CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Fraud poses a massive challenge for many organisations, impacting greatly on bottom-line profits, causing negative publicity and eroding customers, stakeholders and shareholders confidence around the world (Owojori and Asaolu, 2009).There has been considerable public criticism of the attest function performed by auditors of publicly held corporations when performing external audits (Hilzenrath, 2002; Johnson and Masters, 2003; Pulliam and Bandler, 2003). Auditors are responsible for providing reasonable assurance that companies' financial statements are free of material fraud and errors. Respected global audit and financial advisory firm, KPMG, has rated Nigeria as the most fraudulent country in Africa, with the cost of fraud during the first half of 2012 estimated at N225 billion ($1.5 billion) (Adeyemi, 2012).

Audit quality is all about audit risk assessment (Peecher, 2006) and may be improved by enhancing auditors' ability to detect fraud. On the other hand, audit quality enhances corporate governance. Assessing fraud risk is indeed a challenging task for auditors. Macroeconomic forces, excessive risk taking and inadequate regulations of economic and professional practices brought about the worst global recession since the great depression of the 1930's (Moghalu, 2010). The Association of Certified Fraud Examiners (ACFE, 2006) estimates that total annual fraud losses in the U.S. exceed $650 billion and that fraud costs organizations five percent of their annual revenue. Also, according to Wells (2002), one of the most remarkable fraud of the 19th century occurred in the 1970s, when an enterprising insurance salesman, Stanley Goldblum, managed easily to add 65,000 phoney policyholders to his company's – Equity Funding – rolls, along with $800 million of fake assets right under

the nose of its independent Auditor. Since then, financial statement fraud with audit failures have been increasingly a hot issue, including the recent cases of Enron, Waste Management, Xerox and AOL Time Warner, Tyco, WorldCom, Global Crossing. The international auditing firm, Arthur Anderson, which audited Enron, appears to be an example of a firm entangled in a major audit failure. The case brought to light the weaknesses of the audit process. As a result, more people believe professional auditors/accountants have to learn how to detect financial statement fraud more effectively.

Nigeria has had its own share of financial reporting failure problems. According to Egbunike (2009) the recent banking scandals involving chief executives of five banks was glaring pointer. The Central Bank of Nigeria, in a swift move reminiscent of the Asian tsunami, on August 14th 2009, accused the chief executives of the banks of irregular financial reporting and corporate governance dysfunction. The banks were also accused of being over loaded with non-performing loans and with their balance sheets prepared by their auditors to paint a picture of prosperity and buoyancy. The banks include Intercontinental Bank, Union Bank, Oceanic Bank, Afribank and Finbank; by 2012, these banks collapsed and were either merged or acquired by other banks. These were expressed by Obinor (2009) when he quoted Sanusi (2009) that these banks had been living on bubble capital all along, giving false impression about their actual states and coupled with high debt portfolio that were not disclosed in their financial statements. Second, is the case of Lever Brothers Plc (now Unilever) in 1998, where stocks were over-valued to run into billions of Naira (₦). The sad case of African Petroleum Plc in 2000 is another shocking audit failure, where the company's board concealed indebtedness of over ₦22 billion and yet it was not detected in the course of audit for the year. The fraudulent financial reporting issue in Cadbury (Nigeria) Plc is worthy to reference here. The Security and Exchange Commission (SEC) on their investigation of the company

financial reports discovered a whopping colossal sum of ₦13 billion which was fraudulently not reported by the management over a period of time, yet the auditors audited their financial statements within the said time without discovering it. Issues of insider deals and manipulation of security market transactions are rife.

Besides, countries around the world have set codes of best practice as guidelines to address governance and financial reporting anomalies. Such development is one of the best ways to profit from the mistakes of others. In Nigeria, the regulatory authorities have responded by compelling companies to comply with stringent corporate governance codes. However, Idornigie (2010) reports that Nigeria has multiplicity of codes of corporate governance with distinctive dissimilarities namely:

i. Security and Exchange Commission (SEC) code of corporate governance (2003) addresses public companies listed in the Nigeria Stock Exchange (NSE). The code was reviewed in 2011;
ii. Central Bank of Nigeria (CBN) Code (2006) is for banks established under the provisions of the Bank and Other Financial Institutions Act (BOFIA);
iii. National Insurance Commission (NAICOM) Code (2009), is directed at all insurance, reinsurance, broking and loss adjusting companies in Nigeria; and
iv. Pension Commission (PENCOM) Code (2008) is for all licensed pension fund operators.

Despite the interventions of the regulatory authorities, the challenges of ensuring credibility in financial reporting and auditing are still prevalent. It therefore becomes pertinent to investigate the risk factors auditors should apply using fraud pentagon model in order to enhance the relevance of audit and fraud risk assessment in financial statement in Nigeria.

In 1997, in an effort to address concerns of both the profession and the public, the American Institute of Certified Public Accountants (AICPA) and the Auditing Standards Board (ASB) issued Statement on Auditing Standards (SAS) No. 82: Consideration of Fraud in a Financial Statement Audit, which was designed to assist auditors in fraud detection. Relying on academic research and recommendations from the Panel on Audit Effectiveness- the ASB's Fraud Task Force, and various stakeholders, the ASB concluded that SAS No. 82 fell short of its intended goal of enhancing auditors' performance in considering material fraud in financial statements. In an effort to address perceived deficiencies of SAS No. 82, the ASB issued SAS No. 99: "*Consideration of Fraud in a Financial Statement Audit*," in 2002 (AICPA, 2002a). One of the requirements of SAS No. 99 is that the auditors' consideration of fraud must involve the "exchange of ideas or brainstorming among the audit team members, including the auditor with final responsibility for the audit, about how and where they believe the entity's financial statements might be susceptible to material misstatement due to fraud, how management could perpetrate and conceal fraudulent financial reporting, and how assets of the entity could be misappropriated" (ASA 240; ASA 315; ISA 240; ISA 315; SAS No. 99; AICPA, 2002b).

To assist in assessing fraud risk, the Public Company Accounting Oversight Board (PCAOB) has emphasised that detection of fraud is an important objective of an audit and an important focus of the Board. In a report issued by PCAOB, the board reminds the auditors to be diligently focused on their responsibility to detect fraud and has urged auditors to comply with the requirements of Statement on Auditing Standards (SAS) No. 99, *Consideration of Fraud in aFinancial Statement Audit* (PCAOB 2007),thereby improving the likelihood that auditors will detect material misstatements due to fraud in a financial audit. This discussion is to be carried out regardless of any past honest dealings with the entity (Peecher, Schwartz and

Solomon 2007). It is proposed that these requirements will result in a broadening of information used to assess risks of material misstatements, such as, a consideration of external and internal factors affecting the entity which might create incentives toperpetuate fraud provide opportunities tocommit fraud and rationalisation to justify fraudulent action (AICPA 2005). Once fraud risks have been identified, appropriate responses to each can be developed in advance.

According to Okoye (2008), in order to prevent red flags from being viewed as simply a list of ineffective and unrelated cues or being too long a list, where dilution effects might occur due to irrelevant information, the list of the causes of red flags found in SAS No. 99 were summarized in an axiom known as fraud triangle developed from the work of Donald Cressey. He posited that fraud triangle has three elements, which involves the interaction of major classes of fraud risk factors: perceived pressure, perceived opportunity and, rationalization. Though, Wolfe and Hermanson (2004) proffered the fourth element, capability which is called the "Fraud Diamond" to the three-factor theory of Cressey -Fraud triangle. They argue that the Fraud Diamond offers a better view of factors leading to fraud and could enhance both fraud prevention and detection, because the fraud perpetrator must have the necessary traits, abilities, or personal authority to pull off his crime.

However, tailoring with today's environment, Crowe's Fraud Pentagon factored two additional elements with the Fraud Triangle Model which are arrogance and competence. Arrogance or lack of conscience is an attitude of superiority and entitlement or greed on the part of a person who believes that internal controls simply do not personally apply (Crowe, 2011). Auditors should not assume that all the five conditions must be observed or evident before concluding that there are identified risks related to misstatements. Although the risk of

material misstatement due to fraud may be greatest when all five fraud conditions are observed or evident, the auditor cannot assume that, the inability to observe one or two of these conditions means there is less risk of material misstatement due to fraud" (AICPA, 2003). The standard also suggests that the presence of any one set of fraud risk factors alone (pressures, opportunities, rationalizations, capability or arrogance) could be a dominant cause of fraud. Hence, when encountered with any of these fraud risk factors, the auditors should be sceptical and consider adequate measures to investigate for the presence of material misstatements.

SAS No.99 also stipulated that Auditors need effective model(s), ratios or statistical techniques to augment the various Audit analytical procedures usually performed in the cause of their Audit assignment. They need tested ratios that possess the capability of pointing to areas in the Financial Statement prone to manipulation, thus strengthening the substantive tests usually performed on the figures and balances of the Financial Statements (Nwoye, Okoye and Oraka, 2013). The report of the Association of Certified Fraud Examiners (ACFE), USA in 2004, also attested to the above belief. These provide Auditors with a better understanding of what fraud entails, exposing them skilfully to those model indicators and fraud risk factors that constitute and contribute to fraud perpetration in the Financial Statements of commercial banks in Nigeria.

In a nut shell, Crowe's fraud Pentagon model incorporated into Fraud Triangle theory is an important concept introduced at the level of financial statement audits with the global fraud prevalence. This research seeks insight into ways of improving identification of potential material misstatements due to fraud, at the audit planning stage. As outlined above, the emphasis is now shifting towards auditors actively searching for frauds. Auditing standards

now make it compulsory for auditors to discuss at the audit planning stage, how and where the financial statements may be susceptible to fraud. Therefore, the essential import of SAS No. 99 is the change in strategy for anti- fraud war from reactive to proactive.

1.2 Statement of Problem

Frauds and other financial crimes constitute a very serious threat to the survival of the any nation. Frauds in banks are not new. They are as old as the industry itself. It is very widespread and manifests itself in virtually all aspects of national life. The nation, organizations and individuals have lost huge funds to fraudulent practices (Wurim, 2013).
Meanwhile, the importance of deposit money banks as engine of growth for development cannot be over emphasised, but the alarming rate at which this criminal act has permeated Nigeriandeposit money banks in the recent times has made this study more relevant.

The banking business has become more complex with the development in the field of Information and Communication Technology (ICT) which has changed the nature of bank fraud and fraudulent practices. Berney (2008) observes that customers rely heavily on the web for their banking business which leads to an increase in the number of online transactions. Gates and Jacob (2009) and Malphrus (2009) assert that the internet provides fraudsters with more opportunities to attack customers who are not physically present on the web to authenticate transactions.

In Nigeria, in spite of the banking regulation and bank examination by the Central Bank of Nigeria (CBN), the supervisory role of the Nigeria Deposit Insurance Corporation (NDIC), and the Chartered Institute of Bankers of Nigeria (CIBN), there is still a growing concern about fraud and other unethical practices in the commercial banks. Evidence from the NDIC

Report (2008) reveals that the report of the examinations and special investigations showed that some banks were still bedevilled with problems of fraud, weak board and management oversight; fraudulent financial reporting; poor book-keeping practices; non-performing loanwith its attendant large provisioning requirements; related party transactions; poor management, declining asset quality; inadequate debt recovery; liquidity problems; leverage problems; non-compliance with banking laws, rules and regulations. Okpara (2009) found that one of the factors that impacted most on the performance of the banking system in Nigeria was fraudulent practices.

Also, despite the use of several model such as CAMELs model (Capital adequacy, Asset quality, Management efficiency, Earnings strength, Liquidity Position and Sensitivity to market risk) developed in the United States in 1984 to determine the strength and weaknesses of many banks in Nigeria, eight banks failed the stress tests conducted by the Joint audit of CBN/NDIC team of inspectors. The stress revealed fundamental weaknesses in corporate governance and risk management.

Before the establishment of SAS No.99, AICPA (1988) issued SAS 53 to explain the auditors' roles in identifying errors and material misstatements that may affect the financial statement. However, Moyes & Hasan (1996) as cited in Shabnam, Takiah and Zakiah (2014) believe that the concentration on auditors' qualification in fraud detection is insufficient. Therefore, SAS No. 82 was established in 1997 to help auditors in detecting the fraud of financial statements practically. This standard provides more comprehensive instructions about fraud detection by observing high-risk areas and divisions compared to SAS 53. Nevertheless, due to the high rate of business failures, new auditing standards (SAS No. 99) concentrate on the requirements of regulators and auditors for preventing and detecting fraud.

According to Ramos (2003), the objective of SAS 99 is increasing the auditors' role to fully incorporating fraud in the audit process. The fraud risk factors of SAS 99 are based on the fraud triangle model developed by Cressey (1953). Based on this model, the fraud risk factors are categorized into three groups of pressure/motivation, opportunity and rationalization.

Several researches have been carried out based on the Fraud Triangle Model. For example; (Shabnam, Takiah and Zakiah , 2014; Skousen and Wright, 2006; Albrecht, Albrecht and Albrecht, 2008) research on the usefulness of Cressey's fraud risk factor framework adopted from SAS No. 99 to prevent fraud from occurring. Also, a large number of studies have focused on assessing risk of financial statements to find out the possible risk factors and the best model for assessing risk and detecting fraud (Nieschwietz, Schultz & Zimbelman,2000; Wilks & Zimbelman, 2004). Smith, Omar, Syad- Idris and Baharuddin (2005) investigated the most significant factors that were noticed by auditors to find out how auditors' demographic factors influence the significance of fraud risk factors for fraud prevention in Malaysia.

Although, Cressey's fraud triangle was supported and used by Audit Regulators- American Standard Board (ASB) and American Institute of Certified Public Accountant (AICPA). Critics have argued that fraud triangle was found to be incomprehensive in dealing with issues of fraud (Kazeem and Higson, 2012 as cited in Soruke, 2016).

In 2004, Wolfe and Hermanson proffered the fourth element "capability" to be included to the three-factor theory of Cressey-Fraud triangle, called the "Fraud Diamond". They argue that the Fraud Diamond offers a better view of factors leading to fraud and could enhance both fraud prevention and detection, because the fraud perpetrator must have the necessary traits, abilities, or personal authority to pull off his crime. Based on this, the Fraud Diamond

concept was incorporated in the Cressey fraud triangle. However, limited number of studies used Fraud Diamond Model both in and outside Nigeria (Onodi, 2014; Omar and Mohamad, 2010). Their studiessuggested variables as proxy measures for pressure and opportunity, rationalization and capability and test these variables using financial statement of some quoted banks.

However, recent happening in the corporate world with regard to fraud has shown that the aforementioned theories are inadequate to explain the behaviour of a fraudster. Fraud still persists in the banks. Since fraud is a dynamic issue and many of today's largest frauds are committed by intelligent, experienced, creative people, with a solid grasp of company controls and vulnerabilities, SAS No. 99 urge auditors to continually brainstorm at initial planning stage where they search for flaws in their plans on the fraud risk that might endanger auditors in the detection of fraud in the financial statement in Nigeria. The essential import of SAS No. 99 is the change in strategy for anti- fraud war from reactive to proactive.

Nevertheless, in 2011 the Crowe's Fraud Pentagon model was developed by Jonathan Marks which incorporated the fifth element "Arrogance" to be included to the three-factor theory of Cressey-Fraud triangle. Having known that these Fraud Models have been developed in Western countries, there has been concern that these Fraud Models may not fit the peculiar political and corporate governance needs of developing countries, such as Nigeria. Therefore, the researcher is of the opinion that important factor like 'behavioural trait' of the fraud perpetrator be incorporated to Crowes's Fraud Pentagon Model because from the work on learning theory by Edward Thorndike (1898) as cited inMcLeod (2007), operant conditioning involves learning from the consequences of our behaviour. According to *Law of Effect* by Edward Thorndikeand the Skinner's Theory of Behaviourism, any behaviour that is followed

by pleasant consequences is likely to be repeated, and any behaviour followed by unpleasant consequences is likely to be stopped.

The fraud pentagon model in no doubt offered more comprehensive result in fraud risk assessment when compared with other previous models- the fraud triangle model, the fraud diamond model used assessing fraud risk in the deposit money banks in Nigeria and equally contributed to the existing literature by bridging the gap in fraud prevention, detection and deterrence in the commercial banks in Nigeria.

1.3 Objectives of the Study

The main objective of this study is to examine the effect of fraud pentagon model on fraud risk assessment in Nigerian quoted commercial banks. In order to address the main objective, the following specific objectives were drawn:

1. To determine the effect of financial pressure (FP) indices such as; Changes in Cash Flow (CCF), Non- performing Loan (NPL), Working Capital (WC) and Provision for Non-performing Loan (PNPL) on fraudin the financial statement ofNigerian banks.
2. To determine the effect of opportunity (OPR) indices such as; Non- performing loan over Shareholders Fund (NPL/SF), Total Loan over Shareholders Fund (TL/SF) and Non performing Loan Over Total Current Assets (NPL/TCA) on fraud in the financial statement of Nigerian banks.
3. To investigate the effect of rationalization (RAT) indices; Profit after Tax over Dividend paid (PAT/DP) and Earnings before Interest and Tax over Interest Charge (EBIT/IC) on fraud in the financial statement of Nigerian banks.

4. To ascertain the effect of capability (CA) indices; Return on Equity (PATI/SF) and Net Profit Margin (NI/NA)on fraud in the financial statement of Nigerian banks.
5. To appraise the effect of corporate governance (CORP) indices; Debt to Total Assets Ratio (D/TA), Total Liability to Equity Capital (TL/EC) and Equity Capital to Net Loan (EC/NL)on fraud in the financial statement of Nigerian banks.
6. To investigate the effect of behavioural trait (BET) indices; Cash to Current Assets (C/CA) and Cash plus Marketable Security to Current Liability (C/CL) on fraud in the financial statement of Nigerian banks.

1.4 Research Questions

In order to address the above stated objectives, the researcher raised the followingresearch questions:

1. How can financial pressure (FP) indices such as; Changes in Cash Flow (CCF), Non-performing Loan (NPL), Working Capital (WC) and Provision for Non-performing Loan (PNPL) affect fraud in the financial statement of Nigeria banks?
2. How can opportunity (OPR) indices such as; Non-performing loan over Shareholders Fund (NPL/SF), Total Loan over Shareholders Fund (TL/SF) and Non-performing Loan over Total Current Assets (NPL/TCA)affect fraud in the financial statement ofNigerian banks?
3. How can rationalization (RAT) indices;Profit after Tax over Dividend paid (PAT/DP) and Earnings before Interest and Tax over Interest Charge (EBIT/IC) affect fraud in the commercial banks in Nigeria?
4. How can capability (CA) indices; Return on Equity (PATI/SF) and Net Profit Margin (NI/NA)affect fraud in the financial statement of Nigerian banks?

5. How can corporate governance (CORP) indices; Debt to Total Assets Ratio (D/TA), Total Liability to Equity Capital (TL/EC) and Equity Capital to Net Loan (EC/NL)affect fraud in the financial statement ofNigerian banks?
6. How can behavioural trait of individual (BET)indices; Cash to Current Assets (C/CA) and Cashplus Marketable security to Current Liability (CM/CL)affect fraud in the financial statement ofNigerian banks?

1.5 Research Hypotheses

The following hypotheses were formulated in Null form based on the above stated objectives and research questions:

H_{01}: Financial pressure indices do not significantly affect fraud in the financial statement of Nigerian banks.

H_{02}: Opportunity indices do not significantlyaffect fraudin the financial statement of Nigerian banks.

H_{03}: Rationalization indicesdo not significantly affect fraud in the financial statement of Nigerian banks.

H_{04}: Capability indices do notsignificantly affect fraudin the financial statement of Nigerian banks.

H_{05}: Corporate governance indices do not significantly affect fraud in the financial statement of Nigerian banks.

H_{06}: Behavioural trait indicesdo notsignificantly affect fraud in the financial statement of Nigerian banks.

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1.6 Significance of the Study

The researcher believes that the discussions and recommendation of this study would be beneficial to organisations, regulatory authority and the general public in the following ways:

1. The study would help the forensic accountants, audit committees and fraud examiners to understand the financial pressure signal which is embedded in the fraud pentagon model in identifying and investigating the remote cause of fraud concealment.
2. This study would educate bank management team by exposing them on the effect of opportunity whichis embedded in the fraud pentagon model as a determinant of distress symptomsand to form measures to further securitize the banking system.
3. This study will equally restore investors' confidence by knowing whether the banking system is safe and sound through continuous monitoring by the regulatory authorities such as the Central Bank of Nigeria, the Security and Exchange Commission and the Nigeria Deposit Insurance Corporation as the corporate financial reporting will show transparency on the information stated thereon, hence choice for investment decision.
4. Auditors will also be guided on the judgement with regard to SAS No. 99 provision for identification and assessment of capability risk factor in the financial statement of deposit money banks in Nigeria.
5. This study is also significant in that it would help the anti-graft agencies- the Economic and Financial Crimes Commission (EFCC) and the Independent Corrupt Practices & Other Related Offences Commission (ICPC) at ensuring accountability and corporate governance in Nigeria deposit money banks..
6. Moreover, this study is expected to become an academic reference material for students and researchers on fraud and the importance of its prevention due to the high costs of its existence.

1.7 Scope of the Study

This study covers the investigation of fraud risks on the seventeen (17) deposit money banks quoted on the Nigerian Stock Exchange Market. As at the time this research begun,17 banks were listed on the NSE. The period covered in this study is ten years (10yrs) ranging from 2005 to 2014. The researcher chose the fifteen banks because the availability of the financial statements for the period under study. The banking industry was also chosen because it encompasses all the variables proxy for this study in their financial statement.

1.8 Limitations of the Study

The researcher intended to study the seventeen (17) deposit money banks listed on the Nigeria exchange. However, on May 2016, two banks out of the seventeen deposit money banks merged with other banks reducing the number to fifteen deposit money. Also, the study relies on data obtained from secondary source of publish annual statements of companies. Such published annual statements are usually subject to accounting choices and earning management practices, the depth of such practices cannot be ascertained from the face value due to window dressing of the financial statement of some banks.

However, in spite of all these odds, the researcher was able to come out with reliable and reasonable generalisation through scholarly articles and other relevant publications of which proper acknowledgment for such aids were referenced.

1.9 Operational Definition of Terms and Variables

a. **Fraud:**Farlex Financial Dictionary (2012) defines fraud as anyattempt to deceiveanotherforfinancialgain.

b. **Fraud Risk**:Fraud risk is the risk of abuse on assets and of fraud caused by false pretences on financial statements to cause alterations on financial statements enough to adversely influence decisions of the decision-makers (Guredin, 2010).

c. **Fraud Risk Factors**: According to (Wilks and Zimbelman, 2004) fraud risk factors can be defined as events or conditions that indicate *incentives* to perpetrate fraud, *opportunities* to carry out fraud, *rationalizations* to justify a fraudulent action, the *capability* and *behavioural* aspect to use positional authority to pull off a crime.

d. **Audit Risk**: According to the International Auditing andAssurance Standards Board (IAASB), audit risk is definedas follows:

'It is the risk that the auditor expresses an inappropriate audit opinion when the financial statements are materially misstated. Audit risk is a function of material misstatement and detection risk'.

e. **Inherent Risk:** Inherent risk is the susceptibility of an account balance or class of transactions to material misstatement, individually or when aggregated with misstatements in other balances or classes assuming that there were no related internal controls.

f. **Control Risk**: Control risk is the risk of a misstatement that could occur in an account balance or class of transactions and that could be material individually or when aggregated with misstatements in other balances or classes.

g. **Detection Risk**: Detection risk is the risk that auditor's substantive procedures will not detect a misstatement that exist in an account balance or class of transactions that could be material, individually or when aggregated with misstatements in other balances or classes.

h. **Brainstorming:** is a problem-solving technique that involves creating a list that includes a wide variety of related ideas. It is a technique for generating, refining and developing ideas that can be undertaken by individuals, but it is more effective when undertaken by a group of people.

i. **Non-performing Loan:** also called Non Performing Assets (NPAs). A non-performing loan or assets is a credit facility in respect of which the interest and the principal amount has remained past due for a specific period of time (usually 90 days).

i. **Non -Performing Loan coverage ratio:** refers to the ratio of allowance for probable losses on non-performing loan to total non-performing loan. Computed as follows:

$$\frac{\text{Provision for losses on non-performing loan}}{\text{Non-performing loan}} = \frac{\text{PNPL}}{\text{NPL}}$$

ii. **Non-Performing Loan Ratio:** refers to the ratio of non-performing loan to totalloans(gross of allowancefor probable losses). It is measured as:

$$\frac{\text{Non-performing loan}}{\text{Total loan and advances}} = \frac{\text{NPL}}{\text{TL}}$$

j. **Working Capital (WC) Ratio**: this measures the relationship between current assets over current liabilities. It equally indicates the liquidity of the banks to meet its short obligations as they fall due. Computed as follows:

$$\frac{\text{Current assets}}{\text{Current liability}} = \frac{CA}{CL}$$

A ratio of 2:1 is considered appropriate.

k. **Dividend Coverage Ratio** states the number of times an organization is capable of paying dividends to shareholders from the profits earned during an accounting period.Measured as:

$$\frac{\text{Profit After Taxdividend Paid on Irredeemable Preference Share}}{\text{Dividend Paid to Ordinary Shareholders}} = \frac{PAT}{DP}$$

l. **Interest Coverage Ratio:**is a debt ratio and profitability ratio used to determine how easily a company can pay interest on outstanding debt. The interest coverage ratio may be calculated by dividing a company's earnings before interest and taxes (EBIT) during a given period by the amount a company must pay in interest on its debts during the same period. Calculated with the following formula:

$$\frac{\text{Earning Before Interest and TaxEBIT}}{\text{Interest Charge}} = IN$$

m. **Return on Equity**: this measures an organisation's profitability after all expenses have been deducted by indicating how much profit a company generates with shareholders' fund. Computed as follows:

$$\frac{\text{Profit After Tax and Interest}}{\text{Shareholders Fund}} = \frac{PATI}{SF}$$

n. **Net Profit Margin:** this is an indicator of how profitable a company is in relation to its net assets. Calculated as follows:

$$\frac{\text{Net Income}}{\text{Net Assets}} = \frac{NI}{NA}$$

o. **Debt – to- Total Assets:** This ratio measures the amount of the total funds provided by creditors in relation to the total assets of the firm. Debt-to-total asset is given by:

$$\frac{\text{Total Debt x 100}}{\text{Total Assets}} = \frac{TD}{TA}$$

p. **Debt-to–Equity:** This ratio assesses the extent to which firm is using borrowed funds, it is computed by dividing the total debt of a firm (including current liabilities) in the event of shrinking asset values or outright losses. Preference stocks are sometimes included as debt rather than equity when leverage ratios are calculated.

$$\frac{\text{Total Debt x 100}}{\text{Shareholders' Equity}} = \frac{TL}{SE}$$

q. **Equity Capital to Net Loan:**This ratio assesses the extent to which firm is using shareholders' funds, it is computed by dividing the total shareholders' fund over net loan.

$$\frac{\text{Total shareholders fund}}{\text{Net loan}} = \frac{SF}{NL}$$

r. **Cash Ratio**: this ratio takes more stringent view on liquidity. It examines only cash and its equivalent (marketable security) in relation to current liabilities.

It is a measure of most liquid assets of a firm as it considers only cash and its current assets as numerators. Cash ratio is given by:

$$\frac{\text{Cash + marketable Securities}}{\text{Current liabilities}} = \frac{CM}{CL}$$

and

$$\frac{\text{Cash}}{\text{Current assets}} = \frac{C}{CA}$$

s. **Changes in Cash Flow:** is a statement showing changes in cashposition of the firm in the present year less cash flow in the previous year.It is given by:

$CF_t - CF_{t-1}$

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1 Conceptual Framework

2.1.1 The Concept of Fraud Risk Assessment

To protect itself and its stakeholders effectively and efficiently from fraud, an organization should understand fraud risk and the specific risks that directly or indirectly apply to the organization. A structured fraud risk assessment, tailored to the organization's size, complexity, industry, and goals, should be performed and updated periodically. The assessment may be integrated with an overall organizational risk assessment or performed as a stand-alone exercise, but should, at a minimum, include risk identification, risk likelihood and significance assessment, and risk response(ACFE, 2007).

Extant literature has directed our attention toward auditors' inability to detect fraud orproperly analyse fraud-risk factors (Bell &Carcello,2000; Pincus 1989). For example, Pincus (1989) examined theuse of red flag indicators as a method for examining audit fraud risk. Pincus' (1989) research wasmotivated by the increased use of red flag indicators as a method for assessing fraud risk. Usingin-charge auditors from a large Certified Public Account (CPA) firm, Pincus (1989) assigned auditors to either a fraud or nofraud case, and to either the use of a red flag indicator questionnaire or no questionnaire.Auditors' responses were measured on comprehensiveness, uniformity, and fraud risk assessment. The study found that although questionnaire users considered a more comprehensiveset of fraud indicators and exhibited a high degree of uniformity, the participants who did not relyon a questionnaire performed better at assessing fraud risk than those participants who used aquestionnaire. The use of only a red flag questionnaire to assess fraud risk may have limitedauditors' thinking to a restricted set of risks, discouraging them from thinking beyond

theinformation presented to them.When exchanging ideas or brainstorming, SAS No. 99 requires the audit team to considertwo types of fraud: fraudulent financial reporting and misappropriation of assets (AICPA 2002).In order to comply with SAS No. 99, the team must exchange ideas about "how managementcould perpetrate and conceal fraudulent financial reporting.

