

EFFECT OF INTERNAL CONTROL MEASURES ON FRAUD PREVENTION IN SELECTED DEPOSIT MONEY BANKS IN MAIDUGURI METROPOLIS BORNO STATE, NIGERIA

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Abstract

The study sought to examine the effects of internal control measures on fraud prevention in selected deposit money banks in Maiduguri Metropolis Borno State, Nigeria. The population of the study consisted of Auditors of five deposit money banks in Nigeria from which sample size was drawn at one hundred and fifty two (152) senior staff using Yamane's formula. One hundred and fifty two (152) copies of the questionnaire were distributed and one hundred and forty one (141) was filled and retrieved. Data collected were presented in Tables and analysed using analysis of variance (ANOVA) in testing the hypotheses with the aid of SPSS 20.0. It was found that, there was significant effect of internal control measures (segregation of duties, close circuit television and password protection) on fraud prevention in selected deposit money banks in Maiduguri Metropolis Borno State, Nigeria. The research recommends that, the banks should have an effective segregation of duties especially in the area of payroll and they should take advantage of installing an effective close circuit television in banking environment to enhance efficiency and smooth operation and also provide an effective password protection that would protect the activities of the employees in the banks.

Keywords: *Internal Control Measures, Fraud Prevention, Deposit Money Banks*

Introduction

The banking industry is growing tremendously in Nigeria. It is believed that the services provided by banks served as a tool for economic development. Today, the Nigerian banking system is replete with lot of risks. These risks arise from the nature of the services provided by banks. The bank that is on the principle of avoiding all risk or as many of them as possible, will not be dynamic and might not adequately serve the credit needs of its customers and the demands of economic developments (Nzotta, 1999). Of all the risks faced by banks, fraud

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risks are the most pervasive and the most destabilising to banks. Eseoghene, (2010) fraud results in largest single cause of bank failures and the largest source of losses to banks in Nigeria because of the magnitude of the losses and the level of their impact on banking operations. Such fraud includes defalcation of cash, forgeries on negotiable instruments, foreign exchange fraud, treasury fraud and malpractices investment fraud. This has adversely hindered the progress and services provided by banks as well as affecting the level of confidence, which the public and government have in these banks.

The increasing wave of fraud in the banking industry in recent years if not arrested might pose certain threats for the stability and the survival of the banking industry. To minimize the alarming rate of fraud in the banking industry, there ought to be the need for the players in the industry to set up and implement an effective and efficient control system that will adequately monitor the daily activities of the industry. Even though internal control measures like segregation of duties, close circuit television, password protection, operational manual, verification of signatures and banks reconciliation among others have been put in place by banks, still fraud exist in the banking industry. It is against this background that this study assesses the effect of internal control measures on fraud prevention in selected deposit money banks in Maiduguri metropolis Borno State, Nigeria. Therefore, the attempt to put an end to this economic degradation, gave rise to the topic of this study.

Fraud has become one of the most intractable and monumental problems in recent times. In fact, banks have become the main target of a conmen. Studies were carried out on the effectiveness and weaknesses of control measures in banks to prevent occurrence of fraud. Idowu, (2009) carried out a study on the means of minimizing the incidence of fraud in Nigerian banking industry. Findings of the study revealed that, so many factors contributed to the incidence of frauds in banks amongst which are poor management policies and procedures, inadequate working conditions, poor remunerations and lack of effective segregation of duties. Kasum (2009), Okoye (2009), Asaolu (2009), and Mgbame (2011) have all acknowledge in their separate studies, the increasing incidence of fraud and fraudulent activities in Nigeria and these studies have argued that in Nigeria, fraud is gradually becoming a normal way of life. Consequently, there is a general expectation that effective internal control such as effective segregation of duties and password protection among others may be able to stem the tide of fraud witnessed in most sectors of the Nigerian economy.

However, there has not been adequate emphasis, especially survey evidence on how close circuit television and password protection can help curb fraud beyond the several anecdotal views that abound. Consequently, this study want to replicate on these control measures to assess the extent to which they have prevented or otherwise in these selected banks in Maiduguri Metropolis. The main objective of the study is to assess the effect of internal control measures on fraud prevention in selected deposit money banks in Maiduguri Metropolis Borno State, Nigeria. The specific objectives of the study are to examine the effect of

segregations of duties on fraud prevention in deposit money banks, to assess the effect of close circuit television on fraud prevention in deposit money banks, and examine the effect of password protection on fraud prevention in deposit money banks.

For the purpose of this research, the hypotheses tested were: Ho₁: The segregation of duties has no significant effects on fraud prevention in deposit money banks. Ho₂: The use of close circuit television has no significant effects on fraud prevention in deposit money banks. Ho₃: The password protection has no significant effect on fraud prevention in deposit money banks.

