

**EFFECT OF INTERNAL CONTROL SYSTEMS ON FRAUD
DETECTION AND PREVENTION IN COMMERCIAL BANKS IN
MAIDUGURI, BORNO STATE, NIGERIA**

By

**¹Fatima Alfa Tahir (Ph.D), ²Zannah Bukar Waziri (Ph.D) &
³ Mustapha Momoh (Ph.D)**

^{1&2} Department of Accounting, University of Maiduguri

³ Department of Business Management, University of Maiduguri

Abstract

Literature has indicated that Internal Control Systems have a significant effect on bank performance, productivity and fraud detection and prevention. Other studies have also examined individual components of internal control in relation to fraud detection and prevention in Commercial Banks. However, since the effectiveness of internal control systems depend on the synergy between all the various components, an assessment of all the components will provide greater insight on how controls influence fraud detection and prevention in commercial banks. This study examined the effect of the five components of internal control (control environment, control activities/procedures, risk assessment, information and communication and monitoring) on fraud detection and prevention in commercial banks. A survey research design was employed and data was collected from 115 bank managers, accountants, risk officers and internal auditors of selected banks in Maiduguri. Descriptive statistics was used to analyze the demographic data of respondents while inferential statistics were used to analyze topical data with the aid of statistical package for social sciences (SPSS) version 16. The hypotheses were tested using Multiple Regression and Analysis of Variance. The findings show that all the components of internal control have significant influence on fraud detection and prevention in commercial banks. In particular, risk assessment, information and communication and monitoring has greater influence than the other components. The study's findings have implications to commercial banks, bank regulators and researchers. The study therefore recommended that commercial banks strengthen their controls by paying greater attention to risk assessment, information and communication and monitoring components in order to guard against frauds and financial malpractices.

Keywords: internal controls, fraud prevention, fraud detection, commercial banks

1. Introduction

Internal Control Systems (ICSs) are integral parts of every organization which enhance efficiency of operations, ensure safeguarding of assets, compliance with established laws and guidelines and the attainment of organizational goals in a timely and effective manner. Because a system is made up of interdependent components which together function as a whole, organizations must ensure that every aspect of their ICSs is well organized, controlled and coordinated. ICSs are especially important in the banking industry because of the significant role Commercial Banks (CBs) play in the financial industry. CBs not only provide custodial services of cash and valuables, they are also intermediaries who mobilize funds from surplus to deficit sectors for investments (Okonkwo & Ezegbu, 2016). CBs also provide avenues through which monetary policies are implemented and as such play an important role in the success or otherwise of these policies which have far reaching consequences on not only investors and the banking industry but also the economy as a whole (Adeyemo, 2012). For this reason, the financial health and stability of CBs is of paramount importance and any factor(s) which may impact on the smooth running of banks is of interest to researchers, the banks and government. One of the ways CBs can ensure that they meet their objectives efficiently and effectively is by ensuring their accounting system and in particular, the internal control system is sound, strong and effective.

Internal Control Systems (ICSs) are a system of procedures established by the management of organizations in order to obtain reasonable assurance that operations comply with applicable regulations, operations are efficient and effective, financial reports are credible and reliable, organizational assets are safeguarded and the organization meets its stated objectives (Grant, Miller, & Alali, 2008). The effective coordination of the ICSs helps prevent errors, irregularities or frauds by constant monitoring financial reporting processes in line with existing regulatory frameworks. Hence, deviations from targets are restricted to a reasonable level that does not threaten financial procedures and reports. In this regard, auditors (both internal and external) regularly review the effectiveness of the ICS to determine if the system is being applied as intended (Fadzil, Haron & Jantan, 2005). ICSs generally focus on proper identification, assessment and monitoring of risk, control procedures for individual operations, harnessing of dependable information systems which immediately communicates abnormalities to management, ensure detailed and regular reporting and

monitoring of all operations (Opromolla & Maccarini, 2010). ICS are a system of interrelated components designed by management of organizations and function together to achieve the objectives of the organization. According to the Basel Committee (2011), these components consist of the control environment, risk assessment, control activities, information and communication and monitoring activities. These components must exist and function appropriately in order for the ICS to be strong and sound. The importance of sound ICS in MDBs cannot be overemphasized and has attracted scholarly and regulatory attention in recent times. This is because of the enormous losses suffered by many MDBs. Investigations have shown that such colossal losses could have been avoided had the banks maintained sound and effective ICS which could have prevented or alerted management about deviations or system compromises.

Fraud is an act of intentional deception perpetrated by individuals or organizations with the sole purpose of obtaining a personal or financial benefit by advantage of another person or organization. Fraud can manifest in various forms such as theft, manipulation, falsification or alteration of records, misappropriation, embezzlement of cash or corporate assets or fraudulent financial reporting. Measures to prevent fraud (fraud deterrence) or identify and detect fraud (fraud detection) are usually employed by organizations to work in congruence. However, while fraud detection should be pursued on as continuous process in response to evolving fraud mechanisms and relies on evaluations of processes, fraud prevention heavily relies on the ICS. This is because fraud prevention involves segregation of duties, organization and supervision of staff, monitoring of work procedures and authorization control of procedures and operations (Kimani, 2011).