2.1.2 Fraud Framework

Fraud around the world has different definitions. The American Heritage Dictionary of the English Language (2011)defines fraud as "a deception deliberately practiced in order to secure unfair or unlawful gain, a piece of trickery; a swindle, one who defrauds; a cheat." According to West's Encyclopaedia of American Law (2008), fraud can be defined as afalserepresentation of a matter of fact—whether by words or by conduct, by false or misleadingallegations, or by concealment of whatshouldhavebeendisclosed—thatdeceivesand is intended to deceiveanother so thattheindividualwillactupon it to her or hislegalinjury. Also, Farlex Financial Dictionary (2012) defines fraud as anyattempt to deceiveanotherforfinancialgain.Merriam Webster's dictionary of law (1996) as quoted in Abdullahi and Mansor (2015) defined fraud as "any act , expression, omission or concealment calculated to deceive another to his or her disadvantage, specifically a misrepresentation or concealment with reference to some fact material to a transaction thatis made withknowledge of its falsity, and or in reckless disregard of its truth or falsity andworth the intent to deceive another and that is reasonably relied on by the other who is injured thereby".

A clearexample of fraud is selling a new issuethatdoesnotreallyexist.Thatis,thecompanycancollectmoneyfrominvestorsand,ratherthanu

se it to financeoperations,pocketthemoneyand do nothing.Thereare a number of types of fraud.Commontypesincludeforgeryof documents,falseclaims in insurance, andfilingbankruptcy to avoiddebtratherthanbecause of financialhardship. On the other hand, fraud, as it will be used in this context, is a crime of dishonesty and deception for a gain. It is an intentional distortion of the facts to mislead a victim into believing that something is true, when in fact it is untrue (ACFE, 2001).

The more knowledge the auditor has about fraud investigation types, the more he is able to spot fraud indicators, red flags and perpetrators. One way of classifying fraud is based on its detection and exposure to public. Accordingly, fraud is classified into three groups:

Group 1: Fraud that was exposed and is in the public domain

Group 2: Fraud that was discovered, but details have not been made public

Group 3: Fraud that has not been detected and continues to occur to date

These three groups summed up together constitute the world of fraud (Davia, 2000).

Another distinction is made by SAS No. 99. It identifies two types of fraud based on the employee categories that commit it. Accordingly, SAS No.99 distinguishes between misappropriation of assets perpetrated by all types of employees, including management with the intention to deceive internally, and fraudulent financial reporting perpetrated by management with the intention to deceive stakeholders in general and external users in particular.Both classifications are used together, as they add value to fraud mitigation and detection; starting with the groups followed by perpetrators. First, it sheds light on the importance of perusing proactive fraud auditing since experts estimate that Groups 2 and 3 involve the highest percentages around 40% each (Davia, 2000).

Second, it identifies the broader groups which are also applicable more clearly to the fraudulent activities that lie under operational fraud. And third, it opens the opportunity to extract and analyse the findings of Group I, and use them as guides to identify fraud elements, schemes, perpetrator characteristics and the set of circumstances that facilitate it and the different tools which would help in its detection and prevention. Some common frauds include misrepresentation and concealment of material fact, conflicts of interest, theft of money, property trade secrets or intellectual property and breach of fiduciary duty and statutory offenses.

Sequel to the result of detecting fraud and making it available for the public, some characteristics to fraud perpetrators were distilled. It is believed that Group I fraud is largely committed by inept and greedy perpetrators, whose ineptness and greed resulted in their accidental discovery. Behaviour is a major factor in detection. Perpetrators have excessive drinking or other negative personal vices, get easily annoyed especially at reasonable questioning, provide unreasonable responses to questions, and rarely take vacations. On the other hand, it is recommended to look at their life styles. They continuously brag about significant purchases. Analysing all of the above, we infer that additional characteristics are available in the individuals in Groups II and III that make them remain undetected or simply portray that there is no fraud specific to the company or in particular areas in the company. Consequently, we can think that anyone maycommit fraud (Davia, 2000).

2.1.3 Types of Fraud

2.1.3.1 Concept of Corporate Fraud

Corporate fraud which is a typical type of “Loan fraud” in banks occur when credit is extended without following the credit policy, law, rules and regulations. Loans and other

forms of credit extensions to business and individual customers constitute the main function of financial institutions. Inadequate or absence of collateralized and diversion of loan for other uses different from which it is given constitute fraud. Advanced perpetrations of credit fraud go to the extent of applying credit facility approved for one customer to the credit of another who is often unrelated to the first customer.

Slapper and Tombs (1999) explained the concept of corporate crime as 'criminal acts (of omission or commission) which are the result of deliberate decision making (or culpable negligence) of those who occupy structural positions within the organization as corporate executives of managers'. These decisions are made in accordance with the normative goals of the firm, its standard operating procedures, and its cultural norms, and are intended to benefit the corporation itself. Within the definition of corporate crime are the following:

i. All those acts and omissions which existing bodies of law proscribe and/or require, and
ii. All social harms–encompassing a wide range of acts and omissions that may not be expressly addressed in the laws.

Singleton (2006) summarized the topologies of corporate fraud under three distinct headings; namely:

(a) Insider Fraud against Company.

This Comprises the following acts:

i. Cash diversions, conversions and thefts,
ii. Cheque raising and signature or endorsement forgeries,
iii. Debtors manipulations, such as lapping and fake credit memos,

iv. Creditors manipulations, such as raising or fabricating vendor invoices, benefits claims, and expense vouchers, and allowing vendors, suppliers and contractors to overcharge,

v. Payroll manipulations, such as adding non-existing employees (ghost workers) or altering time cards,

vi. Inventory manipulations and diversions, such as specious reclassifications of inventories to obsolete, damaged or sample status, to create a cache from which thefts can be made more easily; and

vii. Favours and payments to employees by vendors, suppliers, and contractors.

(b) Outsider Fraud against the Company

This covers the following:

i.Vendor, supplier and contractor frauds, such as shipping goods, substituting goods of inferiorquality, over billing, double billing, billing but not delivering ordelivering else-where (air supply),

ii. Vendor, supplier and contractor corruption of employees; and

iii. Customer corruption of employees.

(c) Fraud for the Company

This consists of:

i. Smoothing profits (cooking the books) through practices such as inflating sales, profits and assets, understating expenses, losses and liabilities, not recording or delaying recording of sales returns, early booking of sales, and inflation of ending inventory,

ii. Cheque kiting and price fixing,

iii. Cheating customers by using devices such as short weights, counts and measures; substituting cheaper materials, and false advertising,

iv. Violating governmental regulations, occupational and safety standards, environmental securities, and tax violations,

v. Corrupting customer personnel,

vi. Political corruption; and

vii. Padding cost on government contracts.

However, Wells (2006) defines occupational fraud and abuse to fall into three broad categories which comprise fraudulent financial reporting, misappropriation of assets and bribery and corruption.

2.1.3.2 Computer Fraud

Computer fraud refers to fraud being committed using computer rather than traditional method of paper and pen.

This type of fraud include

I. Hacking into an organization's computer system to system to steal or manipulate information.

II. Unauthorized electronic transfer.

III. Disguising the true nature of a transaction by manipulating input and or data including tampering with programme.

IV. Theft of intellectual property, e.g. engineering drawings, trade secrets, e-books, music etc.

2.1.3.3 Fraudulent Financial Reporting

The National Commission on Fraudulent Financial Reporting defines fraudulent financialreporting as "intentional or reckless conduct, whether by act or omission, that results in materially misleading financial statements" (NCFFR 1987). This can be due to a failure to disclose significant information, overstating earnings, inflating assets or inappropriate accounting procedures (Beasley and Salterio, 2001). SAS No. 99 states that fraudulent financial reporting may be accomplished by:

i. Manipulation, falsification or alteration of accounting records or supporting documentsfrom which financial statements are prepared;
ii. Misrepresentation in or intentional omission from the financial statements of events, transactions or other significant information;
iii. Intentional misapplication of accounting principles relating to amounts, classification, manner of presentation or disclosure (AICPA, 2002).

Financial reporting fraud involves a whole lot of possible areas of fraudulent activity. These include:

i. Fictitious or overstated revenue and assets, in order to inflate income on financial statements, incomes could be overstated by omitting elements that would lower actual revenue. Yet another practice could be premature revenue recognitions, for example, inflating earnings when sales have not been completed, or recognizing revenues whose receipt is contingent upon the completion of a contract. The goal could be present pictures of financial buoyancy that may not be real;
ii. Fictitious reduction of expenses and liabilities to mask a firm's true losses or debts, and thereby improve the bottom line on financial statements;

iii. Deliberate misclassification of revenues and assets. This is quite common in the area of security investments;

iv. Over-valued assets or under-valued expenses and liabilities. These constitute assets whose prices cannot be supported by standard business valuations. When sold, they artificially boost income; and when held in the books, they present a false picture of sound financial position;

v. Omission of liabilities and improper disclosures. A portfolio of non-performing assets deliberately loaded into a firm's balance sheet, can give a picture of false buoyancy;

vi. Related-Party Transaction: referring to interactions between two parties, one of whom can exercise control or significant influence over the operating policies of the other. Usually, a special relationship may exist between the parties, to the extent that the major partner carries out acts or omissions through the minor party.

2.1.3.4Misappropriation of Assets

Misappropriation of assets occurs when one or a group of individuals commit fraud for financial gain (Romney and Steinbart, 2002). SAS No. 99 states that misappropriation of assets may be accomplished by larceny or skimming of assets (examples; cash, inventory, receivables) or fraudulent disbursements. Fraudulent disbursements include billing schemes, payroll schemes, expense reimbursement schemes, and check tampering. Therefore, valuation issues related to recording existing assetsdeserve more focus, given that a majority of frauds involvedasset overstatements. This concern may be heightened asfinancial reporting valuations become more dependent onfair value accounting (COSO report, 2010).

2.1.3.5Bribery and Corruption

These covers bribery, illegal gratuities, economic extortion, invoice kickbacks, bid rigging and other such malfeasance;

Nevertheless, there are different types of financial statement fraud taking place in organisations. The COSO report (2010) cited in Beasley,Carcello,Hermanson andNeal(2010),lists common financial statement fraud techniques in the following categories:

i. Improper Revenue Recognition
ii. Overstatement of Assets other than Accounts Receivable
iii. Understatement of Expenses/Liabilities
iv. Misappropriation of Assets
v. Inappropriate Disclosure
vi. Other Miscellaneous Techniques

The COSO report states that the two most common techniques used by companies to engage in fraudulent activities are improper revenue recognition techniques, which overstate reported revenues, and improper techniques that overstate assets. The researcher therefore, chooses to study the application of fraud pentagon model in fraudulent activities in the financial statement of banking industry in Nigeria.

However, for the purpose of this study we would concentrate on financial statement fraud.

2.1.4 Notable Corporate Financial Scandals

There are cases of corporate financial scandals in recent times and this was necessitated by corporate governance dysfunction in the various organizations that were involved in the scandals. According to Osisioma (2009) and Egbunike (2010), corporate financial scandals in the following organizations were jointly and severally deliberated thus:

I. Telecom

This company reported a string of losses amounting to £3.9 billion in six month ending June 2002.The loss for the comparable period a year before was £349 million. The losses rose from amortization and depreciation charges, which climbed from £2.2 billion to £2.9 billion, including £1.7 billion from newly consolidated companies, and £1.5 billion from goodwill amortization from its US subsidiary. However, the company also announced that while its net loss rose, its net debt had fallen to £64.2 billion, from its peak of £66.4 billion two months earlier.

II. Worldcom

This is another corporate giant in America that treated revenue expenses incurred on maintenance of equipment amounting to $3.85 billion as capital investments. By reclassification, the accounting principles allowed the corporation to amortize expenditure over a very long period of time. If the expenses were written off in the year they were incurred, the company would have reported huge losses that will negatively affect its market stock price. Thus $1.4 billion profits reported in 2001, and the $130 million income stated during the first three months of 2002, were found to be false. This was one of the massive inflation of corporate earnings, over-priced acquisitions and under-secured loans.

III. Enron

This was America energy trading company worth over $70 billion in 2000, with its shares trading for about $90 per share. In 2001, it was forced to admit that its officers had used fraudulent accounting practices to conceal about $600 million in

net losses over a period of three years, 1997 to 2000. The confession led to the writing down of the company's net worth by $1.2 billion, leading to a crisis of confidence in the stock market. When creditor closed in on the company it filed for chapter 11 bankruptcy protections under the US law.

In Nigeria, some notable corporate financial scandals include

a) Afribank Plc

In a related development, Afribank Plc which finally came under the recent scandal was discovered by her managing director then Akinwoto Patrick in 2007 that their accounts were cooked by the directors and external auditors. This was verified by SEC and finally, Akintola William Deloitte (AWA) explained that they applied 100% provisions while auditing the book and the international accounting standards. Two years, CBN reaffirmed the claim contrary to what the auditors and directors earlier claimed.

b) Cadbury Plc

This Security and Exchange Commission (SEC) reported that Cadbury management were actually culpable of their accusation of fraudulent financial position to the tune of N50 million after their investigation.

c) Lever Brothers Plc

The case of lever brothers Plc (Unilever) in 1998 where over-valuation of stocks running into billion of Naira was discovered was one of the corporate financial scandals in Nigeria

On August 14, 2009, Boards of five (5) Mega Banks vacated their posts by the Central Bank of Nigeria following adverse audit findings reported by investigation done by CBN and NDIC. These Banks were loaded down with non-performing loans, and their balance sheets had been made to give a false picture of prosperity and buoyancy. The rush of Initial Public Offers (IPOs) that typified the nation capital market between 2004 and 2008 were also tainted. Evidence was uncovered indicating that offers were packaged to achieve favourable price and market conditions for the financial institution and their management.

The five banks that were involved in the financial scandals include Intercontinental, union Finbank and Afribank. The five banks out of a total portfolio of ₦2.8 trillion had aggregate non-performing loans of ₦1.143 trillion, a whopping 40.81% of the total. Margin loan grated for investment in the capital market, stood at ₦456.28 billion, while exposure to oil and gas sector stood at ₦487.02 billion. With the crash in capital market prices and the plunge in oil prices, the banks immediately came face to face with capital- liquidity problems. As at end of July 2009, the five banks had outstanding balance of ₦127.85 billion at EDW, while their net guaranteed inter-bank loans stood at ₦253.50 billion. Their liquidity ratios ranged from 17.65% to 24% at a time, the regulatory minimum is 25%. The cumulative effect was that the banks needed an additional injection of capital to the tune of ₦204.94 billion to meet the minimum benchmark prescribed for banks. The Central Bank of Nigeria therefore, had to inject additional N420 billion of funds to bail out the five banks that failed the stress test (Egbunike,2010)

2.1.5Nigeria Deposit Insurance Corporation (NDIC) Report on Fraud

According to NDIC (2014) report on audited financials, it was affirmed that the nation's banks remain healthy, even as it noted the growth in the industry's key performance indicators (KPIs). The report however equally noted the significant increase in reported cases

of fraud and forgeries in the industry, besides several others that are neither reported nor captured in official data.

According to NDIC, the reported amount involved and expected loss should be far higher than the figures in table 2.1 because many banks reneged on rendering the required return on fraud. The amount involved in fraud increases from ₦10.6 billion in 2005 and slightly reduced to ₦4.8 billion in 2006. There was continuous high increase in fraud cases as from 2008 to 2010.

In the year ended December 31, 2014, Nigerian banks reported 10,612 fraud cases, as against 3,786 in the corresponding period of 2013, "representing an increase of 182.77 per cent."The amount involved rose by ₦3.81 billion or 17.5 per cent from ₦21.80 billion in 2013 to ₦25.61 billion, even as "expected/actual loss increased from ₦ 5.76 billion in 2013 to ₦6.19 billion."

The report also noted that the rise in "expected/actual loss in fraud and forgeries was mainly due to the astronomical increase in the incidence of web-based (online banking)/ATM and fraudulent transfer/withdrawal of deposit frauds

Within the period, the banking industry grew its asset base by 11.84 per cent, while credits to the economy rose by 25.73 per cent, and deposit liabilities by 7.45 per cent. Profit by industry operators also jumped by 11.31 per cent, just as Capital Adequacy Ratio (CAR) of banks fell by 1.26 percentage points from 17.18 per cent to 15.92 per cent. It however exceeded the minimum capital adequacy threshold of 10 percent.

Table 1: Nigeria Deposit Insurance Corporation (NDIC) Report on Fraud

Year	No. of Fraud and Forgery cases reported	Amount involved (₦ billion)	Total Expected loss (₦ billion)	Percentage of loss on total amount involved (%)
2005	1,229	10,606	5,602	52.82
2006	1,193	4,832	2,768	57.29
2007	1,553	10,006	2,767	27.67
2008	1,974	53,523	6,929	12.89
2009	3,852	41,266	4,812	11.62
2010	5,960	21,291	3,520	16.43
2011	2,527	28,400	4,071	14.33
2012	3,380	18,050	3,678	19.94
2013	3,786	21,795	5,746	26.26
2014	10,621	25,608	6,194	24.19

Source: NDICAnnual Report (2005-2014)

The CBN annual reports recorded a decrease in the amount of expected loss from 5.6 billion in 2005 to 2.8 billion Naira in 2006 and 2007. In 2008, there was an increase in the amount in billion (Naira). From 2009, there were fluctuations in the rate of decrease of the total expected loss. The decrease is not unconnected to the measures adopted by the regulatory bodies to combat fraud and fraudulent activities in banks in Nigeria.

2.1.6Fraud Risk–an Overview

Fraud risk is the risk of abuse on assets and of fraud caused by false pretences on financial statements to cause alterations on financial statements enough to adversely influence decisions of the decision-makers (Guredin, 2010).For an organisation, risks are potential events thatcould influence the achievement of the organisation'sobjectives. Risk management is about understandingthe nature of such events and, where they represent threats, making positive plans to mitigate them. Fraudis a major risk that threatens the business, not only in terms of financial health but also its image andreputation. The establishmentof embedded risk management practices is the key to effective internal control systems.

2.1.6.1Audit Risk Model

Traditionally, auditors have used a risk-based approach in order to minimise the chance of giving an inappropriate audit opinion, and audits conducted in accordance with ISAs must follow the riskbased approach,which should also help to ensure that audit work is carried out efficiently, using the most effective tests based on the auditrisk assessment.

According to the International Auditing andAssurance Standards Board (IAASB), audit risk is definedas:

> *the risk that the auditor expressesan inappropriate audit opinion when the financial statements arematerially misstated. Audit risk is afunction of material misstatementand detection risk.*

Identifying and assessing the risksof material misstatement throughunderstanding the entity and itsenvironment, give extensiveguidance to auditors aboutaudit risk assessment. Audit risk is fundamental to theaudit process because auditorscannot and do not attempt tocheck all transactions. Audit risk is fundamental to theaudit process because auditorscannot and do not attempt tocheck all transactions. Auditors shoulddirect audit work to the key risks(sometimes also described assignificant risks), where it is morelikely that error in transactionsand balances will lead to amaterial misstatement in thefinancial statements. It would beinefficient to address insignificantrisks in a high level of detail, andwhether a risk is classified asa key risk or not is a matter ofjudgment for the auditor.

ISA 200 sets out the overall objectives of the auditor, andthe standard explains the natureand scope of an audit designedto enable an auditor to meetthose objectives.ISA 315 states that the auditor should identify and assess the risks of material misstatement of the financial statement level, and at the assertion level for classes of transactions, account balances, and disclosures.Audit risk, as it directly affects the specific audit approach to the engagement, is generally considered at the account balance or class of transaction level.

Audit risk consists of:

i. the risk (consisting of inherent and control risk) that the account balance or class of transactions contain misstatements that could be material to the financial statements whether individually or when aggregated with misstatements in other balances or classes.

ii. the risk (detection risk) that the auditor will not detect such misstatements.

Audit Risk Model: AR = IR X CR X DR, where AR = Audit Risk, IR = Inherent Risk, CR = Control Risk, DR = Detection Risk

(a) Inherent Risk

Inherent risk is the susceptibility of an account balance or class of transactions to material misstatement, individually or when aggregated with misstatements in other balances or classes assuming that there were no related internal controls. The inherent risk of misstatement is greater for some types of transactions or accounts than for others. For example:

i. Account balances and transactions subject to complex calculations are more susceptible to error than those based on simple calculations.

ii. Assets such as cash are more susceptible to theft than assets such as fixed assets.

iii. Account balances subject to judgment and estimation are more likely to be misstated than account balances based on historical, factual data.

(b) Control Risk

Control risk is the risk of a misstatement that could occur in an account balance or class of transactions and that could be material individually or when aggregated with misstatements in other balances or classes. It will not be prevented or detected and corrected on a timely basis by the accounting and internal control systems.

Control risk will vary inversely with the level of effectiveness of the internal control structure. However, because of the inherent limitations of any internal control structure (those due to human error), there will always be some level of control risk within internal control structure.

(c) Detection Risk

Detection risk is the risk that auditor's substantive procedures will not detect a misstatement that exist in an account balance or class of transactions that could be material, individually or when aggregated with misstatements in other balances or classes.

Detection risk is a function of the effectiveness of auditor's audit procedures and how well the auditor should apply them. Such risk exists partly because auditor typically examine less than 100% of an entity's transactions (sampling risk) and partly because auditor may select inappropriate audit procedures, apply audit procedures incorrectly, or misinterpret the results of audit procedures.

The level of detection risk that auditor can accept varies inversely with the level of inherent and control risk. The higher the inherent and control risk, the less detection risk that auditor can accept to keep the risk of material misstatement at an acceptably low level.

(d) Analytical procedures

Analytical procedures performedas risk assessment proceduresshould help the auditor inidentifying unusual transactionsor positions. They may identifyaspects of the entity of which theauditor was unaware, and mayassist in assessing the risks ofmaterial misstatement in order toprovide a basis for designing andimplementing responses to theassessed risks.

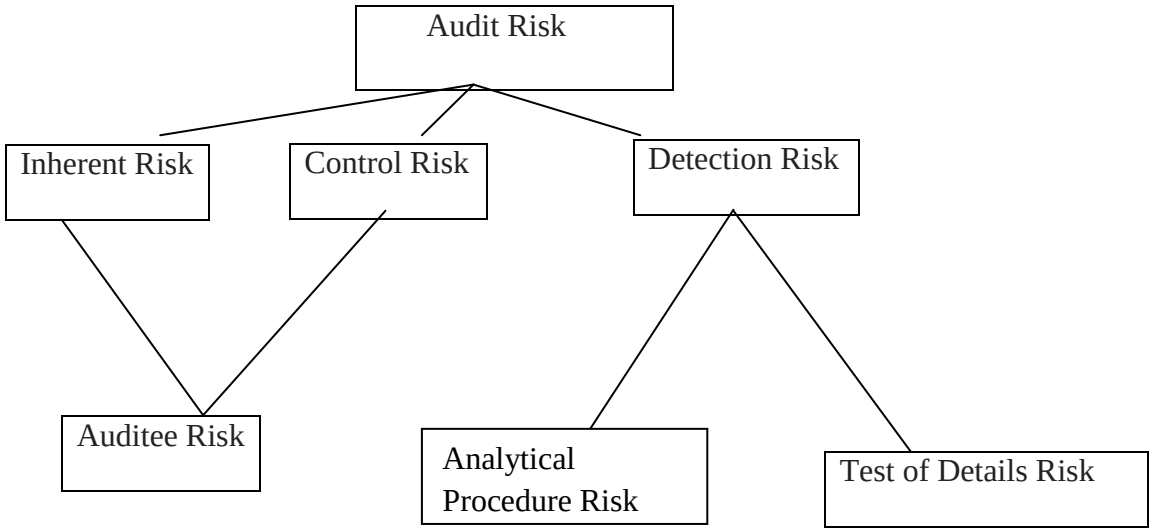

Figure 1: Audit Risk Model:
Source:Dabor and Izedonmi (2010)

ARM = F(AR + APR + TDR + e)

Where, DR = Detection Risk

AR = Auditee Risk

IR = Inherent Risk

CR = Control Risk

APR = Analytical Procedure Risk

TDR = Test of Details Risk

e = error term

The major weakness of Audit risk model is that it does not capture other risks such as business risk s and fraud risks and this contribute to deficiency of SAS No. 82. Therefore, the Modified Audit risk Model (MARM) closed the gap by adding fraud risk.

SAS No.99 and ISA 315 require that risk this assessment procedures should, at a minimum, comprise acombination of the above three procedures through the ASB exposure Draft (ED) and the standard also requires that:

a. The engagement partner and other key engagement team members should brainstorm the susceptibility of the entity's financial statements to material misstatement. Key risks can be identified at any stage of the audit process;

b. Auditors must consider management programs and control to address risks and determine whether such programs and control will mitigate or exacerbate the identified risks;

c. Auditors must develop an appropriate response for each fraud risk identified.

The modified audit risk model (MARM) is depicted in figure 2 below:

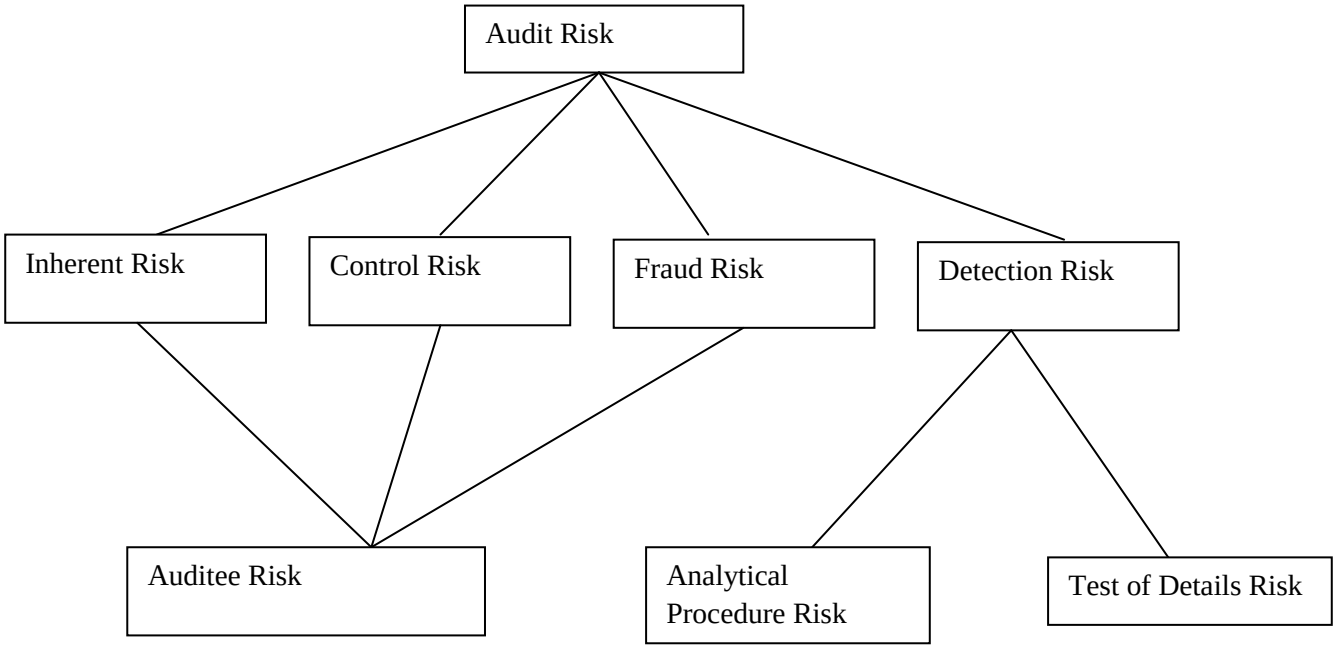

Figure 2: Modified Audit Risk Model (MARM)
Source: Researchers Data, 2016.

MARM = f(IR + CR + FR + DR + e)

Where, DR = Detection Risk

AR = Auditee Risk

IR = Inherent Risk

CR = Control Risk

FR = Fraud Risk

APR = Analytical Procedure Risk

TDR = Test of Details Risk

e = error term

2.1.6.2Fraud Risk Factors

According to (Wilks and Zimbelman, 2004) fraud risk factors can be defined as events or conditions that indicate *incentives* to perpetrate fraud, *opportunities* to carry out fraud, *rationalizations* to justify a fraudulent action, the *capability* and *behavioural* aspect to use positional authority to pull off a crime. SAS No. 82 requires the auditor to specifically assess the risk of material misstatement of the financial statements due to fraud in every audit. It describes two types of fraud – fraudulent financial reporting and misappropriation of assets. The auditor is not expected to assess the risk of fraud as high, medium or low, as might be the case in assessing control risk. Rather, SAS No. 82 asks the auditor to consider risk factors relating to fraudulent financial reporting and misappropriation of assets. It also provided examples of fraud risk factors that, when present, might indicate the presence of fraudulent financial reporting or misappropriation of assets.

However, as stated by the American Institute of Certified Public Accountants (2007), SAS No. 82 focused on a typical list of fraud risk factors that, in practice, were usually reduced to a checklist that individual auditors completed without practical application included in their working papers. Thus, SAS No.99 superseded SAS No.82. Although the auditor's responsibility for detecting fraud has not changed from SAS No.82, as stated by Casabona and Grego (2003), SAS No.99 provides more guidance on how the auditor should plan and perform the audit to obtain reasonable assurance about whether or not the financial statements contain material misstatements due to errors or fraud. SAS No. 99 identifies red flags as risk factors and categorizes those risk factors in three conditions for fraud arising from fraudulent financial reporting and misappropriations of assets. These conditions are referred to as the fraud triangle and they are: incentives/pressures, opportunities, and rationalization/attitudes.

However Wolfe and Hermanson (2004) proffered the theory of the Fraud Diamond in place of the Fraud Triangle by adding the Fourth element or variable, the capability. They argued that the Fraud Diamond offer a better view to factors leading to Fraud. Though, auditors are cautioned not to think that these fraud risk factors are all-inclusive before the incidence of fraud. In fact, research has found that auditors who used different ideas techniques that encouraged them to develop their own fraud risk factors outperformed those who relied on a checklist based on looking only for the illustrated fraud risk factors, Ramos (2003).

