigated the role of Bank CEO’s in the perpetration of corporate executive frauds in the Nigerian Banking sector. The study showed that recent banking crises in Nigeria have exposed the corrupt and fraudulent activities of bank executives in practice. The study placed the actions of corporate executives within the institutional anomie theory called American dream theory, under which the pursuit of monetary success has come to dominate society. Given the strong and relentless pressure for everyone to succeed, in terms of an inherently elusive monetary goal, people formulate wants, targets and desires that are difficult, if not impossible, to meet within the ambit of legally permissible behavior. The standard multiple linear regression model’s ordinary least squares (OLS) method earlier employed in the work of Tillman and Pontell (1995) was used by Onanuga and Oshinloye (2012) to examine the impact of categorized employees of Nigerian banks on expected fraud losses for the period 1991 -2008. They found, among others, a positive relationship ($p<0.05$) between the number of bank officers involved in frauds and forgeries and expected fraud losses, but a negative relationship between expected losses and cashiers/clerks. Further that, from the descriptive statistics, the number of officers involved in frauds was about two and a half times the number of Cashiers/clerks and supervisors/managers. Idolor (2010) sets out to find the common types of bank fraud that are frequently carried out in the banking system, the underlying causes, level of staff involvement, consequences and possible means of ameliorating the problem. Studying a sample of 100 respondents taken in Benin City, capital of Edo State, Nigeria by means of field survey questionnaire and testing the responses for significance using the “t-test”, he found that respondents did not view unofficial borrowing and foreign exchange malpractice as forms of bank fraud since they were common and an industry wide practice. It also revealed that there was an equal level of staff involvement in initiating and executing fraud, with the concealment of fraud coming last in their agenda. Also, among the factors hypothesized to encourage bank fraud; the major individual based factors were greed, infidelity and poverty, while organizational factors were inadequate staffing, poor internal controls, inadequate training and poor working conditions. Respondents also viewed greed, lack of personal ethics and weak corporate governance as managerial factors that help propagate frauds in banks. Ajayi (2003) studied the contributory factors to the actual/expected loss, using the multiple regression analysis to determine the significance and extent of relationship in two models. The first model regressed actual/expected losses associated with fraud on total amount involved in fraud, number of bank staff involved and branch network. The second model related actual losses to four categories of staff involved in fraud between 1989 and 2001. The study revealed that the number of staff, branch network of commercial banks and categories of staff involved in frauds have significant impact on the level of actual/expected financial loss.

III. RESEARCH METHODOLOGY

The study employs the ex-post facto design on annual data for the period 1994 to 2014 on the study variables, namely, expected/actual fraud losses and the various categories of staff involved in the reported fraud cases. The data used are presented in absolute values and the different analytical techniques of the ordinary least square (OLS) regression and descriptive statistics are employed in this study. The augmented Dickey-Fuller unit root test, along with the Philips-Peron test, was used as a comprehensive pre-testing procedure to investigate the characteristic of the time series variables.

The study used secondary annual data that covers the period from 1994 to 2014 obtained from the NDIC Annual reports for various years and the Central Bank of Nigeria (CBN) Annual reports/statistical bulletins. To check for and control for probable sources of errors and spuriousness of results as well as maintain stochastic stability, data are compared from at least three different sources before acceptance and subsequent use in the study.

The desk survey method was used to collect time series data for the period between 1994 and 2014 on frauds and forgeries. The data on the variables were extracted from the publications, bearing in mind the study objectives and hypotheses. Nonetheless, the study acknowledges the position of Eboh (1998) that the collection of data on its own is of limited value unless the data so collected is preserved and presented in a manner that makes it highly comprehensive, informative and usable.

Model Specification

The study is adopts, in a modified form, the multiple regression model previously used by Ajayi (2003) as well as Onanuga and Oshinloye, (2012). In the log linear functional notation, the model is specified as:

EL = f(SM, OA, CC, TO), expressed in the explicit form as:

$$\ln EL = \lambda_o + \lambda_1 \ln SM + \lambda_2 \ln OA + \lambda_3 \ln CC + \lambda_4 \ln TO + E \quad \ldots\ldots (1)$$

On a priori, $\lambda_1, \lambda_2, \lambda_3, \lambda_4 > 0$,

Where,

EL = Expected/Actual losses from frauds and forgeries; SM = Total number of Supervisors and Managers involved in fraud cases; OA = Total number of Officers, Accountants and Executive Assistants involved in fraud cases; CC = Total number of Clerks and Cashiers involved in fraud cases; TO = Total number of Typists/Others involved in fraud cases; ln = Natural logarithm, and E = the stochastic error term