The incidence of employee bank frauds in Nigeria and globally has been on the rise. The deputy governor of central bank of Nigeria on operations, Adelabu (2016) reports that 19,531 fraud cases were reported by banks in 2016 compared to the 10,743 reported in 2015. Of these cases, across the counter transactions amounting to N511.07million accounted for the highest losses. The cost of fraud to banks is hard to ascertain as some fraudsters get away with their crime. Similarly, not all fraud is reported and legal action pursued even when uncovered. And with the advancement in technology, fraudsters are resorting to innovations and the internet to commit frauds. Bank employees in particular are well acquainted with the accounting systems and operations and are privy to classified information which provide an inducement and opportunity to commit fraud. In the face of these

challenges, CBs therefore need to give constant attention to their ICSs in order to prevent or reduce the likelihood of fraud to the barest minimum. It is against this background that this paper seeks to examine the effect of ICSs on fraud prevention in selected commercial banks in Maiduguri, Borno State, Nigeria.

1.2 Problem Statement

ICS is essential to an accounting system because it enhances the efficiency and effectiveness of operations. A sound ICS ensures that operations are adequately documented in detail, assets are appropriately valued and documented, transactions are correctly recorded and classified, summarized and posted and responsibility and authority is effectively discharged. All CBs have ICS. However, whether or not these controls are being applied and complied with as stipulated remains debatable. Most often than not, those charged with the responsibility of maintaining such controls override them thereby introducing lapses in the system and questioning the reliability of the whole system. Furthermore, employees exploit their knowledge of the system by colluding among themselves to allow deviations and manipulations to pass through checks and balances. In other instances, management fails to update and review existing controls making the whole system porous to exploitation. Fraudsters are using technology to devise smarter ways of manipulating records and misappropriation of cash and organizational assets. In the light of these problems and challenges, it is pertinent that management of CBs and regulatory authorities look into how ICSs can be effectively harnessed in order to eliminate or reduce fraud incidence to the barest minimum. This study therefore seeks to breach this gap by providing empirical evidence on the effect of ICSs on fraud prevention in CBs.

There is a lot of literature on ICSs and fraud detection or prevention in DMBs. However, most of these studies focus on different aspects of ICS. For instance, some studies examined components of ICS and how they prevent fraud (e.g. Okwonkwo & Ezegebu, 2016; Kabue, 2015; Ajala, Amuda & Arulogunleye, 2013). Others focused on evaluating the controls of selected CBs (e.g. Owusu-Boateng, Amofa & Owusu, 2017; Adetiloye, Olokoyo & Taiwo, 2016; Abiola & Oyewole, 2013). A third group examined perceptions of bankers and users about ICSs and fraud in CBs (e.g. Onyefulu & Ofor, 2016; Agyeman, 2016; Abiola, 2009; Bierstaker, Brody & Pacini, 2006). Of all the studies, none has considered the effect of all the components parts of ICS as a whole on fraud prevention and detection. This is important

because ICSs is a collection of interrelated components and not selected components. Furthermore, although a few studies (e.g. Alleyne & Howard, 2005; Bakre, 2007; Lange, 2008) examined external auditors' role in fraud detection and prevention, the results are conflicting and therefore inconclusive. This further implies that perceptions differ about the effect of internal controls and fraud detection and prevention. Hence, in order to get a better understanding of this subject, this paper seeks to examine the effect of all the components of ICSs on prevention and detection of fraud in CBs in Nigeria.

1.3 Objectives of the Study

The main objective of the study is to examine the effect of internal control systems on fraud detection and prevention in commercial banks in Borno State, Nigeria. The specific objectives are to:

- i. Examine the effect of control environment on fraud detection and prevention in selected CBs in Borno state
- ii. Assess the effect of risk assessment on fraud detection and prevention in selected CBs in Borno state
- iii. Investigate the influence of control activities on fraud detection and prevention in selected CBs in Borno state
- iv. Examine the effect of information and communication controls on fraud detection and prevention in selected CBs in Borno state
- v. Assess the effect of monitoring on fraud detection and prevention in selected CBs in Borno state

1.4 Research Questions

In line with the objectives, the study seeks answers to the following questions:

- i. What is the effect of control environment on fraud detection and prevention in selected CBs in Borno state?
- ii. What effect does risk assessment have on fraud detection and prevention in selected CBs in Borno state?
- iii. What influence does control activities have on fraud detection and prevention in selected CBs in Borno state
- iv. What is the effect of information and communication control on fraud detection and prevention in selected CBs in Borno state
- v. What effect does monitoring have on fraud detection and prevention in selected CBs in Borno state

1.5 Hypotheses of the Study

The study proposes the following hypotheses in line with the research objectives and questions raised:

Ho1: Control environment has no significant effect on fraud detection and prevention in selected CBs in Borno state

Ho2: Risk assessment does not significantly affect fraud detection and prevention in selected CBs in Borno state

Ho3: Control activities have no significant effect on fraud detection and prevention in selected CBs in Borno state

Ho4: Information and communication controls do not significantly affect fraud detection and prevention in selected CBs in Borno state