Moreover, Apostolou and Crumbley (2008) mentioned that, International Standards on Auditing No. 240 provides similar directions to auditors under SAS No.99 with respect to fraud. Both present specific requirements for auditors to follow like; considering a company's internal controls and procedures, and how these are actually implemented when planning the

audit, designing and conducting audit procedures to respond to the risk, that management could override internal controls and procedures. Again, identifying specific risks where fraud may occur and considering whether any misstatement uncovered during the audit, may be indicative of fraud.

The above standards show that the efforts of standards' setters were directed toward narrowing the expectation gap through increasing auditors' responsibility for detecting fraud. However, regardless of these efforts, the expectation gap still exists. This is supported by what Chemuturi (2008) mentioned in his research where he believes that current professional standards and authoritative guidance require auditors to provide reasonable assurance that financial statements are free from material misstatements, whether caused by errors or fraud. Nevertheless, the lack of a commonly accepted definition of reasonable assurance along with limitations of audit methods in identifying fraud, cost constraints of audits, and high expectations by investors have widened the expectation gap regarding auditor responsibility for detecting fraud.

However, Crowe's fraud pentagon model offered more reasonably assurance or that auditors can effectively detect fraud using the fifth element, the behavioural trait of individual when assessing fraud risk in the financial statement of the deposit money banks in Nigeria. Also, Albrecht, Albrecht and Albrecht (2008) stated that the new model has helped auditors better detect fraud as they became more proactive in brainstorming possible frauds, working with audit committees and management to assess fraud risks. Nonetheless, auditors need to be trained in determining when people are telling the truth or are being deceptive, when documents are real or forged, whether collusion is taking place, or whether fictitious documents have been created.

2.1.7 The Concept of the Fraud Triangle model

The concept of the Fraud Triangle was introduced into the professional literature in Statements on Auditing Standards (SAS) No. 99 - consideration of fraud in a financialstatement. The fraud triangleconsists of three conditions that are generally present whenever fraud occurs. They depicted their relationship with a pyramid.Albrecht, Albrecht and Albrecht (2004) compared this theory to a fire, using the simple explanation of three elements that are necessary to cause a fire, which are (1) oxygen; (2) fuel; and (3) heat. Applying this similar concept that can cause a fire, fraud is unlikely to occur in the absence of the three elements mentioned in the fraud triangle theory, and the severity of fraud depends on the strength of each element (Albrecht, Albrecht and Albrecht, 2004). In other words, for an individual to make unethical decisions, perceived pressure, an opportunity, and a way to rationalise the behaviours must exist.The fraud triangle is as represented in Figure 3.

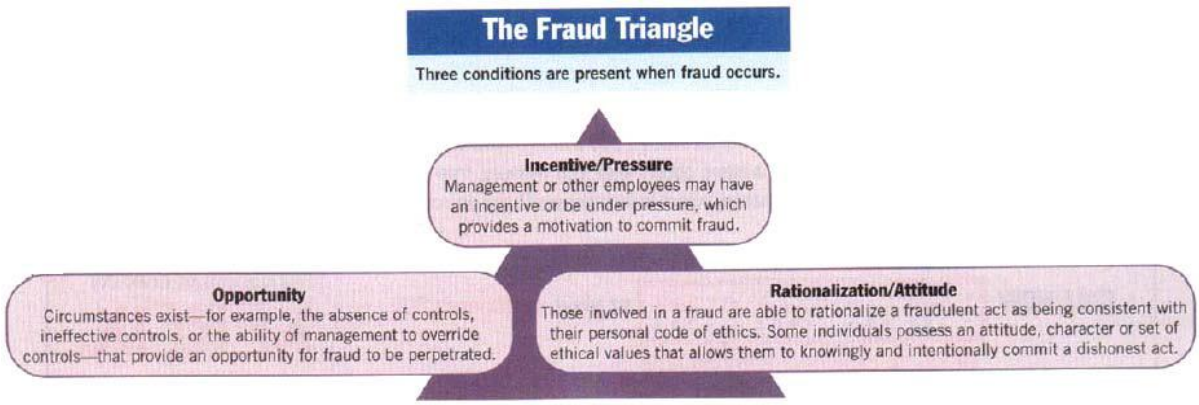

Figure 3: Fraud Triangle
Source: Mark and Jenkins (2003).

Inputs from forensic accountants, academics and researchers consistently showthat evaluation of information about fraud is enhanced when auditors evaluate financial report in thecontext of these three conditions- motives, opportunity, and lack of integrity (Okoye and Gbegi, 2013).

Although, Cressey's fraud triangle was supported and used by Audit Regulators- American Standard Board (ASB) and American Institute of Certified Public Accountant (AICPA). Critics have argued that fraud triangle was found to be incomprehensive in dealing with issues of fraud (Kazeem and Higson, 2012 as cited in Soruke, 2016).

2.1.8 The Concept of Fraud Diamond Model

In addition to addressing incentive, opportunity, andrationalization deficiency, the authors' four-sided "fraud diamond" considers that an individual's capability, namely: personal traits and abilities, play a major role in whether fraud may actually occur even with thepresence of the other three elements.Wolfe and Hermanson (2004) argued that although perceived pressure might coexist with an opportunity and a rationalization, it is unlikely for fraud to take place unless the fourth element (capability) is also present. In other words, the potential perpetrator must have the skills and ability to commit fraud. Many frauds, especially some of the multibillion-dollar ones, would not have occurred without the right person with the right capabilities in place.

Wolfe and Hermanson (2004) maintained that opportunity opens the doorway to fraud, and incentive (i.e. pressure) and rationalization lead a person toward the door. However, capability enables the person to recognize the open doorway as an opportunity and to take advantage of it by walking through repeatedly.They also suggest four observable traits for committing fraud; (1) authoritative position (power) or function within the organisation; (2) capacity to understand and exploit accounting systems and internal control weaknesses; (3) confidence that he/she will not be detected or if caught he/she will get out of it easily; and (4) capability to deal with the stress created within an otherwise good person when he/she

commits bad acts (Wolfe & Hermanson, 2004).Figure 4 below illustrates Fraud Diamond Model as developed by Wolfe and Hermanson.

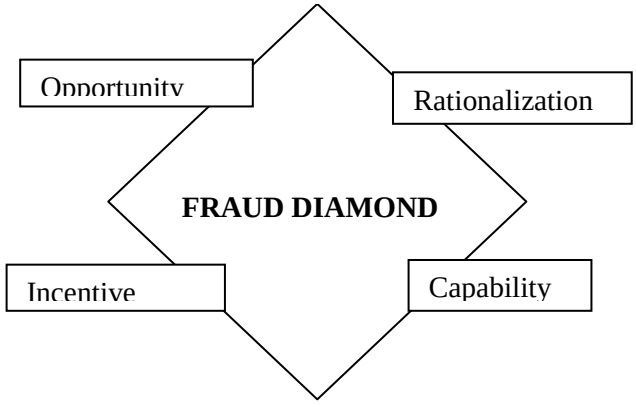

Figure 4: Fraud Diamond Model
Source: Wolfeand Hermanson (2004).

2.1.9 The Concept of Fraud Pentagon Model

The general concept of arrogance and behavioural trait are similarly defined in the Crowe's Fraud Pentagon Model (Crowe, 2011) and fraud behavioural pentagon model. Arrogance represents an employee's ability to override or manipulate internal controls, develop a sophisticated concealment strategy and socially control the situation to his/her advantage (Crowe, 2011). As such, this research measure arrogance/behavioural trait in the same definition from the both Fraud Models (Crowe, 2011 and behavioural pentagon model). According to Crowe (2011), arrogance or lack of conscience is an attitude of superiority and entitlement or greed on the part of a person who believes that internal controls simply do not personally apply (Crowe, 2011). The fraud pentagon model is depicted in figure 5:

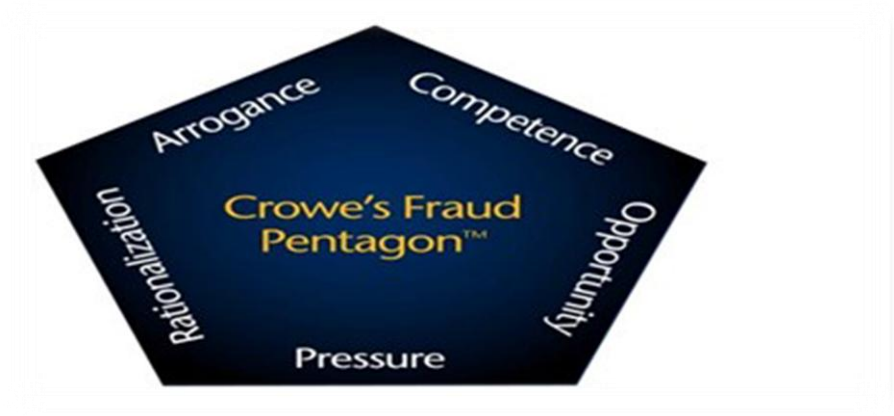

Figure 5: The Crowe's Fraud Pentagon Model
Source: Crowe (2011)

2.1.10 Concept ofFraud Behavioural Pentagon Model

Nevertheless, Onodi (2014) recommends the introduction of "Fraud Box- key Model" into the professional literature to assist auditors in the prevention and detection of fraud. Onodi is of the opinion 'corporate governance' be added to fraud model since it is the key to pressure, opportunity, attitude and capability. The researcher believed that the fraudster's thought process will amount tothinkinginside the boxif thereis goodcorporate governance.Corporate governance dysfunction unlocks the fraudster thought process thereby opening the doorway for fraud tooccur.Figure 6 depicts the Onodi's Fraud Box-Key Model.

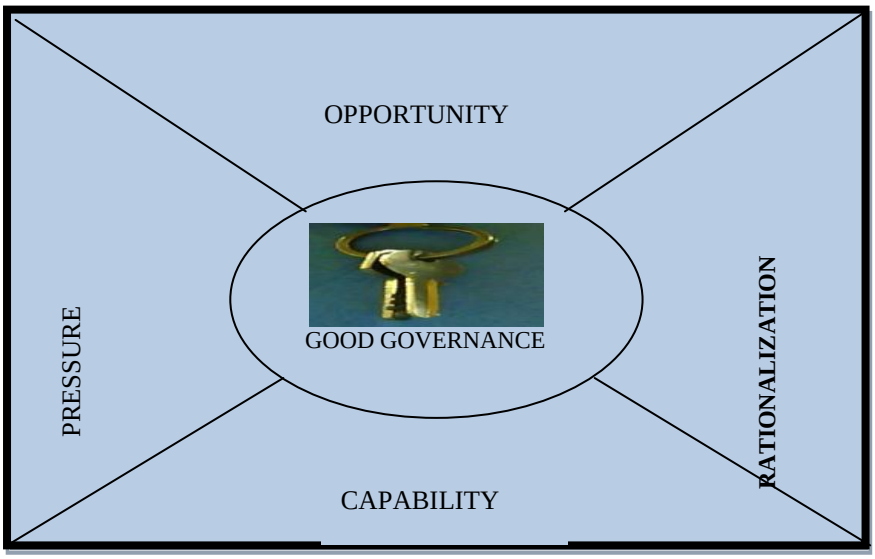

Figure 6: Fraud Box-Key Model
Source: Onodi (2014).

Though study carried out by Onodi (2014) did not incorporate the Crowe's Fraud Pentagon Model in his study. Having known that these Fraud Models have been developed in Western countries, there has been concern that these Fraud Models may not fit the peculiar political and corporate needs of developing countries, such as Nigeria. Therefore, the researcher is of the opinion that important factor like 'behavioural trait' of the fraud perpetrator be incorporated to Crowes's Fraud Pentagon Model. In addition to all fraud model elements linked together,operant conditioning within behaviourism applies. From the work on learning theory by Edward Thorndike (1898) as cited inMcLeod (2007), operant conditioning involves learning from the consequences of our behaviour. According to *Law of Effect* by Edward Thorndikeand the Skinner's Theory of Behaviourism, any behaviour that is followed by pleasant consequences is likely to be repeated, and any behaviour followed by unpleasant consequences is likely to be stopped.

An illustration could be seen in Anambra State governance. When our present Governor, Chief Willie Obiano assumed office in 2014, he mounted security law that anybody caught in the act of kidnapping or armed robbery will be killed and the properties taken over by the government. The law took effect and one multi-millionaire at Onitsha who uses his hotel as a hide out for all crimes was used as an experiment into implementation of the law. Since then, the issue of kidnapping in Anambra State has reduced drastically.

From the forgoing, the researcher therefore, considers the fifth elements, 'the behavioural trait as the master key in a 'Fraud Behavioural Pentagon Model'. It is our opinion that if the outcome of a fraudster's behaviour is favourable and pleasant to him, there is the tendency of repetition of the act since the fraudster lack conscience and believes that internal controls do not personally apply (Mohamed, Ahmed and Jon, 2015).According to Sorunke (2016),

individual behavioural trait consists of lack of self-control, ineffective communication, greed, ignorance and determination which can be emphasised as separate fraud risk factors from attitude if these factors can cause huge influences to commit fraudulent financial reporting among Nigeria commercial banks.

Behavioural trait of an individual is not just a cognitive state of attitude, but rather an emotion that derives the affective state (Edward Thorndike, 1898 as cited inMcLeod 2007). Based on this statement, this study suggested that behavioural trait has a powerful effect on a fraudster mind from a negative emotion rather positive emotion. But if the consequence of the behaviour of a fraudster is dealt with, others fraudster will learn from it. This study also found a new proxy that can be used to measure behavioural trait among commercial banks in Nigeria which is cash ratios: cash/current asset and cash plus marketable security/ current liability. The idea of Fraud Behavioural Pentagon Model is depicted in Figure 7 below.

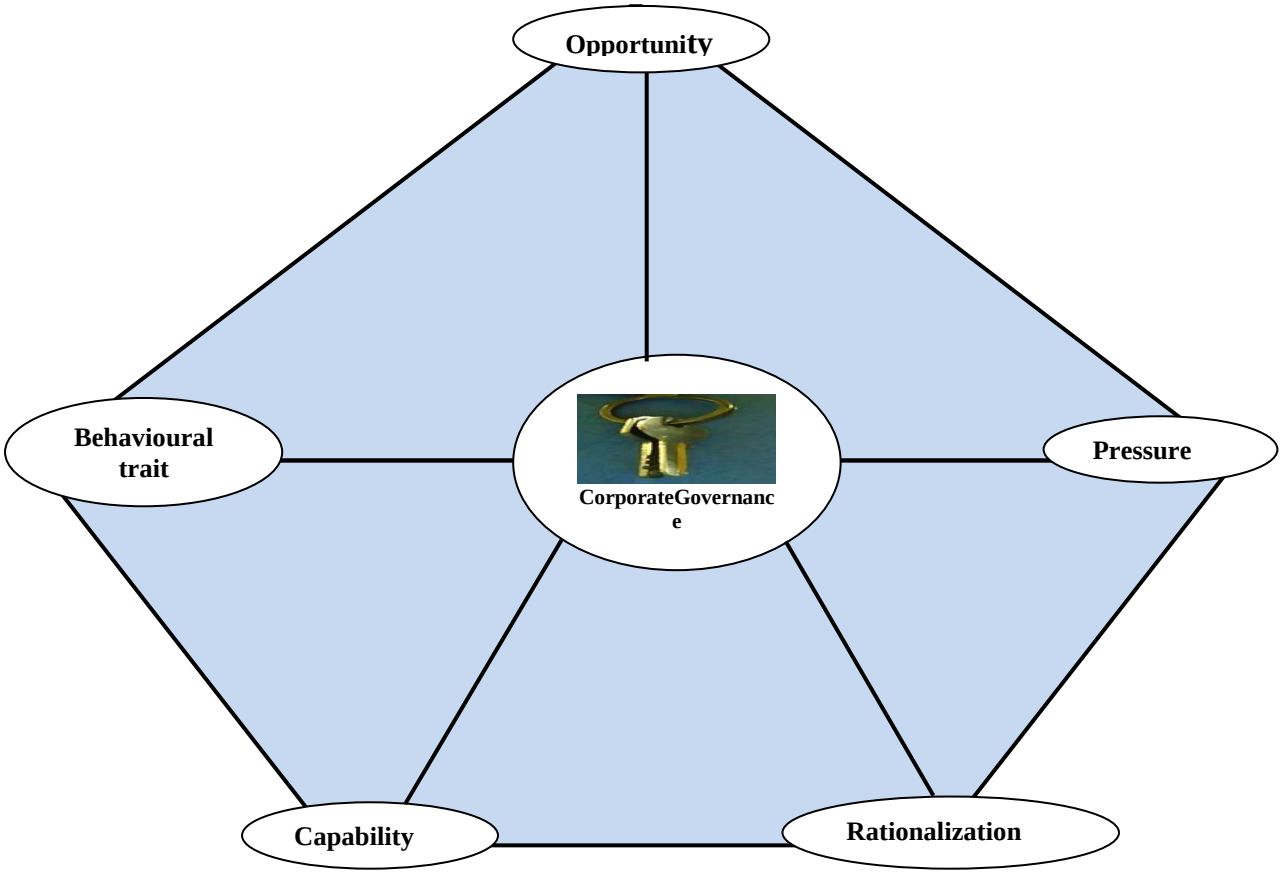

Figure 7: Fraud Behavioural Pentagon Model.
Source: Researcher's Concept, 2015.

2.1.10.1 The Advantages of Fraud Behavioural Pentagon Model

The fraud behavioural pentagon model would be of great importance to the policy makers especially the Government regulatory authorities like the Nigerian Stock Exchange, Security and Exchange Commission, Central Bank of Nigeria, Financial Reporting Council of Nigeria and others to scrutinize the behavioural trait of individual before employment. This would go a long way to deter, prevent and at most detect fraud timely, as the threat offraud that can be contained by taking the right steps in Nigeria deposit money banks.

Moreover, this model would equally help the audit committees and the forensic analysts to ensure that financial statements of firms are properly screened and endorsed by them before being released to the public.Also this study would help anti-graft agencies such as Economic and Financial Crimes Commission (EFCC) and Independent Corrupt Practices & Other Related Offences Commission (ICPC) to take drastic measures on whoever defaults at ensuring accountability and corporate governance in Nigeria deposit money banks.

Again, the regulatory body like the Central Bank of Nigeria should be alert inensuring all deposit money banks put in place appropriate controls and policies, monitors theoperation of these controls and their effectiveness, create favourable working environment andmaintains an anti-fraud culture. This would helpthem to know when the deposit money banks have distress symptomsand to form measures to further securitize the banking system and restore depositor's confidence.

Furthermore, it is hopes that thefinding of this study will help the customers and investors to know whether the banking systemis safe and sound.

The study will also help the bankers to adhere strictly to their banking professional ethics andcode of conduct. In addition, bank staff will use the benefit of the findings of the study to re-evaluatethemselves and adopt appropriate measures and procedures of controlling or preventingbank fraud.

2.1.11 Linking Fraud Risk Factors and Fraud Risk Assessments

Considering fraud risk factors in an audit is important since it is central to what is termed the *'audit expectations gap'*. Because frauds are difficult to find and are hidden by individuals who perpetrate them, auditors attempt to identify risk factors that are associated with the occurrence of fraud. These fraud risk factors are commonly categorized along three dimensions of the fraud triangle: incentives, opportunities, rationalization and capability (Wolfe and Hermanson, 2004). Pressure/Incentivesare present when employees feel pressure to commit fraud. Perceived pressure refers to the factors that lead to unethical behaviours. Every fraud perpetrator faces some pressure to commit unethical behaviour (Abdullahi and Mansor, 2015a). These pressures can either be financial of non-financial pressures. Albrecht Albrecht& Albrecht(2006) pointed out that, since the pressure to commit fraud may not be real it is important to use the word perceived. If the perpetrators believed that they were pressurized, this belief could lead to fraud. Perceived pressure can exist in various ways, especially in non-sharable financial need. Financial pressure is recognized as the most common factor that lead an entity to engage in an evil action. Pressures from personal financial obligations or expectations regarding the entity's profitability may motivate employees to commit fraud in the first place. Other motivators may include gambling or drug addiction, meeting of earnings target for investors, desire of status symbols, houses, cars, etcetera; family problems, including marital and sickness, inability to pay one's bill, meeting of productivity targets at work.

Opportunitiesarise when circumstances within an entity are such that an employee can commit fraud. Employees may have opportunities to commit fraud when there are deficient internal controls or weak corporate governance. When internal auditors cannot regulate the pressure and attitude variables, this may give opportunity for employee to commit fraud.

Lack of control that can induce opportunity risk include; failure to conduct thorough screening on employee who will have access to assets susceptible to misappropriation, inadequate accounting record, lack of supervision, lack of audit trail, lack of segregation of data, failure to mandate employee in sensitive areas to go on vacation, unapproved transactions, lack of physical controls, lack of controls over access to information, failure to discipline perpetrators, significant pressure to obtain additional funding necessary to stay variable and maintain levels of service considering the financial position of the entity, an effective or on existent means of communicating and supporting the entity's accountability for public resources and ethics, especially regarding conflicts of interests and codes of conduct, breakdown of procedures (for example, inappropriate computer access, ineffective physical inventories (Jenfa, 2002).

Some employees rationalizeengaging in fraudulent behaviour because they have attitudes or character traits which allow them to commit a dishonest act. Auditors synthesize their understanding of the fraud risk factors with other information to prepare their fraud risk assessments (AICPA, 2002).Factors associated with acts of fraud include; belief of being overworked, feeling that "everybody else is doing it", low self-esteem or morale, belief that rank has its privileges, feeling of being underpaid, it is only a loan and will be paid back; and nobody will get hurt. According to Wolfe and Hermanson (2004) as cited by Onodi (2014), individual capability to perpetuate fraud arises when the person position within the organization creates an opportunity for him to commit fraud not available to others. Again, the right person for a fraud is smart to understand and exploit internal control weakness and to use position, function, or authorized access to the greatest advantage.

Many of today's largest frauds are committed by intelligent, experienced, creative people, with a solid grasp of company controls and vulnerabilities. This knowledge is used to leverage the person's responsibility over or authorized access to systems or assets. Also the right person has a strong ego and great confidence that he will not be detected, or the person believes that he could easily talk himself out of trouble if caught. Such confidence or arrogance/behavioural trait can affect one's cost-benefit analysis of engaging in fraud; the more confident the person, the lower the estimated cost of fraud will be. In addition, a successful fraudster can coerce others to commit or conceal fraud. A person with a very persuasive personality may be able to convince others to go along with a fraud or to simply look the other way. A successful fraudster lies effectively, convincingly and consistently and to avoid being detected, he boldly looks auditors, investors, right in their eyes. Nonetheless, a successful fraudster deals very well with stress.

Fraud risk assessment sets the tone of the audit. The financial statement auditor must design appropriate audit procedures in order to assess the risk of material misstatements due to fraud or error. This clearly shows that fraud risk assessment has a direct relationship with the audit. Based on guidance provided in SAS No. 99with respect to brainstorming prior to preparation of audit plan there is need to examine the relationship between auditors' fraud riskassessments and the fraud risk factors identified in the client's environment. It is not just brainstorming by any group; the quality of the brainstorming session as determined by the composition of the team would as well be expected to impact on the linkage between fraud risk factors and auditor assessments of fraud risk. In considering incentive, opportunity, rationalization, capability and behavioural consequences of an individual, management has the overall responsibility for ensuring the security and integrity of the assets of a business by putting in place appropriate controls and review measures. In other words, walls of policies,

procedures, techniques, devices and controls need to be erected to surround and isolate each factor in the equation to combat fraud. More so, frequent interaction under a variety of circumstances, both business and social, can provide a meaningful picture of the person's behaviour. If there are consistent statements about certain or tendencies, this information can supplement more direct observations.

2.1.12 Effect of fraud on Deposit Money Banks in Nigeria

Commercial banks are one of the banking sectors which are the main source of funding to business activities. The development role undertaken by banking sector determines the step for development of economy. Hence the stability of banking sector is a key for the development of an economy. The primary function of bank is mobilizing deposits from surplus units to deficit units in the form of loan and advances to various sectors such as agricultural, industry, personal and governments. However, in recent times, the banks have become very cautious in extending loans due to non-performing assets (Sontakke and Tiwari, 2013).

Deposit money banks play a key role in the economy by mobilizing deposits from surplus units to deficit units in the form of loan and advances. As noted by Daniel and Wandera (2013) they play a vital role to emerging economies where most borrowers have no access to capital markets. Thus, they are considered as an intermediary between the depositors and borrowers.Also Rawlin,Shwetha, Sharan and Pradeep (2012), stated that the principal aim of any business is to make profits. That is why any asset created in conduction of business should generate income for the business. They transfer funds from those who do not have productive use of it to those with productive venture. In addition toresource allocation good bank performance rewards the shareholders with sufficient return for theirinvestment. When

there is return there shall be an investment which, in turn, brings about economicgrowth. On the other hand, poor banking performance has a negative repercussion on the economicgrowth and development. Poor performance can lead to runs, failures and crises. Banking crisis couldentail financial crisis which in turn brings the economic meltdown as happened in USA in 2007(Marshall, 2009.) That is why governments regulate the banking sector through their central banks tofoster a sound and healthy banking system which avoid banking crisis and protect the depositors and the economy. Thus, to avoid the crisis due attentionwas given to banking performance.

2.1.13 Effect of Pressure and their Proxy on Fraud

Pressure can result from the fraudster having immediate need for either financial or vice related need. It can be either cash or assets. In some cases, the following are the pressure to commit fraud:

i. The incentive to misstate earnings
ii. Family problem including marital and sickness
iii. Inability to pay one's bill
iv. Meeting of production target at work
v. Desire of status symbols, houses, cars et etcetera
vi. Gambling or drug addition
vii. Meeting of debt covenant
viii. Stock option compensation

The incentive to misstate earnings can arise due to pressure to meet analysts' forecasts,compensation and incentive structures, the need for external financing, or poor performance in settlement of loan borrowed. Erickson, Hanlon, and Maydew (2006)

investigate whether executiveequity incentives are associated with accounting fraud. They examine a sample of firms accused offraud during the 1996–2003 period and do not find any relation between equity incentives and thelikelihood of the firm reporting fraudulent financial information. In contrast, Efendi, Srivastava and Swanson (2007)using a sample of firms that restated their financial statements, find the likelihood of a misstatedfinancial statement increases when the CEO has a sizeable amount of stock options "in-the-money."They also find that misstatements are more likely for firms constrained by debt covenants, firmsraising new debt or equity capital, or firms that have a CEO who serves as the chairman of the board. Burns and Kedia (2006) also document that stock options are associated with strongerincentives to misreport because options make CEO wealth a convex function of stock price.

Beneish (1999) ascited in Hogan, Rezaee, Riley, and Velury(2008)finds that, for a group of firms subject to accounting enforcement actions by theSEC, managers are more likely to sell equity holdings and exercise stock appreciation rights inperiods when earnings are inflated, suggesting insider trading behaviour may be informative aboutearnings overstatements.

More recently, there is evidence that hundreds of firms were involved in intentional backdating of stock options (Lie, 2005), which again provides evidence that stock option compensation provides incentives for fraudulent behaviour. Glass Lewis & Co. (2006) report states that about half of the companies implicated in backdating their stock options have restated their financial statements.

With regard to poorly performing firms, Rosner (2003) examines whether failing firms are more likely to engage in income-increasing manipulation, and whether auditors detect the

overstatements in firms they perceive to be failing. Her findings suggest that the motivation of failingfirms that do not appear distressed on the basis of accrual data, but nonetheless show significantdecreased cash flows, is consistent with material earnings overstatements in non-going-concernyears that are followed by overstatement reversals in going-concern years.

Deposits in banks are offset by higher margins from creation of credits as loans. However, if such assets do not generate any income, the banks` ability to repay the deposit amount on the due date would be in question. Therefore, the banks with such asset would become weak and such weak banks will lose the faith and confidence of the customers. Ultimately, unrecoverable amounts of loans are written off as Nonperforming loan Rawlin, Rajveer, Shwetha, Sharan and Pradeep(2012).

2.1.14Effect of Opportunity and their Proxy on Fraud

Opportunity in fraud triangle has always been associated with the internal control and is a mandatory element to perpetrate and conceal fraud(Schuchter & Levi, 2015). Fraud can happen when one of these three elements namely opportunity, pressure and rationalization capability and behavioural trait exist together or separately in an individual or a group of individuals. Chen and Elder (2007) used three proxies based on TSAS 43 to measure opportunity including related party transactions, CEO duality and difference between control and cash flow rights. Moyes, Lin and Landry (2005) surveyed amongst 77 internal auditors and found that the presence of related party transactions has the second rank amongst various opportunity risk factors. Wilks and Zimbelman (2004) investigated 52 audit managers and suggested that related party transactions had third place amongst six factors. Ming and Wong (2003) also used this proxy to measure the opportunity. But for the purpose of this study,

related party transaction; weak internal control; and rapid growthwere used to assess the opportunity elements in a fraud pentagon model.

Statement on Auditing Standards No. 99 AU Section 316 provides examples of risk factorsthat may increase the opportunity to commit financial statement fraud (AICPA 2002). These riskfactors include:

i. The nature of the industry or the entity's operations such as significant complex orrelated party transactions;
ii. Ineffective monitoring of management;
iii. A complex organizational structure such as one that involves several legal entities;
iv. Ineffective controls due to a lack of monitoring of controls or circumvention of controls;
v. Ineffective means of communicating and supporting the entity's accountability for public resources and ethics;
vi. Lackoftransaction authorization;
vii. Poor accounting record;
viii. Lack of physical control;
ix. Lack of audit trail;
x. Lack of mandatory vacation of employee in key control function;
xi. Lack of establish policies or controls related to investment risk;
xii. Breakdown of procedure such as inappropriate computer access, ineffective physical inventories;
xiii. Lack ofsegregation of duties; and
xiv Failure to discipline perpetrators.

Albrecht and Albrecht (2003) also discuss factors increasing the opportunity to commit fraud and note that having an effective control structure is probably the single most important step to eliminate or minimize opportunity to commit fraudulent acts.