Literature Review

Conceptual Issues on Fraud

Ajisebutu, (2006) viewed fraud in line with association of certified fraud examiners as a deliberate misrepresentation of the financial condition of an enterprise accomplished through the international misstatement or omission of amounts or disclosure in the financial statements to deceive the users. The view of Adewumi, (2007) is that fraud is a conscious premeditated action of a person or group of persons with the intention of altering the truth and or fact for selfish personal monetary gain. It involves the use of deceit and trick and sometimes highly intelligent cunning and expertise. The action usually takes the form of forgery, falsification of documents, authorizing signatures and an outright theft. Almost in the same direction Nwankwo, (1991) also opined that fraud occurs when a person in a position of trust and responsibility, in defiance of norms, breaks rule to advance his personal interests at the expense of the public interest, which he has been entrusted to guide and promote. It occurs when a person through deceit, trickery or highly intelligent cunning ways, gains or advantage he could not otherwise have gained through lawful, just or normal process. Jenfa, (2002) reiterates that frauds could not be eradicated because thieves do not think alike as every fraud has its own unique approach. Hence, there may be no unique approach to forestall frauds. He suggests that the good thing about moves to forestall frauds is that the red flag of forgery should be used as it beams the light for those with knowledge to follow.

Aderibigbe, (2000) reviewed the role of Chartered Accountants in investigation matters in particular when it involved fraud. During the course of the review, it was discovered that the outcome of the work of a forensic Chartered Accountant could serve as a working manual for fraud prevention and control. It was opined that the model of undisclosed income should be adopted to detect whether fraud have been committed or not and the extent of the fraud committed. Aderibigbe's model of undisclosed income could be adopted on civil servant and politician who continue to build houses, buy expensive clothes, cars and celebrate birthdays and burial ceremonies among others. The undisclosed income model compares the total expenses being incurred by the person in question with all the sources of his income, the balance will be the undisclosed income, which could be investigated. Aderibigbe, (2006) situates his research work on the examination

of various forms of accounting mismanagement and fraud that do occur, highlighting the factors contributing to the incidence of frauds including identification of the most common fraudulent practices. He identified the following as amounting to fraud; the ease with which the particular assets can be converted after they are appropriated. Example, cash securities, the materials used on company's operation or goods purchased for resale; Independent control of an individual over assets (that is where there is "inadequate" segregation of duties); Possibility of refusing to comply with laid-down procedures without any penalty or sanction; and Collusion between interacting agents charged with responsibility for protecting the assets and other interests of the organization.

Definition of Fraud

Fraud is the act depriving a person dishonestly of something, which such an individual would or might be entitled to. In its lexical meaning, it is an act of deception, which is deliberately practiced in order to gain unlawful advantage. Therefore, for any action to constitute fraud there must be a dishonest intention to benefit (on the part of the perpetrator) at the detriment of another person or an organisation (Eseoghene, 2010). Fraud involves intentional misrepresentation, concealment or omission of the truth for the purpose of deception or manipulation to the financial detriment of an individual or an organization (such as a bank) which also includes embezzlement, theft or any attempt to steal or unlawfully obtain or misuse the asset of the bank (Mahadi' Zhila, 2008). For any fraud to occur there must be a will to commit the fraud and if the opportunity to commit the fraud is available, then there will be an exit or escape route from relevant sections that are against fraud or related deviant behaviour. As naturally expected, fraud is perpetrated in many forms and usually have insiders (staff) and outsiders conniving together to successfully implement the act (Nwaze, 2008).

However, Abu-Musa, (2010) describes Fraud as a predetermined and well-planned tricky process or device usually undertaken by a person or group of persons, with the sole aim of checking another person or organization, to gain ill-gotten advantages, is it monetary or otherwise, which would not have accrued in the absence of such deceitful procedure. Oluwadare, (1993) stated that, the fraudster and the law abiding storekeeper are concerned with making money. One makes money into his private pocket (egoism) and the other making the money for the organization (altruism). According to the Association of Certified Fraud Examiners, (1996) viewed fraud as "any illegal acts characterized by deceit, concealment or violation of trust. These acts are not dependent on the application of threat of violence or of physical force". Individuals and organizations to obtain money, property or services; to avoid payment or loss of services; or to secure personal or business advantage, perpetrate frauds. Boniface, (1991) fraud refers to "any premeditated act of criminal deceit, trickery or falsification by a person or group of persons with the intention of altering facts in order to obtain undue personal monetary advantage". It summarily concludes from the foregoing definitions that fraud arises when a person in a position of trust and responsibility

digresses from agreed standards, breaks the rules to advance his personal interest at the expense of the interest of the public.

Internal Control Objectives

Haugen, (1999) discussed the value of internal controls. Internal control system has four broad objectives, which include safeguarding assets of the firm; ensuring the accuracy and reliability of accounting records and information; promoting efficiency in firm's operations; and, measuring compliance with management prescribed policies and procedures.

The effectiveness on internal controls depends largely on management's integrity. There are many other reasons for employee fraud, the more common being revenge, overwhelming personal debt, and substance abuse. Business today is very competitive, and employees often stressed. As a result, they have a feeling of being overworked, underpaid, and unappreciated. If employees are also struggling with serious personal problems, their motivation to commit fraud is very high. Adding to the situation of poor internal controls, the readily available computer technology also assists in the crime, and the opportunity to commit fraud becomes a reality.