Estimation Techniques and Validation

In view of the dynamic nature of the study, a model equation was adopted, on the basis of which the relationship between the stated variables was determined. The estimation of the model was based on the ordinary least squares (OLS) method after the necessary pre-testing of the annual time series data, due to its properties of efficiency, consistency and unbiased-ness. Accordingly, the statistical criteria include the correlation coefficient or the adjusted R^2, standard error, students't-test and the F-statistic. The R^2 gives or measures the extent or degree to which the explanatory variables are responsible for the change in the dependent (endogenous) variables. The standard error of estimate or the standard error (S.E.) of the regression is the summary measure of the 'goodness of fit' of the estimated regression line or the test of significance of the parameter estimates. The t-test or, t-statistic, which is an offshoot of the standard error test, estimates the sample value of the "t" by determining the critical region in a two tail test n-k degrees of freedom. If our "t" falls within the critical region, we reject the null hypothesis, otherwise we accept it. The F-statistic performs joint tests of hypothesis and makes joint confidence statements that the true slope coefficients are simultaneously zero. Under this criterion, therefore, if the F value computed exceeds the critical F value from the F table at 5 per cent level of significance, we reject H_0; otherwise we do not reject it (Koutsoyannis, 2006).

The *Econometric criterion (second order test)* employed in the study ensured the exclusion of non-spurious results, arising from uncertainty, parameter fluctuations and contamination in the research design to enhance the validity of the conclusive statements based on them and guarantee existence and uniqueness of solutions proffered (Samad & Khammash, 2000). Further, the Durbin Watson (D.W.) statistic is employed to test the validity of the assumption of non-auto correlated disturbances, by comparing the empirical "d" value calculated from the regression parameters with the values observed from the Durbin Watson tables.

IV. DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.1 DATA PRESENTATION

The annual data points for the total estimated fraud losses, number of fraud cases attributable to the various cadres of staff, namely managers/supervisors (SM), clerks/cashiers (CC), Officers, Accountants and Executive Assistants (OA), typists/technical, messengers/security and temporary staff (TO), covering the twenty one (21) year period, 1994 to 2014, were tabulated and are shown in Appendix 2.

4.2 ANALYSIS OF DATA

The Descriptive Statistics of Variables, decomposed into maximum, minimum, mean and median values in Appendix 2 shows that, out of the frauds and forgeries committed across all cadres of staff, the cadre of managers and supervisors (SM) contributed 3,385 cases (or 26.24%), followed by the cadre of Officers, Accountants and Executive Assistants (OA) with 2,402 (26.42%). Clerks and Cashiers (CC) were involved in 2,088 cases, representing 22.97% of the total during the period, while Typists, Technicians and others accounted for the balance of 2,215 (24.37%) of the cases. Furthermore, the highest amount of fraud losses experienced in the study time period was N17.54 billion (minimum N288 Million), with 234 officers, 218 supervisors and managers, 220 clerks and cashiers, indicating the highest amount of frauds occur in the cadre of officers/accountants. Average of 3.82billion is lost to frauds annually while an average of 113.57, 114.38, 99.43 and 105.48 supervisors/managers, officers, accountants and Executive Assistants as well as clerks/cashiers and other staff respectively commit frauds annually. The lowest amount of fraud losses in the entire period was N228 million, involving 16 supervisors and managers, 41 officers/accountants, 13, clerks and cashiers as well as 7 other categories of staff. The descriptive statistical result tends to indicate that more officers and accountants are mostly involved in contributing to fraud losses in comparison to the other categorized cadres of supervisors and managers, clerks and cashiers, etc. This is confirmed in 2014, where the highest percentage of frauds and forgeries was perpetrated by the cadre of Officers, Accountants and Executive Assistants constituting 37.85% of total staff involved. Temporary staff (a part of TO cadre) contributed 27.10% of the fraudsters, while clerks/cashiers accounted for 16.77%. These three cadres of staff (OA, TO and CC) recorded the highest incidences of frauds and forgeries in 2014. Appendix 3 shows the prevalence of the various types of frauds in 2014 and 2013 alone, generally confirming the trend over the years (CBN, 2014). It confirms that ATM fraud is the most rampant contributing 7181 (67.61%) and 1,739 (i.e. 46.03%) of the total cases in 2014 and 2013. In terms of actual loss sustained, web-based (internet banking) fraud was the highest (and second in terms of frequency) in 2014 at N3.20 billion representing 51.60% of total actual loss (2013: 29.23%), indicating an increase of 90% over 2013 (N1.68 billion). Further, ATM/Card-related frauds rose from 1739 in 2013 to 7181 in 2014 while they contributed N1.24 billion in amount lost to frauds and forgeries, representing 20.06% of the total industry loss in 2014 against 10.16% in 2013. Year-on-year, there was a reduction in unauthorized credits, perhaps indicating better corporate governance practices and good internal control processes. Also, foreign currency theft declined by 46% from 41 (and N0.049 billion loss) in 2013 to 22 (and N0.033 billion loss) in 2014. Further, outright theft by outsiders/customers also waned from thirty four cases (and N0.037 billion loss) in 2013 to fourteen cases (and N0.021 billion loss) in 2014. This probably suggests that frauds were mostly insider-related. Fraudulent transfer and withdrawal of deposits followed internet banking and ATM frauds in terms of frequency (1099 cases) and loss sustained (N0.583 billion) in 2014 ahead of suppression of customer deposits at 483 cases (2013: 324) representing 4.55% (2013:8.63%) of total cases and 5.04% of the N6.19 billion lost in that year (2013: 8.37%). Curiously, there was no case of non-dispensing of money but registered by the electronic journal, a 100% decline from thirty nine in 2013. The top ten deposit money banks contributed N21. 90 billion (or 85.50% of the industry's fraud amount in 2014 as against N18.86 billion (or 86.54%) in 2013. This same class of banks posted a total contributory loss of N5.17 billion representing 83.46% of the banking industry total loss in 2014.

