

**AUTOMATED FORENSIC AUDITING AND FRAUD CONTROL IN
NIGERIA**

**(A CASE STUDY OF THE ECONOMIC AND FINANCIAL CRIMES
COMMISSION, PORTHARCOURT)**

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ACC/2009/522

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AUGUST, 2013.

TITLE PAGE

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BY

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**A PROJECT PRESENTED TO THE DEPARTMENT OF ACCOUNTANCY,
FACULTY OF MANAGEMENT AND SOCIAL SCIENCES,
CARITAS UNIVERSITY, AMORJI-NIKE, ENUGU STATE.**

**IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE
THE AWARD OF BACHELOR OF SCIENCE (B.Sc.)
DEGREE IN ACCOUNTING.**

APPROVAL PAGE

This project on the Automated forensic auditing and fraud control in Nigeria was supervised and approved in partial fulfillment of the requirement for the award of Bachelor of Science (B.Sc.) degree in Accounting.

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CERTIFICATION PAGE

This is to certify that this research project titled “Forensic auditing and fraud control in Nigeria. (A case study of Economic and Financial Crime Commission (EFCC) was carried out by Ohiri Ifeanyichukwu Frankyn.with Registration No. ACC/2009/522 has been supervised and accepted in the Department of Accountancy, Faculty of Management and Social Sciences, Caritas University, Amorji-Nike, Enugu State in partial fulfillment of the requirement for the award of a B.Sc. Degree in Accounting.

Dr. Frank Ovute
(Project Supervisor)	Sign	Date

Dr. Frank Ovute
(Head Of Department)	Sign	Date

DEDICATION

This work is dedicated to the Almighty God, who has always been my helper and protector, and to my parents Chief and Lolo D.A Ohiri for their guidance and support, also whose prayers and advice has been keeping me going throughout.

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All thanks and honour is given to God Almighty in whose mercy I lived, as he saw me through these years. May his name be praised. My sincere thanks goes to my supervisor who is also my HOD, Dr. Frank Ovute for his close attention and time, positive criticism to ensure a complete orderliness in my work just to make it standard, also his fatherly advice to me during my stay in the university. My lecturers in my department, prof. Nwadiakor, Mr. James Ugwu, Mr. C. Agu, Mr. Chinedu Enekwe, Mr. Desmond Obani, for the knowledge they imparted in me throughout my academic pursuit.

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ABSTRACT

The topic “Automated forensic auditing and fraud control in Nigeria” is a critical concept in modern days accounting, and our country Nigeria is not left out in its practice. This research aims at pointing out the rationale behind fraudulent practices as well as examining the role of automated forensic auditing on fraud control. A survey research design was adopted for this research study and the sample size was selected using Taro Yamane sampling technique as data used were obtained from both primary and secondary sources. Four research questions were formulated out of which three hypotheses were tested using the (ANOVA) statistical technique. From the analysis, the major findings derived were that; Automated forensic auditing has significant relationship with fraud control as it helps in the detection and prevention of fraud; There are measures employed to solve the problems of insufficient documented materials necessary for investigating suspects as it helps to foster investigative process; There are standards set for improving on techniques used for obtaining evidence. Conclusively, it can be said that fraud control in Nigeria cannot do without forensic accounting; fraud detection may not be possible in Nigeria if management of different levels are not committed to do an indebt study of a financial statement i.e. having a physical check of assets and liabilities. It was recommended that; The internal control system of every organizations should be strengthened through regular audit; training of forensic auditors should be done regularly, and also seminars should be organized to encourage the use of automated tools.

TABLES OF CONTENTS

Title page	i
Certification	ii
Dedication	iii
Acknowledgments	iv
Abstract	v
Table of contents	vi
CHAPTER ONE: INTRODUCTION	
1.0 Introduction	1
1.1 Background of the study	2
1.2 Statement of the problem	4
1.3 Statement of the objectives	5
1.4 Research question	5
1.5 Research hypotheses	6
1.6 Significance of the study	7
1.7 Scope of the study	8
1.8 Limitations of the study	8
1.9 Definitions of terms	9
CHAPTER TWO: REVIEW OF RELATED LITERATURE	
2.0 Introduction	10
2.1 Academic review	10

2.2 Fraud deterrence and detection	12
2.3 Elements of fraud	13
2.4 Types of fraud	14
2.5 Fraud theories	15
2.6 Antidotes to fraud	16
2.7 Fraud risk management	19
2.8 The fraud teams	23
2.9 Forensic auditing	25
2.10 Application of forensic audit	26
2.11 Investigative audits	29
2.12 Automated forensic tools	33
2.13 The significant of automated tools	40
2.14 Differences between forensic and financial audit	41
2.15 Advantages of forensic auditing to fraud control	42
2.16 Disadvantages	43
2.17 References	44
CHAPTER THREE: RESEARCH METHODOLOGY	
3.0 Introduction	47
3.1 Research design	47
3.2 Sources of data collection	48
3.3 Area of the study	48
3.4 population of the study	49
3.5 Determination of sample size	49
3.6 Reliability test	50
3.7 Validity test	51

3.8 Method of data analysis	51
3.9 References	52

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS AND IMPLEMENTATION

4.1 Presentation of data	53
4.2 Test of hypotheses	67
4.3 References	81

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATION

5.1 Summary of findings	82
5.2 Conclusion	82
5.3 Recommendation	84
5.4 References	85
Appendix 1	86
Appendix 11	87
Bibliography	91

CHAPTER ONE

1.0 INTRODUCTION

Mobile wise geek (2011) defined fraud as a deliberate misrepresentation that causes a form of monetary losses. All of these are usually required for an act to be considered fraud, if someone lied about his name.

United states legal (2011), defined fraud an international misrepresentation of material existing facts made by one person to another with the knowledge of its falsity and for the purpose of inducing the other person to act, and upon which the other person relies with resulting injuries or damages.

Fraud has been in existence from the beginning of creation, and the increase of fraud on daily basis brought about forensic auditing.

Forensic auditing is defined as the activity that consist of gathering, verifying, processing, analyzing of and reporting of data in order to obtain facts and /or evidence in the area of legal of financial disputes and or irregularities including fraud and giving preventative advice. IFA (2011).

Fraud is an independent criminal offence, and it is the main phenomenon that gave birth to forensic auditing, especially those related to economic crime. These economic crimes are known to be an unpleasant fact and a disheartening issue in

the heart of many organizations, and the control of it, is a concern for any organization that employs employees, accountants or other hired professional that have access to the organization's income, receipts or funds.

Therefore, we are faced with the inescapable conclusion that forensic auditors are charged with the responsibility of controlling and preventing those fraudulent practices.