International Federation of Accountants, (2012) also emphasises that 'one of the important driver of business performance, is having an effective internal control system, which manages risk and enables the creation and preservation of value'. Ratcliffe et al (2009), internal controls are fundamental value creation activity that leads to the achievement of an organisation's mission by creating value, enhancing, and protecting stakeholder interest and minimizing the chances of organisational failures which eventually can and will actually save time and money, and promote the creation and preservation of value. Internal control therefore, involve procedures of putting in place the right kind of internal measures that will enable an organisation to take advantage of opportunities while observing risks and reducing the threats. Sequel to the above definitions and position, this study will focus on the definition given by Eseghe (2010).

Causes of Fraud in Nigerian Bank

Ojo (2008), the causes of fraud and forgeries in banking transactions can be classified under two generic factors namely: the institutional or endogenous factor and the environmental or exogenous (social) factors: The institutional factors or causes are those that are traceable to the in-house environment of the banks. Though, the list of institutional factors is inexhaustible, the notable ones are; weak accounting and internal control system, inadequate supervision of subordinates, hapless personnel policies, poor salaries and conditions of services, general frustrations occasioned by management unfulfilled promises, failure to engage in regular call-over, employees' refusal to abide by laid-down procedures without any penalty or sanction, banks reluctance to report fraud due to the perceived negative publicity, banking experience of staff, inadequate Infrastructure, inadequate training and re-training and poor book-keeping.

Idowu (2009), environmental factors are those that can be trace to the immediate and remote environment of the bank. These factors, according to

Ogbunka (2002), are manifest in the following manner: The penchant to get rich quick; slow and tortuous legal process; poverty and the widening gap between the rich and the poor; job insecurity; peer group pressure; societal expectations; increased financial burden on individuals; stiff competition in the banking industry which saw many banks engaging in fraud so as to meet up in terms of liquidity and profitability.

Fraud Control Measures in Banks

The financial industry has adopted several measures to control the occurrence of fraud. Mahadi and Zhila, (2008) argued that measures aim at fraud prevention include; Segregation of duties, Close circuit television, Password protection, Reporting systems, Verification of signatures, Control of dormant accounts, Establishment of inspectorates units, Detection of passport sized photos, and Close watch on the lifestyle of staff. Moreover, measures aimed at fraud detection include; Checking of cashiers, Call-over, Reconciliation and balancing of accounts at branches, Inter-bank at head office levels, Periodical submission of statement of accounts, Stock taking of security items and cash in the vaults, and Inspection by bank inspectors (Eseogheni, 2010).

Olasanmi, (2010) reveals that another angle to fraud prevention is the adoption of computer aids as a tool for fraud prevention and control. That is the involvement of management information system (MIS). She stated that good computer software will allow auditors to cover more grounds in less time and will enhance the production of a more accurate report.

Many fraud prevention and detection strategies were utilised to reduce the chances of bank fraud from occurring. As in today's technological era, fraud has become very complex and even more difficult to detect, thus the techniques used to deal with it must also be sophisticated. According to CAQ (2010), organizations typically employ two strategies to mitigate fraud risks, firstly by having a strong ethical tone at the top and a proactive fraud management program and secondly by detecting fraudulent activities that have occurred. Meanwhile, some controls like whistle-blower program may be used to deter fraud by their presence and at the same time may help detect incidents of fraud. According to Wells, (2000), inventory observation technique should be carefully implemented since inventory is usually represented as the largest single asset for an organization and becomes as one of the most targeted choices for the fraudster. The inadvertent conduct by the auditor during inventory observation may cause harm to the entire company. This happens when the auditor depends solely on the employees for the counting process in the warehouse. The workers might increase the inventory count without the auditor's knowledge. Thus, to ensure that this technique is done effectively, the auditors in charge should carefully observe the stock to verify the inventory.

Effects of Fraud in Banks

Consequently, the activities of fraudsters have negative effects on the affected banks. Some of the effects of frauds on banks according to the provision of the NDIC published report (1996) include:

- i. The distress syndrome: Bank frauds tend to jeopardize the industrial growth of the Nation. Bank frauds have made some banks to wind up, while some are still battling with the distress syndrome. Bank failure in Nigeria have gulped billions of naira so far from innocent depositors, who end up losing their hard earned money and their confidence in these banks.
- ii. Loss of bank fund: Frauds had caused hardship in banks, especially those whose liquidity stated was already in doubt. As fraud cases in banks, continue to raise, bank's losses in terms of money also rises.
- iii. Staff involvement: According to the NDIC publication, about 1914 bank staff of various ranks was involved in fraud between 1994 and 1996. The obvious effects are possible termination of appointment, dismissal and suspension, which would certainly affect their homes adversely.
- iv. Illiquidity: When banks experience fraud, some amount of money is being lost, which in turn affects the banks liquidity position, thus leading to their inability to meet their re-capitalization requirements and
- v. Bad name: According to the BBC News on Nigerian bank frauds (2007) Nigeria has become synonymous with fraud as some of its citizens use the boom in the internet cafes to send Spam mails, promising millions in exchange for the gullible recipient's bank details. This has proved to us that fraud has become unfortunate in Nigeria's international reputation, thus, giving us a bad name.