The regression results: The pre-testing procedure results, based on the augmented Dickey-Fuller (ADF) and the Philips-Peron (PP) tests are presented in Tables 1, below.

Table 1:
Results of ADF and PP unit root test

Variable	ADF	Decision	Philip Perron	Decision
EL	-	I(2)	-	I(1)
SM	3.75744*	I(1)	5.13789**	I(1)
OA	-	I(2)	-	I(1)
CC	5.85739**	I(1)	11.03923**	I(1)
TO	-	I(1)	-	I(1)
	5.73656**		5.51571**	
	-		-	
	5.73078**		8.07211**	
	-		- 4.	
	3.96753**		08540**	

Source: Researcher's computation.

Note: Critical values, ADF test: 1 percent = -3.85739, 5 percent = -3.04039 and 10 percent = -2.66055. Philips-Peron: 1 percent = -3.85739, 5 percent = -3.04039 and 10 percent = -2.66055. *significant at 5 and percent; **significant at all confidence levels (See full analysis in Appendix)

The results as presented in Table 1 show that the variables EL and OA are integrated of order two – I(2), while the remaining variables (SM, CC, TO) are stationary at order one – I(1) under the augmented Dickey-Fuller (ADF). However, the tests show all the variables signed in the model are stationary at order one – I(1) with the Philips-Peron (PP) test.

Table 2:
Correlation Matrix

	SM	OA	CC	TO
SM	1	0.366658	0.532417	0.185729
OA	0.366658	1	0.479673	0.639618
CC	0.532417	0.479673	1	0.694906
TO	0.185729	0.639618	0.694906	1

Source: Computed with e-Views 7.0 from Appendix 3

Having done this, the ordinary least squares technique was used to analyze the underlying data and the resulting regression results are as shown in Table 3, below.

Table 3:
Multiple regression result

Dependent Variable: LEL
Method: Least Squares
Date: 07/21/15 Time: 13:58
Sample: 1994 – 2013
Included observations: 19

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	2.846129	2.526599	1.116875	0.2790
LSM	-0.226771	0.603755	-0.392341	0.7054
LOA	2.284537	0.789610	2.918843	0.0107
LCC	1.716652	0.369905	4.627532	0.0003
LTO	-1.504430	1.297050	-1.798130	0.1016
R-squared	0.768312	Mean dependent var		7.626543
Adjusted R-squared	0.719878	S.D. dependent var		1.256536
S.E. of regression	1.124735	Akaike info criterion		3.293905
Sum squared resid	17.71039	Schwarz criterion		3.542442
Log likelihood	-26.29210	Hannan-Quinn criter.		3.335968
F-statistic	16.93258	Durbin-Watson stat		1.928217
Prob(F-statistic)	0.000044			

Source: Computed with e-Views 7.0 from Appendix 3

4.3 DISCUSSION OF FINDINGS

The study relates total expected fraud losses for the period 1994 – 2014 to the signed in explanatory variables, using the (OLS) technique. Accordingly, the model creates a platform for testing the relative contribution of each category of staff to expected losses and also to evaluate its overall explanatory power and the result is shown in Table 2.

From the estimated regression analysis results in Table 2, based on ordinary least squares, the relationship in respect of estimated losses (EL) on number of supervisors and managers (SM), officers and accountant fraud cases (OA), Clerks/cashiers (CC), and Typists/Other staff (TO), may be represented (with t-ratio levels in parenthesis) as:

Ln EL = 2.85 – 0.23LnSM + 2.29LnOA + 1.72LnCC – 1.50LnTO …………. (4)
(1.12) (0.39) (2.92) (4.63) (1.80)

