

THE NEXUS BETWEEN OUTSOURCING OF STAFF AND BANKING FRAUD IN NIGERIA

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Citation: Ali Momoh, B.O. (2021). The nexus between outsourcing of staff and banking fraud in Nigeria. *KIU Interdisciplinary Journal of Humanities and Social Sciences*, 2(2), 283-301

ABSTRACT

The study examined the nexus between outsourcing of staff and banking fraud in Nigeria. Using secondary data, percentage increase in banking fraud (PBF) to was regressed on percentage of outsourcing 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 outsourcing staff to fraud losses was the highest compared to the other core 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.

Keywords: Banking Fraud, Financial Outsourcing of Staff, Financial stability, Money laundry

INTRODUCTION

The increase in the number of banks is, itself, a positive development because more people access and become aware of banking services than before. However, this accelerated 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 funds by contract staff, customer cash suppression, etc. Anya (2003) states that financial fraud through cybercrime and other economic crimes involve intentional use of deceit, asset theft/ misappropriation by bank officials 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 without any 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, nowhere 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, to examine the nexus between outsourcing of staff and banking fraud in Nigeria 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 banking fraud and the outsourcing staff 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 banking fraud and the outsourcing staff involved.

This should assist regulators locate within the 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.

RELATED REVIEW OF LITERATURE

A Conceptual Review of Literature

Outsourcing

Different definitions have been offered by scholars and researchers across the globe in explaining the concept of outsourcing. Adegbami et al. (2012) defined outsourcing as a contract service agreement in which an organization hires out all or part of its operation to an external company. Corbett (1999) regarded outsourcing as an approach through which major but non-core organization functions are delegated to expert service provider. For him the works being outsourced are the non-core activities which "internal staff" could not render or organizational works that need specialized personnel.

Domberger (1998) in his more detailed definition regarded outsourcing as a strategy of delegating organizational services or works to other party under in business agreement that includes time of service in relation to cost, quality and the timeliness of providing the services. To Beaument (2006), outsourcing can be said to be one sub-type of production to external entity such as a sub-contractor. Outsourcing has become an alternative which all major corporations must consider in order to remain competitive. It has also helped to increase efficiency, improve service quality, accountability, values, decreased head counts and cash infusion and gain access to world class capability and sharing risk (The Outsourcing Institute, 2006).

Therefore, outsourcing in the context of the study is defined as the process whereby activities traditionally carried out internally are contracted out to external body or bodies. It is therefore the transfer of an activity from an internal governing body to external governing body.

Historical Perspective of Outsourcing Over the last two hundred years, firms have been organized in almost every way imaginable organizations have evolved from a focus on a single activity to vertical integrated businesses to multi-dimensional business and how many firms are returning a narrower focus by outsourcing non-core activities. However, outsourcing was not formally identified as a business strategy until 1989 (Mullin, 1996). Most organizations were not totally self-sufficient; they outsourced those functions for which they had no competency internally. They use of external supplier for these essential but ancillary services might be termed stage in the evolution of outsourcing. The next stage is outsourcing support services. This is because as organizations began to focus more on cost-saving measures, they started to outsource those functions, necessary to run a company but not related to the core business. These organizations use outsourcing to strive for greater efficiencies and cost reduction (McIvor, 2005).

The current stage in the evolution of outsourcing is the development of strategic partnership. This is because the focus today is less on ownership but more on developing strategic partnership to bring about enhance results. Consequently, organizations are likely to select out sourcing more on the basis of who can deliver more effective results for a specific function than on whether the function is of core competency. Thus, this trend in outsourcing is leading developed countries to outsource into developing economics where there are lower labour cost and more favourable employment legislation.

Reasons for Outsourcing of Staff

Looking through past research (Prasad and Prasad, 2007) posited that the drive for greater efficiencies and cost reductions has forced many organizations to increasingly specialize in a limited number of key areas. This has led organizations to outsource activities traditionally carried out in-house. Although the term outsourcing has become popular in recent years, organizations have always made decisions about determining their boundaries (Daniel, 2006).

Across the globe companies are establishing and executing outsourcing staff in order to match competitors in their outsourcing endeavors, improve non-competitive cost structures, focus on core competencies and reduce capital investment and overall fixed costs, achieve cost competitive growth in the supply base for goods, services and technologies in a

company's value chain and establish or future sales footprint in a low-cost country by outsourcing simple goods or business processes. These factors are forcing companies to fully evaluate their outsourcing models to determine in today's highly competitive world (Akingbola, 2012).