1.1 BACKGROUND OF THE STUDY

Brief History of Economic and Financial Crime Commission (EFCC)

The Economic and Financial Crime Commission (EFCC) has grown to a robust and reputable national institution that now commands respect. They have gained the admiration of Nigerians and the international community as a whole as the most vibrant anti-corruption fighting organization that has fought corruption to a standstill within the short time of its existence.

Over the years, Nigeria suffered tremendously in her economy in the hands of corrupt leaders who for selfish reasons reduced a country like Nigeria which is rich in oil to one of the poorest countries in the world. All these brought about the establishment of EFCC.

i. Formation of the Economic and Financial Crime Commission (EFCC)

The Economic and Financial Crime Commission (EFCC) was established in 2003 by the Economic and Financial Crimes Commission Act 2002, and re-enacted in 2004 by the Act as a body corporate with perpetual succession and common seal. It has its headquarter at No 5 Fomella Street, Off Crescent, Wuse 11, Abuja. With Nuhu Ribadu as the first executive chairman until 2008 he was replaced by Fomida Waziri, and Mr. Ibrahim Lamorde was appointed the chairman of the commission on 15th February 2012 and he is still the substantive chairman till date.

Its establishment was partially in response to pressure from the financial task force on money laundering (FATF), which named Nigeria as one of the 23 countries non-corporative in international communities' effort to fight money laundering.

ii. Vision statement: To make Nigeria a safe and corrupt free business environment for sound health and positive image of the country.

iii. Mission statement: The mission statement of the commission includes;

a. To curb the menace of corruption that constitutes the cog in the wheel of progress of Nigerians.

- b. To protect national and foreign investments in the country.
- c. To imbibe the spirit of hard work in the citizenry and discourage ill-gotten wealth.
- d. To identify illegally acquired wealth and confiscate it.
- e. To build an upright workforce in both public and private sector of the economy.
- f. To contribute to the global war against financial crimes and terrorism financing in Nigeria.

1.2 STATEMENT OF THE PROBLE

In this study, there are certain problems that are related to the application of forensic auditing and the include;

1. Insufficient skilled manpower for the use of automated tools or software.
2. Insufficient documented materials for investigating suspects.
3. Inadequate techniques for obtaining evidence.
4. High cost of analysis.

1.3 STATEMENT OF OBJECTIVES

The general objectives of the study, is to examine the role of automated forensic auditing on fraud control, while the specific objectives of the study are as follows.

1. To determine why there are insufficient skilled manpower needed for operating automated tools.
2. To investigate the reasons for insufficient documented materials.
3. To examine the cause of not obtaining enough techniques used as evidence.
4. To evaluate the reasons for high cost of analysis.

1.4 RESEARCH QUESTION

Based on the foregoing, the following research questions were formulated:

- i. Is there any significant relationship between automated forensic auditing and fraud control?
- ii. Are there methods adopted to adequately train forensic auditors with investigative skills?

iii. Are these measures employed to solve the problem of insufficient documented materials necessary for investigating suspects?

iv. Are these standards set for improving on techniques that are meant for obtaining evidence?

1.5 RESEARCH HYPOTHESES

The following are the hypotheses to be tested.

H₀₁: There is no significant relationship between automated forensic auditing and fraud control.

H_{A1}: There is a significant relationship between automated forensic auditing and fraud control.

H₀₂: There are no methods adopted to adequately train forensic auditors with investigative skills.

H_{A2}: There are methods adopted to adequately train forensic auditors with investigative skills.

H₀₃: There are no measures employed to solve the problem of insufficient documented materials necessary for investigating suspects.

H_{A3}: There are measures employed to solve the problem of insufficient documented materials necessary for investigating suspects.

1.6 SIGNIFICANCE OF THE STUDY

This study of forensic auditing will be helpful to the following categories of users.

For Management: It will serve as a reference document for management to use as a guide for investigating and controlling fraud.

For Auditors: It will serve as a revision kit for practicing auditors in the field.

For the Public: It will add to existing knowledge by exposing the public on the matter of fraud, making them know that even if fraud cannot be completely eradicated, it can be controlled.

For Researchers/Analyst: It will serve for future research study.

1.7. SCOPE OF THE STUDY

This study covers the activities of the Economic and Financial Crime Commission (EFCC), in Nigeria, especially the branch that is situated in Port-Harcourt.

1.8. LIMITATIONS OF THE STUDY

This research work was faced with certain challenges owing to the fact that the topic in question is not yet widely known. VI2:

i. **Inadequate Materials:** This was the major constraint of the research work, for it was limited to few materials and mainly on internet.

ii. **Time Factor:** This is another factor that limited the flow of this research work. Time factor is a constraints limitation the study. Inadequate time to work due to some school activities that restricts student from going out to research.

iii. **Distance:** The different location of where the materials are to be gathered from posed a problem to this work, since it requires going from one accounting firm to another to gather facts relating to the topic.

iv. **School Exeat:** Here getting permission to sign out of school is a very big problem to the researcher. School exeat sometimes limits us student from gathering enough material for our work.

v. **Fund:** This serves as a major constraint to the research work. Enough funds are required in getting materials for this work.

1.9. DEFINITION OF TERMS

AUTOMATION: This is the use of control systems and information technology to reduce the need for human work in the production of goods and services.

FORENSIC: Belonging to, used in or suitable to courts of judicature.

FRAUD: Irregularities involving the use of criminal detection to obtain unjust or illegal advantage.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.0 INTRODUCTION

In this chapter, efforts are made to gather the opinions of experts in forensic auditing, on how to check and detect fraud in Nigeria.

2.1 ACADEMIC REVIEW

Deregulation, liberization, reformation as well as globalization have over the time redefined the economic landscape in Nigeria. The bad news however, is that the process also provides opportunities for fraudulent activities, which includes embezzlement, money laundering, bribery etc.

This incidence of financial fraud, particularly in a computerized environment is increasing, and it has been a central feature in a number of financial scandals in recent years. This fact together with the increasing sophistication of fraudsters creates difficult problems for management and auditors.

The term “fraud” is one which is used in variety of meanings. It is usually used as;

- a. A tort at common law.
- b. A name for false representation.
- c. A name for such unfair dealings as it will induce a court of equity to refuse specific performance against the party who has been deceived by such fraud or in some cases, to grant rescission upon the complainant's application.

According to Adeniji (2010), fraud refers to “an International act by one or more individuals among management, employees, or third parties, which results in a misrepresentation of financial statements”. It may also involve,

- Manipulation, falsification or alteration of records or documents.
- Misappropriation of assets.
- Suppression or omission of the effects of transaction from records or documents.
- Recording of transactions without substance.
- Misapplication of accounting policies.