Only the number of supervisors and managers and Typists/Other staff involved in bank fraud cases bear the sign predicted by the model, supporting the point that while frauds and forgeries perpetrated by officers and accountants (OA), Clerks/cashiers (CC) are often not discovered thereby increasing the expected fraud losses, those executed by supervisors/managers and Typists/others are often discovered, and recovered, thereby reducing expected losses (Onanuga and Oshinloye, 2012). The results of R^2 and adjusted R^2 from the regression result are 0.77 and 0.72, meaning that the joint explanatory power of the regressors is only 77% of the variation in the regressand, while 72% of the variation in expected fraud losses is explained by the explanatory variables. This means over 28% of fraud losses are attributable to non-insider related frauds and forgeries, which agrees with the position the Central Bank of Nigeria that more frauds are committed directly by insiders or their acquiescence than by outsiders (CBN, 2014). Notwithstanding this explanatory power of the regressors, indicated by the adjusted R^2, the model can still be considered a good fit for forecasting bank fraud losses in Nigeria. The F test at 5% level of significance ($F_{0.05}$) is 3.29 and F_{cal} under this second model is 16.93. Since $F_{cal} > F_{0.05,}$ we reject H_o in favour of H_1. Alternatively, since Prob (F-statistic) is 0.000044, which is smaller than 0.01, 0.05 and 0.1, we reject H_o at 1%, 5% and 10% levels of significance. Also $t_{0.05}$ is 1.73, while from Table 4.6 t_{sm} is 0.39 for number of fraud cases executed by supervisors and managers; since $t_{SM} < t_{0.05}$, we reject H_o and conclude that supervisors and managers are not significant in explaining fraud losses in Nigerian banks. However, t_{OA}, $t_{CC,}$ and t_{TO} are 2.92, 4.63 and 1.80, respectively and all values are greater than $t_{0.05}$ (1.73), we reject the H_o and accept H_1. This implies that the number of fraud cases by officers/accountants, clerks/cashiers and typist/others are statistically significant in explaining the variations in banks' losses due to frauds.

The Durbin-Watson d-statistic, unlike the F or t-tests, has no critical values that lead to the rejection or acceptance of a null hypothesis. Nonetheless, based on our test for the existence of serial correlation using the d-statistic we estimated the d-statistic in Table 4.6 as 1.93. However, the Durbin-Watson d-statistic table gives d_u as 1.57 and d_L is 0.684; since d_u (1.57) < d (1.93) < 4 – d_u (2.43), we accept the null hypothesis and state that there is no autocorrelation, positive or negative, in the error term and since the DW (=1.93) is close to 2.0, it suggests that the model is good for prediction.

4.4 Test of Hypotheses

Hypothesis: There is no significant relationship between the level of frauds in the banking sector and the cadre levels of employees.

Decision Rule: if the calculated t-statistic of the frauds committed by the various cadre levels of employees is significant at 5 per cent level using thumbs rule, reject the null hypothesis and accept the alternative hypothesis. On the basis of the decision rule and given that $t_{0.05}$ is 1.73, while from Table 4.6, t_{sm} is 0.39 for number of fraud cases executed by supervisors and managers; since $t_{SM} < t_{0.05}$, we reject this hypothesis and conclude that supervisors and managers are not significant in impacting fraud losses in Nigerian banks. However, t_{OA}, $t_{CC,}$ and t_{TO} are 2.92, 4.63 and 1.80, respectively and all these values are greater than $t_{0.05}$ (1.73), we reject the H_o and accept H_1 with respect to these variables. These three variables are correctly signed and significant at 5 per cent level, the null hypothesis is therefore rejected and the alternative hypothesis accepted. This implies that the number of fraud cases by officers/accountants, clerks/cashiers and typist/others are statistically significant in explaining the variations in banks' losses due to frauds.

V. SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 SUMMARY OF FINDINGS

The findings of the study are that:

I. Seventy seven percent of frauds have insider attribution and only about 28% of fraud losses are wholly attributable to non-insider related frauds and forgeries.
II. The number of fraud cases by officers/accountants, clerks/cashiers and typist/others are statistically significant in explaining the variations in banks' losses due to frauds.
III. Supervisors and managers are not significant in impacting fraud losses in Nigerian banks.
IV An average of 433 staff are involved frauds and forgeries every year, with supervisors/managers and Officers,

Accountants/Executive Assistants contributing 228 staff complicities (or 53%) at 114 cases apiece.

5.2 CONCLUSION

The results suggest that frauds in the review period were mostly insider-related. With 82.35% of the staff involved in frauds out of the 153 reported in 2014 alone being technical/others staff, the time to review the casualization policy in deposit money banks seem due for review and possible jettisoning. Perceived pressure to commit fraud may be financial or non-financial, while opportunities to act unethically may arise from the very structure of the organization which provides a motivation for employees to manipulate the organization's internal control system and financial infrastructure for unwholesome personal gains. If workplace conditions are managed by HR function to promote positive socialization, foster social learning and a sense of community in employees and management is responsive to employees' plights, the inclination to learn and indulge in anti-social/criminal behavior will be reduced and the spiraling financial losses halted and reversed. Current measures, such as the CBN 'black book' on fraudulent bank staff, the Bank Verification Numbers (BVN) encryption, the activities of SCUML, etc would, hopefully, achieve this end in the near future if sustained and strengthened. Because previous employee dishonesty in the financial industry surely constitutes a reasonable anticipation of future dishonesty by that employee wherever else he goes, the banking community needs to accept that there is reason to be concerned with the spillover or externality impacts of their fraud prevention actions or inaction on other banking entities, the sector and society. The battle against Nigerian fraud will require continued interagency collaboration, public education and greater international cooperation to accomplish greater and sustainable success. The prevention, detection and punishment of fraud offenders must be pursued extensively through measures and regulations (e.g. creating a supportive work environment, a realistic compensation scheme and a sound internal control system) that reduce the temptation to commit fraud while increasing the chances of detection.