Hogan, Rezaee, Riley, and Velury (2008)survey audit partners that have had experience with financial fraudand find that dominated decisions by management and weak internal controls are the primaryconditions that increase the opportunity for fraud. Moutinho and Smith (2000) examine a model where thestrength of internal controls is inversely related to the propensity of a manager to commit fraud. Intheir model, the auditor's assessment of the control system affects their allocation of effort betweencontrol testing and substantive testing, but the likelihood of detecting the fraud does notincrease when the auditor exerts effort to assess controls.

Also, study by Omar and Mohamad-Din (2010) show that the government auditors perceive an opportunity 'red flags' as an important fraud indicator. Smith, Omar, Sayd Idris, & Baharuddin (2005) have also suggested that opportunity is an important element in assessing fraud risk. Opportunity is a manipulation of internal controls by an individual who wanted to commit fraud, concealing fraud and avoid being punished. An opportunity influences criminal behaviour. For example, if an employee is facing financial pressure but has no opportunity to commit fraud due to a good internal control, then the fraud risk would be low. However, if the internal control is weak, then the fraud risk would be high. The employees can create an opportunity to commit fraud by colluding with another employee (LaSalle, 2007). Therefore, understanding the opportunity in the fraud triangle is necessary since prior studies have shown opportunity as a mandatory element for fraudsters to commit fraud.

2.1.15Effect of Rationalization and their Proxy on Fraud

Rationalization is a factor often viewed as out of the control of management and internal auditors because individual who commit fraud justify their action as being consistent with their own personal code of ethics. This is often a function of the fact that those who are trusted are placed in positions where fraud may be committed. Level of ethical principles varies greatly among individual. Based on this, internal auditors should exercise pre-mortem strategy since fraud is typically committed by those we trust.

Some of the rationalizations that often associated with fraud include:

Low self-esteem or morale:

i. Desire to seek revenge:
ii. Feeling of being underpaid;
iii. Nobody will get hurt;
iv. Belief of being overwork;
v. Feeling that everybody else is doing it; and
vi. It is only a loan and will be paid back.

Employee can often be reminded that no justification exists for illegal activities. The internal auditors should review and monitor on-going program that maintain an ethical foundation for the organizations employee. It follows therefore that successful prevention of fraud in an organization lies in the isolation of the perpetrator from the assets and from the opportunity and knowledge required for access. In order words, walls of policies, procedures devices and control need to be erected to surround and isolate each factor in the equation to combat fraud. It is for this reason that the system of internal control is identified as very critical in minimized the incidence of fraud banking industry.

2.1.16Effect of Capability and their Proxyon Fraud

Capability can be viewed as situation of having the necessary traits or skills and abilities for the person to commit fraud. It is where the fraudster recognized the particular fraud opportunity and ability to turn it into reality. Position, intelligence, ego, coercion, deceit, and stress, are the supporting elements of capability (Wolfe and Hermanson 2004). According to Mackevicius and Giriunas (2013), not every person who possessed motivation, opportunities, and rationalization may commit fraud due to the lack of the capability to carry it out or to conceal it. Wolfe and Hermanson (2004) maintained that opportunity opens the doorway to fraud, and pressure and rationalization lead a person toward the door. However, capability enables the person to recognize the open doorway as an opportunity and to take advantage of it by walking through repeatedly.

According to Wolfe and Hermanson (2004) "Theory of White Collar Criminals" states that, as fraudsters found themselves successful at a crime, they began to gain some secondarydelight in the knowledge that they are fooling the world; that they are showing their superiority to others. The individuals committing fraud must have a strong ego and great confidence that they will not be detected. The common personality types include someone who is driven to succeed at all costs, self-absorbed, self-confident, and often-narcissistic (Rudewicz, 2011). Albrecht, Williams, and Wernz (1995) as cited in Abdullahi, Mansor and Nuhu (2015) opine that this element is of particular importance when it concerns a large-scale or long-term fraud. Furthermore, Rudewicz (2011)believes that only the person who has an extremely high capacity will be able to understand the existing internal control, to identify its weaknesses and to use them in planning the implementation of fraud. . Similarly, Wilson (2004) discloses that rationalization and capability are all inter-related, and the strength of each element influences the others.

Wolfe and Hermanson (2004) stated that position and role owned by the employee may perfect his way to breach the organizational trust. Findings of the analysis of public companies carried out by Beasley, Carcello, Hermanson and Lapidesin 2001, revealed that over 70% of the fraud cases involved CEOs of the companies. They also reported that many organizations did not implement sufficient checks and balances to mitigate their CEO's capabilities to influence and perpetuate frauds. Also, managers or executives committed 46% of the frauds based on the Association's recent study. The fraudster has a strong ego and great confidence that he will not be detected, or believes that he could easily take himself out of trouble if caught. Such confidence or arrogance can affect one's cost-benefit analysis of engaging in fraud. The more confident the person, the lower the estimated cost of fraud will be (Wolfe and Hermanson, 2004). In an article entitled, "The Human Face of Fraud" it is noted that one of the common personality types among fraudsters is the ego. An egoistic person refers to someone who is driven to succeed at all costs, self-absorbed, self-confident and narcissistic admiration and a lack of empathy for others(Duffield and Grabosky, 2001). Individuals with this disorder believe they are superior or unique, and they are likely to have inflated views of their own accomplishments and abilities

2.1.17Effect of Corporate Governance and their Proxy on Fraud

In recent years, the issue of corporate governance has been a major area for concern in many countries. When we view accountability as answerability to a higher authority in the bureaucratic or inter-organisational chain of command, we incorporate the two concepts of responsibility and accountability in good corporate governance (Osisioma, 2013). Performance and accountability have become vital elements in the good corporate governance framework. Improving organisational performance and accountability with an

eye on delivering more appropriate, efficient and effective public service is the hallmark of good governance. Osisioma (2009) defines corporate governance in these contexts:

i. It is concerned with creating a balance between economic and social goals and between individual and command goals while encouraging efficient use of resources, accountability in the use of power and stewardship, and aligningthe interest of individuals corporations and society;
ii. The processes, systems, practice and procedures as well as the formal and informal rules that governs institutions, the manner in which these rules and regulations are applied and followed, the relationship that these rules and regulations determine or create, and the nature of these relationships.

The impact of the Act in fraud and financial crime reduction in the public sector cannot be accurately determined. For example, in the UK, the first corporate governance report and code of best practice is considered to be the Cadbury Report in 1992, which was produced in response to a string of corporate collapses.

Dandago (2001) defines accountability as the ability to give explanations or reasons regarding what one does at any given time; it is about the ability to satisfactorily account for whatever has been entrusted into an officer's care. According to Johnson (1996) as cited by Onyeanu (2005), accountability means the obligation to answer for a responsibility that has been conferred. Bovens (2004) describes public accountability as the obligation of an actor to publicly explain and justify conduct to some significant order. This usually involves not just information about performance, but also the possibility of debate and judgment and the imposition of formal or informal sanctions in case of poor performance. Popoola (2008) opines that accountability is a more complex notion implying a due and proper rendering of

accounts. According to him, it entails fiscal accountability, process accountability (demonstrating that the organization has achieved what it sets out to achieve) and programmed accountability, which confirms that the institution/organization has acted in accordance with its mission statement.

The concept of transparency therefore entails the dissemination of factual information that the public has a legal right to access at any given moment. This involves a genuine communication policy which includes the publication of detailed reports which set out an organization's financial position and financial management principles and disclose internal decision making structures, operational methodologies and details of ongoing and proposed projects and initiatives. As noted by Pollitt and Bouchaert (2000), the Thatcher-government in United Kingdom introduced the New Public Management (NPM) – an ideology that public accountability is both an instrument and a goal. It is an instrument to enhance the effectiveness and efficiency of public governance, but it has gradually also become a goal in itself. Public accountability has become an ideograph, a rhetorical symbol for good governance.

In Nigeria, the Fiscal Responsibility Act (2007) was introduced as panacea for public accountability and good governance to enhance the effectiveness and efficiency in the public sector. The Senate screened the Commissioners in September 2008 which in essence signposts the beginning of a journey to public accountability and hence, good governance.
The need for employing appropriate procedures and techniques to combat fraud in Nigeria is necessary in order to restore investors' confidence in an audited financial statement. Thus, accountants andauditors are expected to know and realize that the public continues to expect a low rate of audit failures resulting in corporate governance dysfunction. Thisrequires that

the auditors must plan and perform their audit in a manner that will minimize the risk of undetectedmaterial misstatements. The accountant is under a duty to conduct his work in a manner that does not betray theconfidence which he command.

Similarly, Farber (2005) finds that fraud firms have poor governance relative to no-fraud firms fewer independent boardmembers, fewer audit committee meetings, fewer financial experts on the audit committee, asmaller percentage of Big 4 auditing firms, and a higher percentage of CEOs who are alsochairman of the board. The results are consistent with independent corporate governance mechanismsbeing more effective in the monitoring function.

Abbott, Parker and Peter (2004)address the impact of audit committee characteristics: independence,activity level, and financial expertise on the likelihood of financial statements being restated andalso fraud. The authors examine two different groups of firms: 88 firms that restated their financialstatements from 1991-1999 as well as 44 firms reporting fraudulently, both with matchedsamples. The independence and activity level of the audit committee are negatively associatedwith the occurrence of restatement. There is also a negative association between an audit committeethat includes at least one member with financial expertise and the occurrence of restatement.The results are similar for the fraud sample in that companies having an audit committeewith at least one member with financial expertise are less likely to file fraudulent financial statements.

In summary, academic research hasdocumented that firms with a weak corporate governance structure are more likely to reportfraudulent financial information. The higher incidence of fraud among these firms is at least in part due to the greater opportunities associated with a

poor governance structure, where corporategovernance is one of the controls recognized to address the risk of management override.

2.1.18Effect of Behavioral Trait and their Proxy on Fraud

According to Olongo (2013), behavioural trait of individual has something to do with hereditary. It a situation whereby characteristics are passed on from parents to offspring. Research has shown that somepeople have insatiable appetite for adventure- criminal or otherwise. Such people will steal if they have opportunities, notwithstanding their status ormaterial possessions Olongo (2013).

For instance a kleptomaniac who has a pathological desire to steal just for the sake of stealing would naturally not do well as a banker. It is therefore imperative for banks to trace such symptoms quickly among members of their staff in order to reduce the possibility of fraud among employees. Moral upbringing among people varies. While some parents pay attention to this important issueat home, others leave it to teachers, pastors or Islamic scholars. Wrong choice of friends ormentors can link one to fraudulent people. Such persons may be enticed with generous cash ormaterial gifts before the 'subject'is introduced to them. Some people are from good homes,attend good schools and have very good or refined religious backgrounds but they have weak minds and can easily be convinced. Some fraudsters believe in the use of their 'crimefathers', friends or parental influence to slow down investigation. These 'backers'are usuallyinfluential and may call on their big friends in high places to rescue their children or 'boys' from justice. In the process, the entire syndicate members could be let off the hook.

Aside the aforementioned causes of fraud, the following factors suggested by Onibudo (2007) also contributes immensely to fraud:

i. Inadequate compensation, salaries and fringe benefits which are accruable to bank staff;

ii. The ease at which the stolen assets are converted after deceitful appropriation;

iii. Refusal to comply with laid-down procedures without any penalty or sanction;

iv. Collusion between interacting agents charged with the responsibility of protecting the assets and other interest of the bank;

v. Poor working conditions;

vi. Poverty and infidelity of employees.

Bank frauds greatly jeopardize the organizational growth of a bank as it leads to bank distress. This is because fraud reduces the deposits of depositors and eventually leads to the erosion of the capital base of banks. The cost of fraud is also usually difficult to estimate because not all frauds are discovered or even reported since most banks have a tendency to cover up the frauds emanating from their banks and cash tills all in a bid to continue to gain customers goodwill and engender their clients" confidence all the time (Eseoghene,2010).

2.1.19The Roles of Auditors' inFraud Prevention and Detection

2.1.19.1 Overview of SAS No.99

In order to understand the problems in modern auditing, we will give a brief overview of auditing history. Auditing in one form or another has existed as long as commercial life itself. There has always been a need by those who entrust their property to others to have some checks and control over the latter. There is general agreement, that modern financial auditing began to take shape in the middle of the nineteenth century. The emergence of corporate entities in which ownership and control were separated provided a need for financial auditing

and the development of increasingly detailed disclosure requirements for financial statements. The traditional audit role was a "conformance role".

Early audits focused on finding errors in balance sheet accounts and on stemming the growth of fraud associated with the increasing phenomenon of professional managers and absentee owners. The detection of fraud had a very important emphasis. As companies began to grow and become more complex during the nineteenth century, the detection of fraud became increasingly an unrealistic objective, although it was still generally perceived as one of themain objectives of a financial report audit, at least by the general public.The difference in perception of responsibilities and reality was addressed in the case of *Kingston Cotton Mill Co (No 2)* (1896) 2 Ch 279 at 289 – 290, Lopes LJ (FTMS, 2001) which said of auditor:

> *…He is a watchdog, but not a bloodhound… If there is anything calculated to excite suspicion, he should probe it to the bottom but, in the absence of anything of that kind, he is only bound to be reasonably cautious and careful…*

From the 1930s until the 1980s, the focus of the audit changed. Today, the modern external audit has been described as an independent examination ofand an expression of opinion on the truth and fairness of the financial statements of an enterprise presented to him (Nweke, Ekwueme and Okoye, 1997). However, if there are errors in the account which did not come to auditor's notice, he will not be held responsible, as long as he acted with a responsible level of care and caution supportable and verifiable by sufficient audit evidence compiled by him (Nweke, Ekwueme and Okoye, 1997).

The International Audit and Assurance Standard Board (IAASB), a sub-committee of the International Federation of Accountants (IFAC) defined an audit as an independent examination of, and expression of opinion on the financial statements of a business enterprise

by an appointed auditor in accordance with his terms of appointment and in compliance with the relevant statutory and performance requirements. The audit report is the end product of every audit assignment that the auditor issues to the members of a client company expressing his opinion on the truth and fairness view regarding an enterprise's financial statements. In Nigeria, this statutory duty is provided for in Section 359(1) of the *Companies and Allied Matters Act (CAMA), 1990*. The auditor has a statutory responsibility by virtue of Section 359(3) of the *Company and Allied Matter Act (CAMA), 1990*, to issue a report to the members of the audit committee which must be statutorily set up by such a client.

Consequently, detecting fraud is not the primary objective of auditing, although it is generally perceived to be so by the public. This conflict in the objectives of auditing has been described in terms of an "expectations gap". The gap is between what the public expects – the detection of fraud – and what auditors claim to be delivering – an opinion on the financial statements which appeals to notions such as "fairness" and "true and fair" view (Auditors typically argue that the main responsibility for prevention and detection of fraud lies with management and its systems). Nevertheless, when companies collapse for whatever reason but particularly in cases of alleged or actual fraud, public reaction focuses first on the auditors and the possibility of their failure. According to Alghamdi (2012), it is increasingly necessary for professionals to step up and take responsibility for continuing to improve their practices overall, so as to enhance corporate governance.

The American Institute of Certified Public Accountants supported the Public Accounting Oversight Board recommendations and concluded it was crucial to develop an auditing standard focused solely on financial statement fraud .The AICPA formed a fraud task force and subsequently issued SAS No. 82, *Consideration of Fraudin a Financial Statement Audit*,

in February 1997. For the first time, fraud was included in the title of an auditing standard. SAS No. 82 classified fraud into two distinct categories: *intentionalfalsification of financial statements* and *theft of assets*. It provided auditors with a list of risk factors covering instances of fraudulent financial reporting and misappropriation of assets that they should assess during an audit. Under SAS No. 82, auditors must document their assessment of fraud risk and their modifications to the audit plan if and when conditions of potential fraud appear during the audit. SAS No. 82 was the AICPA's attempt to clarify auditors' role in fraud detection. The intention of the standard was to provide assurance to the public that when external auditors signed their names to an opinion finding a company's financial statement free of material misstatement; they have taken extensive steps to ensure they did not overlook any underlying fraud (AICPA 2002).

The public was outraged about the fall of Enron, the seventh largest company in the U.S. at the time of its demise. Thousands of Enron employees lost their life's savings when their pension plans were depleted as a result of Enron filing for bankruptcy (Klass, 2004). Nevertheless, SAS No. 82 did not increase auditors' responsibility to detect fraud beyond the key concepts of materiality and reasonable assurance (AICPA 2003). The audit profession came under heavy criticism for failing to carry out its fiduciary duty as gatekeepers who protect thepublic's interest. In an attempt to restore public confidence, Congress passed the Sarbanes-OxleyAct (SOX) and created the Public Accounting Oversight Board (PCAOB). Standard settersexpected SOX, which is considered the strongest regulation passed since the 1930s, to helpauditors prevent and limit corporate fraud (Klass, 2004).

Nevertheless, SAS No. 99 shift audit focus on fraud detection and increased the responsibility of auditors. In 2002, SAS No. 99, *Consideration of Fraud in a Financial Statement Audit*,

was issued by the Auditing Standards Boardto replace SAS No. 82 because standard setters believed that new guidance was needed to provide auditors with better guidance on how to enhance theirabilities to detect fraud during a financial statement audit(AICPA 2003). The purpose of the standard is to helpauditors take a proactive approach to prevent and detect fraud by increasing their knowledge oftheir clients, which should result in more meaningful risk assessment procedures (Marczewskiand Akers, 2005; Kiel, 2008). SAS No.99 defines fraud as an "intentional act that results in a material misstatement in financial statements that are the subject of an audit". SAS No. 99 calls for auditors to maintain a questioning mindregarding the potential for material misstatements due to fraud throughout the audit. They areexpected to exercise professional scepticism in gathering and evaluating audit evidence and toset aside prior beliefs that management is honest and has integrity. More specifically, it requiresauditors to engage in brainstorming sessions to discuss the risks of material misstatements due tofraud (AICPA, 2002).

Additionally, SAS No. 99 recommends audit firms use forensic specialiststo provide auditors with forensic audit training. While the intent of SAS No. 99 is to improveauditors' performances related to fraud detection, auditors did not anticipate it wouldsubstantially affect audit effectiveness (Marczewski and Akers, 2005; Gogin and Johnson, 2008). More so, SAS No.99 requires Auditors to consider whether the identified risks are related to either specific accounts or transactions or to the financial statements as a whole using analytical procedure. According to Wells (2007), because the balance sheet, income statement and Statement of cash flow are interrelated, frauds can pop-out when certain numbers do not agree. Based on this, the researcher employed some of the financial ratios as proxy for the fraud risk factors- incentive, opportunity, rationalization, capability and corporate governance. Table 2 depicts fraud risk factors relating to fraudulent financial statement.

Table 2: Examples of Fraud Risk Factors from SAS No. 99 Relating to Financial Statement Misstatements

Pressures	Opportunities	Rationalizations
1. Financial stability or profitability is threatened by economic, industry, or entity operating conditions: □High degree of competition or declining profit margins □High vulnerability to rapid changes (i.e., technology, obsolescence, or interest rates) □Declines in customer demand □Operating losses □Recurring negative cash flows from operations □Rapid growth or unusual profitability □New accounting, statutory, or regulatory requirements **2. Excessive pressure exists for management to meet requirements of third parties:** □ Profitability/trend expectations □Need to obtain additional debt or equity financing □Marginal ability to meet exchange listing requirements or debt repayment or other debt covenant requirements □Likely poor financial results on significant pending transactions. **3. Management or directors' personal financial situation is:** □ Significant financial interests in the entity □ Significant performance based compensation □ Personal guarantees of debts **4. There is excessive pressure on management or operating personnel to meet financial targets set up by directors or management.**	**1. Industry provides opportunities for** □Related-party transactions beyond ordinary □A strong financial presence or ability to dominate a certain industry sector that allows the entity to dictate terms or conditions to suppliers or customers □Accounts based on significant estimates □ Significant, unusual, or highly complex transactions □ Significant operations across international borders environments and cultures □ Significant bank accounts in tax-haven jurisdictions **2. Ineffective monitoring of management allows** □ Domination of management by a single person or small group □ Ineffective board of directors or audit committee oversight **3. There is a complex or unstable organizational structure** □Difficulty in determining the organization or individuals that have control of company □Overly complex structure □High turnover of senior management, counsel, or board **4. Internal control deficient** □Inadequate monitoring of controls □High turnover rates or employment of ineffective accounting, internal audit, or information technology staff □Ineffective accounting and information systems.	**1. Attitudes/rationalizations by board members, management, or employees that allow them to engage in and/or justify fraudulent financial reporting** □ Ineffective communication, implementation, support, or enforcement of ethics □ Nonfinancial management's excessive participation in selection of accounting principles or the determining estimates □ Known history of violations of securities laws or other laws □ Excessive interest in maintaining or increasing stock price □ Aggressive or unrealistic forecasts □ Failure to correct known reportable conditions on a timely basis □ Interest by management in employing inappropriate means to min. reported earnings for tax □ Recurring attempts by management to justify marginal or inappropriate accounting on the basis of materiality □ Strained relationship with current or predecessor auditor o Frequent disputes with the current or predecessor auditor o Unreasonable demands on the auditor, such as unreasonable time constraints o Restrictions on the auditor that inappropriately limit access o Domineering management behaviour in dealing with the

Source: SAS No. 99, Consideration of Fraud in a Financial Statement Audit, AICPA (2002)

2.1.19.2 Benefits of SAS No.99

The new fraud standard, Statement on Auditing Standards No.99, is the cornerstone of the global comprehensive antifraud and corporate responsibility programme. The general goal of the programme is to rebuild the confidence of investors in our capital markets and re-establish audited financial statements as a clear picture window into affairs of corporate organisations. It also provides more structure around auditors' consideration of fraud when compare with the previous fraud standards, SAS No. 53 and SAS No. 82. Auditors no longer have a choice of whether to brainstorm about the possibility of fraud; SAS No.99 requires them to do it. Brainstorming sessions can generate ideas about how and where fraud can occur, but they must be carefully planned and managed to ensure their effectiveness AICPA (2007).

Apart from providing auditors and Public Accountants with clarified and focused auditing guidance, SAS No. 99 is put forward to help reduce the incidence of fraudulent misstatement in corporate financial statement. The standard focuses on fraudulent financial reporting (intentional misstatement of the financial statements) and misappropriation of assets (theft of company assets) as two distinct fraud types for auditors to consider throughout the audit process.

2.1.20Internal Auditors

The Institute of Internal Auditors (IIAs) definition of Internal Auditing states that, "Internal auditing is an independent, objective assurance andconsulting activity designed to add value and improve an organization's operations. It helps an organizationaccomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectivenessof risk management, control, and governance processes." In relation to fraud, this means that

internal auditingprovides assurance to the board and to management that the controls they have in place are appropriate given theorganization's risk appetite.Internal auditing should provide objective assurance to the board and management that fraud controls aresufficient for identified fraud risks and ensure that the controls are functioning effectively. Internal auditors mayreview the comprehensiveness and adequacy of the risks identified by management — especially with regard tomanagement override risks.

Internal auditors should consider the organization's assessment of fraud risk when developing their annual auditplan and review management's fraud management capabilities periodically. They should interview and communicateregularly with those conducting the organization's risk assessments, as well as others in key positions throughoutthe organization, to help them ensure that all fraud risks have been considered appropriately. When performingengagements, internal auditors should spend adequate time and attention to evaluating the design and operationof internal controls related to fraud risk management. They should exercise professional skepticism when reviewingactivities and be on guard for the signs of fraud. Potential frauds uncovered during an engagement should betreated in accordance with a well-defined response plan consistent with professional and legal standards. Internalauditing should also take an active role in support of the organization's ethical culture.

The importance an organization attaches to its internal audit function is an indication of the organization'scommitment to effective internal control. The internal audit charter, which is approved by the board or designatedcommittee, should include internal auditing roles and responsibilities related to fraud. Specific internal auditroles in relation to fraud risk management could include initial or full investigation of suspected fraud, root causeanalysis

and control improvement recommendations, monitoring of a reporting/whistle-blowerhotline, and providingethics training sessions.If assigned such duties, internal auditing has a responsibility to obtain sufficient skillsand competencies, such as knowledge of fraud schemes, investigation techniques, and laws. Effective internal auditfunctions are adequately funded, staffed, and trained, with appropriate specialized skills given the nature, size,and complexity of the organization and its operating environment. Internal auditing should be independent (haveindependent authority and reporting relationships), have adequate access to the audit committee, and adhere toprofessional standards.

2.1.21External Auditor

External auditors are required by the auditing standards to provide reasonable assurance that the financialstatements are free from material misstatements. Inability of the external auditors to detect materialmisstatements, particularly fraud, may expose the external auditors to litigation (Jaffar, Haron, Iskandar and Salleh, 2011).According to Izedonmi (2002) as cited in Ikharo (2015), auditors' independence implies the ability of an auditor to perform his audit work in accordance to his judgement, free from any undue influence and without being biased. Independence is an attitude of mind characterize by integrity and objectivity. In order words, auditors should be free from ay influence or interference in the planning and conduct of his work and he should be objective in reporting his opinion without fear of the management, staff, shareholders or any other stakeholders.

Under Section 357 of Companies and Allied Matters Act (CAMA, 1990) a company's audit committee is responsible for the supervision, monitoring and the appointment of external auditors. Section 359 of CAMA stipulates that auditors of the company shall make a report to its members on accounts examined by them on every balance sheet, profits and loss accounts

and all group financial statements which are to be laid before the company in a general meeting during the auditors' tenure. Under Section 359 (3) of CAMA, auditors shall in case of public company make reports to the audit committees which shall be established by the company. An organisation without its own internal audit department may consider consulting their external auditors should they discover a fraud, if only to obtain the expertise to establish the level of loss. The external auditors may also be in a position to provide expert assistance from elsewhere within the audit firm, such as from a specialist fraud investigation group. A decision to call on external auditors should, however, be considered carefully, as there is always the possibility that if the auditor has missed obvious fraud alerts, the organisation may eventually seek damages from its auditor.

According to Silverstone and Michael (2007),the most important qualities the accounting professional can bring to any fraud investigation are aninvestigative mindset and skepticism. The skeptical mindset is something that has long been inherent in forensicaccountants and other internal investigators when looking for evidence of fraud. With the emergence of SAS 99and under increasing scrutiny, the external auditor is now being pushed to think like the forensic accountant whichmeans to think like both a thief and a detective and be constantly looking for the weak links in the accountingsystem and among the people who staff it. What turns a well-trained and experienced accounting professional intoa good financial investigator is the knowledge of human behaviour and a sixth sense for red flags for fraud and agood intuitive feel for the significance of evidence.

2.1.22 Audit Committee

The term ‘‘audit committee’’ means a committee (or equivalent body) established by and amongst the board of directors of an issuer for the purpose of overseeing the accounting and financial reporting processes of the issuer and audits of the financial statements of the issuer.

According to Bourke (2006), an independent audit committee member is a person who is not affiliated with the company in any way, and does not accept compensation (including consulting, advisory, or other compensatory fee) from the company, other than in their capacity as a member of the board of directors and any board committee.

The Role of the Audit Committee in Preventing and Detecting Fraud due to recent Legislative and Regulatory Change is now more defined. These include:

a. Audit committees are responsible for overseeing the financial reporting process and ensuring the objectivity of the external audit. The basic intention of the new standard, SAS No. 99 was to “establish standards and provide guidance to auditors in fulfilling their responsibility as it relates to fraud in an audit of financial statements conducted in accordance with generally accepted auditing standards” (Martins and Nugent, 2003). As a result of this standard, an increased importance on recognizing financial statement fraud became mandatory (Bukics& Flemming, 2003).

b. Audit committee members have responsibility for reviewing the organisation’s internal control and risk management systems, including the design and implementation of anti-fraud programmes and controls (CIMA,2009).

c. The audit committee should monitor the integrity of the financial statements, assess the organisation’s performance in fraud prevention, review the

investigation log of cases at least once a year, and report any significant matters to the board.

d. The audit committee is also required to certify that the interim and annual filings aretrue in all material respects and do not contain misleading statements.

Bourke (2006) went further by explaining that while it is not the audit committee's responsibility to guarantee the accuracy of a company's financial statements, the independence of the audit committee is considered to offer some assurance to the investing public regarding the reliability of the financial statements presented by the entity. He stressed that Audit committees effectiveness comprise the attributes considered pertinent to function effectively in their role as corporate governance monitors and that the attributes that could enhance effectiveness are, the independence, competence and diligence of the audit committee members.

The audit committee should review arrangements by which employees can confidentially raise concerns about possible wrongdoing, and the audit committee's objective should be to ensure that arrangements are in place for the proportionate and independent investigation of such matters and for appropriate follow-up action. If a suspicion involves the nominated fraud contact, the finance director or an executive director, the matter should be reported directly to the chairman of the audit committee. In small companies a nominated non-executive director may fulfil the role of the audit committee.

The Code of Corporate Governance (2001) states that the majority of audit committee members must be independent and the chairman should be an independent non-executive director. It enhances the effectiveness of monitoring functions. It serves as a reinforcing agent to the independence of internal and external auditors. It is posited that the more independent the audit committee, the higher the degree of oversight and the more likely that members act objectively in evaluating the propensity of the company accounting, internal control and reporting practices.

External auditors, through their interactions with audit committees are able to influence the company's internal control strength as well as reporting quality (Goodwin and Seow, 2000). The audit committee is expected to deal with the appointment and dismissal of external auditors. The Code of Corporate Governance (2001) spells out that it is the responsibility of the audit committee to discuss with the external auditors the nature and scope of audit before the audit starts and to review the findings of the audit subsequently. Such linkage is expected to produce an interaction effect between the external auditors and audit committees to certify that the financial statements and associated information auditors filedwith the regulatory authorities are free from material errors and misleading.