Adeniji (2010) further explains that among the various definitions of fraud, the most common is that “fraud is a generic term, and embraces all the multifarious means which human ingenuity can devise, which are resorted to by one individual, to get an advantage over another by false representations. No definite and invariable rule can be laid down as a general preposition in defining fraud, as it

includes, surprise, lickery, cunning and unfair ways by which another is cheated. The only boundaries defining it are those which limit human knowing”.

Fraud is also defined “as the crime or offense not deliberately decreeing another in order to damage them usually to obtain property or services injustice”. Ekeigwe (2010).

Also Kano (2004), Opines that “fraud and forgery are jointly defined as irregularities involving the use of criminal detection to obtain unjust or illegal advantage”.

2.2 FRAUD DETERRENCE AND DETECTION

The fact that fraud cannot be completely eliminated does not guarantee that it should be ignored, for it can be controlled to reduce losses. Then, this control for fraud brings about fraud deterrence and detection.

Fraud deterrence is the proactive identification and removal of the causal and enabling factors of fraud. It is based on the premise that fraud is not a random occurrence, but it occurs when the conditions are for it to occur. its purpose being that it proactively deter financial misrepresentation so as to ensure more accurate financial reporting and in turn increase investor’s confidence. Wikipedia (2011).

However, Wiley (2006) stated that fraud deterrence is a preventive measure preferred on that improving on organizational procedures to reduce the causal factors of fraud is the best defense against fraud as they are design to reduce the risk of fraud and misconduct from occurring.

On the other hand, fraud detection which is more of an act, requires innovative and creative thinking which may involve reviewing historical transactions in order to identify indicators of a non-conforming transaction that may lead to fraud. They are usually design to uncover fraud and misconduct when it occurs. Cendrowski, Martin and Petro (2006).

2.3 ELEMENTS OF FRAUD

All kinds of fraud including financial statement fraud are outcome of at least three (3) elements which include, pressure, opportunity and rationalization. These three elements make up what we call the fraud triangle.

- 1. Pressure or motive:** it is the need for committing fraud.
- 2. Rationalization:** The mindset of fraudster that justifies them to commit fraud.

3. Opportunity: The situation that enables fraud to occur and this often happens when internal control is weak or non-existent.

2.4 TYPES OF FRAUD

The different types of fraud which includes: Employee embezzlement, management fraud, investment scams, vendor fraud, customer fraud, miscellaneous fraud was categorized into three (3) broad headings by Keshi (2011), as internal fraud, external fraud and corruption or collusion.

Internal Fraud: This is the most common form of fraud found in organizations. The perpetrators of this kind of fraud are managers (i.e. top or middle management) and employees.

External Fraud: This is another form of fraud that is being perpetrated by those outside the organization, which may include customers or organized criminal.

Corruption or Collusion: This is one of the most difficult kind of fraud to recognize. It is fraud perpetrated within the corporation by an inside employee and an outsider.

2.5 FRAUD THEORIES

Anomie Theory: This theory is seen as a condition of malaise in individuals, characterized by an absence or diminution of standard of values. When applies to a government or institutions anomie implied a social unrest or chaos or disorder. Chandola (2009).

Differential Association Theory: This theory is of the premise that through interaction with others, individuals learn the values, attitudes, techniques and motives for criminal behavior, and that if employees are shielded from bad influences and exposed to good role models, the incidence of fraud will be low. Ekeigwe (2010).

Labeling Theory: Also known as social reaction theory, it is concerned with how the self-identity and behavior of an individual is influenced, categorized and described by others in their society. It also focuses on the linguistic tendency of majorities to negatively label minorities. Tennenbaum and Becker (2008).

Social Control Theory: This theory proposes that people's relationships, commitments, values, norms and beliefs encourage them not to break the law, and that if morals codes are internalized, individuals will voluntarily limit their propensity to commit deviant acts. As this acts are undertaken in the pursuit of self-interest and self-control. Gottfredson and Hirschi (1990).

Strain Theory: This theory states that social structures with society may encourage citizens to commit fraud. When the goals of a society becomes significant to the individual, achieving them becomes more important than the means adopted, as there is usually an encouragement to strive for monetary success, with little or no emphasis placed on the legitimate means of achieving them. Ekeigwe (2010).

2.6 ANTIDOTES TO FRAUD

Internal Control: This is best regarded as the whole system of controls financial and otherwise, established by management in the conduct of a business including internal checks, internal audit and other forms of control. Okezie (2004).

An internal control system is defined as being the whole system of controls, financial and otherwise established by management in order to carry on the business of an enterprise in an orderly and efficient manner to ensure adherence to management policies, safeguard assets and secure as far as possible the completeness and accuracy of the records. Chukwu (2010).

It can also be described as the plan of an organization and all the methods, rules, procedures and regulations established by the management to assist in

achieving management's objective of ensuring as far as possible, the orderly and efficient conduct of its business, including adherence to management policies, the safeguarding of assets, prevention and detection of fraud and error, the accuracy and completeness of the accounting records and timely preparations of reliable financial information. Adeniji (2010).

Auditing And Monitoring: Auditing and monitoring system that are reasonable designed to detect fraud and misconduct are important tools that management can use to determine whether the organization's control are working as internal. Since it is impossible to audit every fraud and misconduct, management should develop a comprehensive auditing and monitoring plan that is based on risk identification through the organization's fraud risk assessment process. Ekeigwe (2010).

Ekeigwe (2010) also opines that auditing and monitoring plan should thus encompass activities that are tailored in depth to the nature and degree of the risk involved with higher risk issues receiving priority treatment. Auditing activities which are an evaluation of past events and monitoring activities, that is to say, an evaluation conducted at real-time should be performed in areas where:

- i. There are specific concerns about a key procedure, account or position.
- ii. The company has a history of fraud and misconduct.
- iii. There is high employee turnover or organizational change.

- iv. Laws and regulations have changed significantly.
- v. Audits are legally required, or situations where governmental agencies are targeting enforcement actions like money laundering.

Budget and Fiscal Transparency: Budget transparency (BT) is defined as the full disclosure of all relevant fiscal information in a timely and systematic manner. Pekkonen (2002). The international monetary fund, 2011 code of good practices on fiscal transparency provides a set of guidelines to establish a good and viable transparency framework for fiscal policy which has the following objectives;

- i. Clarity of roles and responsibilities.
- ii. Open budget process.
- iii. Public availability of information.
- iv. Assurance of integrity.

The combination of budget transparency and public participation in budget processes has the potential to combat corruption, foster public accountability of government agencies and contribute to judicious use of public funds. OECD, (2002).