5.3 RECOMMENDATIONS

Based on the findings of this study, the following recommendations are made:

1. The CBN must work with the deposit money banks to aggressively tackle cyber crime and implement robust risk-based internal control systems and strict adherence to the codes of corporate governance to check the prevalence of insider-related frauds and forgeries. This will sign post.
2. Existing guidelines (CBN 'black book', EFCC's SCUML, etc.) on deterrence and prevention of banking sector frauds, which are currently inadequately addressing detection and mitigation activities should be strengthened and broadened by deepening the Risk Based Examination methodology and incorporating forensic skills into the current audit model
3. Recognizing the spillover or externality impacts of the individual banks' fraud prevention actions or inaction on other entities and society and noting that no meaningful achievement could be recorded without the collaborative efforts of all concerned, collaborations to facilitate understanding and reduce areas of distrust and nurture opportunity for information sharing is recommended to avert the spiraling of corporate fraud
4. The recruitment process of banks should be strengthened through a robust, IT-based, secured selection, referencing and lifestyle tracking aspects, by institutionalizing supervision of bank employees and necessary employee investigations at the hiring point in the industry.
5. Strengthen the internal control mechanism of banks, particularly, the monitoring and sustenance of effective system of dual control in banking operations as well as work environment and job content enrichment to curtail

the opportunity to commit fraud presented when employees are allowed to have wholesome access to assets and information that allow them to both commit and conceal fraud.

6. Deliberate and sustained customer education, by the CBN, NDIC and the banks on security scrutiny of bank documents and platforms, reporting and redress mechanisms should be put in place, supported with a central fraud registry where convicted bank fraudsters are indented for recall and referencing during personnel hiring processes.
7. The CBN must work with the Bankers Committee to promote professional training, retraining and certification of bank staff and consider the casualization policy in deposit money banks for review and possible jettisoning.

CONFLICT OF INTEREST

The author declares that there is no conflict of interests regarding the publication of this paper.

REFERENCES

[1] Abdulraheem, A., Isiaka, S. B. & Muhammed, A. Y. (2012). Fraud and its implications for banks in Nigeria. International Journal of Asian Social Science, 2(4), 382 – 387.

[2] Adebisi. A.F. (2009). The bankers fortress. Lagos: Mega synergy Nigeria limited

[3] Adeyemi, O. O. (2012). Corruption and local government administration in Nigeria: A discourse of core issues. European Journal of Sustainable Development 1 (2), 183-198

[4] Adeyemi, S. B. (2004). Minimization of financial crimes: the role of the accountants. Global Journal of Accounting, 1(2), 95 – 107.

[5] Adeyemo, K. A. (2012). Fraud in Nigerian banks: Nature, deep-seated causes, aftermaths and probable remedies. Mediterranean Journal of Social Sciences, 3 (2), 279 -290.

[6] Aikhorin, O. (1994). Bank fraud. Unpublished Masters seminar paper, University of Benin, Nigeria.

[7] Ajayi, M. A. (2003). Fraud in Nigeria's financial system: Evidence from commercial banks. Ilorin Journal of Business and Social Sciences, 8(1&2), 112 -118.

[8] Alashi, S. O. (1994). Fraud prevention and control: the role of Government and US agents. The Nigerian Banker, October – December, 26 - 34.

[9] Anya, A. O. (2003). Corporate governance as an effective tool for combating financial and economic crimes. The Nigerian Banker, October – December, 32 – 36.

[10] Atu, O. O.K., Gbenga, E. & Atu, E. R. (2011). The impact of corporate governance and earnings management on the performance of some Nigerian quoted companies. ICAN Journal of Accounting and Finance, 1(3), 50 – 61.

[11] Ayozie, D. O. (2012). Ethical considerations of integrated marketing, communication in Nigeria. The Nigerian Banker, April – June, 26 - 34.

[12] Ayozie, D. O. (2014). The current ethical challenges in the commercial banking sector. The Nigerian Banker, January – March, 35 - 53.

[13] Barr, R. H. (2007). A case study in fraudulent financial reporting. Elliot Marketing Inc. Retrieved 16/07/2015 from www.bobbar.biz/Elliot

[14] Buckley, R. P. & Gao, X. (2002). Development of the fraud rule in letter of credit law: The journey so far and the road ahead. Journal of International Law, 23(4), 663 – 712.

[15] CBN (2014). Economic report for the first half of 2014. Abuja: Central Bank of Nigeria

[16] CBN (2015; February 19). Closure of thr cbn RDAs/WDAs foreign exchange window. Press Release. The Punch, 57.

[17] Chiezey, U. & Onu, A. J. C. (2013). Imoact of fraud and fraudulent practices on the performance of banks in Nigeria. British Journal of Arts and Social Sciences, 15 (1), 12 – 28.

[18] Cressey, D. R. (1953). Other people's money: A study in the social psychology of embezzlement. Glencoe, Ill.: Free Press.