2.1.23Forensic Accounting

The American Institute of Certified Public Accountants (AICPA, 2002) defines forensic accounting as "the ability to identify, collect, analyze, and interpret financial accounting data and information; apply the relevant data and information to a legal dispute or issue; and render an opinion." It is the integration of accounting, auditing and investigative skills (Adebisi, 2011). Also known as investigative accounting, forensic accounting is a detailed examination and analysis of financial documents and records for use as evidence in a court of

law (Boleigha, 2011). Forensic accounting is the application of accounting knowledge and investigative skills to ascertain, record, summarize, evaluate, interpret, and communicate information in order to resolve legal issues.

SAS No. 99 (AICPA 2002) and a PCAOB release in 2007 encouraged thattomost effectively identify fraud risk factors, an audit team's brainstorming session shouldinvolve key members of the audit team, including, for example, forensic specialistsduring audit engagement and prior research, Brazel and Agoglia (2007), suggests that audit judgment performance is enhanced when appropriate specialists are utilized on audit engagements. According to Enofe, Okpako and Atube(2013), it is agreeable that an auditor does not have the absolute duty to uncover fraud, but they should practice fair and true reporting to ensure that the interests of the public as well as the employees are protected. With the use of forensic accounting guidelines, auditors can act as forensic accountants in cases of suspicious fraud or criminal activities in a company. Ineffective and inefficient system of internal control which is stated by the authors points out that a weak management cannot be changed with internal control system. Even if a company applies good internal control systems, the management will still be the major factor influencing the implementation.

Companies should look towards new approaches rather than follow the traditional approach as forensic accounting may be the next best alternative in resolving problems. Ramazani and Refiie (2010) studied the accountants' perception of prevention methods of fraud. In this research they examined accountants' perception of forensic accounting which demonstrates the low extent of accountant's perception of forensic accounting. Forensic accounting is considered as one of the factors in fraud prevention (Bierstaker, Brody and Pacini, 2006). Okoye and Gbegi (2013) carried out a study on the evaluation of forensic accountants to

planning management fraud risk detection procedures. The study reveals that forensic accountants effectively modify the extent and nature of audit test when the risk of management fraud is high, forensic accountants propose unique procedures that are not proposed by auditors when the risk of management fraud is high, forensic accountants can make to the effectiveness of an audit plan when the risk of management fraud is high, involving forensic accountants in the risk of management fraud assessment process leads to better results than simply consulting them.

Since the term forensic accounting can refer to anything from the execution of a fraud analysis to the recreation of true accounting records after the discovery that they have been manipulated, it also encompasses both litigation support and investigative accounting. Forensic accounting is focused upon both the evidence of economic transactions and reporting as contained within an accounting system, and the legal framework which allows such evidence to be suitable to the purpose(s) of establishing accountability and/or valuation (Bolutife, 2011).According to Danie du Plessis (2010), the designation given to persons performing forensic accounting services is uncertain. The terminology being used is expert accountant, forensic accountant, fraud auditor, fraud investigator, fraud examiner and risk control manager, makes the balance sheet look better.

2.1.24 Internal Control

The British Auditing Guidelines defined internal control as the "whole system of controls, financial or otherwise, established by the management in other to carry on the business of the enterprise in an orderly and effective manner, ensure adherence to management policies,safeguard the assets and secure as far as possible thecompleteness and accuracy of records".

COSO (2004) also defines Internal Control System as a process, implemented and managed by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives regarding:

i. Company strategy;

ii. Effectiveness and efficiency of operations;

iii. Reliability of financial reporting

iv. Laws and regulations compliance

There have been a number of reports in the past covering provisions around areas such as executive remuneration, non-executive directors, and audit committees. The principles of these various reports have been brought together to form the Combined Code on Corporate Governance (Combined Code).

The Association of Certified Fraud Examiners (ACFE, 2010) agrees with O'Bells recommendations of implementing a control environment with strong internal controls to prevent, detect, and deter fraudulent behaviour. For the Internal control system to be successful, the control environment has to be included within the vision and mission of the company to achieve the company's objectives in an effective and efficient manner. The Association made it clear that establishment of embedded risk management practices is fundamental to effective internal control systems. Rikhardsson (2006) mentions factors that contribute to the control environment which include:

1. Integrity
2. Ethical values
3. Competence of the entity's management and employees
4. Management's philosophy and operating style
5. Assignment of authority

Accountants and auditors have often been exhorted to be leaders in minimizing the risks of fraud by employing their skills in designing "tight control systems". Forensic Accountants and Fraud Examiners posit that the "tight control systems" is at best a short-run solution to fraud management. They believe that business activity is built on the trust that people at all levels will do their jobs properly. Internal controls operate on many levels. There could be behavioural controls, information controls, operational controls, preventive controls, detective controls, application controls, and general controls Rikkhardsson (2006). CIMA (2009) also provides examples of areas where Internal Controls typically exist such as approval and authorization processes, access restrictions and transaction controls, account reconciliations, and physical security. These procedures often include the division of responsibilities, checks and balances to reduce risk.

International Association of Insurance Supervisors(IAIS, 2006) advised that managers should eliminate every possible fraud-likelihood opportunity by formulating proper policies, establishing procedures like brainstorming,mental simulation, use of red flag indicators and instituting control measures, in order to prevent fraud from taking place and, if fraud does take place, to detect it. The key to integrity in business is accountability- that is, each person must be willing to put his or her decisions and actions in the sunshineto ensure good corporate governance.

2.1.24.1 Limitations of Internal Control

The auditor’s main of objective in evaluating and testing internal control is to determine the degree of reliance which he may place on the information contained in the accounting records. Due to inherent limitationin even the most effective internal control system, it

willnot be possible for the auditor to rely solely on its operation asa basis of his opinion on the financial statement. Some of these accentuate limitations of internal control:

i. Management may override the system of internal control by agreeing with customers to prelude revenue recognition that after term and conditions of the core standard contract.
ii. Errors, such as mistake of judgment, carelessness, distraction or fatigue may occur when designing maintaining or monitoring automated control.

2.1.25 Financial Statement Variables in Detecting Financial Statement Fraud

According to Sparthis (2002), fraudulent financial statements are the most costly scheme per fraud cases. In spite of being the most common and the smallest loss per cases, asset misappropriation present in total the highest losses of these categories.

It is therefore necessary that fraud risk assessment based on variables evaluation are examined from time to time because these financial statement variables are more likely to be manipulated by management. For example, the fraudulent activity of recording sale before they are earned may show as additional account receivable. This can be tested by comparing the account and the ratios of account receivables to sales and account receivable to total asset. Again management may manipulate inventories when they are matching sales with the corresponding cost of goods sold (COGS), increasing gross margin and net income and strengthen the balance sheet. Consequently, the ratio of inventory to sales (Inventory/Sales) is considered necessary.

In the assessment of variables according to Sparthis (2002) as cited in Egbunike (2011), there is relationship between a company's choice of accounting valuation methods and the type of depreciation with fraudulent financial statement. Mangers involved in fraudulent activities

may attempt to disguise their actions through accounting choices. By selecting different valuation method, management can increase or decrease stated values for various variables. Also, Chow and Rice, (1982) as cited in Egbunike (2010), suggested that potential wealth transfer from debt holders to Managers increases leverage. A high debt structure may increase the likelihood of fraudulent financial statement since it shifts the risk from equity owners and Managers to debt owners. Management may manipulate financial statement given the need to meet certain debt covenants. This suggested that higher levels of debt may increase the probability of fraudulent financial statement. This can be measured through the difference in the ratio of debt to equity (Debt/Equity) and Total Debt to Total Assets (TD/TA).

Again, account receivable and inventory depend on the subjective judgement involved in estimating uncollected accounts and obsolete inventory. On account of subjective judgement in these levels of accounts, it is possible that management may manipulate them. This reasoning was supported by Spathis (2002) when the observed that management use these accounts (account receivables and inventory) as a tools for financial statement manipulation.
Fraudulent financial reporting can be manipulated in a desire to earn higher profitability. This often serves as a primary orientation guiding company's profitability. Though this was argued by summer and Sweeney (1998) as cited in Spathis (2002) when they noted that profitability orientation tempered by the manager's own utility maximization which is partially defined by job security. Based on these needs, management desired of stable or increasing earnings streams minimizes the manager's utility. This approach is based on the level of profitability, regardless of what those levels were. More so, Spathis observed that when these expectations are not met by actual performance, then it provides a motivation for financial statement falsification.

For the purpose of this study, elements of fraud pentagon model were proxy using financial ratios of selected variables as follows:

A. Financial Pressure Risk Factors

This variable is proxy in line with studies carried out by Chen and Elder (2007); Somoye (2010);Stuti and Bansal (2013);Lee and Yeh (2004); Onodi (2015)using

i Cash Flow Trend;

ii Working Capital Ratio;

iii Non-performing Loan Ratio; and

iv Non-performing Loan Provision Ratio.

B. Opportunity Risk Factor

Opportunity risk factor is also measured usingstudy carried out by Chen and Elder (2007);Onodi (2015):

i. Related Party Transaction;

ii. Weak Internal Control; and

iii. Rapid Growth.

C Rationalization Risk Factor

This is proxy usingstudy conducted by Chen and Elder (2007);Onodi (2015):

i. Interest Coverage Ratio; and

ii. Dividend Coverage.

D Capability Risk Factor

The proxy variables were measured using study carried out by Spathis (2002);Onodi (2015):

i. Return on Equity; and

ii. Net Profit Margin.

E Corporate Governance Risk Factors

The proxy variables used wereadopted from the work of Yung-I and Ming-Long (2009);Egbunike (2010); Onodi (2015):

i. Debt to Equity;

ii. Debt to Assets; and

iii. Capital Gearing Ratio.

F Behavioural Trait Risk Factor

The proxy variables were adopted from the work of (Heracleous and Lan, 2012; Nyberg, Fulmer, Gerhart, & Carpenter, 2010); Olongo (2013); Omoye and Eragbhe (2014)

i. Cash to Current assets; and

ii. Cash to Current Liability.

2.2 Theoretical Framework

2.2.1 Legal Agency Theory

According to, Dalton, and Cannella (2003), as cited in Heracleousand Lan (2012), agency theory rooted in economics and financethinking has become acornerstone of the corporate governance field,not only in terms of its impact on the literaturebut also in terms of policy and practice.Codes of good practice in corporate governance,auditors training, and composition and proceduresof corporate boards have been influencedby agency theory tenets

(McCarthy and Puffer,2008).The agency relationship derivingfrom the separation of ownership and controlis defined as "a contract under which one ormore persons (the principal(s)) engage another person (the agent) to perform some service on their behalf which involves delegating some decision making authority to the agent" (Jensen and Meckling,1976) as cited in (Heracleous and Lan, 2012).This theory states that the Principal-Agent relationship is important in understanding of how the audit has developed. Agency theory is a useful economic theory of accountability which helps to explain the development of audit. The delegation of duties to the agent by the principal and the resulting division of labour are helpful in promoting an efficient and productive economy.

However, a simple agency model suggests that as a result of information asymmetries and self-interest, managements (agents) may not always act in the best interest of the principal. To resolve this agency problem, the principal lack reason to trust their agents and will seek to resolve these concerns by putting in place mechanisms to align and monitor the activities of the chairman and top executives, including monitoring the internal control over financial reporting (Wan-Hussin and Haji-Abdullah, 2009).Agents are likely to have different motives to principals'. They may be influenced by factors such as financial rewards, labour market opportunities and relationships with other parties that are not directly relevant to the principals. Agent may also be more risk averse than principals, as a result of these differing interests, he may have an incentive to bias information flows.

Many researchers have examined the use of both cash and non-cash remuneration to ally agent interests with those of principals (Heracleous and Lan, 2012; Nyberg, Fulmer, Gerhart, & Carpenter, 2010). Toward this end, many organizations choose stock options as a means to align agent and principal ambitions. 'A stock option is the right to purchase company shares

in the future at a predetermined price'. When a manager exercises a stock option, usually at a price below market value, they stand to make a gain on the transaction. Again, growing number of researchers have considered ramifications of using stock options as part of compensation (Deutsch, Keil, and Laamanen, 2011; Hamza, 2011; Sigler, 2009). Consequently, options shift some risk to agents. The belief is that stock ownership transforms agents into principals with the hope that interests will converge. Stock options should motivate agents to behave in ways that conform to the best interests of principals, a group to whom they now belong. Koss Corporation utilized stock options at the time of the fraud, and continues to use them as compensation for their executives, key managers, and members of its board of directors.

However, because principals do not have trust on agents to provide them with reliable and relevant information; they then hire external experts who are independent of these agents.Auditing is said to have started when shareholders and other stakeholders of businesses attempt to find out whether managements of their business enterprises were operating their entities and/or resources made available to them within the laid down rules, regulations, practice, norms and/or to achieve agreed targets (profitability) (Kim, Nofsinger and Mohr, 2010). Auditors act as agents by rendering stewardship account to the principals when performing an audit and this relationship therefore brings with it similar concerns with regard to trusts and confidence as the director-shareholder relationship (Nkundabanyanga, Ahiauzu, Kisakye, & Ntayi, 2012). Also just as the director-shareholder relationship, simple agency model would suggest that auditors will have their own interest and motives to consider like risk aversion and being conscious of their potential liability, introduce risk management processes that result in limitation in the scope of their work and caveat in their reports which principals may find frustrating (Arnold and Lange, 2004).

Auditor's independence from the board of directors is of great importance to shareholders and is seen as a key factor in helping to deliver audit quality. As far as independence and objectivity are concerned, auditors need to be conscious of threats to objectivity and apply suitable safeguard where necessary. Reputation is a key factor in promoting trust andauditor's independence is an important quality that shareholders look for and these help auditors to retain and win audits.Nevertheless, there exist agency problem which is both legally and theoretically criticizedasfar as certain set of assumptions hold. That is, that there issomeone (the principal) who asks someone else (the agent) to manage their investmentsor assets, in return for compensation, where their interests may or may not diverge, andthere is information asymmetry. How these concepts of agency theory and relationships are understood and analysed are not universalbut historically and technical (Heracleous and Lan, 2012). Therefore, within a context of substantive rationality, an examinationof the current state of agency theory that is capable of questioning its root assumptions is needed.

There are several reasons pointing to the desirability of such a challenge to agencytheory. First, meta-analyses of empirical research do not clearly support the meanssuggested by agency theory to mitigate the agency problem (auditor independence,equity ownership, and the market for corporate control) (Dalton, Hitt, Certo and Daily, 2007).

Further,several scholars have questioned the control and self-interest oriented assumptions ofagency theory (Davis, 2005; Ghoshal, 2005), which are arguably moreapplicable to agency relationships in the Anglo-American model of governance ratherthan alternative models such as the Continental one. As such, agency theory assumptionsare not entirely consistent with corporate governance systems characterized by collaborativebehaviours (Sundaramurthy and

Lewis, 2003) or situated in different contexts thanmature market oriented economies, where other theories may have higher explanatorypower (McCarthy and Puffer, 2008; Young, Peng, Ahlstrom, Bruton and Jiang, 2008). Besides, a legalperspective severely questions the idea that shareholders are the owners of the firm (principal), andauditors are their agents and monitors of managers (Heracleous and Lan, 2012).

It is forthese reasons that agency theory must be looked beyond normal science and examinein a new way as a foundational theory of corporate governance, as urged by scholars (Dalton, Hitt, Certo, and Daily, 2007; Ghoshal, 2005).What is at stake here is not just conceptual understandings of agency theory, but alsothe influence of these understandings on practice, such as on actual decisions of auditors.These can often be morally questionable, because auditors, wedded to traditionalagency theory assumptions, believe that they have to do everything in their power, withlittle or no leeway, to maximize shareholder returns (Heracleous and Lan, 2012). However,legal theory wasdrawn to offer an alternative conception of the principal, and of therole and status of the team of auditors. In addition to being more in line with the legalcontext as well as with stakeholder expectations, we contend that this reformulated, legalagency theory has a greater potential of being institutionally sensitive because it recognizesvarious stakeholders as team members, and encourages in-depth, inductiveresearch of actual decision processes in context.

Our redefinition of agency theory not only aligns the theory more closely with theprevailing legal context but also strengthens its relevance to current thinking on thesocietal role of the corporation (Agle, Donaldson, Freeman, Jensen, Mitchell, and Wood, 2008). Auditor primacy, and the status ofauditors as autonomous fiduciaries, shifts attention away from structural aspects such asboard composition, towards such substantive aspects as auditor characteristics or teamdecision processes (Eisenhardt and Zbaracki, 1992) as cited in

Heracleous and Lan, (2012). It encourages brainstorming to go beyondsuch issues as the independent vs dependent mix, or the nature of the resources auditors may bring to the group members, to include issues such as trust, integrity, ethical values, andpersonal cost to an individual auditor in the event of bias judgement, as major criteriain selecting appropriate candidates for team discussion (Schwartz, Dunfee, and Kline, 2005).

Moreover, auditor primacy assumes that the social norms of careful and loyal behavioursanctioned by law can be internalized by the auditors and form the basis for their trustworthiness. In this sense, the auditor primacy modelis aligned with stewardship theory which assumes that agents are trustworthy, withintrinsic motivation and oriented to serving the entire corporation rather than themselves. This view implies that it would be more importantto appoint auditors who inspire trust, as 'a psychological state comprising the intentionto accept vulnerability based upon positive expectations of the intentions or behaviour of another' rather than merely based on structural criteria,or on simplistic concepts of independence(Heracleous and Lan, 2012).

Again, under the law, and in contrast to traditional agency theory, audit team areaccordingly expected to act on behalf of the interests of the whole corporation, rather thanjust those of shareholders. What is in the best interests ofthe audited financial statements of a corporation is now commonlyjudged by not only what advances the welfare of shareholders, but also its employees,customers, creditors, and communities. Therefore, Regulatory reporting impact on the demand for and role of audit which can equally compensate for the weak right of principals and regulators thereby maintaining confidence and trust in markets and the operations of auditors. Also, good corporate governance practices including an effective board and audit committee will ultimately lead to overall welfare of both stakeholders and shareholders (Karbhari and Mohiuddin, 2010).

In addition,determination of the audit strategy requires a high degree of professional judgment. Consequently, the audit assignment should be carried out by an experienced staff, with the involvement of the audit partner. In particular, the determination of the audit strategy for a new client will usually require considerably more time and effort than for existing clients, and the extent to which the auditor places reliance on the work of an internal audit department may significantly affect the nature, timing and extent of his work. Auditors should then determine and record his audit strategy at audit planning stage, before commencing any detailed audit work. In doing so, the auditor will need to identify the optimum balance between relying on internal controls and reducing the level of his substantiate tests, and on the other hand, placing little or no reliance on internal controls and seeking audit satisfaction from a higher level of validation procedures. The purpose of making this assessment is to enable the auditor to carry out the audit in the most effective and efficient manner. In all cases, a formal record of the audit strategy is essential. The overall strategy should focus on a more efficient and effective audit.

Furthermore,Planning for an audit, just like every human endeavour, is essential for the smooth performance of the audit work and its successful completion. Planning ahead for an audit work will not only guarantee a valid audit opinion but will also help the auditor to ensure that: the audit objective is established and achieved; the audit is properly controlled and adequately directed at all stages; high risk and critical areas of the engagement are not omitted but that adequate attention is focused on these areas; and the work is completed economically and expeditiously, hence, savings on audit resources.

Drawing from above,concerns regarding the competence and independence of auditors have arisen regularly in recent years and have been the subject of a number of committee reports (Adeniyi, 2010). Although in order to ensure a high standard of performance, it is important that the auditor should prepare adequately for his work. Shareholders and stakeholders expect the auditor(s) to meet their expectations. Bearing this in mind, any audit performance short of these perceived expectations of users of financial information would be seen as substandard performance (Agyei, Aye and Owusu-Yeboah, 2013). Conversely, auditor(s)' regulatory frameworks such as the companies law, auditing standards and ethical guidelines define the roles, responsibilities and duties of the auditor(s) and in some cases indicated the sort of audit work and programmes to be carried out in varying audit engagements which may far differ from the public's perceived responsibilities expect of the auditor. This situation is usually referred to as audit expectation gap. The auditors' failure to meet the public's perceived expectations undermines the public's confidence in the auditor as well as the audit function. The fear is that if confidence is betrayed, the audit function will be destroyed as it becomes futile exercise (Agyei, Aye and Owusu-Yeboah, 2013). This is because the stakeholders and users of audited financial statements need to put reliance on the audited financial statements for purposes of entity's economic performance evaluation, investment decisions among others as postulated (Libby, Libby, Short, Kanaan and Gowing, 2008).

2.2.2 Behavioural Theory

Behaviourism is more concerned with behaviour than with thinking, feeling, or knowing. It focuses on the objective and observable components of behaviour. The behaviourist theories all share some version of stimulus-response mechanisms for learning. Nowadays, behaviourism is associated with the name of Skinner (1984), who made his reputation by testing Watson's theories in the laboratory. Skinner ultimately rejected Watson's almost

exclusive emphasis on reflexes and conditioning. Skinner believed that people respond to their environment, but they also operate on the environment to produce certain consequences.Skinner, who carried out experimental work mainly in comparative psychology from the 1930s to the 1950s, but remained behaviourism's best known theorist and exponent virtually until his death in 1990, developed a distinct kind of behaviourist philosophy, which came to be called radical behaviourism.

Skinner was influential in defining radical behaviourism, a philosophy codifying the basis of his school of research named the Experimental Analysis of Behaviour(EAB). While EAB differs from other approaches to behavioural research on numerous methodological and theoretical points, radical behaviourism departs from methodological behaviourism most notably in accepting treatment of feelings, states of mind and introspection as existent and scientifically treatable. Skinner's theory of behaviourism argues that in understanding fraud, the religious affiliations of the fraudster and his status in the society are not factors, rather three factors are critical to his behaviour-

i What was the driving force for his action(stimuli)? In other words, why did he feelthe 'need' to carry out the act?

ii What were the reinforcements in the form of money, prestige, goodwill?

iii. How has his past experience influence his action?

iv. Based on the act and history, how likely is he to commit the act again?

According to Slapper and Tomb (1999), human behaviour is motivated by self-interested pursuit of pleasure and the avoidance of pain. Crimes are events in which force or fraud are used to satisfy self-interest. They are simply the easiest way some people satisfying their desire to maximize pleasure and minimize pain, to gain certain ends rapidly, certainly and with minimal effort. Criminality therefore becomes a tendency of individuals to pursue short-

term gratification in the most direct way with little consideration for the long-term consequences of the acts.

Nevertheless, in searching for flaws in the financial statement audit, auditors should consider the behavioural trait of the fraudster as one of the fraud risk factors through techniques such as team brainstorming and pre-mortem strategy.

2.2.3 The Fraud Triangle Theory

The Fraud Triangle Model was created by Dr. Donald R. Cressey (1953), an American sociologist and criminologist. He focused his research on the circumstances that lead individuals to engage in fraudulent and unethical activity. Later, his research became known as the Fraud Triangle Model (Dorminey et al, 2010; 2012; Ruankaew, 2013). According to Cressey**, f**raud is the result of a set of circumstances which come together at a particular time and place causing someone to become a fraud perpetrator, particularly a trusted employee. Also Okoye (2011)pointed that the U.S. exposure draft released for public comment in February, 2002 introduces three categories of factors that may be inter-relatedto represent these circumstances.These are: pressure orincentives,opportunities, and attitudes or rationalizations. Cressey (1953) as cited in Montgomery, Beasley, and Palmrose (2002) described these three factors as the Fraud Triangle which involves:

1. **The motive or pressure to commit fraud**: This is perceived in the form of real or perceived financial need or moral needs such as getting back at the employer. By this individual feels that he wants to, or has a need to, commit fraud.
2. **The perceived opportunity to commit fraudand get away with it**: This arises as a result of these enabling factors: deficient internal controls and weak corporate governance. When one or two of these factors weigh(s) heavily inthe direction of fraud, the probability increases.

3. **The rationalization of the perpetrator**: This is achieved through finding a morally acceptable excuse that justifies why their action is not considered as a crime.

2.2.4 The Fraud Diamond Theory

Wolfe and Hermanson (2004)suggested that a different way to think about fraud risks could be to enhance and improve on the fraud triangle for both prevention anddetection of fraud by introducing a fourth element – individual's capability. In addition to addressing incentive, opportunity, andrationalization, the authors' four-sided "fraud diamond" considers that an individual's capability, namely: personal traits and abilities, play a major role in whether fraud may actually occur even with thepresence of the other three elements.Many frauds, especially some of the multibillion-dollar ones, would not have occurred without the right person with the right capabilities in place. Opportunity opens the doorway to fraud, and incentive and rationalization can draw the person toward it. But the person must have the capability to recognize the open doorway as an opportunity and to take advantage of it by walking through, not just once, but over and over again due to greed and arrogance. Accordingly, the critical question is: "who could turn an opportunity for fraud into reality?" Using the four-element fraud diamond, a fraudster's thought process might proceed from incentive or pressure to commit fraud to capabilityto convinces himself or themselves that he or they possess the necessary traits and abilities to be the right person(s)) to pull it off.

1. **Capability:**

   The individualor group convinces himself or themselves that he or they possess the necessary traits and abilities to be the right person(s)) to pull it off.

The conviction usually is that ‘I’ or ‘we’ have recognized this particular fraud opportunity and can turn it into reality.

2. Position/Function

Wolfe and Hermanson (2004) stated that position and role owned by the employee may perfect his way to breach the organizational trust. The initial factor to enable the fraudster to have the capability to commit fraud is the function or position holding in an organization. Many organizations do not implement sufficient checks and balances to mitigate their CEO's capabilities to influence and perpetuate frauds.

3. Intelligence/Creativity and Ego

Many of today’s largest frauds are committed by intelligent, experienced, creative people with a solid grasp of controls and vulnerabilities. This knowledge is used to influence the individual's concern for authorize access to systems or assets (Wolfe and Hermanson, 2004). The fraudster is someone who understands and is capable of exploiting internal control weaknesses and using the position; function or authorized access to the greatest advantage (Abdullahi and Mansor, 2015b). According to the Association of Certified Fraud Examiners (2003), 51% of the criminals of occupational fraud had at least a bachelor's degree, and 49% of the fraudsters were over 40 years old. Also, managers or executives committed 46% of the frauds based on the Association’s recent study.

The fraudster has a strong ego and great confidence that he will not be detected, or believes that he could easily take himself out of trouble if caught. Such confidence or arrogance can affect one's cost-benefit analysis of engaging in fraud. The more confident the person, the lower the estimated cost of fraud will be (Wolfe and Hermanson, 2004). In an article entitled, "The Human Face of Fraud" it is noted that one of the common personality types among fraudsters is the ego. An egoistic person refers to someone who is "driven to succeed at all costs, self-absorbed, self-confident and narcissistic" (Duffield and Grabosky, 2001). "The Psychology of Fraud" notes that, in addition to financial strain, an aspect of aspect of motivation that may apply to some or all types of fraud is ego/power.

4. Coercion, Deceit and Stress

A successful fraudster can coerce others to commit or conceal fraud Rudewicz (2011). A person with a very persuasive personality may be able to convince others to go along with a fraud or to simply look the other way. In addition it is noted that, a common personality type among fraudsters is the "bully," who "makes unusual and significant demands of those who work for him or her, cultivates fear rather than respect and consequently avoids being subject to the same rules and procedures as others" (Wolfe and Hermanson 2004). Many financial reporting frauds are committed by subordinates reacting to an edict from above to "make your numbers at all costs, or else."(Wolfe and Hermanson 2004).

According to Wolfe and Hermanson (2004) and Rudewicz, (2011) a successful fraudster must also lie effectively and consistently. To avoid detection, the fraudster must look at the auditors, investors, and others right in the eye and convincingly tell them lies. Thus, the fraudster should also possess the skill to keep track of the lies, so that the overall story remains consistent. Another strong characteristic of fraudsters is their ability to handle stress (Wolfe and Hermanson, 2004). Committing frauds require and managing the frauds over a long period of time and can be stressful. There is the risk of detection, with its personal ramifications, as well as the constant need to conceal the fraud on a daily basis. The individual must be able to control their stress, as committing the fraudulent act and keeping it concealed can be extremely stressful (Rudewicz, 2011).

2.2.5The Fraud Pentagon Theory

The Fraud Pentagon, also known as Crowe's Fraud Pentagon Model was developed by Jonathan Marks, a partner and a leader of the Fraud, Ethics, and Anti-Corruption Product and Solutions initiative at Crowe Horwath LLP in the United State in 2011. The model is an expansion of the Fraud Triangle Model (Cressey, 1953). Crowe's Fraud Pentagon factored two additional elements with the Fraud Triangle Model (Cressey, 1953), which are arrogance and competence. Arrogance or lack of conscience is an attitude of superiority and entitlement or greed on the part of a person who believes that internal controls simply do not personally apply (Crowe, 2011).The individuals committing fraud must have a strong ego and great confidence that they will not be detected. The common personality types include someone who is driven to succeed at all costs, self-absorbed, self-confident, and often-narcissistic (Rudewicz, 2011). According to the Diagnostic and Statistical Manual of Mental Disorders

(DSMMD), as cited by Rudewicz (2011) narcissistic personality disorder is a pervasive pattern of grandiosity, a need for admiration and a lack of empathy for others. Individuals with this disorder believe they are superior or unique, and they are likely to have inflated views of their own accomplishments and abilities.Five elements of arrogance/behavioural trait from the perspective of CEO, according to Crowe are:

1. big egos – CEO is seen as a 'celebrity' rather than a businessman;
2. they can circumvent internal controls and not get caught;
3. they have bully-attitude;
4 they practise autocratic management style; and
5. they have fraudulent behaviour trait in them.