2.7 FRAUD RISK MANAGEMENT

Fraud risk management is a clinical process that requires constant application and effective maintenance. An effective fraud risk management provides an organization with tools to manage risk in a manner consistent with regulatory requirements as well as the entity's needs and expectations. In order to achieve this, management is advised to identify their scope and objectives and set targets for improvement together with steps to achieving them. Ekeigwe (2010).

Ekeigwe (2010) also states that management is expected to develop a broad ranging program that encompasses control, deploys a strategy and process for implementing the new controls, and assesses the existing controls in connection to legal and regulatory frameworks, so as to prevent, detect and response to incidents of fraud or misconduct.

PRINCIPLES OF FRAUD RISK MANAGEMENT

The principles based approach effective for establishing an environment with fraud risk management was outlined by Ekeigwe (2010) to include:

- ❖ Fraud risk management which should be in place, including a written policy to convey the expectation of the board of directors and senior management regarding managing fraud risk.

- ❖ Fraud risk exposure that should be assessed periodically by the organization to identify specific potential schemes and events that the organization needs to mitigate.

- ❖ Prevention techniques to avoid potential key fraud risk events should be established, where feasible, to mitigate possible impacts on the organization.

- ❖ Detection techniques should be established to uncover fraud events when preventive measures fail or unmitigated risks are realized.

- ❖ A reporting process should be in place to solicit inputs on potentials fraud and a coordinated approach to investigation. Then correction action should be used to help ensure that potential fraud is addressed appropriately and timely.

COMMITTEE OF SPONSORING ORGANIZATIONS (COSO) MODEL

According to Wikipedia (2011) the COSO “internal control integrated framework” describe five (5) interrelated components of internal control that provided the foundation for fraud deterrence. These elements of internal control are the means for which the “opportunity” factors in the fraud triangle can be remove to most effectively limit instances of fraud. Intact, ACFE (2002) report to the nation on occupational fraud and abuse reveals that 46.2% of fraud occurs because the victim lacked sufficient controls to prevent fraud. The five (5) COSO components are:

i. Control Environment: This sets the tone of an organization influencing the control consciousness of its people. It is the foundation for all other components of internal control, providing discipline and structure, as it consists of all the actions, policies and procedures that reflect the overall attitude of top management, directors and owners of an entity. Its factors includes, integrity and ethical values, management’s operating style, delegation of authority systems as well as the processes for managing and developing people in the organization, Arens, Elders and Beasley (2009).

ii. Risk Assessment: Every entity faces a variety or risks from external and internal sources. A precondition to risks from assessment is the identification and

analysis of relevant risks to the achievement of assigned objective. It is a prerequisite for determining how the risks should be managed. Cendrowski et al (2006).

iii. Control Activities: These are the policies and procedures that help ensure management directives are carried out. They help ensure that necessary actions are taken to address the risks that may hinder the achievement of entity's objectives. Control activities occur throughout the organization at all levels and in all functions so that fraud will be reduced to its barest minimum. Arens et al (2009).

Also, for asset protection, control activities typically involves identifying assets within the organization that would be susceptible to fraud, and applying control procedures in such a way that the asset will be removed as its removal will be concealed. Cendrowski et al (2006). Control activities generally fall into the five (5) following specific activities:

- i. Adequately segregation of duties.
- ii. Proper authorization and verification of transactions and activities.
- iii. Adequate documents and records.
- iv. Physical documents and assets and records.
- v. Independent checks on performance. Arens et al (2009).

Iv. Information And Communication: These play key roles in internal control systems as they produce reports including operational, financial and compliance related information that make it possible to run and control the business in a broad sense, effective communication must ensure that information flows across and up the organization. For instance, formalized procedures exist for people to report suspected fraud. Effective communication should also be relayed to external parties (such as customers regularities and shareholders) about related policy positive so that they would be able to detect fraudulent activities when such occur. Cendrowski et al (2006).

v. Monitoring: This activities deals with ongoing or periodic assessment of the quality of internal control performance by management to determine that control are operating as intended and that they are modified an appropriate for changes in conditions. Monitoring involves both fraud deterrence and fraud detection activities, as they are used by managements to ensure that all the control processes are performed as designed and approved. Arens et al (2009).

2.9 THE FRAUD TEAM

The fraud teams according to Ekeigwe (2010) comprises of those that are responsible for controlling and preventing fraud and as well prosecuting fraudsters as they include,

i. **Fraud Examiner:** Also known as fraud investigator, is a person who conducts civil and criminal investigations to identify a scam. He tracks all the events and examines all the evidence in situations where fraud may have been committed.

ii. **Auditors:** They are those charged with the responsibility of examining and reporting on the financial statements so as to detect any misappropriations or fraudulent practices.

iii. **Security:** Usually a detective, they investigate what could be described as a traditional fraud offences, such as banking fraud, insiders billing fraud, etc. They are usually armed in case of any emergency.

iv. **Human Resource Personnel:** They are those charged with the responsibility of implementing strategies and policies that are capable of curbing fraudulent acts.

v. **Management Representative:** This is a representative of the organization in which the investigation is been carried out. He has a first-hand information concerning the issue investigated on.

vi. **Legal Counsel:** They are those who give legal advices.

viii. **Information System personnel:** They are those involved in processing data concerning the investigation.

ix. **Accountants:** Dr. Ovute, in one of his classes stated that “Accountants here examines the accounts and records of an organization unbehalf of a client for a special purpose in terms of business”.

2.9 FORENSIC AUDITING

As a result of all these things, the auditors coming together decided to have a special people to do an in-depth study of what is happening. The need to incorporate expertise that will be charged with responsibility of carrying out judicial functions together with accounting skills instigate forensic auditing.

Mobile greek (2011), defined forensic auditing as an examination and evaluation of a firm’s or individual financial information for use as evidence in court. It can be conducted in order to prosecute a party for fraud, embezzlement or other financial claims.

Forensic auditing is defined as “the application of auditing skills to situations that have legal consequences”. Chatterji (2009). It is also seen as “an examination and evaluation of a firm’s or individual’s financial informations for use as evidence in event”. During a forensic auditing, professionals compile and assess financial information to be used in legal proceedings, whereas the auditing

is conducted by forensic auditors who rely on the principles of law, business and ethics. These reports are sometimes used to prepare legal defenses as well as prosecuting a party for fraud, embezzlement or other financial claims. Investopedia (2011).

Forensic auditing has been seen as a specialization within the field of accounting, whereby forensic auditors provides experts testimony during trial proceedings. Nigrini (2011).

In relation to this, Scott (2008) defined forensic defined forensic auditing “as a special practice of accounting that involves using auditing techniques to specifically look for financial misconduct”.

2.10 APPLICATION OF FORENSIC AUDIT

Due to the increase of fraudulent practices, there has been increasing risk of auditing skills to prevent fraud by identifying and rectifying situations which could lead to fraud been perpetrated. It has been observed that the cost of implementing procedures to monitor and restrict the fraudulent acts are far less than the fraud risk that companies face each day. Chatterji (2007).