[19] Eboh, E. C. (1998). Social and economic research: principles and methods. Lagos: Academic Publications and Development Resources Limited.

[20] Ebomobowei, A. & Sophia, J. M. (2011). Mergers and acquisitions in the Nigerian banking industry: An explorative investigation. The Social Sciences, 6 (3), 213 – 220.

[21]

[22] Epstein, G. (2002). Financialization, rentier interests and Central Bank policy. Research Institute (PERI), usetts, Amherst.

[23] Federal Bureau of Investigation (2011). Taking a Trip to the ATM? Beware of 'Skimmers'. Retrieved from https://www.fbi.gov/news/stories/.../atm_071411

[24] Francis, L. (2010). Banking on Robbery: The Role of Fraud in the Financial Crisis. Casualty Actuarial Society E-Forum, Fall, 2. 1- 54.

[25] Garner, B. A. (2014). Black's Law Dictionary, 10th ed. New York: Thomson West.

[26] Gujarati, D. N. (2013). Basic econometrics (7th ed.). USA: McGraw-Hill Create.

[27] Healy, P. & Wahlen, J. M. (1999). A review of the earnings management literature and its implication for standard setting. Accounting Horizons, 1-32.

[28] Helsby, T. (2014). Fraud at a glance: The human factor. Kroll Global Fraud Report, July/August, 8 -9.

[29] Hirschi, T. & Gothfredson, M. R. (1983). Age and the explanation of crime. American Journal of Sociology, 89 (3), 552 – 584. Doi:10.1086/227905.

[30] Hopwood, W. S., Liener, J. J., Young, G. R. (2012). Forensic Accounting and fraud examination (2nd ed.). New York: McGraw-Hill Companies, Inc.

[31] Hur-Yagba, Y. (2003). Frauds in the Nigerian banking industry. Abuja Management Review, 1(1), 11 – 17.

[32] Idigbe, A. I. & Kalu, O. (2010). Dealing with bank insolvency: regulatory intervention and criminal. Insolvency & Restructuring – Nigeria, 1-5.

[33] Idolor, E. J. (2010). Bank frauds in Nigeria: underlying causes, effects and possible solution. African Journal of Accounting, Economics, Finance and Banking Research, 6 (6), 62 – 80.

[34] Idowu, I. (2009). An assessment of fraud and its management in Nigerian commercial banks. European Journal of Social Science, 10(4), 628-640.

[35] Ikpefan, O. A. & Odularu, G.O. (2007). Using money laundering Act as a tool for monitoring deposits and frauds in the Nigerian banking industry: An empirical approach. The Nigerian Banker, April – June.

[36] Iyiegbuniwe, W. (1998). Fraud risk in Nigerian banks. Unilag Journal of Business, 1(2).

[37] Jafaru, J. & Iyoha, F. O. (2012). Directors and corporate governance in the banking sector: Evidence from Nigeria, ICAN Journal of Accounting and Finance, 11(4), 157 – 167.

[38] Kanu, S. I. & Okorafor, E. O. (2013). The nature, extent and economic impact of fraud on bank deposits in Nigeria. Interdisciplinary Journal of Contemporary Research in Business, 4(9), 253 – 265.

[39] Koslowski, P. (2009). The ethics of banking conclusions from the financial crises. New York: Springer Science + Business Media B.V.

[40] Koutsoyiannis, A. (2006). Theory of econometrics. New York: Palgrave Publishers Ltd

[41] Kroll (2014). 2013/2014 Global Fraud Report. New York: Kroll/Economist Intelligence Unit.

[42] Kumar, R. & Sharma, V. (2011). Practical Auditing: A risk-based approach. New Delhi: PHI Learning Private Limited.

[43] Lannacci, J. & Morris, R. (2000). Aceess device fraud and related financial crimes. Washington: CRC Press

[44] Lundin, L. (2013). Financial fraud. Orlando: Sleuthsayers.

[45] MacRae, J. (2001). The evolution of insurance fraud detection: Claims. Insurance Week, Inc. Sept., 49(9), 51.

[46] NDIC (2013). Annual Report and Statement of Accounts for the year ended December 31. Abuja: Nigerian Deposit Insurance Corporation

[47] NDIC (2014). Annual Report and Statement of Accounts for the year ended December 31. Abuja: Nigerian Deposit Insurance Corporation

[48] Nyong, M. O. (2008). Recent advances in econometric analysis. Lecture notes on advanced quantitative techniques. Department of Banking and Finance, University of Calabr, Calabar, Nigeria.

[49] Ogunleye, G. A. (2010). Perspectives on the Nigerian Financial safety-net: An NDIC Book. Abuja: Nigeria Deposit Insurance Corporation.

[50] Ojo, J. A. (2008). Effect of bank fraud on banking operation in Nigeria. International Journal of Investment and Finance, 1(1), 103.

[51] Olaoye, C. O. (2009). Impact of internal control system in banking sector in Nigeria. Pakistan Journal of Social Sciences, 6(4), 81 – 89.