2.3 Empirical Review

Shabnam, Takiah and Zakiah (2014), studied the usefulness of Cressey's fraud risk factor framework adopted from SAS No. 99 to prevent fraud from occurring. In accordance with Cressey's theory, pressure, opportunity and rationalization are in existence when fraud occurs. The study suggests variables as proxies' measures for pressure and opportunity, and tests these variables using publicly available information relating to a set of fraud firms and a sample of no-fraud firms. Two pressure proxies and two opportunity proxies are identified and suggested to be significantly related to financial statement fraud. We find that leverage and sale to account receivable are positively related to the likelihood of fraud. Audit committee size and board of directors' size are also linked to decrease the level of financial statement fraud. A binary logistic model based on examples of fraud risk factors of fraud triangle model measures the likelihood of financial statement fraud and can assist experts.

Wilks and Zimbelman (2004) tested whether evaluating theincentive, opportunity and rationalization (attitude) factors,separately increase or decrease the level of fraud assessment by auditors. The questionnaire included 40 factors, adopted from SAS 99, distributed amongst auditors. The findings indicated that when the perception of management's attitude regarding risk of fraud is low, the level of sensitivity of auditors to opportunity and incentive is higher when they assess separately compared to assessing overall fraud risk.

Skousen and Wright (2006) constructed a model consists of risk factors limited to pressures and opportunities to estimate the level of fraud occurrence. The findings indicated positive relationship between pressure and high level of fraud occurrence, and also suggested that high opportunity amongst the individuals increase the level of fraud incidence in companies.

To improve the previous study, Skousen and Wright (2008) developed some proxies to measure the elements of fraud triangle and find the impact of these factors on predicting and detecting fraud in financial statement. The study included five proxies for pressure and two proxies for opportunity which were found to have significant impact on financial statement fraud.

Lister (2007) suggested that pressure is a significant factor in committing fraud as "the foundation of heat for the fire". He determined three types of pressure including personal, employment stress, and external pressure. Lister defined opportunity as "the fuel that keeps the fire going". It was mentioned that even if individuals are motivated to perform the fraud, they cannot carry out the crime unless they have sufficient opportunity. As the third element of the fraud triangle model, rationalization identified as "the oxygen that keeps the fire burning". Lister selected the corporate culture as a proxy to evaluate rationalization instead of individually measurement.

Vona (2008) examined personal and corporate pressures as motivations' proxies for fraud commitment. The findings suggested direct relationship between opportunity and capability to hide the fraudulent behaviour. Hence, identifying the opportunities that increase the incidence of fraud increases the ability of auditors to find out the fraud committedby individuals. The current study intends to suggest a logical model for assessing fraud risk instead of long red flags lists, and provide a useful tool for experts.

Moyes (2007) examined the difference in perceived level of fraud –detecting effectiveness of SASNo.99redflags between external and internal auditors regarding the perceived levels of fraud detection of the 42 red flags found in SAS No.99. SAS No 99 requires the 42 red flags to be used in financial statement audit in order to detect fraudulent financial reporting activity. No differences were found between external and internal auditors with respect to overall perceptions. However, 17 of the 42red flags had significant differences regarding the effectiveness of red flags in the detection of fraud. For internal auditors perceived fraud – detecting effectiveness was a function of one's internal and total audit experience. Surprisingly, gender differences occurred with both external and internal auditors with female rating the red flag effectively consistently higher than male auditors. With the exception of two red flags, external auditors displayed a higher degree of consensus regarding the effectiveness rating of each red flag than internal auditors. When asked to identify the more effective red flags based on SAS No. 99 categories, both groups of auditors perceived the attitude/rationalization red flag category as the most effective red flags.

Graham and Bedard (2003) analyzed audit planning decisions on a sample of audit engagements and concluded that auditors' fraud risk assessments were appropriately related

to the number of risk factors present in the audit environment. Furthermore, recent experimental study by Carpenter (2007), found that auditors who participated in brainstorming sessions were better able to synthesize fraud risks and generate lists with more quality fraud ideas than individual auditors. The brainstorming audit teams provided more effective fraud risk assessments (higher when fraud is present than when fraud is not present) than auditors working alone.

A number of studies examined different perspectives of pressure. For instance, Murdock (2008) separated pressure into financial, non-financial, political and social categories. Rae and Subramaniam (2008) studied employees' motivation and financial pressure dimensions. Albrecht, Albrecht and Albrecht (2008) divided pressure/motive into financial or non-financial. They also categorized pressure in four groups including economic, vice, job-related and other pressures. The findings suggested that the majority of fraud originate from financial or vice-related pressure.

Smith, Omar, Syad Idris and Baharuddin (2005) investigated the most significant factors that were noticed by auditors to find out how auditors' demographic factors influence the significance of fraud risk factors for fraud prevention in Malaysia. The findings suggested that operational and financial permanence factors have the highest effect on fraud prevention, continuing with management attributions and finally affected by industry characteristics.

Chen and Elder (2007) identified six basic categories for pressure including transgression of obligations, problems originated from individual problems, corporate inversion, position achievement and relationship between employees. The study used three proxies including analysts forecast error, negative cash flow from operations, and directors' shareholdings

pledged for loans and credits ratio to measure the pressure based on Taiwan Statement of Auditing Standard (TSAS 43). According to the standard, management pressure increase because of their profitability. In addition, managers focus on thresholds for earnings to affect the insights of financial statement users who are interested in organizations' performance. Moreover, TSAS 43 proposed that profitability and productivity can be influenced by financial and operational conditions of the company. It is suggested that the financial situation of management or board of directors is endangered by financial performance of the organization. More so, the stock pledge percentage was measured by the percentage of directors' and supervisors' shareholdings pledged for loans and credits as a proxy for individuals' financial pressure.

Zuraidah, Norhayati, Normah, and Mohd-Daniel (2015)examined which factors are most likely use byauditors in assessing the likelihood of fraud risk. Anexperimental approach is adopted by sending case scenarios to63 auditors from the National Audit Department of Malaysiaand 67 final year accounting students. Both groups have tocomplete two different case scenarios which level of internalcontrols and fraud motivation- pressures and opportunity-are being manipulated into high and low level. The resultsindicate that there are significant interaction between internalcontrols and fraud motivation factors.

Yung-I and Ming-Long (2009) examined risk factors of the fraud triangle, core of all fraud auditing standards, for assessing likelihood of fraudulent financial reporting. Significant variables, including analysts forecast error, debt ratio, directors' and supervisors' stock pledged ratio, percentage of sales, related party transaction, number of historical restatements, and number of auditor switch, belong to pressure/incentive, opportunity and attitude/rationalization. Results indicate fraudulent reporting positively correlated to one of

the following conditions: more financial pressure of a firm or supervisor of a firm, higher percentage of complex transactions of a firm, more questionable integrity of a firm's managers, or more deterioration in relation between a firm and its auditor. A simple logistic model based on examples of fraud risk factors of ISA 240 and SAS 99 gauges the likelihood of fraudulent financial reporting and can benefit practitioners.

Halbouni (2015) investigates internal and external auditor perceptions regarding their responsibilities related to preventing, detecting, and reporting fraud in the United Arab Emirates. This study features a survey of 53 auditors and also explores the procedures that internal and external auditors follow so as to detect fraud during an audit. From the internal auditors‟ side, the results indicate that they are primarily responsible for identifying incidents of fraud and that their principal contribution is that are primarily responsible for identifying fraud and are consequently more concerned about reporting incidents related to fraud.

Velnampy and Anojan (2014) compared the financial performance of state and private sector banks during war and post war scenarios of Sri Lanka. CAMEL rating system, ratios and descriptive analysis were used for the study for the financial year 2007 to 2012. The findings revealed that Commercial Bank of Ceylon Plc was rated 1 or strong, Bank of Ceylon (BOC) was 2 or satisfactory, Hatton National Bank (HNB) PLC was rated 3 or fair and People's Bank rated 4 or marginal. According to the result of CAMEL rating system, the researcher suggested that HNB PLC and People's Bank should increase their financial performance through successful ideas to compete and run the business successfully in Sri Lankan banking sector.

Law (2011) examined empirically the organizational factors that are associated with the absence offraud in Hong Kong. Factor analysis was first employed and then logistic regression was performed so asto analyze the survey responses of 253 Chief Financial Officers as long as a total of 20 semi-structuredinterviews. The results indicate that audit committee and internal audit effectiveness, the tone at the topmanagerial level, and ethical policies are positively associated with a lack of fraud within organizations. Thefindings also show that neither auditor's prior success in fraud detection nor the type of auditor employed isan influential factor in the absence of fraud.

Thus, prior research has shed little light on the impact of hierarchical team composition on idea generation during fraud brainstorming sessions. On the other hand, Hogan, Rezaee, Riley, and Velury (2008) provided a summary of research on related party transactions and find that the mere presence of related party transactions does not appear to increase auditor risk assessments; however the research also suggests that related party transactions is one of the top reasons cited for audit failure when a fraud does occur.

Asare, Davidson and Gramling (2008) examine internal auditors‟ fraud risk decisions inresponse to variations in audit committee quality and management performance incentives. Using anexperimental approach, they find that internal auditors acting in an either a self-assessment role or a duediligence role were sensitive to alterations in management performance incentives, linked them to fraud riskassessments and changed their audit plans accordingly. With respect to audit committee quality, internalauditors in both roles were sensitive to variations in quality and linked the variation in quality to fraud risk,but did not alter the scope of their planned audit effort. As a result, they neither linked the variations inquality to fraud risk nor to planned scope.

Besides, Beasley, Carcello, Hermanson, and Lapides, (2001) investigated 56 firms whose auditors were subject to actions by the SEC, for their association with fraudulent financial statements and found that 27 percent of their sample firms had instances where the auditor had either failed to recognize or disclose related party transactions which in turn translated into reporting of inflated asset values.

Further, Braun (2000) suggests that time spent preparing for the session as well as time spent during the session will also likely improve the auditor's attention to fraud factors. Given that one of the objectives of the brainstorming session is to analyze fraud risk factors and to develop a fraud risk assessment, a higher quality brainstorming session should improve this process. Research conducted prior to the issuance of SAS No. 99 failed to find a consistent positive link between risk assessments and planned audit procedures. Graham and Bedard (2003) determined that auditors increased the extent of testing in response to fraud risk, but that the increase mostly took the form of review and inquiry procedures.

Hinsz, Tindale andNagao (2008) investigated differences in the ways that groups and individuals apply information-processing strategies and biases in their judgments involving probabilistic inference problems that involved base-rate and case-specific information. Their results showed that when individuals neglected base-rate information in their judgments, groups accentuated this tendency and used the base-rate information even less in their probability judgments.

Abdullatif (2013) explores how audit firms in Jordan deal with the presence of fraud risk factors in audit clients by considering the ones that are more important to Jordanian auditors.

They consider modifying their audit programmes when fraud risk factors are present in clients. The study uses a structured questionnaire that was administered to senior level auditors in the largest Jordanian audit firms. The findings show that almost all of the 20 fraud risk factors included in the questionnaire were only slightly important (if not unimportant), a finding that is arguably alarming. The perceived importance of modifying the audit programme in the presence of each fraud risk factor was related to the perceived importance of the fraud risk factor itself. However, changes in the nature and extent of audit procedures were more important than changes in the timing of the procedures or the members of the audit team. The most important fraud risk factors were related to the characteristics of management and its attitude towards the audit, while the least important fraud risk factors were related to the difficulties in the client's financial performance. Factor analysis found that the fraud risk factors could be classified into four separate groups. Possible interpretations of the findings were discussed, such as considering the Jordanian business environment characteristics, and the findings were compared to those of extant international studies.

Sebe-Yeboah and Mensah (2014) carried out research on the financial performance of Agricultural Development Bank in Ghana. Their PELARI (Profitability, Efficiency, Liquidity, Asset Quality, Risk Measures and Investor analyses) model is similar to the CAMELS' rating. They used financial ratio analysis to test for liquidity of the institution. Troubled signals models such as the Altman Z-score for non-manufacturing companies and risk index were also used to measure risk. The Altman Z-score generated for 2011 and 2012 showed a figure of less than 1.1 which put the bank in the distress zone category. It was evident from the analysis that ADB's focus on agricultural financing is diminishing since a sector analysis of loans and advances indicates that the agriculture sector lost its first position to the services sector which recorded 38% compared with agriculture 29% in 2012. The

bank's liquidity showed a downward trend and slipped further down in 2010 confirming the Ghana Banking Survey (2011) assessment that the bank was illiquid.

Erickson, Hanlon and Maydew (2006) investigated whether executive equity incentives were associated with accounting fraud. They examine a sample of firms accused offraud during the 1996–2003 period and do not find any relation between equity incentives and thelikelihood of the firm reporting fraudulent financial information. In contrast, Efendi, Srivastava and Swanson (2007) used a sample of firms that restated their financial statements, find the likelihood of a misstatedfinancial statement increases when the CEO has a sizeable amount of stock options "in-the-money."They also find that misstatements are more likely for firms constrained by debt covenants, firmsraising new debt or equity capital, or firms that have a CEO who serves as the chairman of the board.

Abdullahi and Manson (2015) examined the concept of understanding the convergent and divergent of the two classical theories- the fraud triangle theory and the fraud diamond theory. The similarities and differences between them are highlighted and appreciated for fraud prevention purposes. The study used secondary sources of information obtained from journal articles, textbooks and the internet. The discussion of the theories contributes to the understanding of frauds especially by forensic accountants, auditors, fraud examiners and other anti-fraud bodies.

Sutrisno (2016)examined the effect of risk and efficiency on the performance of Islamic banking. Risk consists of the financing risk that is measured by non-performing financing (NPF),capital risk measured by the capital adequacy ratio (CAR) and liquidity risk is measured by financing to deposit ratio (FDR) and the minimum reserve requirement (RR).

The efficiency was measured by operating expenses to operating income ratio (OEOI). While Islamic banking performance was measured by Return on Assets (ROA) and Net Profit Margin (NPM). This study involved 8 Islamic banks in Indonesia as the samples with quarterly data and processed using multiple regression analysis. The results showed the significant effect of FDR, CAR, OEOI and size on the performance of Islamic banking in contrast to the RR and NPF that had no significant effect on the performance of Islamic banking.

Dunn (2004) examinedthe issues of corporate governance and insider power in relation to fraud. He usedlogistic regression to examine the relationship between the top management team and board of directors' characteristics with the release of fraudulent financial statements. Dunn's results show that fraud is more likelyto occur when there is a concentration of power in the hands of insiders.

In the study conducted by Omar, Arshad and Razali (2013), financial ratios were used to assess risk of financial vulnerability. The study examined to what extent Non-Profit Organisations (NPOs) are exposed to risk of financial vulnerability. To provide a moremeaningful investigation, the study used eight financial indicators -Debt ratio, Cash ratio, Revenueconcentration index, Reliance ration ratio, Administrative ratio, Management cost rate ratio, Net OperatingMargin and Primary Reserve Ratio. The financial data to compute the ratios were derived from annual reports of134 NPOs registered under Companies Commission of Malaysia (CCM) for the financial period of 2011. It was established that 14% of the samples NPOs are classified under high risk of financial vulnerability. Majority ofNPOs (69%) are at moderate risk. The study indicates that NPOs are at risk because their revenues are not welldiversified, revenues earned are highly

depending on the major source of income, low administrative cost, anddo not have any surpluses during financial shock.

Apostolou, Hassell, Webber and Sumners (2001) surveyed both external and internal auditors. In this study, all auditors were asked to rate the importance of the twenty-five red flags found in SAS No. 82. They found that fraud risk factors involving Management characteristics and influence over the control environment were thehighest rated indicators (red flags) by the sample of auditors and significantly more important than factors related to financial stability and industry conditions. Interestingly, no significant differences were discovered between external and internal auditors.

Surveys of internal auditors (Gramling and Myers 2003; Moyes, Lin and Landry 2005) also reported a tendency to perceive fraud risk factors related to attitudes and rationalisation as relatively high in importance when compared to other factors.

Following the bankruptcy literature, two studies Kaminski,Wetzel andGuan(2004) sought to develop models based upon financial ratios to predict fraud. They used multiple discriminant analysis (MDA). The models reportedsignificant misclassification of fraud firms (between 58 and 98 percent). However,several financial ratio variables were shown to be useful in identifying and classifyingfraud firms. These financial ratios include fixed assets divided by total assets, inventorydivided by sales, inventory divided by current assets, sales divided by accountsreceivable, and sales divided by total assets.

Also, Moyes (2008) surveyed views of Certified Public Accountants over the effectiveness of fraud risk factors in detecting fraudulent financial reporting. He found that fraud risk factors

related to attitudes/rationalisation were perceived as more effective compared to those related to opportunities or incentives/pressures. The most important fraud risk factors reported were known histories of violations of security laws or allegations of fraud against the client or its senior management or board members, and management attempts to influence the scope of the auditor's work.

Almumani (2014) analyzed and compared the performance of Saudi banks listed in stocks market for the period 2007- 2011. The study is an evaluator in nature, drawing sources of information from secondary data. The financial performance of the bank is studied on the basis of financial ratios and variables. Financial performance was measured by two approaches: trend analysis and inter- firm analysis. It was found that increasing of assets, operating expenses and cost to income cause a decrease in Saudi bank profitability, while increasing of operating income cause an increase in the profitability of Saudi banks. Analysis shows that all the variables of the study have a positive mean value and all banks are generating income. Saudi joint venture banks proved to be more proficient in generating profits, absorbing loan losses and dominating in ROE, while Saudi established banks have more capacity of absorbing asset losses and dominating in ROA.

Mustafa (2014) investigated the financial performance of Erbil bank for investment and finance, Kurdistan Region of Iraq during the period of 2009-2013. Several financial performance parameters were used such as financial ratios analysis which is used to measure the financial position for the bank and on broader range statistical tools were used for analysis purpose of the several variables which would affect the banking system in general in order to know whether these are significantly correlated with the financial performance for the bank, the findings of the study revealed the positive behaviour of the financial position for

Erbil Bank and some of their financial factors variables influence the financial performance for the bank. Again, it is found that the overall financial performance of Erbil bank is improving in terms of liquidity ratios, assets quality ratios or credit performance, profitability ratios- Net Profit Margin (NPM), Return on Asset (ROA), Return on Equity (ROE). The study suggested a set of recommendations regarding the development and enhancing of some banking operations which will boost the bank's profitability and improve the financial performance for the bank.

Hogan, Rezaee, Riley and Velury (2008), provided a summary of research on related party transactions and find that the mere presence of related party transactions does not appear to increase auditor risk assessments; however the research also suggests that related party transactions is one of the top reasons cited for audit failure when a fraud does occur.

Besides, Beasley,Carcello, Hermanson and Lapides (2001) investigated 56 firms whose auditors were subject to actions by the SEC, for their association with fraudulent financial statements and found that 27 percent of their sample firms had instances where the auditor had either failed to recognize or disclose related party transactions which in turn translated into reporting of inflated asset values.

Rohit and Anoop (2013) used CAMEL Model to evaluate the performance of the selected five banks in India. This model measures the performance of the banks for the parameters comprising of Capitaladequacy, Assets quality, Management, Earnings strength and Liquidity sufficiency, theperformance of five banks selected was evaluated on the basis of market capitalisation.Period under study was from 2007 to 2011. After calculating ratios weight ages have been given to eachparameter of the CAMEL Model. From the weighted results of each

ratio, marks were given on the basis of performance of each bank. On the basis of best overallperformance, they assigned ranks from 1 to 5 to the banks under study. As per thewhole evaluation, results of the study wereas follows. 1st Rank: HDFC Bank; 2nd Rank: SBI Bank; 3rd Rank: Kotak Mahindra Bank; 4th Rank: ICICI Bank; 5th Rank: AXIS bank.

Moreover, several researches have been carried out based on the fraud triangle and fraud diamond theories. For example; Shabnam, Takiah and Zakiah (2014)research on the usefulness of Cressey's fraud risk factor framework adopted from SAS No. 99 to prevent fraud from occurring. In accordance with Cressey's theory, pressure, opportunity and rationalization are existence when fraud occurs. The study suggested variables as proxy measures for pressure and opportunity, and test these variables using publicly available information relating to a set of fraud firms and a sample of no-fraud firms. Two pressure proxies and two opportunity proxies are identified and suggested to be significantly related to financial statement fraud. The study found that leverage and sale to account receivable are positively related to the likelihood of fraud.

Also, a large number of studies have focused on assessing risk of financial statements to find out the possible risk factors and also find the best model for assessing risk and detecting fraud (Nieschwietz,Schultz &Zimbelman,2000; Wilks & Zimbelman, 2004). Copies of questionnaire were utilized by a number of studies to find out the significance of fraud risk factors determined through SAS 53 or SAS 82 in fraud prevention and detection. Asare and Wright (2004) compared the auditors utilized the factors determined in SAS 82 with auditors who do not use the checklist and found that the diagnoses are less effective amongst the first group.

Smith,Omar, Syad- Idris and Baharuddin (2005) investigated the most significant factors that were noticed by auditors to find out how auditors' demographic factors influence the significance of fraud risk factors for fraud prevention in Malaysia. The findings suggested that operational and financial permanence factors have the highest effect on fraud prevention, continuing with management attributions and finally affected by industry characteristics.

Asikhia and Sokefun examined the effect of capital adequacy on profitability of deposit-taking banks both foreign and domestic banks in Nigeria. Primary data collected through questionnaire involving a sample of 518, distributed to staff of banks with a response rate of 76% was used for the study. Also published financial statements of the banks were used from 2006 to 2010. The findings for primary data analysis revealed a non-significant relationship but the secondary data analysis showed a positive and significant relationship between capital adequacy and profitability of bank. This implies that for deposit-taking banks in Nigeria, capital adequacy plays a key role in the determination of profitability. It was also discovered that capitalization and profitability are indicators of bank risk management efficiency and cushion against losses not covered by current earnings.

When we investigate the prior literature on fraud risk factors in Nigeria environment, the number of studies carried out was limited.

Mohammed (2012) considered the impact of corporate governance on the performance of banks in Nigeria. The increased incidence of bank failure in the recent period generated the current literature on quality of bank assets and also emphasized good governance as means of achieving banks objectives. The study made use of secondary data obtained from the financial reports of nine (9) banks for a period of ten (10) years (2001-2010). Data were

analysed using multiple regression analysis. The study supported the hypothesis that corporate governance positively affects performance of banks. The study also showed that poor assets quality (defined as the ratio of non-performing loan to credit) and loan deposit ratios negatively affect financial performance.

Okoye and Gbegi (2013) carried out a study on the evaluation of forensic accountants to planning management fraud risk detection procedures. The study reveals that forensic accountants effectively modify the extent and nature of audit test when the risk of management fraud is high, forensic accountants propose unique procedures that are not proposed by auditors when the risk of management fraud is high, forensic accountants can make to the effectiveness of an audit plan when the risk of management fraud is high, involving forensic accountants in the risk of management fraud assessment process leads to better results than simply consulting them.

Charles and Kenneth (2013) assessed the impact of Non-performing loans and capital adequacy on the financial performance of commercial banks in Nigeria using regression analysis. The findings revealed that capital adequacy impacted positively on banks financial performance while NPLs have negative impact on banks' profitability in the period under study.

Onodi (2015) examined the application of fraud diamond model in the determination of fraud risk factors in the banking industry. The fraud diamond risk factors- pressure opportunity, rationalization, capability and corporate governance were proxied by these variables: cash flow trend, working capital, non-performing loan, provision for non-performing loan, non performing loan and advance to shareholders fund, total loan and advance to shareholders

fund, non-performing loan and advance to total current assets, interest coverage ration dividend coverage ratio, return on equity ratio, net margin ratio, debt to equity, debt to total assets and capital gearing ratio. Both primary and secondary data were used for the study. The findings revealed that elements of the fraud diamond model were critical factors in the determination of fraud risk in Nigeria banks.

Omoye and Eragbhe (2014) investigated accounting ratios and false financial statements detection among firms quoted in the Nigerian Stock Exchange. Accounting data were obtained from the reported financial statements of 30 sampled firms in financial and non financial sectors covering a time frame of five (5) years (2007-2011).The statistical instrument employed was Pooled Data Binary Logit regression. Data collected were run with E-Views 7 and SPSS 20. The findings revealed that investment and liquidity ratios were significantly related to financial statements fraud. It was recommended that accounting ratios should be critically examined by investors and stakeholders so as to detect probabilities of financial statements fraud occurrences, and also Government regulatory authorities like the Nigerian Stock Exchange, Security and Exchange Commission, Central Bank of Nigeria, Financial Reporting Council of Nigeria and others should ensure that financial statements of firms are properly screened and endorsed by them before being released to the public.

Ahmed, Madawaki and Usman (2014) tried to identify ways of reducing or preventing frauds and forgeries by analyzing their causes and effects in a study focused on the Central Bank of Nigeria (CBN) and some selected commercial banks in Gombe. They concluded that frauds and forgeries in banks has been on the upward trend despite the control measure put in place by more acute in commercial banks than in merchant banks. The study also suggested that banks ought to adopt a stronger internal control system and adequate internal control measures must be put in place to safeguard the assets of the bank against theft and misuse.

In a study conducted by Odunayo (2014), the study investigates the likely incidence of fraudulent financial reporting among 212 companies quoted on the Nigerian stock exchange as at 2007.The result of the study revealed that there exist the likely incidences of fraudulent financial reporting in Nigerian quoted companies. The study using statistical tools to evaluate the responses from Nigerian quoted companies revealed that there is a relationship between financial reporting fraud and company size, weak audit committees, internal control, and auditor's independence. The study established a positive relationship between these variables.

2.4 Summary of Literature Review

So many theories were reviewed in this study such as; Legal agency theory, Behavioural theory, Differential association theory, Opportunity theory, but this study is anchored on Legal agency theory.

Nevertheless, the first decade of the twenty-first century experienced a tsunamior blizzardin the number of corporate scandals, frauds and failures (Ball, 2009). These events precipitated and contributed to the Great Recession and significantly impacted the efficient functioning of free market capitalism. Some of which were actually facilitated by public auditors and accountants (Afribank Nigeria Plc, Cadbury Nigeria Plc,Intercontinental Bank Plc,Enron,WorldCom and Arthur Andersen). The scandals, frauds and failures have contributed to the loss of confidence by the financial statements users. According to ACFE (2012), an estimated $3.5 trillionworldwide were lost due to fraudulent financial statements, asset misappropriation, and corruption in 2011.

In an effort to restore public trust in the audit profession, accounting standard setters have increased the steps auditors areexpected to take in order to detect and prevent fraud. As a

result of these corporate debacles, auditors are currently requiredto adhere to the requirements of Statement on Auditing Standards (SAS) No. 99 as cited in Chui and Pike, (2013).

Again, inputs from forensic accountants, academics and researchers consistently showthat evaluation of information about fraud is enhanced when auditors evaluate financial report in thecontext of these three conditions- motives, opportunity, and rationalization- lack of integrity (Cressey Fraud Triangle).Wolfe and Hermanson (2004), suggested that a different way to think about fraud risks could be to enhance and improve on the fraud triangle for both prevention anddetection of fraud by introducing a fourth element – individual's capability- a four-sided "fraud diamond". He is of the opinion that an individual's capability, namely: personal traits and abilities, play a major role on whether fraud may actually occur even with thepresence of the other three elements. Onodi (2014) recommends the introduction of "Fraud Box- key Model" into professional literature to assist auditors in the prevention and detection of fraud but the researcher did not recognise the Crowe's Fraud Pentagon Model.Despite all these elements introduced, fraud still persists in Nigerian banks.

Moreso, findings from various studies outside Nigeria indicated inconclusive results with regard to which fraud risk indicators are the most important. Again, the findings are not palatable with Nigerian environment. Over time, regulators and researchers addressing fraud prevention and detection have also identified new fraud risk indicators and taxonomies, making comparisons difficult, hence, the need for this study in order to build on the finding of previous researches and probably establishing new empirical findings.

2.4.1 Gap in Literature

Since fraud is a dynamic in nature, the researcher is of the opinion that in addition to all the above elements linked togetheroperant conditioning within behaviourismapplies. From the work on learning theory by Edward Thorndike (1898) as cited inMcLeod (2007), operant conditioning involves learning from the consequences of our behaviour. According to *Law of Effect* by Edward Thorndike and the Skinner's Theory of Behaviourism, any behaviour that is followed by pleasant consequences is likely to be repeated, and any behaviour followed by unpleasant consequences is likely to be stopped. This study therefore, contributes to the existing literature by incorporating the 'behavioural trait' of the fraudster into the fraud risk assessment by developing a model, 'fraud behavioural pentagon model'. This is based on the notion that if the outcome of a fraudster's behaviour is favourable and pleasant to him, there is the tendency of repetition of the act.

Hence, when we investigate the prior literature in Nigeria, there could not be found any studies examining the application of fraud pentagon model in audit risk assessment in Nigerian banks, categorised under these fraudrisk factors: pressures, opportunities, rationalizations,capabilities, corporate governance and behavioural trait. This study attempted to fill the gap.

Furthermore, this study used sixteen (16) financial ratios variables as proxy for the independent variables, namely: non-performing loan, changes in cash flow, cash to current asset, gearing ratios (detailed in chapter three) as indices for the fraud risk factors. Also, CAMEL (Capital adequacy, Asset quality, Management competence, Earning strength and Liquidity sufficiency) rating, was used as proxy for fraud in the assessment of bank performance as stipulated by the CBN to be used in the assessment of fraud or no fraud banks.

This study ascertained the effect of fraud pentagon model in fraud risk assessment in the commercial banks in Nigeria, which auditors,shareholders, stakeholders, managers, researchers and policy makers may use in order to appraise the corporate performance of banks and benchmark it with global standards.

The researcher is of the opinion that when auditors apply the fraud pentagon model during audit fraud risk assessment will enhance auditors' prevention and detection of fraud in the financial statement which invariably will enhance accountability, transparency and good corporate governance in the audited financial reporting in Nigeria.

CHAPTER THREE

METHODOLOGY

3.1 Research Design

This study is concerned with the effect of fraud pentagon model in fraud risk assessment with focus on all the commercial banks quoted on the Nigeria stock exchange as at 31st December 2014.The research study adopted in this work is exploratory/formulative research study. The main purpose of such study is that of formulating a problem for more precise investigation or for developing the working hypotheses from an operational point of view.