Ho5: Monitoring controls do not significantly affect fraud detection and prevention in selected CBs in Borno state

2. Literature Review

2.1 Overview of the Nigerian Banking Sector

The Nigerian banking sector has witnessed radical reforms over the years from Deregulation (1986-1993) to Re-regulation (1994-1998) then Liberalization reforms (1999–2004) and Recapitalization and Consolidation reforms (2005– 2011). However, the most significant in terms of scope and breadth is the 2004 banking reforms in which the Central Bank of Nigeria (CBN) required that all banks had to meet up a ₦25 billion minimum capital base. The large capital base was expected to provide the banks with a stronger, resilient and more solid foundation that could withstand shocks in the economy while ensuring continued and efficient service delivery. Most of the banks could not meet up the ₦25 billion minimum benchmark and had to merge. Still, others that were more buoyant acquired other banks, reducing the number of money deposit banks from 89 to 25 by December, 2005. Thirteen others failed to meet the deadline and had their banking license revoked. In August 2009, the governor of the CBN announced after an evaluation of the remaining 24 banks that five banks were insolvent. The CBN had to inject the sum of ₦420 billion as a lender of last resort to the banks because the banks in aggregate presented a significant systemic risk to the economy, holding approximately 30 per cent of the deposits in the Nigerian banking system. Some senior executives of the insolvent banks were charged with financial crimes. By October 2009, the CBN had to inject an additional ₦200 billion into three other insolvent banks and dismissed their CEOs. Put together, eight banks were bailed out with ₦620 billion by the CBN, representing 2.5 per

cent of Nigeria's entire 2010 GDP of \$167 billion (Alford, 2011). In January 2010, the CBN issued new regulations that limited the terms of CEOs of banks to a maximum of 10 years in order to enhance the corporate governance of banks and avoid the "sit-tight syndrome" instead of being accountable to their various stakeholders. By March, 2010, the CBN announced its intention to dismantle the universal banking system by categorizing banks according to function with commensurate minimum capital requirement. The expectation was that since the banks served diverse market segments, the minimum benchmark for all banks should be phased out, paving way for each bank to obtain its distinct license. The Asset Management Corporation of Nigeria (AMCON) was also established to absorb the non-performing loans of banks that require assistance. With this intervention, the ratio of non-performing loans to total credits was significantly reduced from 34.4% to 4.95% between November and December, 2011. As at December 2011 there were 24 CBs with 5,789 branches and 816 microfinance banks summing up to a total of 6,605 bank branches (Sanusi, 2012). The banking industry also moved forward by the adoption of the International Financial Reporting Standards (IFRS) aimed at harmonizing global accounting practices and enhance financial discipline and accountability.

In 2012 the Cashless Policy was introduced to curb high operational costs in the management of cash which was costing the banks about 192 billion naira in 2012 (Umejiakwu, 2017). The competition in the banking sector coupled with increased application of Information and Communication Technology (ICT) has resulted in more sophisticated products. This has enhanced the shift to cashless transactions in order to improve service delivery and eliminate or reduce fraud to the barest minimum (Ajala, Amuda & Arulogun, 2013; Tahir, Atabo & Bukar, 2017). In August 2015, the president directed that all Federal Ministries, Departments and Agencies (MDAs) implement the Treasury Single Account (TSA) in line with section 80 and 162 of the 1999 Constitution (as amended) which provides that all revenues expended should be captured in the national budget and be authorized by the National Assembly. This invariably meant that all governmental organizations were to ensure that their revenue accounts maintained in various banks were remitted daily to the TSA account. Following this directive, the Central Bank of Nigeria directed all CBs to implement the Remita e-Collection Platform to facilitate transfer of all government incomes to a consolidated account domiciled with the CBN. However, the TSA has impacted negatively on the liquidity of CBs (Yusuf,

2015) as banks scramble for funds to cover their short term obligations. Moreover, the Nigerian banking sector has felt the impact of TSA in terms of deposits and funding cost structure. According to Yusuf (2015) the adverse implication of the TSA is already unfolding since some banks had to lay off some of their staff due to ministries and agencies massive withdrawal of deposits from CBs in compliance with the federal government directive.

2.2 The Internal Control System (ICSs)

Millichamp (2002) defines Internal Control System (ICSs) as the entire collection of controls, financial and otherwise that are established by management for the purpose of carrying on its business, safeguard organizational assets and protect as far as possible the completeness and correctness of the records. Similarly, The Committee of Sponsoring Organizations of the Tread way Commission (COSO, 2013) explains ICSs as a process that is instituted by an entity's board of directors, administration and other personnel, which is intended to provide reasonable assurance concerning the attainment of objectives such as effectiveness and efficiency of operations, credibility and reliability of financial reports in compliance with existing laws and regulations. According to Hevesi (2005), ICSs refer to an integration of procedures, plans, approaches, policies and efforts of organizations that work together to provide reasonable assurance that organizational goals and objectives will be attained. Ajala, Amuda and Arulogun (2013) assert that internal control encompasses the plans of organizations and all other coordinate methods and measures employed to safeguard its assets, ensure its data is accurate and reliable, promote operational efficiency and encourage observance of prescribed managerial policies. From these definitions, it can therefore be inferred that ICSs are a collection of components established and implemented in order to ensure that economic resources are safeguarded and mobilized efficiently and effectively to accomplish set objectives. The COSO (2013) frame work identified five components of a strong ICS. These are the Control environment, Control procedures/activities, Risk assessment, Information and communication and Monitoring. Amudo and Inanga (2009) contend that a control framework should not place so much emphasis on detailed explanations of system components and their design while ignoring how each system component can be evaluated in terms of efficiency and effectiveness. Thus, the strength and effectiveness of an ICS depends on the smooth functioning and interactions of all the major components of the system.