From the above effects, it can be clearly seen that fraud is really a destructive force on a mission to spoil the name of financial institutions, render so many employers of labour jobless, close down banks and erase the confidence of the people in the country's banks. This should not be permitted hence efficient internal control systems must be fully affected.

Empirical Studies

There have been an extensive studies conducted in many countries on fraud. Yang Lin and Koo (2015) investigated the impact of processed internal controls adaptation on operative performance. Analysis hypotheses derived from the model were tested using multivariate analysis on the form information and money information from Taiwanese listed corporations. The results showed that not solely internal controls ability had an effect on internal controls effectualness and operative performance, however additionally internal controls effectualness had a partial influence on operative performance. Eva and Udoayang (2012) studied the impact of internal control design on banks' ability to investigate staff fraud, staff lifestyle and fraud detection in Nigeria. Data were collected from 13 Nigerian banks using a four point likert scale questionnaire. The study revealed that internal control design influences staff attitude towards fraud such that strong internal control mechanism is deterrence to staff fraud while the weak exposes the system to fraud and creates opportunities for staff to commit fraud. Joseph, Albert and Byaruhanga (2012) investigated the impact of control on Fraud Detection and hindrance in District Treasuries of Kakamega County. Data collected was analysed using descriptive and inferential statistic exploitation

applied statistical package for the scientific discipline (SPSS). Findings of the study disclosed that there was a statistically vital and positive relationship between the adequacy of control systems and fraud hindrance and detection in district treasuries in Kakamega County. The study recommends that effective and economical control policies and procedures will put an end to fraud in the banks.

Theoretical Framework

In order to explain why fraud is conceived in the society, scholars have advanced the following theories; the fraud triangle theory, fraud diamond Theory and fraud scale theory. However, the theory adopted to guide this study was diamond theory because it is the expanded version of both triangle and scale theory and it consist of four elements that lead to fraud. These elements are; incentive, opportunity, rationalization and capacity.

The Fraud Diamond Theory:

Wolfe and Hermanson first presented the fraud diamond theory, an expanded version of fraud triangle theory, in the *CPA journal* December, 2004. The fraud diamond theory includes an additional element: capacity. Hermanson, (2004) argued that, although perceived pressure or incentive might coexist with an opportunity to commit fraud and a rationalisation for doing so, fraud is unlikely to take place unless the fourth element, capacity, is also present. In other words, the potential perpetrator must have the skills and ability to actually commit fraud and he identified four observable traits related to individuals' capacity to commit fraud; authoritative position or function within the organization, capacity to understand and exploit the accounting and internal control systems weaknesses to the greatest advantage, confidence that fraudulent behaviours will not be detected (or that one can easily escape punishment if the behaviour is detected and capability to effectively deal with stress in order to manage the fraud over a long period of time.

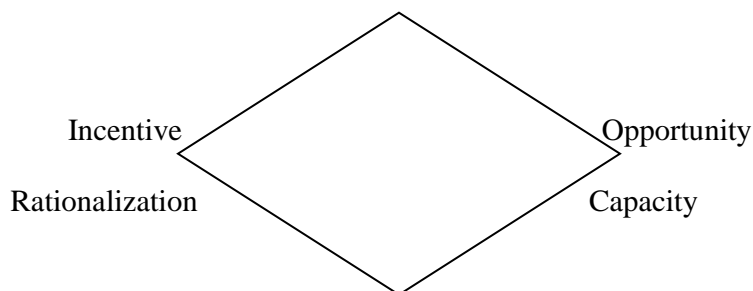


Figure 2: The fraud diamond

Source: Hermanson (2004)

With the additional element presented in the fraud diamond theory affecting individuals' decision to commit fraud, the organisation and auditors need to better understand employees' individual traits and abilities in order to assess the risk of fraudulent behaviours. In addition, better systems of checks and balances should be implemented and monitored to proactively minimise risks and losses because of fraudulent activities in the work place.

Methodology

The study adopted survey design; data were collected from primary sources essentially through the administration of questionnaires to one hundred and fifty two (152) senior staff of the five (5) deposit money banks. Self-administered questionnaire is the instrument used in the study. The questionnaire was designed based on the questions raised by the study. The questionnaires were administered to the staff of the five money deposit banks via drop-off method (that is hand delivery of self administered questionnaires, followed by personal collection). Each copy of the questionnaire contained twenty (20) questions of which the respondents ticked the relevant answers and filled the provided spaces where it arises. It elicits more candid and more objective replies particularly when it does not call for a signature or other means of identification. The sample size was obtained using the formula developed by Yamane;

$$n = \frac{N}{1+N(e)^2}$$

Where; n = required sample size; e = level of significance taken to be 0.05;

N = the population size; 1 = constant

$$n = \frac{246}{1+246(0.05)^2} ; n = 152$$

Therefore, the percentage of the sample size is = $152 / 246 \times 100 = 62\%$ of population. The sampling technique adopted for the study was simple random sampling. The senior staffs of the five deposit money banks were selected at random to give equal chance for every senior staff to be selected.