The type of data employed in this study is a longitudinal/panel data. Longitudinal/ Panel Data are data that have the features of time series and cross sectional data of different companies for many years.

Ex-post facto research design used for this study was to establish meaningful effect of fraud pentagon model on fraud risk. This study is treated as ex-post facto research since it relied on historical data. This is appropriate because ex-post facto research aims at measuring and establishing the effect of one variable and another or the impact of one variable on another, in which the variables involved are not manipulated by the researcher (Onwumere, 2005). An ex-post facto research determines the cause-effect relationship among variables. It is most useful in investigating variables that cannot be observed experimentally, such as those used in this study. Ex-post facto seeks to find out factors that are associated with certain occurrence,

conditions, events or behaviours by analysing past events or already existing data for possible causal factors (Gujarati, Porter & Gunasekar, 2013; Kothari & Garg, 2014).

3.2 Population of the Study

The population of this study consists of all the quoted commercial banks in Nigeria that are listed in the Nigerian Stock Exchange between 2005 and 2014. Currently, there are fifteen (15) deposit money banks quoted in the Nigerian Stock Exchange Market. (**See appendix**)

3.3 Method of Data Collection

The data used for this study was mainly collected from secondary sources. The secondary data consist ofpanel data collected from the financial statement of the banks used for the study. The fraud risk factors were proxy with financial ratios used in the analysis. The financial data were sourced from publications of the Nigerian stock exchange (NSE), fact-books and the audited annual report and accounts of the selected quoted commercial banks, particularly the comprehensive income statement and statement of financial position of these banks as well as their respective notes to the account from 2005 to 2014. Both the dependent and the independent variables were computed from the data extracted from the publications of the NSE. The dependent variable which is Fraud was measured using CAMEL rating. The dependent variableindicator was established as follows: code 1- if the bank is very sound, 2 represent sound, 3 represent satisfactory, 4 represent marginal and 5 represent unsound bank respectively as categorized by CBN/NDIC. Also, the independent variables were measured

using relevant financial ratios such as Non-performing loan, working capital ratios leverage ratios, profitability ratios, liquidity ratios that were required by a particular variable.

3.4 Operationalization of Variables

As stated earlier, two variables namely, dependent and independent variables were operationalized in this research. The dependent variable was bank fraud, proxy by CBN bank ranking (Onodi, 2015) while the independent variable was covered by the fraud risk factors-pressure/incentive, opportunity, rationalization, capability, corporate governance and behavioural trait. Table 3 below shows the proxies for the variables:

Table 3: Fraud Risk Factors and their Proxies

S/N	Variables	Proxy	Measures
1	Financial Pressure Factors	i. Cash flow trend ii. Working capital Ratio iii. Non- performing Loan and Advance iv. Provision for Non Performing Loan	i. Change in cash flow= average $CF_t - CF_{t-1}$ ii. Current Assets / Current Liabilities iii. Non-performing loan / Total loan iv. Prov. for non performing loan / Total non-performing loan (Chen and Elder (2007)
2	Opportunity Risk Factors	i. Related party transaction ii. Weak Internal Control iii. Rapid Growth	i. Non-performing loan / Shareholders' funds ii. Total loan / Shareholders' funds iii. Non-performing loan / Total current Asset (Chen and Elder, 2007)
3	Rationalization Risk Factors	i. Economic Downturn ii.Poor Market Share	i.Dividend coverage ratio ProfitAfter tax / Dividend paid ii. Interest coverage ratio Earnings before interest and tax / Interest charges (Chen and Elder, 2007)
4	Capability Risk Factors	i. Pressure from Earning Forecast ii. Management Override Control	i. Return on Equity Ratio PAT & Interest / Shareholders' Funds ii. Net Profit Margin Net operation income / Net Assets (Spathis, 2002;Mustafa (2014)
5	Corporate Governance Risk Factors	i. Declining Productivity ii. Poor Leadership Direction	i. Debt to Equity Ratio Total Debt / Shareholders' Equity ii. Debt to Total Assets Ratio

		iii. Ineffective and inefficient management team	Total Debt / Total Assets iii. Capital Gearing Ratio Long–term debt x 100 / Total capitalisation Yung-I and Ming-Long (2009)
6	Behavioural Trait	i. Cash to Current assets; and ii. Cash to Current Liabilitiekes	i. Cash / Current asset ii. Cash + marketable security / Current liabilities Omoye and Eragbhe (2014)

Source: Researcher's Data, 2016

The dependent variable which is fraud, used the mean-score variables of the fraud risk factors incorporated in the fraud pentagon model to predict bank failure and the status of Nigeria deposit money banks (Unuafe and Afolabi, 2014).The CBN's rating system of the deposit money banks and ranks assigned to them are given in Table 4.

Table 4: Classification of Banks based on Rating System

Class	**Composite Score%**	**Rating**	**Rank**
A	86-100%	Very Sound	1
B	71-85%	Sound	2
C	56-70%	Satisfactory	3
D	41-55%	Marginal	4
E	0-40%	Unsound	5

Source: NDIC Quarterly Vol.17 N0.3/4 Sept/Dec. 1997 p.20

The researcher employed the above rating system in the application of fraud pentagon model in the determination of fraud risk factors in commercial banks in Nigeria. The secondary data from quoted banks' financial statements for ten years (2005-2014) were analysed accordingly using the proxies in Table 3.

3.5 Methods of Data Analysis

The analyses of data for this study was done based on the data collected from publications of the Nigerian stock exchange(NSE) and the annual report and account of the selected quoted deposit money banks.

Both dependent and independent variables were computed from the data extracted from the publication of the Nigeria stock exchange (NSE), the annual report and account of the selected quoted deposit money banks and ratios would be computed from the figures as reported in the annual report. Such data extracted are present in table 3.

The data were analysed using correlation matrix, regression analysis, frequency count; mean score, and diagnostic tests (multi-co-linearity and auto-correlation). The hypotheses were tested using regression analysis. The null hypotheses were tested at 0.01, 0.05 and 0.10 (1%, 5% and 10% levels of significance). Altman's financial ratios were used to measure the performance of banks and ranked them into five categories (very sound, sound, satisfactory, marginal and unsound) in line with the CBN and NDIC assessment using CAMELS rating system(Sebe-Yeboah & Mensah, 2014).

The study used descriptive statistics and correlation analysis to explain the nature of the data used. The descriptive statistics showed the mean-score, maximum, minimum, standard deviations and Jarque-Bera normality test (skewness and kurtosis). The correlation analysis was used to show the level of association among the variables used. It also revealed the presence or absence of multi-co linearity in the variables used(Omoye &Eragbhe, 2014).

The regression results were evaluated based on individual statistical significance test (t-test), and overall statistical significance test (F- test). The goodness of fit of the model was tested using the coefficient of determination (R-squared)(Azuka, 2011).

In conducting the data analyses, the study used both Micro-soft Excel and Sigma Plot version 12.1 software packages(Azuka, 2011).

3.6 Model specification

The model for this study premised on the main objective and anchored on the sub-objective. A linear regression model was design to test each of the null hypotheses.

The model used was adapted from the work of (Mainoma, 2009);(Chen & Elder, 2007);(Onodi 2015);(Sebe-Yeboah & Mensah, 2014) to suite the variables used in the study.

FRD = *f*(FP, OPR, RAT, CAP, COPG, BET) - - - - - - (1)

This can be econometrically expressed as follows:

$FRD = \beta_0+\beta_1 FP_{it}+\beta_2 OPR_{it}+\beta_3 RA_{it}+\beta_4 CAP_{it}+\beta_5 COPG_{it}+\beta_6 BET_{it}+\mu$ - - - (2)

FRD = Fraud

FP = Financial Pressure/Incentive Risk Factor

OPR = Opportunity Risk Factor

RA = Rationalization Risk Factor

CAP = Capability Risk Factor

COPG = Corporate Governance

BET = Behavioural Trait Risk Factor

μ = Represents error terms for intentionally/unintentionally omitted or added variables. Ithas zero mean, constant variance and non-auto-correlated. The coefficients

ofexplanatory variables were estimated by the use of Ordinary Least Square (OLS) technique.

í = cross section of firms

ι = Time series (years)

β_0 = is the y-intercept.

β_1, β_2, β_3, β_4, β_5, and β_6, represent estimated coefficient for specific bank *i* at time *t,*

The fraud risk factors are represented and computed with the following indices;

$FRD_{it} = \beta_0 + \beta_1 FP_{íι} (CCF_{it} + WC_{it} + NPL_{it} + PNPL_{it}) + \mu$ - - (3)

$FRD_{i\,t} = \beta_0 + \beta_1 OPR_{íι} (NPLSF + TLSF + NPLCA) + \mu$ - - (4)

$FRD_{it} = \beta_0 + \beta_1 RA_{íι} (PATDI_{it} + EBITIC_{it}) + \mu$ - - - (5)

$FRD_{it} = \beta_0 + \beta_1 CAP_{íι} (PATSF_{it} + PATNA_{it}) + \mu$ - - - (6)

$FRD_{it} = \beta_0 + \beta_1 CORG_{íι} (TDTA_{it} + TLEC_{it} + EQNL_{it}) + \mu$ - - (7)

$FRD_{it} = \beta_0 + \beta_1 BET_{íι} (C/TA_{it} + CM/TL_{it}) + \mu$ - - - (8)

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter deals with the analysis of data collected and interpretation of the result of the analysis. No set of data is meaningful until it is analysed and interpreted by the researcher. Hence, no raw data is meaningful unless it is arranged in such a way that it will be meaningful and useful for decision making. According to Baridan (1976) cited in Onodi (2014) once data are collected, they should be transformed into a useable state for decision making.

In this chapter also the hypotheses formulated were tested. The data collected were presented and analysed and effort was made to answer research question taking cognizance of the information collected from the financial statement of the banks.

In answering the research question, the mean score, frequency count and standard deviation were used. While in testing the hypothesis, correlation analysis and regression analysis were used. Diagnostic tests, namely: normality test and multi-co linearity, were also conducted.

4.2 Fraud Pentagon Risk Factors

Descriptive statistics analyses of the operational Fraud Risk Factors (as contained in the fraud Pentagon model) data for commercial banking sector in Nigeria during the study period are presented in Table 5 below.

Table 5: Descriptive Statistics for Operational fraud Risk Factors for Banking Sector

	FRAUD	FP	OPR	RAT	CAP	CORG	BET
Mean	2.933333	0.701667	0.860000	1.258667	0.332667	1.957333	0.492000
Median	3.000000	0.700000	0.870000	1.100000	0.300000	1.930000	0.500000
Maximum	4.000000	1.000000	1.430000	4.350000	0.900000	3.030000	1.100000
Minimum	2.000000	0.500000	0.480000	0.300000	0.080000	1.070000	0.100000
Std. Dev.	0.457738	0.157703	0.304889	0.997131	0.196549	0.510147	0.242375
Skewness	-0.315216	0.388681	0.305582	2.069957	1.610108	0.441622	0.873395
Kurtosis	4.902893	1.935461	1.912535	7.260907	5.713194	2.799540	3.892450
Jarque-Bera	2.511529	11.08599	0.972563	22.05889	11.08201	0.512690	12.40480
Probability	0.284858	0.081014	0.014909	0.000016	0.003923	0.073875	0.008466
Sum	44.00000	10.52500	12.90000	18.88000	4.990000	29.36000	7.380000
Sum Sq. Dev.	2.933333	0.348183	1.301400	13.91977	0.540843	3.643493	0.822440
Observations	15	15	15	15	15	15	15

Source: Researcher's computation using Sigma Plot version 12.1

From Table 5, the mean serves as a tool for setting benchmark. The median re-ranks and takes the central tendency. While the maximum and minimum values help in detecting problem in a data. The standard deviation is the most robust and widely used measure of dispersion/ variation from the mean. It is a measure of risk. The higher the standard deviation, the higher is the risk of the data. According to Azuka (2011), the standard deviation is a measure that summarises the amount by which every value within a data set varies from the mean.

In many data sets, the values deviate from the mean due to chance and such data sets are said to display a normal distribution. In a data set with a normal distribution, most of the values are clustered around the mean, while relatively few values tend to be extremely high or extremely low. Many natural phenomena display a normal distribution (Azuka, 2011).

The standard deviation in the commercial banks for the period 2005-2014 is 0.457738, 0.157703, 0.304889, 0.997131, 0.1965549, 0.510147 and 0.242375 for fraud, financial pressure, opportunity, rationalization, capability corporate governance and behavioural trait respectively. For such distribution, it is the case that 0.45%, 0.15%, 0.30%, 0.99%, 0.19%, 0.51% and 0.24% of values are less than one standard deviation (1SD) away from the mean value of FR, FP, OPR, RAT, CAP, CORG and BET respectively.

Skewness and Kutosis are contained in Jacque-Bera. Positively skewed is an indication of a rise in profit while negatively skewed is an indication of loss or backwardness. Jacque-Bera is used to test for normality (that is, to know whether data are normally distributed). Table 5 shows that the data used for this study are positively skewed.

Also, according to Jacque-Bera Theory:

H_0 means not significantly normally distributed

H_1 means significantly normally distributed

When probability value (PV) is less than 10% = Accept H_1 (It is significant)

When probability value (PV) is greater than 10% = Accept H_0 (It is not significant)

Table 5 reveals that the fraud risk variables; financial pressure (FP), opportunity (OPR), rationalization (RAT), capability (CA) corporate governance (CORP) and behavioural trait (BET) with p-values of 0.081014, 0.014909, 0.000016, 0.003923, 0.073875 and 0.008466, respectively are less than10%. So invariably, they are significantly normally distributed.

Further descriptive analyses of the data on the operational fraud risk factor proxies were made. The results are presented on Table 6 below.

Descriptive Statistics of Operational Variables used for the Commercial Banking Sectorpresented in Table 6 shows that all the variables, WC, NPL, PNPL, NPLSF, TLSF, NPLCA, PATDI, EBITIC, PATSF, PATNA and TDTA are positively and significantly normally distributed, while CCF and TLSE are not significantly and normally distributed. The p-values that are significant are: 0.006857 (CCF); 0.047722 (WC); 0.004552 (NPL); 0.012372 (PNPL); 0.048484 (NPLSF); 0.027433 (TLSF); 0.000000 (NPLCA); 0.000003 (PATDI); 0.016975 (EBITIC); 0.000440 (PATST); 0.008571 (PATNA); 0.094555 (TDEBT); 0.006914 (TLSE) and 0.010656 (CCA).

4.3 Correlation Analysis of the Financial Ratios

In examining the association among the selected variables, the study employed the Pearson correlation coefficient (correlation matrix). The correlation matrix was also used to test for multi-co linearity. A correlation of 90% and above shows the presence of multi-co linearity. Multi-co linearity problem occur where there is a strong association among the independent variable, such that two or more variable have the same effect or influence on the dependent variable. Using the two variables is like a repetition because they will have the same level of influence. Multi co-linearity problem is usually associated with pool or panel data.

The study used a panel data (financial ratio) of fifteen money deposit banks for ten years (2005-2014). Table 7 present the correlation matrix results of the variables (financial ratios) used for the study.

The correlation matrix table revealed that there is a positive association between fraud and financial pressure, opportunity risk factor, rationalization, capability, corporate governance risk factor and behavioural trait risk factor, while the association between financial pressure and capability, opportunity and behavioural trait, rationalization and behavioural trait, capability and behavioural risk factor were negative respectively. There are no correlation coefficients greater than 0.75, with the vast majority of the remainingcoefficients having values less than 0.5.

When correlations are high, one of the variables is removed from the correlation analysis. This is done to prevent multi-colinearity. In addition to reviewing thecorrelation coefficients, the study also carried out heteroscedasticity test to establish how homogenous the data used for the study is. We assumed that the data used on the commercial banks are homogenous.

This means that the proxy variablesfor financial pressure, opportunity, rationalization, capability, corporate governance risk factors and behavioural risk factorsare homogenous. Since our test for heteroscedasticityshows homogeneity of the variables used, there was no need to carry out robust test. A robust regression test is a test that correct for the fault of

heteroscedasticity test. In checking for multi-co-linearity, the study observed that no two explanatory variables were perfectly associated. This shows the absence of multi co-linearity in the model.

4.4 Regression Analysis

In order to examine the influence of the pentagon model variables on fraud risk and to test the hypotheses, the study used multiple regression analysis. The following models specifications were used to test the research hypotheses:

$FRD_{it} = \beta_0+\beta_1 FP_{it}+\beta_2 OPR_{it} +\beta_3 RA_{it} +\beta_4 CAP_{it} +\beta_5 COPG_{it}+\beta_6 BET_{it} +\mu$ - - (1)

Represented by these indices;

$FRD_{it}= \beta_0+\beta_1 FP_{it} (CCF_{it}+WC_{it}+ NPL_{it}+ PNPL_{it}) +\mu$ - - (2)

$FRD_{it}= \beta_0+\beta_1 OPR_{it} (NPLSF + TLSF +NPLCA) +\mu$ - - (3)

$FRD_{it}= \beta_0+\beta_1 RA_{it} (PATDI_{it}+EBITIC_{it}) +\mu$ - - - (4)

$FRD_{it}= \beta_0+\beta_1 CAP_{it} (PATSF_{it}+PATNA_{it}) +\mu$ - - - (5)

$FRD_{it}= \beta_0+\beta_1 CORG_{it} (TDTA_{it}+TLEC_{it}+ EQNL_{it}) +\mu$ - - (6)

$FRD_{it}= \beta_0+\beta_1 BET_{it} (C/CA_{it}+CM/CL_{it}) +\mu$ - - - (7)

4.5 Restatement of the Hypotheses

The six hypotheses to be tested as stated in Chapter One are:

1. Financial pressure does not have significant effect on fraud in the Nigerian deposit money banks.

2. Opportunity has no significant effect on fraud in Nigerian deposit money banks.

3. Rationalization has no significant effect on fraud in Nigerian deposit money banks.

4. Management capability has no significant effect on fraud in Nigerian deposit money banks.

5. Corporate governance has no significant effect on fraud in Nigerian deposit money banks.

6. Behavioural trait has no significant effect on fraud in Nigerian deposit money banks.

4.5.1 Analysis of Commercial Banks Financial Ratios Using Fraud Pentagon Model

Financial ratios from the quoted banks within the period of ten (10) years from 2005-2014, were analysed using regression analysis.Below in Table 8 are the computed financial ratios of the commercial banks in Nigeria.

4.5.2 Interpretation of the Fraud Pentagon Mean Factors

A. Financial Pressure Risk Factors

This variable is proxy by:

i Cash Flow Trend;

ii Working Capital Ratio;

iii Non-performing Loan Ratio; and

iv Non-performing Loan Provision Ratio.

The mean scores of the above ratios for the banks presented as A, B, C, and D, respectively under Financial Pressure column in Table 8 show the level of Liquidity, Assets quality and Management competence. From the table, all the banks have cash flow lower than the minimum level of 40% required of them by the regulatory authorities.

The table reveals the level of working capital ratios of the commercial banks in column B. The analysis shows that only five (5) banks namely: Diamond, Union, UBA, Wema and Zenith Banks met the statutory requirement of 2:1. This means that only about 33% of the banks met the statutory working capital requirement while 67% (10) of the banks did not.

The table also reveals in column C the levels of non-performing loans in the banks. The analysis shows that apart from Diamond, Fidelity, and Sterling Banks that have ratios below 20%, and GTB and Skye Banks that have ratios of just 20%, the benchmark limit, others have ratios above the benchmark. FBN, Unity and Wema Banks have the highest ratios of 40% each. This is worrisome.

Table 8 also reveals in column D under Financial Pressure ratios of the provisions for non-performing loans to total of non-performing loans of the banks. From the analysis none of the banks met the statutory benchmark of 1:1. The closest to the benchmark was 90% provisions made by Eco and Fidelity Banks. The least provision for non-performing loans was 33% made by Zenith and Union Banks.

B. Opportunity Risk Factor

Opportunity risk factor is measured by:

i Related Party Transaction;

ii Weak Internal Control; and

iii Rapid Growth.

Table 8 also shows the analysis of the Mean-Scores of the opportunity risk factor indicators for the banks in three columns, A, B and C for related party transactions, weak internal control and rapid growth, respectively, under Opportunity column. These ratios expose bank level of liquidity and inside trading disposition

.

The ratio of non-performing loans to shareholders' fund in column A revealed that Skye, Access, Fidelity, FCMB and Stanbic Banks have ratios of 40%, 25%, 23% , 23% and 21%, respectively. Others are Diamond Bank (9%), Eco Bank (19%), FBN (14%), GTB (15%),

Sterling Bank (11%), Union Bank (16%), UBA (18%), Wema Bank (16%), Unity Bank (13%) and Zenith Bank (8%).

The result of total loans to shareholders funds analysis as presented in column B reveals that Stanbic Bank, Union Bank and UBA's total loans to shareholder funds ratios are above 60%. Access Bank, Diamond Bank, First Bank, FCMB, GTB, Skye Bank Sterling Bank, Fidelity Bank, Wema Bank and Union Bank have ratios of 40% or more but less than 47% while Zenith, Unity and Eco Banks' ratios were below 40%. Those high loans to shareholders' funds ratios may result to high non-performing loan and high opportunity risk factor.

Column C contains the ratios of non-performing loans to total current assets of the banks. The results showed that GTB and Access Bank had the highest ratios of 60% and 40%, respectively. Others are Diamond and Fidelity Banks (10%) each, Eco and Skye Banks (20%) each, FBN (4%), FCMB and Sterling Bank (30%) each, Stanbic Bank (11)%, UBA and Union Bank (15%) each, Unity Bank (16%), Wema Bank (19%) and Zenith Bank (8%). Our finding shows that FBN and Zenith Bank have the least ratios (4% and 8%, respectively). High level of non-performing loans to total current assets may induce banks to present fraudulent financial statements in bid to cover up the fraud risk.

C Rationalization Risk Factor

This is proxy by:

i Interest Coverage Ratio; and

ii Dividend Coverage.

These ratios presented in columns A and B respectively under rationalization in Table 8 reveal the profitability of banks within the period studied. The mean score for interest

coverage ratios for the banks are: Access Bank (200%), Skye Bank (230%), Zenith Bank (210%), UBA (155%), Sterling Bank (148%), Union Bank (143%) and Unity Bank (130%). Others are: Eco Bank (65%), Wema Bank (81%), First Bank (52%), Diamond Bank (48%), Fidelity Bank (38%), FCMB (42%), GTB (32%), and Stanbic Bank (30%). Access, Skye and Zenith Banks were able to generate earnings before interest and tax that were two times or more than their interest charges. UBA, Sterling, Union and Unity Banks had ratios greater than one but less than two; and the rest all had interest coverage ratios below one (1). However, all the banks had positive interest coverage ratios within the period under review. But the banks with interest coverage ratios below 1 are not generating sufficient revenues to satisfy their interest expenses.

The dividend coverage ratios for the banks are: Zenith Bank (300%), GTB (230%), FBN (210%), Access Bank (200%), UBA (160%) and Union Bank (120%). Others are: Unity Bank (80%), Sterling Bank (62%), Stanbic Bank (60%), Skye Bank (62%), Fidelity Bank (75%), Eco Bank (70%), Diamond Bank (60%), Wema Bank (52%) and FCMB (30%) dividend covers are as indicated. The dividend coverage ratios for Zenith, GTB, FBN, Access Bank, and UBA are abovethe 1.5 (150%) benchmark of stability. Others have, apart from Union Bank which has 1.2 (120%) less than 1 (100%) dividend cover. Although, all the banks have positive dividend covers.

D Capability Risk Factor

The proxy variables were:

i Return on Equity; and

ii Net Profit Margin.

These ratios reveal the leverage level in banks. From the analysis in Table 8 the ROE for each of the banks are: Sterling and Union Banks (20%) each, UBA (14%), Fidelity Bank (12%),

First Bank (10%), Access Bank (9%),Unity Bank (8%), Wema and Stanbic Banks (7%) each. Others are: Eco Bank (6%), FCMB, Skye and Zenith Banks (4%) each, GTB (3%), and Diamond Bank (2%). Though, a business that has a high return on equity is more likely to be capable of generating cash internally; it could as well be indication of fraud risk.

The analysis in Table 4.4 also reveals the net profit margins of the banks within the period to be as follows: Eco Bank (40%), Union and Wema Banks (30%) each, UBA, Access, Diamond and Unity Banks (20%) each. Others with single digit figures are: Fidelity Bank (6%), FBN and FCMB (5%) each, Zenith Bank (4%) each, GTB and Skye Bank (3%) each, Stanbic Bank (2%) and Sterling Bank (-4%). The banks, except Sterling Bankwhich made a negative net profit, had positive net profit margins.

E Corporate Governance Risk Factors

The proxy variables used were:

i Debt to Equity;

ii. Debt to Assets; and

iii. Capital Gearing Ratio.

These variables measure management efficiency.

The analysis as presented in Table 8 reveals that the proportion of debt financing to equity for most of the banks are generally below 30% of the shareholders' equity funds except for UBA, Fidelity, FCMB, Union and Unity Banks which have ratios above 30% but less than 34%. Although debt financing accords some tax shield benefits on firms; but high debt-to-equity ratio signifies serious adverse effects on a firm's operating cost and long term solvency.

The Mean-Scores of debt-to-assets ratio of the banks as presented in Table 8 range from 8% to 33%. FCM, UBA, Union and Sterling Banks have ratio of 0.33 (33%) each. Diamond and Fidelity Banks have much lower ratios of 0.16 (16%) and 0.08 (8%), respectively. Higher

ratio indicates stress on the solvency of the institution and increased fraud risk in the financial statement of the institution as there may be deliberate attempt to manipulate the accounts to cover up the management inefficiencies.

Column C under Corporate Governance in Table 8 shows the banks' Capital Gearing Ratios. The analysis revealed that Eco Bank has the highest capital gearing of about 110%. Eco Bank is followed by Skye Bank which has 98%. Both Stanbic and Sterling Banks have 63% each while Unity and First Banks have 61% and 56%, respectively. Others are UBA 53%, Union Bank 49%, FCMB and GTB 48% each, Zenith Bank 46%, Access Bank 42%, Diamond 39%, Wema and Fidelity Banks 37% and 21%, respectively. Both very high and very low gearing are indicators of poor corporate governance. The auditor should pay careful attention to such ratios as indicators of fraud risk in the in the financial statement of such organization.

F Behavioural Trait Risk Factor

The proxy variables were:

i Cash to Current assets; and

ii Cash to Current Liability

The mean score of cash to current assets ratios of the banks are presented under column A in the Behavioural trait in Table 8. The ratios range from 4% to about 78%. Union, Unity and Wema Banks have the largest ratios of 78%, 69% and 61%, respectively. Others are Access Bank 42%, GTB 40%, FBN 39%, UBA and Zenith Bank 28% each, Diamond Bank 27% and Eco Bank 24%. At the lower rungs are: Skye Bank 15%, Fidelity 14%, FCMB 12%, Sterling Bank 9% and Stanbic Bank 4%.

On cash to current liabilities, the ratios are presented as column B under Behavioural trait in Table 8. The ratios range from 20% to 160% (that is 0.2 to 1.6). UBA and FBN maintained

cash and cash equivalent volumes that were 1.6 and 1.1 times of their current liabilities, respectively. This shows a high level of liquidity in such banks. They were followed by Fidelity, GTB, Access and Union Banks which have ratios of 80%, 70%, 60% and 60% respectively. Eco Bank and FCMB had 50% each while Diamond, Skye, Sterling, Unity Wema and Stanbic Banks were at the lower rungs with 40%, 30% or 20%. Extreme figures of cash to current ratios are fraud risk pointers and call for deeper investigation by the auditor as excessive liquidity may be either a cover up or a lure to commit fraud.

The Nigeria Deposit Insurance Corporation and the Central Bank of Nigeria use the Capital Adequacy, Asset Quality, Management Competence, Earning Strength and Liquidity Sufficiency (CAMEL) for rating banks. The rating system classify banks into very sound, sound, satisfactory, marginal and unsound, the rating enable the regulatory authority to determine banks that are distress and their level of distress (NDIC, 1997).

The rating was used as proxy for fraud risk factors in the determination of fraud risk in Nigeria Banks.

The ranking of the Banks in accordancewith CAMEL rating is presented in Table 9:

From Table 9 the grand mean rating of the banks within the period studied shows four (4) banks namely: Eco, Stanbic, UBA and Unity were satisfactory while the rest were rated marginal.

4.5.3 Testing of Hypotheses

The hypotheses were tested using multiple regression analysis of the dependent variable on the independent variables and the result is presented on Table 10.

Table 10: Multiple Regression Analysis between Fraud and FP, OPR, RAT, CAP, CORP, BET in the commercial banks

Dependent Variable: FRAUD
Method: Least Squares
Date: 06/08/16 Time: 17:34
Sample: 1 15
Included observations: 15

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.168522	0.543795	9.504533	0.0000
FP	7.936986	0.631537	11.48659	0.0762
OPR	0.729682	0.271132	6.691241	0.0274
RAT	-0.001285	0.083934	-0.015305	0.9882
CAP	2.756188	0.499480	9.513950	0.0685
COPG	0.287336	0.169872	1.691485	0.0292
BET	2.273622	0.444262	7.615903	0.0551

R-squared	0.632064	Mean dependent var	2.933333
Adjusted R-squared	0.701112	S.D. dependent var	0.457738
S.E. of regression	0.289096	Akaike info criterion	0.660608
Sum squared resid	0.668611	Schwarz criterion	0.991031
Log likelihood	2.045440	Hannan-Quinn criter.	0.657088
F-statistic	74.51629	Durbin-Watson stat	1.898037
Prob(F-statistic)	0.027125		

Source: Researcher's computation using Sigma plot 12.1

Interpretation of Regressed Result

The regressed coefficient result in Table 10 showsthat Fraud (FR) has a positiverelationship with Financial Pressure (FP)at 7.936986 and statistically significant at 0.0762. The Opportunity (OPR) risk factor has apositiverelationship with FRat 0.729682 and statistically significant at 0.0274. Rationalization (RAT) has a negative relationship with FR at -0.001285 and statistically insignificant at0.9882.FR has a positiverelationship with Capability (CAP)at 2.756188and statistically significant at 0.0685. Corporate governance (COPG) has a positiverelationship with FR at 0.287336 and statistically significant at 0.0292. Also, there exists a positive relationship between FR and Behavioural Trait(BET)at 2.273622 and statistically significant at 0.0551. Again, the Durbin-Watson Statistics is 1.898037 which is approximately 2 (based on the rule of thumb). This indicates the fitness of model used in the study and there is no problem of Auto correlation in the regressed result. Auto correlation is a problem associated with time series data.