2.2.1 Control Environment

According to Accounting Technicians Scheme for West Africa (ATSWA), the control environment underpins all the other components because it consist of directors and management efforts, commitment and actions concerning the entire ICS. In other words, the control environment sets the tone and provides the enabling environment for the other components. Idowu and Adedokun (2013) assert that the control environment refers to the management's philosophy and operating style, integrity, ethical values, and discipline and employee competence as enshrined by management. There are however various factors which may enhance or impede the strength of the control environment. For instance, Idowu and Adedokun (2013) report that human resource policies such as adequate delegation of authority and responsibility, employee training and development as well as promotion and compensation policies significantly influences the control environment.

2.2.2 Control Activities

Okonkwo and Ezegbu (2016) define control activities as the policies and procedures established by organizations to ensure employees carry out management directives. These policies and procedures relate to processing of information, segregation of duties, approvals, authorizations, performance reviews, verifications, reconciliations, reviews of operating results and asset security. Control activities can only be efficient and strong if management accounting and information systems are synchronized in an orderly, are timely and responsive. Arens and Lobbecke (1997) note that control activities/procedures are the most noticeable aspect of internal control and most significant in terms of preventing errors or irregularities. Boateng, Amofa and Owusu (2017) concur that control activities are instituted over a range of duties in order to mitigate risks that are capable of inhibiting the organization from achieving its objectives. The General Accounting Office(GAO, 1999) directs that control activities should take place at all levels and functions of an organization. In addition, the control environment is also relevant because it provides motivation for ethical conduct(COSO, 1994).

2.2.3 Risk Assessment

Risk Assessment refers how organizations identify, assess and manage internal and external risks and uncertainties that may hamper the organization from achieving its set objectives. This factor is closely linked to control activities because it is only through proper assessment of risks that organizations are able to identify porous areas and institute control measures to avert deviance from targets. Similarly, risk assessment also complements control activities by following up on compliance to policies, application of rules and regulations, adherence to authority and controls procedures. According to Ajala, Amuda and Arulogun, (2013), organizations should continuously update risk assessment procedures in line with existing threats and environmental changes. Regular risk assessment serves as an early warning system of potential risks, likely errors and loopholes in the accounting system that can be eliminated or minimized to levels that may not compromise the system as a whole (Frazier, 1996; Tadesse, 2006).

2.2.4 Information and Communication

Information and communication controls refer to how organizations identify, capture, process, exchange, and transmit data and information in a defined manner. Complete, accurate, timely and effective communication enables employees to carry out assigned tasks efficiently and effectively (Addey, 2012). According to Idowu and Adedokun (2013) Information and communication controls relate to the means by which organizations identify, capture and exchange financial, operational and compliance data in a timely way. This is because employees with timely, credible and reliable information are more able to carry out, manage and coordinate activities than others who do not. Okonkwo and Ezgbu (2016) report that information and communication controls can lessen the likelihood of fraud in two ways. Firstly, the accuracy and integrity of the information reduces the likelihood of fraud occurrence or its cover-up. Secondly, an effective communication system enhances the likelihood of detecting errors and irregularities (Cendrowski *et al*, 2007)

2.2.5 Monitoring

The quality of existing controls can be assessed by on-going monitoring or periodic evaluations. Monitoring ensures that controls are being applied as prescribed, procedures are carried out as stipulated and regulations are complied with. Monitoring helps in timely identification and

rectification of significant control lapses in the control system. Management can monitor operations and compliance through self-assessments, test of controls or internal audits. According to Lawson (2004), Monitoring provides managers with feedback to make more informed decisions about the control system. Idowu and Adedokun (2013) suggest that significant deficiencies should be reported to employee responsible for that activity as well as higher management so that corrective action can be effected and monitored. The internal audit unit is the unit in charge of appraising and evaluating operations and monitoring the internal control system. It is necessary for every CB to have an internal audit unit or department to confirm that accounting systems are efficient and reliable, provide timely and complete information and safeguards organizational assets from errors, irregularities and misappropriation (Achibong, 1993). Management of CBs through the internal audit unit ensures monitoring is routinely carried out through daily or weekly comparisons and reconciliations. Similarly, separate evaluations are also undertaken periodically to test compliance to the accounting and control system.