[52] Olaoye, C. O. & Adekola, D. R. (2014). Analysis of frauds in banks: Nigeria's experience. European Journal of Business and Management, 6 (31), 90 – 99.

[53] Olatunji, O. C. (2009). Impact of internal control system in the banking sector in Nigeria. Pakistan Journal of Social Sciences, 6 (4), 181 – 189.

[54] Onanuga, A. T. & Oshinloye, M. O. B. (2012). An empirical analysis of occupational frauds in the Nigerian Banking Industry, 1991 -2008. Journal of Banking, 6 (1), 1 – 18.

[55] Onwujiuba, J. O. (2013). Bank fraud and its effect on bank performance in Nigeria. Retrieved from www.pubs.caritasuni.edu.ng/.

[56] Osilowo, T. (2004). Money Laundering: Know your customer. A seminar paper presented at Covenant University Community Bank, Ota, Nigeria.

[57] Otusanya, O. J. (2011). The role of professionals in anti-social financial practices: The case of Nigeria. Accountancy Business and the Public Interest, 1 – 52.

[58] Owolabi, S. A.(2010). Fraud and fraudulent practices in Nigeria banking industry. African Research Review, 4(3b), 240-256

[59] Padmanabhan, G. (2013). Role of financial market infrastructure in financial system stability and implications for Central Bank. 11th SEACEN-World Bank Advanced Course on Payment and Settlement Systems, Kuala Lumpur, February 26.

[60] Samad, H. E. & Khammash, M. (2000). Stochastic stability and its relevance to the analysis of gene regulatory networks: some recent thoughts and results. Nature, 17.

[61] Scarpitti, F. R., Nielsen, A. L. & Miller, J. M. (2009). A Sociological theory of criminal behavior, crime and criminals: Contemporary and classical readings in Criminology (2.ed). New York: Oxford University Press.

[62] Schipper, K. (1989). Commentary on earnings management. Accounting Horizons, 3, 91-102.

[63] Schorr, D. & Low, E. (2014). Independent monitors: Not just for enforcement action anymore. Kroll Global Fraud Report, July/August, 16 - 17.

[64] Schubert, J. (2015). Social control: definition, theory and examples. Retrieved from study.com/academy/lesson/social-control-definition-theory-examples.html

[65] Sikka, P. (2005, February 23). The corporate scams that aid terrorist money launders. The Guardian, 32.

[66] Soludo, C. C. (2004). Consolidating the Nigerian banking industry to meet the development challenges of the 21st century. Address at the Special meeting of the Bankers' Committee, Abuja, July 6.

[67] Sutherland, E. H., (1947). Principles of Criminology. New York: J. B. Lippincott.

[68] Sutherland, E. H., & Cressey, D. R. (1960). A theory of differential association. In F. T. Cullen & R. Agnew (Eds.), Criminological theory: Past and present (pp. 122 – 125). Los Angeles: Roxbury Company.

[69] Tijani, O. M. & Sunmonu, S. O. (2013). Unethical Leadership and Equities Market Crisis – Stakeholders'Perspective in Nigeria. European Journal of Humanities and Social Sciences, 20 (1), 1008 – 1028.

[70] Tillman, R. & Pontelli, H. (1995). Organiszations and fraud in the savings and loans industry. Journal of Social Forces, 73 (4), 1439 – 1463.

[71] The Free Dictionary (2013). Paperhanging – Definition. Retrieved July 15, 2015 from www.thefreedictionary.com/paperhanging/

[72] Usenideh, E. A. (2014). The linkage between financial infrastructure, macro-prudential policies and financial crisis: Its (financial crisis) adverse impact on financial stability and international business. The Nigerian Banker, January – March, 11 – 25.

[73] Usman, A. K. & Shah, M. H. (2013). Critical Success Factors for Preventing e-Banking Fraud. Journal of Internet Banking and Commerce, August, 18 (2), 1 – 54.

[74] Uthman, A. B., Abdul-Baki, Z. & Iyanda, R. A. (2013). An empirical examination of the role of "forensic audit" in enhancing financial investigations in Nigeria. ICAN Journal of Accounting and Finance (IJAF), 2(1), 145 – 159.

[75] Wilks, J. T. & Zimbelman, M. F. (2004). Decomposition of fraud-risk assessments and auditor's sensitivity to fraud cues. Contemprary Accounting Rsearch, 21 (3).

[76] Wilhelm, W. K. (2004). The Fraud Management Lifecycle Theory: A Holistic Approach to Fraud Management. Journal of Economic Crime Management, Spring, 2 (2), 1–38.

[77] Wolfe, D. T. & Hermanson, D. R. (2004). The fraud diamond: Considering the four elements of fraud. The CPA Journal, 74 (12), 38 – 42.

[78] Zimbelman, M. F., Albrecht, C. C., Albrecht, W. S. & Albrecht, C. O. (2012). Forensic Accounting (4th ed). New York: South-Western Centage Learning International.