It will be useful therefore to discuss forensic as being either “proactive or reactive”.

Proactive Forensic: This audit helps businessmen to ensure that their processes stay robust, and it can be viewed from different aspects depending on its application. Ezeilo (2010).

i. Statutory Audit: In this case, auditing standards prescribe that internal control should be studied and evaluated in respect of safeguarding assets and resources when performing regularity and financial audit, and in assisting management in complying with laws and regulations when performing compliance auditing. Asosai (2011).

ii. Regulatory Compliance: This technique is usually used by government departments or agencies to assess compliance with regulations governing payments or grants or subsidies. Performance auditors could also use this technique while auditing such governmental programs. Ezeilo (2010).

iii. Diagnostic Tool: Forensic auditing can be used either by management or by auditors to carry out general reviews of activities to highlight risks arising either out of fraud or from any other source, with the purpose of initiating focused reviews on particular areas and targeting specific threats to the organization. Asosai (2011).

iv. Investigation of Allegation: The techniques of forensic auditing are useful in this case, in the sense that various complaints and allegations could be used as a guide for gathering evidence used in investigation. This is cited as being proactive because it is widely felt that the existence of a system of investigation in such cases is significant deterrent to fraud and corruption. Ezeilo (2010).

Reactive Forensic: The objective of this audit is to investigate cases of suspected fraud so as to prove or disprove the suspicious and if proven, the person involved is to be identified, the findings are to be supported by evidence, after which it is presented in an acceptable format in any subsequent discipline or criminal proceedings. Ezeilo (2010).

Due to the processes involved in reactive forensic audit, it is important therefore to keep in view the following:

- i. Working relations with the investigating prosecuting agencies.
- ii. Authorization and control of the audit investigation.
- iii. Documentation of relevant information and safeguarding all prime records pertaining to the case.
- iv. Rules of evidence on government admissibility or authentication of records.

v. Confidentiality of evidential document.

vi. Evaluation of the evidence to assess whether the case is sustainable.

vii. Legal advice where appropriate.

viii. Reporting the findings in a manner that meets legal requirements. Chatterji (2007).

2.11 INVESTIGATIVE AUDITS

Ezeilo (2010) defined investigative audit as “audit that are performed to investigate incident of possible fraud or misappropriation of institution funds.” It is usually seen as an audit that takes place as a result of report of unusual or suspicious activity on the part of an individual or a department. It usually focuses on specific aspects of the work of a department or individual in relation to fraud and corruption, so as to examine how the systems can be reinforced for fraud prevention and detection.

Ezeilo (2010) further explains that investigative audit is a valuable part of audit toolkit because it focuses on the risks that threaten achievement such as risk of fraudulent claims for expenditure, fraudulent provision of services to an organization or fraud and evasion of revenue payments. It also concentrates on the

standards of financial management, implementation of internal control regimes and electronic services. It is also worth noting that this audit differs from other audits because they are normally conducted without first notifying the personnel who may be affected by the findings.

In carrying out this investigation, the forensic auditors who are usually referred to as investigative auditors have certain principal tools used in investigating, and they include;

- i. Information (informants)
- ii. Interviews (witnesses)
- iii. Interrogation (suspects)
- iv. Instrumentation (crime laboratory, comparison microscopes, polygraph etc.).

Out of all these tools, information contribute to the solution of crime more than the other tools, although there are some evidence that instrumentation could be used more frequently and more effectively to solve a greater number of crimes.

FRAUD INVESTIGATION STEPS

There is a common tendency to interpret a successful investigation as one in which the fraud is detected, but for this to be achieved certain steps are usually

involved in investigation and they include; planning, data/Evidence collection, evaluation of evidence and report writing. Ekeigwe (2010).

i. Planning: This ensures that a guide of what needs to be done is put to place. It is the foremost step to be taken if a substantial result is required for it is the processes by which an organization solves problem of determining its relationship with its environment. Anyaogu (2011).

ii. Data/Evidence collection: In order to present the formation obtained, the evidence collected needs to be evaluated using different methods, including automated tools so that an easy conclusion can be made. Driven et al (2003).

iii. Evaluation Of Evidence: In order to present the formation obtained, the evidence collected needs to be evaluated using different method, including automated tools so that an easy conclusion can be made. Driven et al (2003).

iv. Report Writing: If the investigation confirms that fraud has been perpetrated or attempted, a formal report has to be written on the outcome of the investigation for presentation to senior management with a copy of it presented to anti-fraud officer. Driven et al (2003).

ELEMENTS OF FRAUD EXAMINATION

In relation to Ekeigwe (2011). Opines that fraud examination can be seen as a methodology for resolving fraud allegations from inception to disposition which may involve the following.

- Analyzing documents
- Obtaining evidence and taking statements.
- Writing reports.
- Testifying to findings.
- Assisting in the detection and prevention of fraud.

Apostolou (2000) also stated that the purpose of fraud examination is to prove or disprove the legal elements of the offense, whereby each of the elements must be proven. The process may involve;

- i. Preventing the evidence in a chronological order.
- ii. Finding altered concealed or destroyed documents or evidence.
- iii. Obtaining confessions.
- iv. Looking for patterns or repetitions of suspicious behavior.
- v. Obtaining testimony of co-conspirators.

2.12 AUTOMATED FORENSIC AUDITING TOOLS

Forensic tools are automated tools which provide investigative platforms to search, collect, scrutinize and analyze digital information in a systematic manner. Bytes (2011).

These tools are usually designed to identify vulnerabilities in an information system, which could be exploited to gain access to privilege information, as they increase the pace of investigation with accurate analysis. They are usually directed to areas of weak security as they integrate with other security measures of an organization to strengthen those areas.

Automated forensic are usually called computer or digital forensic, for they are a branch of forensic science pertaining to legal evidence found in computers and digital storage mediums. Noblett, Politt and Presley (2000). These tools are ideal for solving cyber-crimes, revealing accounting fraud, and more commonly, for the retrieval of accidentally deleted data. Philip, Conen and Davis (2009).

Several automated tools are used in forensic auditing and they include:

Digital Investigation Manager (D.I.M): This is a digital evidence tracker software used in digital investigations. It was designed and developed to be used as digital evidence process support during computer forensic and incident response

operations. Accountant search (2011). It allows the investigation process to be organized on a case basis as each case may contain one or more hosts (i.e. workstation, laptop, etc.), which in turn may be associated with one or more items of evidence obtained through the forensic acquisition process. This forensic acquisition process include media (hard disk, floppy disk, flash card zip drive etc.), network dump and log file. Special detailed forms are usually compiled for each of these host or media when they are acquired.