2.3 Fraud

Fraud has existed all through history (Kabue, 2015) and has received various scholarly and regulatory definitions. For instance, according to the Fraud Act (2006) fraud can be committed by concealing information that should be disclosed, false representation of facts or through misuse of office or authority. According to Eseoghene (2010) an action is deemed as fraudulent if there is dishonest intention to benefit self at the expense of another individual or organization. Benjamin (2001) explains fraud as a deliberate act by a person or group of persons to conceal the truth or fact in order to derive selfish personal or financial gains. Idowu (2009) defines fraud as the deliberate distortion, suppression or omission of facts through deception in order to gain unfair financial advantage, to the detriment of another person or organization. Other theorist have used terms such as embezzlement, theft, fraudulent financial reporting, misappropriation of assets or any effort to steal or illegally gain, misuse or harm the asset of organizations. From these definitions, it can be deduced that fraud is a deliberate act by a perpetrator that is designed to cause financial harm to others through deception, false or incomplete disclosure of information, misappropriation of resources or theft.

Bank frauds have resulted in the collapse of banks, loss of existing and potential customers and distress in the banking industry. Frauds have also deprived banks of their reputation and goodwill, loss of bank assets and customer deposits resulting in criminal litigation and convictions (Okonkwo & Ezegbu, 2016). According to Benjamin (2001), some frauds in CBs include cash theft, unofficial borrowing, fictitious transactions, fraudulent use of document, conversion of cash to personal use, falsification of figures, unauthorized overdrafts, presentation of forged cheques, posting of fictitious credit and suppressions of cheque. Kabue (2015) asserts that bank fraud has been on the rise due to electronic innovations and the prevalent use of the internet. Cressey(2003) notes that fraud can only happen if three factors are present; pressure, rationalization and opportunity. Employees of CBs are familiar with the systems and have access to classified and confidential information. Together with advancements in technology, the opportunity to commit fraud is ever present. All that is left is some pressure(from family or friends) and the justification that they deserve it for them to become fraudsters.

2.4 Internal Control System and Fraud Prevention

Fraud Prevention refers to instituting controls in order to reduce the likelihood of fraud occurrence in organizations (KPMG, 2008). Strong and effective ICSs are necessary to detect and prevent frauds. The Institute of Internal Auditors (IIA, 2003) reported that risk and control are intricately linked because risks must be first identified and assessed before they are managed to acceptable levels by application of effective and robust ICSs. In order to attain growth, profitability and maximize shareholders' wealth while minimizing losses (Njagi, 2009; Kipro, 2010), CBs must manage their risks through the application of effective internal controls. Additionally, a strong fraud strategy should be embedded in the organizational culture and have management commitment. More worrisome is the fact that fraud and fraudulent practices are on the increase due to advancements made in banking technologies. For example, ACI (2014) reports that detection and prevention of financial crimes and lessening the occurrence of frauds has become a necessity for financial institutions to survive. There are advanced malware, Phishing, Trojans, SMSishing and skimming wares that hackers frequently devise in order to override existing controls. In addition, the cost of fraud is hard to say for certain since not all fraud is revealed and not all revealed fraud is reported and prosecuted. The onus is now on CBs to not only protect

their customers from such vices but also to protect themselves from the consequences of fraud (Kabue, 2015). Protecting against fraud is itself quite challenging because completely eliminating fraud is impossible. CBs need to go extra mile by putting measures in place to detect fraud early enough in order to minimize likely losses. Similarly, Kimani (2011) also reports that early detection can serve as preventive measure thereby ensuring a more robust control system. Strong ICS ensures the financial reports are reliable, assets are safeguarded, regulations are complied with, losses are minimized and the objectives of CBs are achieved.

Fraud is possibly the most disastrous of all risks facing CBs. The magnitude of fraud in Nigerian CBs can be easily inferred from the enormous losses sustained. Overtime, this has led to loss of customer confidence in the banks which invariably affects the growth and profitability of CBs (Popoola, Rayaana, Samsudin & Che Ahmad, 2016). Frauds have also resulted in a decline and eventual loss of physical and financial assets of CBs. More prevalent among the financial crimes in CBs is the insider loan abuses (Ajala, Amuda & Arulogun, 2013). In the past, insider loan abuses has led to liquidation of many banks by NDIC and Central Bank of Nigeria. More recently, the Asset Management Corporation of Nigeria (AMCON) was also established to absorb the non-performing loans of banks which presented a significant problem. Fraud also raises the operational costs of CBs because it leads to a diversion of resources which affects productivity and profitability. Thus, if fraud and financial irregularities are not consistently prevented and addressed, the impact on the banking industry and the economy at large will be disastrous.

Review of Empirical Studies

Internal Control and Fraud Prevention or Detection has received a lot of scholarly attention both globally, within Africa and Nigeria. This is perhaps because of the prevalence and disastrous effect fraud has on investors, organizations and the economy as a whole. For instance, Kabue (2015) investigated the effect of three types of internal controls (reconciliation controls, financial governance controls and reporting and budget controls) on fraud detection and prevention among commercial banks in Kenya. Using an explanatory research design, the study surveyed 43 commercial banks in Kenya. The study employed ordinary linear regression to analyze the data collected. The findings reveal that reconciliation controls

and financial governance control had a negative and significant relationship with fraud prevention and detection while reporting and budget control had a positive and significant relationship with level of fraud prevention and detection. Similarly, Popoola, Rayaana, Samsudin and Che Ahmad (2016) examined the moderating effect of fraud capability on internal industry factors and fraud prevention in Saudi Arabian banking sector. The findings show that the banking sector in Saudi Arabia had strong fraud prevention systems. In addition, fraud capability significantly moderated the relationship between internal industry factors (internal controls, insider involvement, information sharing) and fraud prevention.