The study employed the used of both descriptive and inferential statistics to analyse the data. In the descriptive statistics, the study employed the used of simple percentages to summarize the responses of the respondents. While in the inferential statistics, Analysis of Variance (ANOVA) was used to test the hypotheses formulated. SSPS version 16.0 was used to aid the analysis. The decision rule is that if One-way ANOVA results produce a significant F (i.e. ≤ 0.05), the stated null hypothesis stands rejected otherwise accepted where F test is not significant (i.e. > 0.05).

Analyses and Results

Table 1 shows questionnaire administered, valid response, invalid response and questionnaires that were not returned or excluded.

Table 1: Respondents' Feedback

Questionnaires Distributed	Number of Questionnaires	Percentage (%)
Valid returned	141	92.8%
Invalid returned	3	2.0%
Not returned	8	5.2%
Total	152	100%

Source: Field Survey, 2016

The Table 1 reveals that commensurate with the sample size, a total of 152 questionnaires were administered out of which 141 representing 92.8% were validly completed and returned while the remaining 3 representing 2.0% and 8

representing 5.2% respectively were invalidly completed and returned and not returned at all. Therefore, the remaining is immaterial to influence the response of the majority 141 (92.8%) respondents hence, the basis of the analysis is fair representation of population and the result obtained as to the effect of segregation of duties on fraud prevention is reliable.

Table 2: Responses on effects of segregation of duties on fraud prevention in selected deposit money banks in Maiduguri Metropolis Borno State, Nigeria

S/N	Questionnaire Items	SA	A	U	D	SD	Total
1	Effective segregation of duties taken by bank management will lead to eradication of fraud feasible in banks.	49 35%	81 57%	6 4%	4 3%	1 1%	141 100%
2	The major purpose of separation of responsibilities is to prevent occupational fraud in the form of asset mismanagement and in banks.	31 22%	89 63%	17 12%	3 2%	1 1%	141 100%
3	The fundamental element of internal control is the segregation of duties to other employees.	33 23%	82 58%	17 12%	9 6%	0 0%	141 100%
4	Segregation of duties can help reduce unintentional errors that affect the bottom line of banks businesses.	28 20%	96 68%	13 9%	4 3%	0 0%	141 100%
5	Payroll is one of the major area that require segregation of duty in the banks	25 18%	79 56%	23 16%	13 9%	1 1%	141 100%
6	Segregation of duties is one of the several steps to improve the internal control of an organization's assets.	41 29%	86 61%	11 8%	3 2%	0 0%	141 100%
7	Implementation of no one person should initiate, approve, record and reconcile transactions will monitor fraud in banks.	53 37%	66 47%	9 6%	7 5%	6 4%	141 100%

Source: Field Survey 2016

The findings in Table 2 above indicated when asked as to whether effective segregation of duties in banks will eradicate fraud, 35% of the respondents strongly agreed, 57% agreed, 4% undecided, 3% disagreed and only 1% strongly disagreed. This shows that segregation of duties is highly effective in controlling or preventing fraud in deposit money banks because of it percentage. Therefore, it is advisable for deposit money banks to segregate duties among employees to eradication of fraud feasibility in the banks.

On the issue of whether separation of responsibility will prevent occupational fraud in banks, 22% of the respondents strongly agreed, 63% agreed, 12% undecided, 2% disagreed and only 1% strongly disagreed. It is clear that separation of responsibility among employees will prevent occupational fraud in banks that is the reasons why most of the respondents agreed to it. In fact, the major purpose for separation of responsibility in banks is to curb fraud. As regards to whether segregation of duties to other employees is the fundamental element of internal control, 23% of the respondents strongly agreed, 58% agreed, 12% agreed and 6% disagreed and none goes with strongly disagreed. This indicates that the fundamental element of internal control is the segregation of duties to employees. When asked as to whether segregation of duties can help reduce unintentional errors in banks, it was also established that, 20% of the respondents strongly agreed, 68% agreed, 9% undecided, 3% disagreed none indicated opinion

on strongly disagreed. Separating high-risk duties help to prevent errors and mistakes. Therefore, it is important for deposit money banks to separate high-risk duties to their employees to avoid unintentional error. When asked as to whether payroll is the major area that need segregation of duties in banks, the findings reveals that 18% of the respondents strongly agreed, 56% agreed, 12% undecided, 9% disagreed and only 1% strongly disagreed. Payroll is the sum total of all compensation a business must pay to its employees for a set period. It is usually managed by the accounting department and because of it sensitivity, it need segregation of duties to avoid fraud in the bank.