Also, the digital investigative manager application allows users to catalog all pertinent information gathered during investigation and to make reports from those evidence gathered. This application is usually available in three (3) versions namely, standalone version, workgroup version and enterprise version forensic focus (2011).

The Standalone Version: With this version, users work using a local database on the computer running DIM and thus only one user at a time can work the database. This tool automatically numbers the items of evidence and hosts for a given case on the basic of the information contained in the database.

The Workgroup And Enterprise Version: These two (2) versions differ from the standalone version in that they use a remote shared database, whereby a number of users can be connected to them so as to work simultaneously on the same or

different case. All evidence entered at the different workstations are catalogued coherently in the shared database. Forensic Focus (2011).

However, for a well-defined or dedicated module, there has to be a synchronization of the local database (i.e. the standalone version) and the centralized database (the workgroup and Enterprise version), so that a global and updated copy of the operations carried out at the individual workstations is maintained. Forensic Focus (2011).

Digital Forensic Framework (DFF): This tool is both a digital investigation tool and a development platform. They are usually used by system administrators, law enforcement examiners, digital forensics researchers and security professionals worldwide. Wikipedia (2010). The basic function of the digital forensic framework (DFF) is to aggregate information and methodology analyze volumes, file system, user and application data, while extracting metadata, deleted and hidden items, as they make use of tools, libraries, modules, and user interfaces. They also authenticate data by processing information into virtual read-only containers, thus preserving the integrity of the forensic auditors. Blogger (2011).

Encase: This is a complete forensic toolkit that covers much of the work that the ITM (information technology management) forensic analysis carry out. It is designed as “a computer forensic product produced by guidance software used to

analyze digital media in civil or criminal investigations, network investigations, data compliance and electronic discovery”. Wikipedia (2010).

Encase contains tools for several areas of the digital forensic process, acquisition, analysis and reporting. It is usually available to law enforcement agencies and corporations, for it has been used successfully in various court systems around the world. It is also generally considered as the de facto standard for criminal digital forensic evidence collection as it is globally recognized as a world leader in digital forensic, cyber security and e-discovery. Oliver and Shenoi (2006).

The two (2) major attributes that make Encase software unique are the breadth of operating system and file system are separate, but they have a deep relationship on how information is stored and how the host operating system operates. Since a system that exists, there are number of different file system which the host operating system could utilize and the ability to deeply analyze a broad range of operating system and file system is a critical component of an enterprise investigation. Guidance (2011).

Forensic Toolkit (FTK): The access data forensic toolkit (FTK) is another component forensic toolkit that is recognized as one of the leading forensic tools to perform e-mail analysis, as it can easily locate deleted e-mails. It includes a

standalone disk imaging program called FTK imager. This FTK imager is a simple but concise tool that saves an image of a hard disk in one file or in segments which may later be reconstructed. Access data (2011).

Computer Aided Audit Tools (CAAT): Also known as Computer Assisted Audit Tools and Techniques (CAATs), it is growing field within the financial audit professions and a practice of using computer to automate or simplified the audit process by extracting data, analyzing data and identifying exceptions that relate to fund. CAAT tools have a significant advantage over manual data testing techniques and they include; ACL Audit, Command language, IDEA Analysis, WizRule etc. With these tools, auditors can review, test and analyze the entire population of data which is not usually possible with the manual or traditional audit techniques. Wikipedia (2009).

Also, it tends to enhance the productivity of forensic auditors, as it enable them make informed discussion to qualify the impact of financial statement errors by analyzing them through CAAT, for CAAT gives a high level of comfort to the senior management about the overall quality of data within the organization. Just answer (2011).

Proactive Forensic Data Analysis: Many of the indicators of fraud and misconduct, both actual and potential, reside with an organization's financial

operation, and transactional data, which can be identified using data analysis tools and techniques. Proactive data analysis uses sophisticated analytical tests, computer-based cross matching, and non-obvious relationship identification to highlight potential fraud and misconduct that can remain unnoticed by management for years. Ekeigwe (2010).

The benefits of this analysis may include among others,

- i. Identification of hidden relationships between people, organization and events.
 - ii. A means to analyze suspicious transactions
 - iii. An ability to assess the effectiveness of internal controls intended to prevent or detect fraudulent activities.
 - iv. The ability to consider and analyze thousands of transactions in less time and cost effectively than using traditional forensic sampling techniques.
 - vi. The ability to consider a company's unique organizational and industrial issues.
- Ekeigwe (2010).

Also, in this type of analysis, transactions can be analyzed using either continuous or retrospective transaction monitoring. Continuous transaction monitoring allows an organization to identify potentially fraudulent transactions on a daily, weekly or monthly basis. On the other hand, Retrospective transaction in

one or two years increments, enabling organization to discern patterns that are not visible with shorter-term analysis, which may involve the following;

- ❖ Assessing the fraud risk profile of systems or processes.
- ❖ Defining the overall objectives of the analysis.
- ❖ Creating a methodology to acquire, extract and evaluate the data.
- ❖ Defining the analysis to be performed.
- ❖ Selecting software tools to be used in performing the analysis.
- ❖ Performing the analysis, aggregate and prioritize the results.
- ❖ Reviewing and resolving the exceptions identified.

Ekeigwe (2010).

Secure Sphere Database Activity Monitoring: According to Taylor (2004), database activity monitoring and auditing has become a critical challenge for organizations due to the increasing importance of data integrity and privacy to organizations and regulators. Taylor (2004) also stated that the need to continuously audit database access by privileged and non-privileged users on large number of database is addressed by secure sphere's automated and scalable database audit solution and that it has beneficial to organizations, in the sense that it:

- a. Focuses on forensic analysis for effective incident response.

- b. Secures audit access to business critical database and files.
- c. Reduces data by detecting sensitive data, investigating vulnerabilities and removing excessive rights.
- d. Ensures audit integrity by establishing an independent audit train of user's activity.
- e. Provides unmatched security, visibility and compliance controls. Taylor (2004).

2.13 THE SIGNIFICANCE OF AUTOMATED TOOLS

Bytes (2011) outlined the importance of automated tools as follows;

1. Forensic tools help in identifying the root cause of breaches which facilitates security measures in an organization.
2. They play a critical role in reactive security measures when an incident has already occurred.
3. They are pivotal in the incident handling procedures of an organization.
4. They ensure validity and reliability of information through assessment of current organizational structure.
5. They perform faster and are more reliable than manual procedures.