Okonkwo and Ezeogu (2016) used a survey to examine the effect of internal control techniques mitigated fraud in Nigerian banks. Instruments were administered to 83 employees and 143 customers of two selected banks (Guaranty Trust Bank and Fidelity Bank PLC). Data was analyzed using descriptive statistics and the hypotheses were tested using Chi-Square statistic at 5% level of significance. The study results show that majority of reported bank frauds were perpetrated by top management staff. In addition, internal control techniques and preventive measures on fraud mitigation employed by banks in checking fraud were not found to be generally effective. Ewa and Udoayang (2012) investigated the impact of internal controls on banks' ability to detect and prevent fraud in Nigeria. The study sourced data from 13 banks using questionnaires. The findings show that internal control design impacts staff likelihood of committing fraud as strong internal control systems served as deterrent to fraud.

Boateng, Amofa and Owusu (2017) examined the efficacy of the internal control system of GN Bank in Ghana. The study surveyed eighty five (85) managers and officers of the bank from the credit and risk departments in the south eastern zone. The study employed descriptive statistics to analyze the data collected. The findings indicate that GN Bank Ghana had a strong internal control system. In particular, regular checks and reviews of control system were frequently carried out in addition to provision of adequate training for credit personnel on internal control procedures. Idowu and Adedokun (2013) investigated the effects of internal control system on fraud detection in selected Nigerian commercial banks. The study surveyed 200 unit heads of 10 selected commercial banks in Lagos. Data was analyzed using correlation and regression analysis. The study reports a significant positive relationship between strong internal control systems, employee training and fraud detection in Nigerian commercial banks. Furthermore,

Ajala, Amuda and Arulogun, (2013) assessed the role of internal control system as preventive measure for fraud in the Nigerian banking sector. The study purposely surveyed employees of five banks (Access bank, Diamond Bank, First Bank of Nigeria, United Bank of Africa and Wema Bank). The findings show that internal control system is a significant preventive measure of fraud in Nigeria banking sector. Similarly, internal control system was also found to have a significant effect on corporate performance of Nigerian banking sector.

Bierstaker, Brody and Pacini (2006) examined accountants, internal auditors, and certified fraud examiners use of fraud prevention and detection methods, and their perceptions of the methods effectiveness. The study surveyed was administered to 86 accountants, internal auditors and certified fraud examiners. The results shows that firewalls, virus and password protection, and internal control review and improvement were the commonest methods used to combat fraud. Continuous auditing, discovery sampling, data mining, forensic accountants, and digital analysis software were less often used, in spite of receiving respondents' high effectiveness ratings. In fact, the use of forensic accountants was reported as the least often used anti-fraud technique despite having the highest mean effectiveness rating. The study also found smaller firms were more averse to spend on fraud prevention and detection technologies while larger firms anti-fraud methods and software appeared to be under-utilized.

Njenga and Osiemo (2013) investigated the effect of fraud risk management on organizational performance of micro finance banks in Kenya. The study stratified respondents along senior, middle and lower management staff. The study employed qualitative and quantitative analysis and analyze the data collected. The results revealed that SMEs had documented policies and procedures that employees abide by. The study also reported that Anti-Fraud Policies had a significant effect on the performance of deposit-taking SMEs. Ewa and Udoayang (2012) investigated the impact of internal controls on banks' ability to detect and prevent fraud in Nigeria. The study sourced data from 13 banks using questionnaires. The findings show that internal control design influences staff intention to commit fraud as strong internal control systems served as deterrent to fraud. Additionally, Wee Goh (2009) examined perceptions of 208 firms' audit committees and board of directors in relation to rectifying material weaknesses in the internal control system. The study also considered whether the severity of material weaknesses affected firm profitability. The findings indicate audit committee members with financial expertise were positively related to timely rectification of material weaknesses whereas independent boards were more likely to resist management pressure and influence on management to correct material weaknesses in the control system. Another study by Barra (2010) examined the effect of penalties and similar controls on employee's inclination to commit fraud. The study surveyed managerial and non-managerial employees and used analytical approach to assess control activities and monitoring function. The study reported that control activities and separation of

duties raises the cost of committing fraud. In other words, the cost of committing fraud far outweighed the benefits envisaged from fraud when employees' duties were segregated. Furthermore, the study revealed that segregation of duties was a least-cost fraud deterrent for non-managerial employees.

Taken together, empirical studies have shown that various types of ICSs are positively related to fraud prevention and detection. However, the effects of components of internal control on fraud prevention and detection still requires further research. This is because internal control embodies different controls which work together to achieve set objectives. This study intends to fill this gap.