On the issue of whether segregation of duties is one of the several steps to improve internal control in banks, the study indicated that 29% of the respondents strongly agreed, 61% agreed, 8% undecided, 2% disagreed and none indicated opinion on strongly disagreed. No doubt, segregation of duties is one the several steps to improve internal control in deposit money banks. More so, when asked on one person should not initiate, approve, record transactions and also reconcile balances, handle assets and review report, 37% strongly agreed, 47% agreed, 6% undecided, 5% disagreed and 4% strongly disagreed. If we say one person should initiate, approve, record transactions and also reconcile balances, handle assets and review report, definitely, fraud will occur easily but if it will go through other people, there is every tendency someone will dictate and expose it along the way. So therefore, it is quite important for banks to segregate in order to avoid this easy way of fraud.

Table 3: Responses on effects of close circuit television on fraud prevention in selected deposit money banks in Maiduguri Metropolis Borno State, Nigeria

	<i>Close Circuit Television</i>						
1	Effective close circuit television can curb the menace of fraud in banks.	38 27%	86 61%	14 10%	2 1%	1 1%	141 100%
2	Use of close circuit television as a means of control measures will have positive impact in averting fraud in the banks.	56 40%	67 48%	13 9%	2 1%	3 2%	141 100%
3	In close circuit, television signals are not distributed but are monitored, primary for surveillance and security purposes in order to reduce fraud in banks.	37 26%	74 52%	22 16%	6 4%	2 1%	141 100%
4	Is easy to detect the perpetrators of fraud in banks by obtaining a visual record of person's activity using close circuit television surveillance.	48 34%	77 55%	10 7%	6 4%	0 0%	141 100%
5	Close circuit television obtained visual record of human activities in banks to curb fraud but not fraud on paper.	18 13%	82 58%	23 16%	14 10%	4 3%	141 100%
6	The close circuit television helps in securing banks premises through camera surveillance to curb fraud.	23 16%	49 25%	35 35%	28 20%	6 4%	141 100%

Source: Field Survey 2016

The findings in table 3 above, question was asked as to whether effective close circuit television can curb fraud in banks, 27% of the respondents strongly agreed, 61% agreed, 10% undecided, 1% disagreed and only 1% strongly disagreed. Based on the responses by the respondents, one can conclude that effective close circuit television can control fraud in banks. When asked as

regards to use of close circuit television as a means of control measures will have positive impact in averting fraud in banks, 40% of the respondents strongly agreed, 48% agreed, 9% undecided, 1% disagreed and only 2% strongly disagreed. Since majority of the respondents has concurred that close circuit television will have positive impact in averting fraud, it is advisable for the management of the deposit money banks to install close circuit television in all of the banking environment.

On the issue of whether close circuit television signals are not distributed but are monitored for surveillance in banks to control fraud, the study indicated that 26% of the respondents strongly agreed, 52% agreed, 16% undecided, 4% disagreed and 1% strongly disagreed. The respondents that close circuit television signals are not distributed but monitored for surveillance in banks to control fraud unanimously agreed it. More so, when asked as to whether it is easy to detect perpetrators of fraud in banks by obtaining a visual record of person’s activity using close circuit television surveillance, 34% strongly agreed, 55% agreed, 7% undecided, 4% disagreed and none strongly disagreed. The majority of the respondent agreed that, it is easy to detect perpetrators of fraud in banks through close circuit television surveillance because the only thing to do is to check records of the activities of that particular date on the camera and display.

On the issue of whether close circuit television obtained visual records to curb fraud in banks but not on paper, 13% of the respondents strongly agreed, 58% agreed, 16% undecided, 10% disagreed and 3% strongly disagreed. Majority of the respondents agreed that close circuit television does not protect fraud on paper. This is one of the disadvantages of close circuit television but credit goes to segregation of duties because it helps protect fraud on paper since it has to go through many. As regards to whether close circuit television helps in securing banks premises through the use of camera surveillance to curb fraud, 16% of the respondents strongly agreed, 25% agreed, 35% undecided, 20% disagreed and only 4% strongly disagreed. The majority of the respondents agreed that close circuit television helps in securing banks premises using camera surveillance to curb fraud.

TABLE 4: Responses on effects of password protection on fraud prevention in selected deposit money banks in Maiduguri Metropolis Borno State, Nigeria

<i>Password Protection</i>							
1	The password employs digital signature in order to curb the menace of fraud in banks.	44 31%	65 46%	15 11%	17 12%	0 0%	141 100%
2	The password is used by ensuring managers capable of accessing into the user computer’s security and auditing features.	24 17%	65 46%	25 17%	22 16%	5 4%	141 100%
3	The password protection is effective because it requires password before gaining access to information available computer.	20 14%	68 48%	24 17%	24 17%	5 4%	141 100%
4	An employee password ought to be changed regularly to be more effective and prevent others from getting access to the password to defraud.	59 42%	72 51%	9 6%	1 1%	0 0%	141 100%

Source: Field Survey 2016

The findings of study in table 4 further established on the issue of password protection as to whether password employs digital signature in order to curb the menace of fraud in the banks, 31% of the respondents strongly agreed, 46% agreed, 11% undecided, 12% disagreed and none indicated opinion on strongly disagreed. Digital signature as a means of password protection is very effective because person that signs is the only one has access to the information.