Banking Fraud

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; minimize 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 harbor; 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. Majorly these frauds are being carried out by outsourcing staff

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-majorly the outsourcing 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 bank. External Fraud: This is a fraud perpetrated by outsiders or ex staff. 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, contract 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 outsourcing 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 which seem easy for the outsourcing staff because they use to the modus operandi of the system and also the system loopholes. 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 the contract staff with, 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 contract staff 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)

Theoretical Framework

The Fraud Triangle Theory

This theory was propounded by Cressey, (1953) as a classical theory and designated the propensities for fraud as a triangle of perceived opportunity, perceived pressure and perceived rationalization. Every fraud executor is confronted with some kind of pressure or "need". Pressures that motivate individuals to commit fraud are financial pressures (high medical bills or debts), vices (drugs, gambling, and alcohol), and work related pressures (high pressure for good results at work or a need to cover up someone's poor performance or to report results that are better than actual performance compared to those of competitors) and other pressures (frustration with the nature of work, or even a challenge to beat the system) Donald, (1986). This „need“ or greed usually has a combination of other factors such

as the opportunity and the attitude to commit the fraud. The executor of fraud must believe that he or she can commit the fraud without being caught (or if caught, nothing grave will happen) Abdullah & Mansur, (2015). The opportunity to commit fraud is possible when employees have access to assets and information that allow them to both commit and conceal fraud. Opportunities are provided by a weak internal control environment, lack of internal control procedures, failure to enforce internal controls and various other factors such as apathy, ignorance, lack of punishment and inadequate infrastructure (ACFE, 2010; Duffield & Grabosky, 2001; Levi, 2008). Access must, therefore, be limited to only those systems, information, and assets that are truly necessary for an employee to complete his or her job. The third driver of fraud is ability of the perpetrators to find a way to rationalize their actions as acceptable. Rationalization or Absence of guardians refers to the manner in which people think about their work, performance and contribution within the workplace Kiragu, Wanjau, Gekara, & Kanali, (2013). They, therefore, attach a value that they should derive from the company for being productive or delivering something of value. Absence of guardians, on the other hand, refers to the situation where there are limited or no processes in the organization to test the integrity of the financial information or processes. The absence of the integrity process includes an absence or ineffective role of internal auditors, external auditors, Board of Directors and reporting requirements – banks, regulators and appropriate management review.

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

Empirical Review of Previous Studies

Several researches have been undertaken in this area with each researcher giving a different view and results. Uchenna & Agbo, (2013) examined the impact of fraud and fraudulent practices on banks' performance in Nigeria. They found out that fraud inflicts several financial difficulties on banks and customers. This work however, failed to show the direct impact

banking fraud and financial mismatch has on some economic variables such as gross domestic income, unemployment rates and per capital income, which are the main theme of this work. Also Ojeaga, Ikpefu & Odejimi, (2014) also investigated factors eliciting fraud in Nigerian banking sector. It was discovered that high bank deposit was primarily responsible for a high rise fraudulent occurrences in the Nigerian banking sector particularly management fraud, as most banks failed in their primary role of lending to the real sector of the economy and because of this there are excessive idle funds in the banks which necessitated management fraud and other insiders' abuse. Some other factors that were also jointly responsible for these occurrences include high interest rates, low commercial bank lending and poor oversight function by the Central Bank and other financial regulatory agencies. The work also failed to show the impact of these factors on the performance of banks and consequently of the nation's economy.

Asli & Emna, (1998) examined the determinants of banking crises: evidence from developing and developed nations in 1980-84. It was then suggested that crises tend to erupt when the macroeconomic environment is weak, especially when economic growth is low and the inflation rate is high. Also, high real interest rates are related with systemic banking sector problems. David, Lucey & Winne, (2015) also assessed banking and occupational fraud risk in Kenya, their findings showed a positive correlation between bank size and occupational fraud risk, also the result showed a significant influence of bank size on occupational risk in Kenyan commercial banks.

lyiegbuniwe (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

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.

METHODOLOGY

The study employed the ex-post facto design on annual data for the period 1999 to 2019 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 1999 to 2019 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 1999 and 2019 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

To achieve the objectives of this study and test the hypotheses the following regression model was developed to capture the relationship between OS,OA,SM,TO and PBF OS = Total number of Outsourcing Staff involved in fraud cases; OA = Total number of Officers, Accountants and Executive Assistants involved in fraud cases; SM = Total number of Supervisor/ Manager involved in fraud cases; TO = Total number of Typists/Others involved in fraud cases as the independent variables and regressed against the Percentage increase in Banking Fraud (PBF) used as proxy for Banking Fraud.