Research Methods

The study adopted a survey method and collected cross sectional data from respondents. Eight banks in Maiduguri, were purposely selected. These are: Guaranty Trust Bank PLC, Zenith Bank PLC, Access Bank PLC and Fidelity Bank PLC, Diamond Bank PLC, United Bank for Africa PLC, Ecobank PLC and First Bank of Nigeria PLC. The study employed the convenience sampling technique to select a sample because of the inability to obtain a sampling frame of bankers. Another reason for adopting this technique was because of the type of information sought. The operations unit and managers were targeted because management is responsible for the establishment of a strong internal control system. The internal audit and risk officers were targeted because they are responsible for risk assessment, monitoring and evaluating the effectiveness of the control system. Both groups are also adequately knowledgeable about the accounting and internal control system. Due to the confidential nature of disclosure of information relating to fraud, questions generally focused on prevention and detection strategies. The questionnaire was adapted from prior studies (Okonkwo & Ezegbu, 2013; Boateng, Amofa & Owusu, 2017; Bierstaker, Brody & Pacini, 2006). The questionnaire consisted of questions related to the five major components of the internal control system (Control environment, Control procedures/activities, Risk assessment, Information and communication and Monitoring) and fraud detection and prevention strategies. Responses were captured on a five point likert scale with anchors from 1 "Strongly Disagree" to 5 "Strongly Agree". Twenty five (25) questionnaires were administered to officers of each selected bank, summing up to a total of two hundred (200) questionnaires for the eight banks. Out of these, only one hundred and fifteen (115) were retrieved and found useful for further analysis, representing a response rate of 58%. Data collected was coded and input into the Statistical Package for Social Science (SPSS) software version 16 for analysis.

Analysis of Demographic Information

Table 1 shows the respondents' demographic data. Majority of the respondents (52%) were male and 84 (73%) were within the 26-45 age bracket.

Table 1: Demographic Profile of Respondents

S/N	Items	Frequency	Percentage (%)
1.	Gender		
	Male	60	52
	Female	55	48
2.	Age Category		
	18-25	17	15
	26-35	42	36.5
	36-45	42	36.5
	46-60	14	12
3.	Educational qualification		
	Postgraduate	32	18.4
	First degree/Higher National Diploma	66	60.3
	Diploma/National Certificate of Education	17	21.3
4.	Bank Experience		
	1-5 years	19	16.5
	6-10 years	41	35.7
	11-15 years	25	21.7
	16-20 years	13	11.3
	Over 20 years	17	14.8
5.	Respondent Rank		
	Manager	24	21
	Accountant	44	38
	Risk Officer	24	21
	Internal Auditor	23	20

In terms of educational qualification, 85% of the respondents had attained at least a first degree and 96 (83%) had over 10 years of experience working in the bank. The respondents consisted of 24 (21%) bank managers, 44 (38%) accountants, 24 (21%) risk officers and 23 (20%) internal auditors.

Correlation Analysis

The Pearson Product-Moment Correlation was run on the six variables; Control Environment (Mce), Control Activities/Procedures (Mcap), Risk Assessment (Mras), Information and Communication (Mic), Monitoring (Mmon) and Fraud Detection and Prevention (Mfdp). Table 2 shows the results of the Pearson Correlation for variables examined. All the independent variables (Mce, Mcap, Mic, Mmon, Mras) have high correlation(.920, .911, .907, .931 and .943)with the dependent variable (Mfdp) which aresignificant at 1% (P=.000). This shows there is a high degree of association between the variables as shown in table 2.

Table 2: Pearson Correlation

		Mce	Mcap	Mic	Mras	Mmon	Mfdp
Mce	Pearson Correlation	1					
	Sig. (2-tailed)						
Mcap	Pearson Correlation	.882**	1				
	Sig. (2-tailed)	0.000					
Mic	Pearson Correlation	.871**	.852**	1			
	Sig. (2-tailed)	0.000	0.000				
Mras	Pearson Correlation	.918**	.872**	.858**	1		
	Sig. (2-tailed)	0.000	0.000	0.000			
Mmon	Pearson Correlation	.872**	.877**	.850**	.886**	1	
	Sig. (2-tailed)	0.000	0.000	0.000	0.000		
Mfdp	Pearson Correlation	.920**	.911**	.907**	.931**	.943**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	

** . Correlation is significant at the 0.01 level (2-tailed).

Regression Analysis

Table 3 shows the regression results. The R square of 95.2% and an adjusted R square 95% means that the independent variables (control environment, control activities/procedures, risk assessment, information and communication and monitoring) account for 95% of variation in the dependent variable (fraud prevention and detection) while other variables outside the scope of this study account for the remaining 5%. Furthermore, the F statistic is positive

Effect Of Internal Control Systems On Fraud Detection And Prevention In Commercial Banks In Maiduguri, Borno State, Nigeria

(437.061) and significant at 1% (P=.000) indicating that the model is fit and reliable. The standard error of estimate is also small (.048).