6. They reduce human intervention and in turn reduce chances of error.

2.14 DIFFERENCES BETWEEN FORENSIC AND FINANCIAL AUDIT

Financial/Conventional Audit	Forensic/Investigative Audit
1. Objective: It primarily to report to the truth and fairness of the views presented by an entities financial statement	To report on the truth and fairness of the views presented by financial information.
2. Scope: Is laid down by statutes and generally accepted auditing practice and covers an entity's set of financial statement.	Is generally as agreed with the clients.
3. Timing/Regularity: Annual exercise Are mandatory on companies.	Is conducted on an adhoc basis.
4. Depth Of Examination: It requires auditor to carry out reasonable inquiry into every aspect of an entity's financial statement.	Involves an in-depth inquiry into specific areas. i.e. physical check.
5. Extent Of Regulation: Governed by legislation.	Governed by terms of reference mutually agreed between the client and the Accountant.

SOURCE: Dr. Ovute (2013). Classwork

2.15 ADVANTAGES OF FORENSIC AUDITING TO FRAUD CONTROL

The advantages of forensic auditing to fraud control was outlined by Dr. Ovute (2013) in one of his classes, they include;

- i. Forensic auditing strengthens control mechanism, with the objective of protecting the business against fraudulent practices that try to threaten the viability of business.
- ii. It plays an important role for companies under review by regulatory authorities as the ensure that there anti-money laundering procedures are effective in order to protect the company from public ridicules.
- iii. It helps improve efficiency by identifying areas of waste.
- iv. A well-resourced forensic auditing process can help to identify misreporting at different levels of an organization.
- v. It helps in detection of fraud and errors and improve transparency and accountability in both public and private sectors.

2.16

DISADVANTAGES

- i. It consumes time. i.e. the time used to interview staff could be used for another things.
- ii. It raises doubt among employees of various organizations, to them it is anfradid of their responsibilities.
- iii. They for finance is high that some organizations cannot afford to do that.
- iv. It exposes the forensic auditor risk, treats from his employees.
- v. Confidentiality: They company exposes their financial statement to outsiders.

As a result of all these things, the auditors coming together decided to have a special people to do an indebt study of what is happening, so that in the court of law they will have facts or evidence to defend themselves and prove whatever they want to prove. Dr. Ovute (2013).

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CHAPTER THREE

RESEARCH METHODOLOGY

3.0 INTRODUCTION

This chapter aims at describing the process and steps involve in obtaining, interpretation and analyzing of data so as to provide concrete information as regards to the topic in question. It also tends to bring to light the rationale behind the research design, area of coverage and data analysis techniques.

3.1 RESERCH DESIGN

The design of the study is the basis plan which guides the data collection phrase of the research project. In designing the researcher, will make use of survey research.

Anyanwu (2000). The method generally in use for survey research includes personal interviews, questionnaires, observation, telephone interview and panel technique. Due to time constraints, and the type of research to be carried out, the researcher will limit his research design to questionnaire and observations from primary data.

3.2 SOURCES OF DATA COLLECTION

The two main sources of data collection are:

Primary sources of data: Anyanwu (2000) defines primary data as original data assembled specifically for the problem under consideration. Based on this, data were derived primarily through research questionnaires distributed to the staff of EFCC and personal interviews were also granted.

Secondary sources of data: This can be defined as data originally collected for some other purpose, which are usually obtained from published and unpublished source. Egbulonu (2001).

Secondary data used in the research work include; textbooks, journals, internet, articles and class work.

3.3 AREA OF THE STUDY

The area of this research study is the Economic and Financial Crime Commission (EFCC) Portharcourt.

3.4 POPULATION OF THE STUDY

The total population of the study is 60. However, the population was restricted to the various departments listed in chapter one.

20 questionnaires was distributed to Investigative department, 15 questionnaires to Antifraud department, 10 to Operation department, 8 to Organization Support department and the remaining 7 to the department of Laboratory Medicine.

3.5 DETERMINATION OF SAMPLE SIZE

The sample size will be mathematically derived using the Taro Yamen's formula.

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

where

n	=	The Sample size
N	=	Total Population size
e	=	Error margin/limit
1	=	Constant.

$$n = \frac{60}{1+60(0.05)^2}$$

$$= \frac{60}{1.15}$$

$$= 52$$

∴ Sample size (n) = 52

The overall sampling fraction

$$= \frac{52}{60} = 0.87=0.9$$

Which means that every one of the staff has a 0.9 probability of being selected.

3.6 RELIABILITY TEST

The questionnaire issued to the respondents for this research work was designed in a way that it got interest in the mind of the respondents. Their content validity was carried out by my supervisor, and expects in the field to ensure that the questionnaire was in line with what the research work is talking about.

3.7 VALIDITY TEST

The questionnaire is designed to elicit response on automated forensic and fraud control in Nigeria. The measuring instrument (questionnaire), is valid because the researcher succeed in achieving the objectives which is to test whether the research design is capable of eliciting the required response from the respondents.

3.8 METHOD OF DATA ANALYSIS

The data obtained will be manually handled as it will be analyzed as well as testing hypotheses using the analyses of variance (anova) statistical method.

Egbulonu (2007), “Anova is a statistical method for determining the existence of differences among several population means”.

The formula for Avova is given as follows.

$$F = \frac{TRMS}{EMS}$$

Where TRMS = Treatment mean square

EMS = Error mean square

Degree of freedom (df) = (n-1) – (r-1) = n-r

Where between samples = r-1

Within samples = n-1

$$\text{TRMS} = \frac{\text{TRSS}}{r-1}$$

$$\text{EMS} = \frac{\text{ESS}}{n-r}$$

$$\text{Where TRSS} = \frac{n[(\sum EEx)^2 - r(\sum EEx)^2]}{N}$$

N

$$\text{ESS} = \text{TSS} - \text{TRSS}$$

$$\therefore \text{TSS (ie. Total Sum of square)} = \frac{EEx^2 - (\sum Ex)^2}{N}$$

N

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CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 PRESENTATION OF DATA

In this chapter, the data collected are presented, analyzed and interpreted using tabular form and sample percentage analysis method, which is aimed at identifying the distribution of responses to each question. Greater emphasis is placed on those questions that are directly related to the purpose of the study. The hypotheses formulated in chapter one is also tested in this chapter.

A total of 52 copies of the questionnaire were issued by the researcher to the staff of EFCC in Port-Harcourt, out of which 40 were attended to and returned, which will be used to analyze and compute the data.

4.2 ANALYSIS OF RESPONDENTS AND RESPONSES

SECTION A PERSONAL DATA

SEX	RESPONSES	PERCENTAGE
Male	22	55%
Female	18	45%
Total	40	100%

Source: Field survey, May 2013.

The table portrays that 55% of respondents are males while 45% are females.

TABLE 4.2.2 AGE OF RESPONDENTS.