This study employed the model specified below in the log linear functional notation, the model is specified as:

PBF = f(OS, OA, SM, TO), expressed in the explicit form as:

$$\ln PBF = \lambda_0 + \lambda_1 \ln OS + \lambda_2 \ln OA + \lambda_3 \ln SM + \lambda_4 \ln TO + E$$

..... (1)

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

Where,

BF = Percentage increase in Banking Fraud; OS = Total number of Outsourcing Staff involved in fraud cases; OA = Total number of Officers, Accountants and Executive Assistants involved in fraud cases; SM = Total number of Supervisor/ Manager 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 unbiasedness. Accordingly, the statistical criteria include the correlation coefficient or the adjusted R², standard error, students't-test and the F-statistic. The R² 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 H₀; 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.

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

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), outsourcing staff (OS), Officers, Accountants and Executive Assistants (OA), typists/Other technical staff (TO), covering the twenty-one (21) year period, 1999 to 2019, were tabulated and are shown in Appendix 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 outsourcing staff (OS) contributed 3,385 cases (or 26.24%), followed by the cadre of Officers, Accountants and Executive Assistants (OA) with 2,402 (26.42%). Supervisor/ Manager (SM) 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 Outsourcing staff, 220 clerks and cashiers, indicating the highest amount of frauds occur in the cadre of officers/accountants and they are all contract staff. Average of 3.82 billion 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 which they were all outsourcing staff, 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 OS cadre) contributed 27.10% of the fraudsters, while clerks/cashiers accounted for 16.77%. These three cadres of staff (OA, OS and SM) 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
PBF	-	I(2)	-	I(1)
OS	3.75744*	I(1)	5.13789**	I(1)
OA	-	I(2)	-	I(1)
SM	5.85739*	I(1)	11.03923**	I(1)
TO	*	I(1)	-	I(1)
	-		5.51571**	
	5.73656*		-	
	*		8.07211**	
	-		- 4.	
	5.73078*		08540**	
	*			
	-			
	3.96753*			
	*			

Source: Researcher's computation. 2021

Note: Critical values, ADF test: 1 percent = -3.75744, 5 percent = -5.51571 and 10 percent = -8.07211. Philips-Peron: 1 percent = -5.13789, 5 percent = -5,73078 and 10 percent = 3,96753. *significant at 5 and percent; **significant at all confidence levels

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 (OS,SM, 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

Date: 09/25/2021 Time: 09:22
 Sample: 1999-2019
 Included observations: 34 after adjustments
 Trend assumption: Linear deterministic trend
 Series: OS SM TO EL OA
 Lags interval (in first differences): 1 to 2
 Unrestricted Cointegration Rank Test (Trace)

Hypothesize d		Trace	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.803382	123.3298	69.81889	0.0000
At most 1 *	0.590193	68.02905	47.85613	0.0002
At most 2 *	0.525285	37.69870	29.79707	0.0050
At most 3	0.200771	12.36730	15.49471	0.1402
At most 4 *	0.130325	4.747624	3.841466	0.0293

Trace test indicates 3 cointegratingeqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesize d		Max-Eige	0.05	n
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.803382	55.30072	33.87687	0.0000
At most 1 *	0.590193	30.33035	27.58434	0.0216
At most 2 *	0.525285	25.33140	21.13162	0.0121
At most 3	0.200771	7.619677	14.26460	0.4187
At most 4 *	0.130325	4.747624	3.841466	0.0293

Max-eigenvalue test indicates 3 cointegratingeqn(s) at the 0.05 level

*denotes rejection of the hypothesis at the 0.05 level **MacKinnon-Haug-Michelis (1999) p-values Unrestricted Cointegrating Coefficients (normalized by $b'S_{11}^{-1}b=I$):
Source: Researchers' E-views Results, (2021)

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:

$$\ln \text{PBF} = 2.85 - 0.23\ln \text{OS} + 2.29\ln \text{OA} + 1.72\ln \text{SM} - 1.50\ln \text{TO} \dots\dots\dots(4)$$

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.

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_{SM} , 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_0 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.

SUMMARY, CONCLUSION AND RECOMMENDATIONS

Summary of findings

The findings of the study are that:

- 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.
- 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 outsourcing staff and Officers, Accountants/Executive Assistants contributing 228 staff complicities (or 53%) at 114 cases apiece.

Conclusions

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, which they fall under the category of outsourcing 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.

Conclusions

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

- The CBN must work with the deposit money banks to aggressively tackle cybercrime 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.
- 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
- 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
- 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.
- 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.
- The CBN must work with the Bankers Committee to promote professional training, retraining and certification of bank staff and consider the outsourcing policy in deposit money banks for review and possible jettisoning or good remuneration welfare package for them as this will reduce the menace called fraud in the banking industry

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