Table3: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	F	Sig.	Durbin-Watson
1	.976 ^a	0.952	0.95	0.04835	437.061	.000 ^a	2.164

a. Predictors: (Constant), Mmon, Mic, Mcap, Mras, Mce

b. Dependent Variable: Mfdp

The coefficients of the regression are presented in table 4. The t value of control environment (Mce) is 1.753 and significant at 10% (P=.082). This provides the basis to reject H01 which states that control environment has no significant effect on fraud detection and prevention in commercial banks. Thus, the alternate hypothesis that control environment has a significant effect on fraud detection and prevention in commercial banks stands accepted. Further, control activities/procedures has a positive t value (2.396) and is significant at 5% (P=.018). This provides evidence to reject H02 which states that control activities/procedures have no significant effect on fraud detection and prevention in commercial banks. Hence, the alternate hypothesis that control activities/procedures have a significant effect on fraud detection and prevention in commercial banks is accepted.

Table 4: Regression Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics		
	B	Std. Error	Beta			Tolerance	VIF	
	(Constant)	0.178	0.093		1.913	0.058		
1	Mce	0.099	0.056	0.106	1.753	0.082	0.118	8.455
	Mcap	0.114	0.047	0.124	2.396	0.018	0.161	6.192
	Mic	0.181	0.043	0.199	4.19	.000	0.193	5.183
	Mras	0.21	0.057	0.221	3.689	.000	0.121	8.237
	Mmon	0.352	0.049	0.376	7.196	.000	0.16	6.268

a. Dependent Variable: Mfdp

In testing H03, the information and communication (Mic) has a positive t value (4.19) and is significant at 1% (P=.000). Thus, H03 which states that information and communication has no significant effect on fraud detection and prevention in commercial banks stands rejected while the alternate hypothesis that information and communication has a significant effect on fraud detection and prevention in commercial banks is accepted. The results on H04 shows that risk assessment (Mras) t value is positive (3.689) and significant at 1% (P=.000). This provides the basis to reject H04 which states that risk assessment has no significant effect on fraud detection and prevention in commercial banks. In other words, the alternate hypothesis that risk assessment has a significant effect on fraud detection and prevention in commercial banks is accepted. Finally, in assessing H05, the t value of monitoring (Mmon) is positive (t=7.196, P=.000) and significant at 1%. Hence, H05 which states that risk assessment has no significant effect on fraud detection and prevention in commercial banks is rejected while the alternate hypothesis that monitoring has a significant effect on fraud detection and prevention in commercial banks is accepted. Taken together, the results of the regression coefficient reveal that information and communication, risk assessment and monitoring have the highest influence on fraud detection and prevention in commercial banks.

Table 5: ANOVA^b

Sum of Squares	df	Mean Square	F	Sig.
5.108	5	1.022	437.061	.000 ^a
0.255	109	0.002		
5.363	114			

a. Predictors: (Constant), Mmon, Mic, Mcap, Mras, Mce

b. Dependent Variable: Mfdp

The robustness of the model was assessed by testing for Multicollinearity and Auto correlation. The Durbin-Watson statistic on table 3 (2.164) is below 4 benchmark which rules out the presence of auto correlation in the model. Similarly, despite the high correlation between the variables, table 4 shows the tolerance value which is less than one (<1) and the Variance Inflation Factor is less than 10 (< 10) are reasonably within limits and rule out the existence of Multicollinearity in the model. Overall, the results show that the model is fit and robust. The ANOVA result on table 5 also shows the F value of 437.061 is significant (P=.000) implying that the independent variables are significantly different from each other in predicting the dependent variable.

Discussion and Conclusions

The study contributes to knowledge in several respects. First, the study extends Ajala, Amuda and Arulogun, (2013) study that internal controls are a significant preventive measure of fraud in Nigeria banking sector. This is also concurs with Idowu and Adedokun (2013) finding that there is positive relationship between strong internal controls and fraud detection in Nigerian banks. Therefore, CBs should strive to ensure their internal controls are strong and effective in order to prevent and detect fraud. Second, the results concur with Barra (2010) study which found that control activities and segregation of duties raises the cost of committing fraud. For instance, firewalls, password protection, continuous auditing, discovery sampling, data mining, and digital analysis need to be regularly updated due to scammers evolving newer techniques to defraud bank customers. Additionally, Njenga and Osiemo (2013) reported that strong internal controls also deters staff intention to commit fraud. Hence, management of CBs need to install and maintain strong accounting and information systems that are robust and adequately protected. Third, of the five components of internal control, information and communication policies, risk assessment and monitoring had the strongest influence on fraud detection and prevention in CBs($t=4.190, 3.689, 7.196$) with significant values at 1% (.000). Hence, CBs need to focus on these key significant components of internal controls in order guard against fraud. Management of CBs should not lose cognizance of the fact that risk assessment and monitoring strategies need to be updated in line with recent practices and technologies. Moreover, risk management and monitoring are continuous processes which need to be factored into strategic plans so that CBs can protect their customers, shareholder and achieve their objectives.

Despite the contribution to knowledge, the study has some limitations. Firstly, the study relied on data from a cross-sectional survey which is prone to several limitations. Secondly, the study did not assess differences in perception among the respondent groups. Third, the study conveniently sampled banks in Maiduguri which inhibits generalization of results to other CBs. The study limitations provide avenues for further research on internal controls and fraud prevention. Future studies could examine the effects of these components in other sectors such as ministries, insurance industries or manufacturing organizations. A mixed method research may also provide greater insight and rigor to the results. Despite these limitations, the study results have important implications to CBs, academics and bank regulatory agencies.

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