AUTHORS

First Author – IBOR, Bassey Ina, basseyibor@yahoo.co.uk
Department of Banking and Finance, Faculty of Management Sciences, University of Calabar, Nigeria

Appendix 1
Insured Banks' Frauds and Forgeries

YEAR	TOTAL NUMBER OF FRAUD CASES	TOTAL AMT INVOLVED (N' M)	TOTAL EXPECTED LOSS (N' M)	NO. OF STAFF INVOLVED
1994	737	3,399	951	737
1995	625	1,011	229	625
1996	606	1,601	375	552
1997	487	3,778	228	566
1998	573	3,197	692	311
1999	195	7,404	2,730	596
2000	403	2,851	1,081	493
2001	943	11,244	906	152
2002	796	12,920	1,300	85
2003	1036	9,384	857	106
2004	1,175	11,754	2,610	383

ISSN 2250-3153

2005	1,229	10,606	5,602	378
2006	1,193	4,832	2,769	331
2007	1,553	10,006	2,871	273
2008	2,007	53,523	17,543	313
2009	1,764	41,266	7,549	656
2010	1,532	21,291	11,679	357
2011	2,352	28,400	4,071	498
2012	3,380	18,050	4,520	531
2013	3,786	21,790	5,757	682
2014	10621	25,608	6,192	465
TOTAL	36,918	303, 920	80, 512	9.090
Highest*	10,621	53,523	17,543	737
Lowest*	195	1,011	228	85
Mean*	1758	14,472	3,834	433
Median*	1,175	11,754	2,610	383

Source: NDIC Annual Reports (1995 – 2013) & *Authors' Computation

Appendix 2

Cadre and Number of Bank Staff Involved in Frauds

Rank	SM	OA	CC	TO	TOTAL
1994	211	144	220	162	**737**
1995	151	142	172	160	**625**
1996	218	96	145	93	**552**
1997	203	154	124	85	**566**
1998	112	72	82	45	**311**
1999	178	144	92	182	**596**
2000	132	101	137	123	**493**
2001	55	60	30	07	**152**
2002	16	48	13	08	**85**
2003	25	41	25	15	**106**
2004	157	129	61	36	**383**
2005	169	124	54	31	**378**
2006	118	90	50	73	**331**
2007	84	89	34	66	**273**
2008	48	127	48	90	**313**
2009	94	137	200	225	**656**
2010	92	79	115	71	**357**
2011	89	126	163	120	**498**
2012	78	89	117	247	**531**
2013	97	234	128	223	**682**
2014	58	176	78	153**	**465**
TOTAL	**2385**	**2402**	**2088**	**2215**	**9090**
% of Total*	26.24	26.42	22.97	24.37	100
Highest*	218	234	220	247	737
Lowest*	16	41	13	07	85
Mean*	113.57	114.38	99.43	105.48	432.86
Median*	157	129	61	36	383

Source: NDIC Annual Reports (1994 – 2013) & *Author's Computation

** Of this figure, Temporary staff alone account for 126 or 82.35%

Appendix 3
Types of frauds and forgeries with frequency and actual loss sustained in 2013 and 2014

s/n	Type of fraud and forgery	2013				2014			
		Frequency	% of Total*	Actual loss (₦' bn)	% of Total*	Frequency	% of Total*	Actual loss (₦' bn)	% of Total*
1.	ATM Fraud/Card related fraud	1,739	45.93	0.585	10.16	7181	67.61	1.242	20.06
2.	Fraudulent Transfer/Withdrawal of Deposits	394	10.41	1.162	20.19	1099	10.35	0.583	9.41
3.	Suppression of Customer Deposit	324	8.56	0.482	8.37	483	4.55	0.312	5.04
4.	Internet Banking/Web-based Fraud	316	8.35	1.683	29.23	1277	12.02	3.196	51.61
5.	Fraudulent Conversion of Cheques	219	5.78	0.388	6.74	138	1.30	0.088	1.42
6.	Presentation of Stolen Cheques	196	5.18	0.120	2.09	59	0.56	0.054	0.87
7.	Unauthorized Credits	132	3.49	0.511	8.88	98	0.92	0.231	3.73
8.	Presentation of Forged Cheques	118	3.12	0.018	0.31	62	0.59	0.067	1.08
9.	Outright Theft By Staff (Cash Defalcation)	116	3.06	0.205	3.56	107	1.01	0.297	4.80
10.	Diversion of Bank Charges (Commissions & Fees)	63	1.66	0.056	0.97	42	0.40	0.036	0.58
11.	Lodgment of Stolen Warrants	55	1.45	0.034	0.59	39	0.37	0.033	0.53
12.	Foreign Currencies Theft	41	1.08	0.049	0.85	22	0.21	0.033	0.53
13.	Non-Dispensing of Money But Registered By The Electronic Journal	39	1.03	0.427	7.42	0.000	0.00	0.000	0.00
S14.	Outright Theft By Outsiders/Customers	34	0.90	0.037	0.64	14	0. 13	0.021	0.34
	TOTAL	3,786	100	5.757	100	10,621	100	6.193	100

Source: NDIC Annual Reports (1994 – 2013) & *Author's Computation