On the issue as to whether password are used by ensuring managers capable of accessing into the user computer's security and auditing features, 17% of the respondents strongly agreed, 46% agreed, 17% undecided, 16% disagreed and 0% strongly disagreed. Is good for managers have access to some profile that has auditing features to help in checking fraud in the banks. When asked as to whether password protection is effective because it requires password before gaining access to information available on the systems, 14% of the respondents strongly agreed, 48% agreed, 17% undecided, 17% disagreed and 4% strongly disagreed. The majority of the respondents agreed that password protection is effective because unless an employee releases his password otherwise nobody will get access to the information available on the systems.

Lastly, when asked as to whether An employee password ought to be changed regularly to be more effective and prevent others from getting access to the password to defraud, 42% of the respondents strongly agreed, 51% agreed, 6% undecided, 1% disagreed and none indicted opinion on strongly disagreed. In order to have an effective control system, an employee password ought to be changed regularly in the banks.

Test of Hypotheses

The earlier formulated hypotheses were tested and the outcome of the results discussed.

H₀₁: The segregation of duties has no significant effect on fraud prevention in banking industry. ANOVA test on segregation of duties on fraud prevention in banking industry

SUMMARY

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
SA	7	260	37.14286	115.4762
A	7	579	82.71429	87.2381
U	7	96	13.71429	32.90476
D	7	43	6.142857	14.14286
SD	7	9	1.285714	4.571429

Source: STATA/SPSS

ANOVA

Source of Variation	SS	df	MS	F	P-value	F critical
Between Groups	31307.6	4	7826.9	153.8709	0.0000156	2.689628
Within Groups	1526	30	50.86667			
Total	32833.6	34				

Source: STATA/SPSS

The results above revealed that there are significant effects of segregation of duties on fraud prevention in banking industry since F-calculated (153.8709) is greater than F- critical (2.689628) or p-value (0.0000156) is less than (0.05) level of significance.

Decision Rule: The rule states that the null hypothesis is rejected if the calculated value of F – ratio that is (MS_B/MS_W) is greater than the critical value of F that is $(F_{t-1, N-t})$ as given in the F distribution table otherwise, it stands accepted. Therefore, the null hypothesis, which states that there is no significant effect of segregation of duties on fraud prevention in deposit money banks in Maiduguri Metropolis, is hereby rejected.

H₀₂: The close circuit television has no significant effect on fraud prevention in the banking industry.

SUMMARY: ANOVA test on lose circuit television on fraud prevention in banking industry

Groups	Count	Sum	Average	Variance
SA	6	220	36.66667	207.8667
A	6	435	72.5	175.5
U	6	117	19.5	84.3
D	6	58	9.666667	99.86667
SD	6	16	2.666667	4.666667

Source: STATA/SPSS

ANOVA

Source of Variation	SS	df	MS	F	P-value	F critical
Between Groups	18631.8	4	4657.95	40.70211	0.0000134	2.75871
Within Groups	2861	25	114.44			
Total	21492.8	29				

Source: STATA/SPSS

The results above revealed that there is significant effect on close circuit television on fraud prevention in banking industry since F-calculated (40.70211) is greater than F- critical (2.75871) or p-value (0.0000134) is less than (0.05) level of significance.

Decision Rule: The rule states that the null hypothesis is rejected if the calculated value of F – ratio that is (MS_B/MS_W) is greater than the critical value of F that is $(F_{t-1, N-t})$ as given in the F distribution table otherwise, it stands accepted. Therefore, the null hypothesis which states that there is no significant

effect of close circuit television on fraud prevention in deposit money banks in Maiduguri Metropolis is hereby rejected.

H₀₃: The password protection has no significant effect on fraud prevention in the banking industry.

SUMMARY: ANOVA test on password protection on fraud prevention in banking industry

<i>Groups</i>	<i>Count</i>	<i>Sum</i>	<i>Average</i>	<i>Variance</i>
SA	4	147	36.75	330.25
A	4	270	67.5	11
U	4	73	18.25	58.25
D	4	64	16	108.6667
SD	4	10	2.5	8.333333

Source: STATA/SPSS

ANOVA

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Between Groups	10103.7	4	2525.925	24.45232	00.01	3.055568
Within Groups	1549.5	15	103.3			
Total	11653.2	19				

Source: STATA/SPSS

The results above revealed that there is significant effect of password protection on fraud prevention in banking industry since F-calculated (24.45232) is greater than F- critical (3.055568) or p-value (00.01) is less than 0.05 level of significance.

Decision Rule: The rule states that the null hypothesis is rejected if the calculated value of F – ratio that is (MS_B/MS_W) is greater than the critical value of F that is ($F_{t-1, N-t}$) as given in the F distribution table otherwise, it stands accepted. Therefore, the null hypothesis which states that there is no significant effect of password protection on fraud prevention in deposit money banks in Maiduguri Metropolis is hereby rejected.