The prob. (F-statistic) which is used to test the overall significance of a model reveals that the tested variables have a collective, statistically significant relationship at 5% level of significance. It was observed from the result of the analysis in Table 10 thatthe coefficients of determination (R-Squared adjusted) obtained was 70.33, meaning that 70% of the systematic variations on the dependent variables could be jointly predicted by all the independent variables.

Model Specification Fraud Pentagon model for the Nigerian commercial banks is given as:

$$FRD_{it} = 5.168522 + 7.936986FP_{it} + 0.729682OPR_{it} - 0.001285RAT_{it} + 2.756188CAP_{it} + 0.287336COPG_{it} + 2.273622BET_{it} + \mu \quad - \quad - \quad (8)$$

(a) Hypothesis One:

H_{01}: Financial pressure does not have significant effect on fraud risk factor in the Nigerian commercial banks.

Decision Rule

Accept the alternate hypothesis, if the P-value of the test is less than 0.01, 0.05 and 0.10, otherwise reject.

Decision

In Table 10, the result of the analysis of the effect of financial pressure on fraud risk in the Nigerian commercial indicated a coefficient value 7.9370 and P-Value of 0.0762. These show that financial pressure has a positive effect on fraud risk; the higher the financial pressure, the higher the fraud risk in the bank. The table also revealed a probability value of 0.0762, which is less than the alpha value of 0.10 (10%). This means that financial pressure has positive effect on fraud risk and the influence is statistically significant at 10%. Based on this result, the study rejects the null hypothesis and accepts the alternate; and concludes that financial pressure has positive influence on bank fraud in Nigeria.

(b) Hypothesis Two

H_{02}: Opportunity has no significance effect on fraud risk factor in the Nigeriancommercial banks.

Decision Rule

Accept the alternate hypothesis, if the P-value of the test is less than 0.01, 0.05 and 0.10, otherwise reject.

Decision

The result of the analysis of the effect of opportunity on fraud risk factor presented on Table 10 showed coefficient value of 0.7297 and probability value of 0.0274. The coefficient value is positive. The coefficient value of 0.7297 means that opportunity risk factor has a weak positive effect on the level of fraud committed in banks. Frauds are likely to be committed when the opportunity to do so offers itself. The p-value of 0.0274 is less than the alpha value of 0.05 (5%). This showed that opportunity has a positive effect on bank fraud and the effect is statistically significant at 5%. Consequently, we reject the null hypothesis and accept the alternate hypothesis and conclude that opportunity has a positive effect on fraud in Nigerian commercial banks.

(c) HypothesisThree

H_{03}: Rationalization has no significance effect on fraud risk in Nigerian commercial banks.

Decision Rule

Accept the alternate hypothesis, if the P-value of the test is less than 0.01, 0.05 and 0.10, otherwise reject.

Decision

The regression analysis of the effect of rationalization on fraud risk showed a coefficient value of -0.0013 and p-value of 0.9882. The negative coefficient value means that rationalization has negative influence on fraud risk. However, the coefficient value of (-0.0013)indicates a weak negative effect and shows that the more a fraudulent staff tries to rationalize his action, the less the risk of fraud in the banks. The effect of rationalization on fraud risk shows a p-value of 0.9882 which is greater than 0.1 (10%). This means that rationalization does not have statistically significant effect on fraud risk in the Nigerian

commercial banks. Based on this result, the study accepted the null hypothesis and concluded that even though rationalization very weakly effect on fraud risk in commercial banks in Nigeria, the influence is not statistically significant even at a high significance level of 10% (See Table 10).

(d) HypothesisFour

H_{04}: Management capability has no significance effect on fraud risk in Nigerian commercial banks.

Decision Rule

Accept the alternate hypothesis, if the P-value of the test is less than 0.01, 0.05 and 0.10, otherwise reject.

Decision

The result of the analysis of the influence management capability on fraud risk as presented in Table 10 shows a coefficient value of 2.7562 and p-value of 0.0685. The positive coefficient value of 2.7562 connotes that management capability has positive impact on fraud risk and with a p-value of 0.0685 which is higher than 5% level of significance but less than 10% significant level. Based on this result of analysis, the study rejected the null hypothesis which states that management capabilities has no significance effect on fraud risks and accept the alternate hypothesis. We, therefore, conclude that management capability has a significance effect on fraud risk factors in the commercial banks in Nigeria.

(e) HypothesisFive

H_{05}: Corporate governance has no significance effect on fraud risk in Nigerian commercial banks.

Decision Rule

Accept the alternate hypothesis, if the P-value of the test is less than 0.01, 0.05 and 0.10, otherwise reject.

Decision

Result of analysis of the effect of corporate governance on fraud risk shows a coefficient value of 0.2873 and p-value of 0.0292 (less than the 5% significance level). The coefficient value (0.2873) indicates that corporate governance has weak positive effect on fraud risk. The analysis showed a p-value of 0.0292 which is less than the alpha value of 0.05 (5%) significance level. Hence, corporate governance has weak positive effect on fraud risk and the influence is statistically significant at 5% level. Based on this finding, the study rejected the null hypothesis and accepted the alternative hypothesis. We, therefore, conclude that corporate governance has statistical significant effect on fraud risk in Nigerian commercial banks (See Table 10).

Effective corporate governance ensures check and balance in the organization's operations which reduce the level of fraud risk in the organizations.

(f) HypothesisSix

H_{06}: Behavioural trait has no significant effect on fraud risk factor in Nigerian commercial banks.

Decision Rule

Accept the alternate hypothesis, if the P-value of the test is less than 0.01, 0.05 and 0.10, otherwise reject.

Decision

The result of the analysis on fraud risk showed a coefficient value of 2.2736 and p-value of 0.0551. The positive coefficient value means behavioural trait has a positive effect on fraud risk in banks and the effect was statistically significant at five percent 10%. Hence individual life style and inherited trait of employee have influence on the level of fraud risk in Nigeria

banks. Based on the analysis finding, the study rejects the null hypothesis and accepts the alternative hypothesis. The study therefore concludes that behavioural trait has a positive effect on fraud risk in Nigerian commercial banks and the effect is statistically significant at 5% level(See Table 10).

Summary of the regression analysis result is presented in Table 11 below.

Table 11: Regression Analysis

	FP	**OPR**	**RAT**	**CAP**	**COPG**	**BET**
Coefficient	7.9370	0.7297	-0.0013	2.7562	0.2873	2.2736
T-test	11.4866	6.6912	-0.0153	9.5140	1.6915	7.6159
P-value	0.0762**	0.0274*	0.9882	0.0685**	0.0292*	0.0551**
R-squared		0.6321				
R.sq (Adj)		0.7011				
F-statistics	0.74516					
F-stat (P-value)		0.0271				
Durbin Watson (DW)		1.8980				

Note:*5% level of significance while ** 10% level of significance.
Sources: Researcher's extract from regression analysis. Sigma plot 12.1

The R-sq (Adj) value of 0.70 means that about 70% of fraud risk in Nigerian commercial banks can be attributable to financial pressure, opportunity, rationalization, capability, corporate governance dysfunction and behavioural trait of the staff and management of the institutions. The F-statistics which measures the fitness of the model showed a positive value of 0.7452 with p-value of 0.0271; this means that the model used for the study is 74.52% fit for the analysis and is statistically significant at 5%. The Durbin Watson (DW) which test for

the presence of multi-co-linearity and the appropriateness of the regression used showed a DW value of 1.8980, which can be approximated to 2, confirms the absence of multi co-linearity in our model and the appropriateness of the model used. The overall F-statistics is

Summarily, the effect of fraud pentagon model variables on fraud risk is revealed by the regression coefficient while the level of significance is revealed by the probability value (p-value) which is 0.006313. this shows the fitness of the model used for this study. Table 12 shows the results of the effect of fraud on the fraud risk factor indices.

Table 12: Multiple Regression Analysis Showing Effect of Fraud on Fraud Risk Factors Indices

Dependent Variable: FRAUD
Method: Least Squares
Date: 06/08/16 Time: 17:11
Sample: 1 15
Included observations: 15

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.645594	2.038059	2.770084	0.0243
CCF+WC+NPL+PNPL	5.208766	0.272583	14.76584	0.0657
NPLSF+NPLTA+NPLCA	0.155857	0.882945	10.17659	0.0643
PATDI+EBITIC	0.058929	0.098656	0.597317	0.5668
PATSF+PATNA	3.870419	1.366012	13.63717	0.0418
TDTA+TLSF+EQNL	1.704718	0.535936	11.31499	0.0250
CCA+CMCL	1.399511	0.343913	-1.161661	0.0289

R-squared	0.703252	Mean dependent var	2.866667
Adjusted R-squared	0.671808	S.D. dependent var	0.516398
S.E. of regression	0.561158	Akaike info criterion	1.987096
Sum squared resid	2.519186	Schwarz criterion	2.317519
Log likelihood	7.903219	Hannan-Quinn criter.	1.983576
F-statistic	74.64614	Durbin-Watson stat	2.049956
Prob(F-statistic)	0.006313		

Source: Researcher's computation using Sigma plot 12.1

4.6 Post Regression Analysis

Since this study used longitudinal research design, post regression analysis was conducted to test for multi-co-linearity in the variables used for this study. The general rule for interpretation is:a mean variance inflation factor less than ten (thatis meanVIF< 10) shows no

multi-co-linearity; while a value greater than ten (mean VIF > 10) shows evidence of multi-co-linearity. The result of the post regression analysis of the variables used in the model is presented in Table 13.

Table 13: Post Regression Analysis Test of Multi-Co-linearity in the Banking Sectors

Variance Inflation Factors
Date: 06/08/16 Time: 17:11
Sample: 2005 - 2014
Included observations: 15

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	326.3164	1875.039	NA
CCF+WC+NPL+PNPL	0.208766	9.272583	1.876584
NPLSF+NPLTA+NPLCA	0.043857	1564.245	1.517659
PATDI+EBITIC	0.053629	1.325456	2.297317
PATSF+PATNA	2.423419	1.366012	1.163717
TDTA+TLEC+EQNL	0.004718	1.215367	1.131499
CCA+CMCL	1.019511	1.435136	1.161661

Source: Researcher's computation using Sigma plot 12.1

In the analysis, each independent variable was regressed on theremaining variables. This was done to test for significance of the relationship among the independent variables.The results from the regressions were similar to those identified in the correlation test anddid not reveal any significant relationships other than those identified in the correlation analysis. The mean variance inflation factor in each test is less than 10 and thus indicates evidence of non-existence of multi-co-linearity among the variables used in this study.

4.7 Discussion of Findings:

A. Financial Pressure Risk Factors:

We stated a null hypothesis that high level of financial pressure is not a determinant of fraud risk.

This variable is proxy by: Cash Flow Trend (CCF); Working Capital Ratio (WC); Non-performing Loan Ratio (NPL); andProvision Non-performing Loans Ratio (PNPL). The ratios show the level of Liquidity, Assets quality and Management competence.

The analysis revealed that all the banks have cash flow of over 40% the expected minimum level of liquidity by the regulatory authorities.

The multiple regression coefficient result in Table 12 shows that financial pressure (FP) indices (CCF, WC, NPL and PNPL) associate positively with fraud (FR) and the association is statistically significant at 10% (0.0657). The regression equation is:

$$FRD = 5.64594 + 5.208766FP(CCF,WC,NPL,PNPL) \quad - \quad - \quad - \quad (9)$$

Thisresult is in consonance withShabnam, Takiah and Zakiah (2014); Onodi (2015); Skousen and Wright (2006); though using different proxies for financial pressure. The findings suggest that all the pressure proxy variables (Sales to Accounts receivables and leverage) are positively correlated to the level of financial statement fraud occurrence.Lee and Yeh (2004) concluded that deviation in control away from cash flow rights was related to risk for financial distress.This study also confirms the findings by Sebe-Yeboah and Mensah (2014) that non-performing loans influence fraud in the financial statement of commercial banks in Nigeria. They underline that the uncertain economic prospects, the high default risk and the difficulty of assessing the soundness of each debtor, generate adverse selection and aversion to rising risk among banks. This therefore calls for adoption of policies of lending restrictions.

B. Opportunity Risk Factor

Opportunity risk factor is measured by: Related Party Transaction; Weak Internal Control; andRapid Growth.The variables are proxy by: Non-performing loans/Shareholders fund (NPLSH); Total Loans/Shareholders funds(TLSF); Non-performing Loan/Total Current Assets (NPLCA)

These ratios expose bank level of liquidity and inside trading. High ratio of non-performing loan to shareholders' fund may not be unconnected with insider lending and this problem can lead to fraudulent financial statement in a bid to cover up the fraud risk.

The hypothesis was tested using linear regression and the analysis result of the influence of opportunity risk factor in Table 12 showed coefficient value of 0.15586 and probability value of 0.0643. The regressed coefficient result also showed that opportunity (OPR) indices (NPLSF, TLSF and NPLCA) associate positively with fraud (FR) and are statistically significant at 10%. The positive coefficient value means that opportunity has a positive influence on fraud committed in banks. The regression equation is:

FRD = 5.64594 + 0.155857OPR(NPLSF, TLSF, and NPLCA) - - (10)

Frauds are committed when the opportunity to do so offers itself. This is in line with the finding by Desai, Trompeter, and Wright (2010). They foundthat the presence of high pressures on its own is sufficient to induce opportunistic behaviour from management; high opportunities in combination with a high capability are also likely to induce opportunistic managerial behaviour.

Also, Kranacher, Riley and Wells (2011) noted that predators (which maybe individual or organisation) needed only opportunity with respect to fraud triangle since pressure and rationalisation played little or no role in their actions.

C Rationalization Risk Factor

This is proxy by: Interest Coverage Ratio; and Dividend Coverage.

These ratios reveal the profitability of banks. We observed earlier that all the banks had positive interest coverage as well as positive dividend ratios within the period under review.

A fluctuation in the dividend pay-out ratio could send different signals to investors at different times; hence management may be induced to fraudulently influencing the financial statement to maintain its favoured ratios.

The regression analysis of the influence of rationalization on fraud risk showed a coefficient value of 0.05 and P-value of 0.5668. The regressed coefficient result also showed that rationalisation (RAT) indices (PATDI+EBITIC) associate positively with fraud (FR) but the p- value are not statistically significant at both 5% and 10% levels of significant. The regression equation of rationalization on the ratios is:

$$FRD = 5.64594 + 0.058929RAT(PATDI+EBITIC) \quad - \quad - \quad - \quad (11)$$

This result is in consonance with the findings by Sorunke (2016); Wilks and Zimbelman (2004). The study tested whether evaluating attitude (rationalization), opportunity and incentive factors separately increase or decrease the level of fraud assessment by auditors. The finding indicated that when the perception of management's attitude regarding risk of fraud is low, the level of sensitivity of auditors to opportunity and incentive (pressure) tends to be higher when assessed separately compared to assessing the overall fraud risk.

D Capability Risk Factor

The proxy variables were: Return on Equity; and Net Profit Margin. These ratios reveal the profitability level in banks.

The regression analysis on the influence management capability on fraud risk has a coefficient value of 3.870419 and p-value of 0.096313. The positive coefficient value of 3.870419 shows that management capabilities has positive influence the fraud risk in Nigerian commercial banks. The probability value of 0.096313 is higher than five percent significance level. The study used ten percent significant level for the interpretation. The p-value of 0.096313 means, that management capability has significance influence on fraud risk in quoted commercial banks in Nigeria.

$$FRD = 5.64594 + 3.870419CA(PATSF+PATNA) \quad - \quad - \quad - \quad - \quad (12)$$

This result supports AICPA (2002) exposure draft which observes that incentive and opportunity have impact on management capability. It was observed that high management integrity reduces the impact of opportunities. A manger may exhibit very high integrity and not only may fail to respond to afforded opportunities, but may also work to reduce them. However, manager may decide that higher levels of opportunities may be so compelling that the manager's integrity is compromised and fraud increased.

This finding is also in line with (Wolfe and Hermanson, 2004; Vona, 2008; and Onodi, 2015). It suggests direct relationship between opportunity and capability to hide the fraudulent behaviour.

E Corporate Governance Risk Factors

The proxy variables used were: Debt to Equity, Debt to Assets, and Capital Gearing Ratio. These variables measure management efficiency.

This study observed that most banks used more debt financing than equity financing; this may be due to the tax shield benefit. The high debt financing has adverse effect on operating cost and long term solvency.

The analysis of the influence of corporate governance on fraud shows a coefficient value of 1.704718 and p-value of 0.0250 (less than the 5% significance level). A positive coefficient value (1.704718) means that corporate governance has positive influence on fraud risk. Effective corporate governance ensures check and balance in the operation. The p-value 0.0250 is less than 5% significance level. This shows that the influence of corporate governance on fraud risk is statistically significant at five (5%) percent significance level.

$$FRD = 5.64594 + 1.704718COPG(TDTA+TLEC+EQNL) \quad - \quad - \quad - \quad (13)$$

The CBN code of corporate governance Act, 2006 has contributed immensely in salvaging the Nigerian banks. Since the emergence of the Act, the regulatory authorities especially the NDIC has taken supervision and prudential guideline as provided by Banking and other Financial Institutions Act (BOFIA) of 1991 seriously. This has reduced the incidences of abuse of office and inside lending that were the bane of bank's practice prior to 2006 banking reform Act. Hence, the CBN code of corporate governance helped commercial banks in Nigeria to ensure that best practices are maintained in the industry.

This finding is consistent with Dunn (2004) and Onodi (2015). The studies examined the issues of corporate governance and insider power in relation to fraud. The Dunn's results show that fraud is more likely to occur when there is a concentration of power in the hands of

insiders. Also Okoi and Stephen (2014) and Osisioma, Egbunike and Adeaga (2015) equally concurred to this.

F Behavioural Trait Risk Factor

The proxy variables were: Cash to Current assets; and Cash to Current Liabilities.

The result of the regression analysis on fraud risk showed a coefficient value of 1.399511 and p-value of 0.0289. The positive coefficient value means behavioural trait has a positive influence on fraud risk in banks and the influence was statistically significant at five percent 5%. Hence individual life style and inherited trait of employee have influence on the level of fraud risk in Nigeria banks. Based on the result, the study rejects the null hypothesis and accepts the alternative hypothesis. The model is depicted thus:

$$FRD = 5.64594 + 1.399511BET(CCA+CMCL) \quad - \quad - \quad - \quad - \quad (14)$$

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

Our empirical results reveal the followings: The results of our hypotheses test are documented below:

1. Financial pressure has a positiveeffect on fraud risk and the effect is statistically significant at 0.05.
2. Opportunity has a positive effect on fraud in the commercial banks in Nigeria and the effect is statistically significant at 0.10.
3. Rationalization has a positive effect on fraud risk but the effect is negligible (statistically not significance).
4. Management capability has a significance effect on fraud risk on quoted commercial banks in Nigeria and the effect is statistically significant at 0.05.
5. Corporate governance has positive effect on fraud riskand the effect is statistically significant at 0.05.
6. Behavioural trait has a positive influence on fraud risk in commercial banksand the effect is statistically significant at 0.05.

5.2 Conclusion

Money is at the root of most unethical practices in Nigeria and the major cause of bank failures. This was confirmed in the thesis of Yidawi (2005). Unethical people who found themselves in custody of people's money have thus redefined business as “the art of extracting money from anotherman's pocket without resorting to violence.

Fraud leads to loss of confidence in business, insolvency or winding up of business, bankruptcy and failure of creditors business with attendant loss of employment, revenue to the government, lenders and investors. Many of today’s largest frauds are committed by intelligent, experienced, creative staff, with a solid grasp of company controls and vulnerabilities. This knowledge is used to leverage the person’s responsibility over or authorized access to systems or assets. Also the right person has a strong ego and great confidence that he will not be detected, or the person believes that he could easily talk himself out of trouble if caught. Such confidence or arrogance can affect one’s cost-benefit analysis of engaging in fraud; the more confident the person, the lower the estimated cost of fraud will be. In addition, a successful fraudster can coerce others to commit or conceal fraud. A person with a very persuasive personality may be able to convince others to go along with a fraud or to simply look the other way. A successful fraudster lies effectively, convincingly and consistently and to avoid being detected, he boldly looks auditors, investors, right in their eyes. He equally deals very well with stress.

Nevertheless,auditors are responsiblefor providing reasonable assurance that companies’ financial statements are free of material fraud and errors and audit quality is all about audit risk assessment and may be improved by enhancing auditors’ ability to detect fraud which on the other hand, enhances corporate governance. Assessing fraud risk is indeed a challenging task for auditors. Albrecht, Albrecht, & Albrecht (2008) stated that the new standards (SAS No.99) have helped auditors better detect fraud as they became more proactive in brainstorming possible frauds, working with audit committees, forensic accountants and management to assess fraud risks.

Therefore, fraud pentagon model offer an effective means in assessing fraud risk in the financial statement by incorporating the fifth element - the behavioural trait in the fraud risk factor. This can be achieved through continuous brainstorming at initial stage as prescribe by SAS No.99, about the possible fraud risk before substantive work begun. This when considered would effectively enhance auditors' detection of material misstatement in the financial statement of banking industry in Nigeria. Thus, when considering the potential for fraud, in order to be effective, auditors must think just as creatively and unconventionally as fraud perpetrators.

In addition, the results of the findings provide a model for applicable proxy variable relating to 'fraud pentagon model' with R-sq (Adj) 0.70, this means that about 70% of fraud risk in Nigerian bank can be attributable to financial pressure, opportunity, capability, corporate governance dysfunction and behavioural trait (accuracy classifications). Likewise, security supervisors such as Audit committee Forensic analysts can apply this model to identify firms for fraud investigation or monitoring. Moreover, through this model, investors can avoid fraud risk and be assisted in investment decisions. When auditors preliminary assess new client engagement, the model can also be applied to evaluation in the likelihood of fraudulent financial statement.

The overall rule of professional conduct is that an auditor/accountant must approach work with integrity and honesty as where honesty connotes telling the truth, integrity implies keeping faith even when there is scope and opportunity to default without consequences Aguolo (2006). It is only then that good corporate governance will be achieved which invariably will enhance long term Shareholders and interest of other stakeholders within the context of corporate mission will be protected.

5.3 Recommendations

1. Incorporation of fraud pentagon model with great emphasis to behavioural trait into SAS No. 99 is of great significant as the researcher believes it would help auditors in prevention and detection of fraud in an organisation's financial statement.
2. The transition plans to IFRS adoption for the preparation of the financial statement has to be effectively communicated to the preparers, users, educators and other stakeholders. This will harmonise the financial statement and invariably bring uniformity and consistency on the information presented in the financial statement.
3. Efforts to build good corporate governance and enhance corporatetransparency will be successful only when the key stakeholders have the desired knowledge to understand thefinancial reports and interrogate reported information.
4. When performingengagements, both internal and external auditors should spend adequate time and attention to evaluating the design and operationof internal controls related to fraud risk management. They should exercise professional skepticism when reviewingactivities and be on guard for the signs of fraud.
5. The regulatory authorities like CBN and NDICshould organized symposia and workshop for commercial banks shareholders in order to increase the level of awareness of fraud behavioural pentagon model and enhance theirparticipation in fostering good and efficient corporate governance practices in banks where they own shares. They should properly also monitor from time to time the financial soundness indicators which are the bed-rock of advancing andestablishing robust financial banking system in the Nigeria economy.
6. Audit Committees and Forensic Accountants are necessary in check mating the activities of external auditors in an audited financial statement.

5.4 Contributions to Knowledge

Audit risk assessments require effective fraud model in order to assist auditors detect material misstatements in financial statement. In the context of different fraud risk factors that auditor need to brainstorm for, the constraints notwithstanding, this research advanced knowledge in the following ways:

1. The findings of this study revealed strong empirical evidence that behavioural trait of individual positively and significantly influence fraud in the banking sector in Nigeria
2. This study developed modified audit risk model (MARM) which incorporated fraud risk in addition to control risk, inherent risk and detection risk to form auditee risk (see figure 2.7). .
3. This study adds to the body of existing knowledge and a guide for researchers to further research on the subject matter in areas that were not addressed in this study.
4. This study developed a regression model for fraud risk assessment which can be adopted by government agencies, corporate firms and external auditors in the assessment of fraud. The model is depicted as:

$$FRD_{it} = 5.168522 + 7.936986FP_{it} + 0.729682OPR_{it} - 0.001285RAT_{it} + 2.756188CAP_{it} + 0.287336COPG_{it} + 2.273622BET_{it} + \mu$$

Where the operational variables are computed as:

$$FRD_{FP} = 5.64594 + 5.208766FP(CCF,WC,NPL,PNPL)$$

$$FRD_{OPR} = 5.64594 + 0.208766OPR(NPLSF, TLSF, and NPLCA)$$

$$FRD_{RAT} = 5.64594 + 0.058929RAT(PATDI+EBITIC)$$

$$FRD_{CAP} = 5.64594 + 3.870419CA(PATSF+PATNA)$$

$$FRD_{COPG} = 5.64594 + 1.704718COPG(TDTA+TLEC+EQNL)$$

$$FRD_{BET} = 5.64594 + 1.399511BET(CCA+CMCL)$$

5. This study is the first attempt by any researcher to determine the application of fraud pentagon model in fraud risk assessment in Nigeria which employed multi-co linearity test; variance inflation factor test (VIF) to assess the lateral associations among the variables.

6. **Priscilla Fraud Behavioural Pentagon Model**

Several researches have been conducted on audit fraud risk factors using fraud triangle model, fraud diamond model, fraud box-key model. This study contributes to knowledge by bridging the gap in the exiting literature through the introduction of the 'fraud behavioural pentagon model' for representation of principal fraud risk factors that auditors should pay attention to in the conduct of audit assignment. The researcher is of the opinion thataccording to the work on learning theory by Edward Thorndike (1898) as cited inMcLeod (2007), operant conditioning involves learning from the consequences of our behaviour. According to *Law of Effect* by Edward Thorndikeand the Skinner's Theory of Behaviourism, any behaviour that is followed by pleasant consequences is likely to be repeated, and any behaviour followed by unpleasant consequences is likely to be stopped.

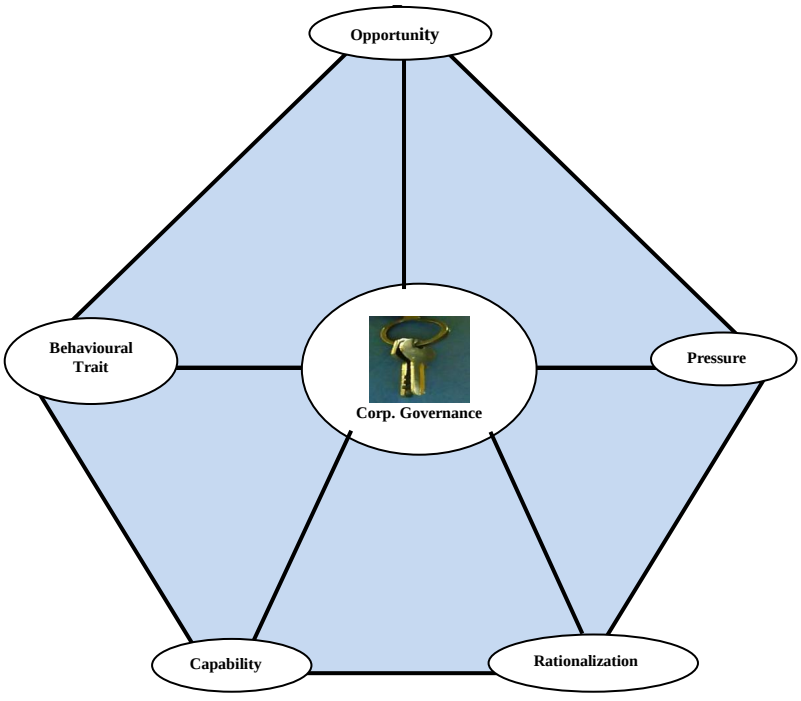

Figure 8: Priscilla Fraud Behavioural Pentagon model

7. CAMEL rating was employed in this study to ascertain the performance of the individual bank.

5.5 Suggestions for Future Research

This study extends the previous literature of financial statement fraud by examiningthe SAS No. 99fraud risk factors that are modelled after Cressey's fraud triangle and Wolfe and Hermanson fraud diamond model. In addition, the study extends the research by developing a discriminatory model, the fraud behavioural pentagon modelin Crowe's fraud pentagon model using CAMEL rating as proxy for banks fraud and sixteen (16) variables as proxy for the fraud risk factors. From the findings, this study identified several fraud risk factors recognized in the literature as having discriminatory value that could be used by auditors in assessing fraud in the financial statement of the banks.

However, further research can be conducted on the effects of fraud pentagon model risk factors (being a new version of fraud triangle theory) onfinancial fraud of all the quoted banks in Nigeria by incorporating more variables in determiningbanks financial risk factors as opposed to the current study which covered on deposit money banks in Nigeria.

The study can also be done using primary data instead of relying only on data secondary since the authenticity of the data could not be verified at face value due to window dressing of the financial statement of some banks. Other researchers can delve into studies using financial variables of other sectors to include data that are verifiably objective.

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