Discussion of Findings

The study examined the effects of internal control measures on fraud prevention in selected deposit money banks in Maiduguri Metropolis, Borno State, Nigeria. These effects were examined through the components of internal control measures that is segregation of duties, close circuit television and password protection on fraud prevention. The study reveals that effective segregation of duties that is effective implementation of no one person should initiate transaction, approve transaction, record transaction, reconcile balances, handle assets and review report will monitor and prevent fraud in banks and sometimes provide corrective measures in deposit money banks.

Furthermore, the study also indicates that effective close circuit television will have positive impact in averting fraud in deposit money banks and it is easier to detect the perpetrators of fraud through the visual record of camera

surveillance. However, password protection according to the responses employs the digital signature to protect the access to defraud and employees should change their password regularly to prevent others from getting access to their password because if an employee has access to the password of others, it is easy for him/her to commit fraud and endangered others.

The components of internal control measures (segregation of duties, close circuit television and password protection) on fraud prevention were tested using analysis of variance ANOVA. The details of the results from ANOVA test showed that all the three components of internal control used that is segregation of duties, close circuit television and password protection on fraud prevention to test the hypotheses indicated that there is significant effect of internal control measures on fraud prevention in banking industry.

The test statistics for various components of internal control measures were as follows; segregation of duties (P value= 0.0000156 is less than 0.05 level of significant), close circuit television (P value = 0.0000134 is less than 0.05 level of significant) and password protection (P value = 0.000201 is less than 0.05 level of significant). The ANOVA test values obtained above fell in the rejection regions when compared with critical values at respective degrees of freedom. Likewise the p-values were less than the test value of 0.05 hence, we reject the null hypotheses that there is no significant effect of segregation of duties, close circuit television and password protection on fraud prevention in five deposit money banks in Maiduguri Metropolis, Borno State, Nigeria and concluded that the three components of internal control measures control fraud in banking industry.

Summary of Findings

Fraud is a universal phenomenon that has been in existence for long. It result the largest single cause of banks failure and also the largest source of losses to banks in Nigeria because of the magnitude of the losses and the level of their impact on banking operations. Such fraud include: defalcation of cash, forgeries on negotiable instruments, foreign exchange fraud, treasury fraud and malpractices investment fraud, this has adversely hinder the progress and services provided by these banks as well as affecting the level of confidence which the public and government has in these banks. The need for the internal control measures like segregation of duties, close circuit television and password protection in banks cannot be undermined, due to the fact that the banking sector, which has a crucial role to play in the economic development of a nation, is now being characterized by macro economic instability, slow growth in real economic activities, corruption and the risk of fraud.

The study has best on the objective to; examine the effects of segregations of duties on fraud prevention, assess the effect of close circuit television on fraud prevention, and to examine the effects of password protection on fraud prevention in Maiduguri Metropolis. Apart from the contribution of this study to the existing literatures, the study is beneficial to the management of the banks, the government and other financial institutions to serve as a guide and solution to their identical

or similar problems in related area and/ or business. The study covers five deposit money banks in Maiduguri Metropolis and utilized survey design while primary data sourced through questionnaire administration and data were analysed and presented using analysis of variance. The result of the findings revealed that;

- i. There is significant effect of segregation of duties on fraud prevention in deposit money banks in Maiduguri Metropolis.
- ii. There is significant effect of close circuit television on fraud prevention in deposit money banks in Maiduguri Metropolis.
- iii. There is significant effect of password protection on fraud prevention in deposit money banks in Maiduguri Metropolis.

Conclusion

Fraud has been identified as a major threat to the growth and development of the banking sector globally. This study examines the effect of segregation internal control measures on fraud prevention in deposit money banks. Based on the findings of the study, it was concluded that effective internal control measures established by deposit money banks are able to control fraud in the banks as supported by the study findings on segregation of duties, close circuit television and password protection. The conclusion of this study is that there is a significant effect of internal control measures (segregation of duties, close circuit television and password protection) on fraud prevention in selected deposit money banks in Maiduguri Metropolis Borno State, Nigeria.

Recommendations

Consequent upon several revelations from the research conducted, the followings recommendations from respondents were made:

- i. The banks should develop an effective segregation of duties especially in the area of payroll to prevent occupational fraud in the form of assets mismanagement and to ensure that the bank's assets are safeguarded, of which cash is one. This would go a long way in reducing and curbing the menace of fraud in banks.
- ii. As regard to fraud prevention and detection methods, the banks should take advantage of installing an effective close circuit television in all of the banks to enhance efficiency and smooth operation of the task of detection, prevention and recovery through surveillance. This will definitely reduce the menace of fraud in the banking industry.
- iii. Management of the banks should establish strong password protection that would protect the activities of the employees of the banks and there is the need for the banks management to support particularly the employees and build up an effective password protection. If effective password protection is enhanced it will go a long way in preventing fraud in banks.

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