AGE	RESPONSES	PERCENTAGE
21-25	7	17.5%
26-30	12	30%
31-35	3	7.5%
36-40	5	12.5%
41 and above	13	32.5%
Total	40	100%

Source: Field survey, May 2013.

The table above shows that 17.5% of the respondents are within the ages of 21-25, 30% of them is within the ages of 26-30, while 7.5% of them are within the ages of 31-35, 12.5% of them are within the ages of 36-40, 32.5% are within the ages of 41 and above.

TABLE 4.2.3 MARITAL STATUS

STATUS	RESPONSES	PERCENTAGE
Married	29	72.5%
Single	11	27.5%
Total	40	100%

Source: Field survey, May 2013.

The analysis above shows that 72.5% of the respondents are married and 27.5% are still single.

TABLE: 4.2.4 STAFF CATEGORY

CATEGORY/LEVEL	RESPONSES	PERCENTAGE
Senior staff	22	55%
Junior staff	18	45%
Total	40	100%

Source: Field survey, May 2013.

The table above shows that 55% of the respondents are in senior staff category, and 45% of the respondents are in junior staff category.

TABLE: 4.2.5 EDUCATIONAL QUALIFICATION OF RESPONDENTS.

Qualification	Response	Percentage
OND/HND	12	30%
B.Sc.	18	45%
MBA/Ph.D.	3	7.5%
OTHER	7	17.5%
TOTAL	40	100%

Source: Field survey, May 2013.

The above analysis shows that 30% of the respondents hold OND/HND, 45% of the respondents holds B.Sc., 7.5% of the respondents hold MBA/Ph.D. while 17.5% of the respondents are under others category of qualification.

SECTION B: GENERAL QUESTIONS

QUESTION 1

Is there any significant relationship between automated forensic auditing and fraud control?

Table 4.2.6

OPTIONS	SENIOR STAFF	JUNIOR STAFF	TOTAL	PERCENTAGE
Strong/Agree	13	1	14	35%
Agree	17	4	21	53%
S/disagree	-	1	1	2%
Disagree	-	1	1	2%
Undecided	2	1	3	8%
Total	32	8	40	100%

Source: Field survey, May 2013.

The table above reveals that 35% of the respondents strongly agree that there any significant relationship between automated forensic auditing and fraud control. 53% agreed. 2% strongly disagree, 2% disagreed, while 8% were undecided.

QUESTION 2

Are there method adopted to adequately train forensic auditors with investigative skills?

Table 4.2.7

OPTIONS	SENIOR STAFF	JUNIOR STAFF	TOTAL	PERCENTAGE
Strong/Agree	17	3	20	50%
Agree	14	4	18	45%
S/disagree	-	-	-	-
Disagree	-	-	-	-
Undecided	2	-	2	5%
Total	33	7	40	100%

Source: Field survey, May 2013

The table above shows that 50% of the respondents strongly agreed that there are methods adopted to adequately train forensic auditors with investigative skills. 45% of the respondents agreed, while 5% were undecided.

QUESTION 3

Are there measures employed to solve the problem of insufficient documented materials necessary for investigating suspects

Table 4.2.8

OPTIONS	SENIOR STAFF	JUNIOR STAFF	TOTAL	PERCENTAGE
Strong/Agree	3	2	5	12.5%
Agree	16	1	17	42.5%
S/disagree	2	-	2	5%
Disagree	5	3	8	20%
Undecided	7	1	8	20%
Total	33	7	40	100%

Source: Field survey, May 2013

The above table responses were shown on whether there are measures employed to solve the problem of insufficient documented materials necessary for investigating suspect.

In analyzing their responses in table 4.2.8, above 12.5% were strongly agreed. 42.5% agreed, 5% of the respondents strongly disagreed, 20% of the respondent disagreed while 20% of the respondents were undecided.

QUESTION 4

Are there standards set for improving on techniques that are meant for obtaining evidence?

Table 4.2.9

OPTIONS	SENIOR STAFF	JUNIOR STAFF	TOTAL	PERCENTAGE
Strong/Agree	9	1	10	25%
Agree	20	4	24	60%
S/disagree	-	1	1	2.5%
Disagree	2	-	2	5%
Undecided	2	1	3	7.5%
Total	33	7	40	100%

Source: Field survey, May 2013

The above table shows that 25% of the respondents strongly agreed that the standards set for improving on techniques that are meant for obtaining evidence. 60% of the respondents agreed, 25% of the respondents strongly disagreed, 5% of the respondent disagreed while 7.5% were undecided.

QUESTION 5

Traditional or manual process is more preferable when compared to automated procedures, due to high cost of automated equipment.

Table 4.2.10

OPTIONS	SENIOR STAFF	JUNIOR STAFF	TOTAL	PERCENTAGE
Strong/Agree	3	5	8	20%
Agree	5	4	9	22.5%
S/disagree	4	2	6	15%
Disagree	5	-	5	12.5%
Undecided	8	4	12	30%
Total	25	15	40	100%

Source: Field survey, May 2013.

The table above shows that 20% of the respondents strongly agreed that traditional or manual process is more preferable when compared to automated procedures, due to high cost of automated equipment. 22.5% of the respondent agreed. 15% of the respondent strongly disagreed while 30% were undecided.

QUESTION 6

There are methods adopted to train forensic auditors with investigative skills.

Table 4.2.11

OPTIONS	SENIOR STAFF	JUNIOR STAFF	TOTAL	PERCENTAGE
Strong/Agree	6	4	10	26.1%
Agree	15	5	20	50%
S/disagree	-	-	-	-
Disagree	7	3	10	23.91%
Undecided	-	-	-	-
Total	28	12	40	100%

Source: Field survey, May 2013.

The table above shows that 26.1% of the respondents strongly agreed that there are methods adopted to train forensic auditors with investigative skills. 50% agreed 23.9% of the respondents disagreed.

QUESTION 7

If the methods adopted for training forensic auditors are not adequately worked on, it will affect the investigation.

Table 4.2.12

OPTIONS	SENIOR STAFF	JUNIOR STAFF	TOTAL	PERCENTAGE
Strong/Agree	6	6	12	30%
Agree	12	6	18	45%
S/disagree	-	-	-	-
Disagree	2	1	3	7.5%
Undecided	3	4	7	17.5%
Total	23	17	40	100%

Source: Field survey, May 2013.

In the above table, 30% of the respondent strongly agreed that the methods adopted for training forensic auditors if adequately worked on, affects investigation, 45% of the respondent agreed. 7.5% of the respondent disagreed, while 17.5% were undecided.

QUESTION 8

Special trainings are usually organized to train forensic auditors so as to enable them investigate on the rationales behind fraud occurrence.

Table 4.2.13

OPTIONS	SENIOR STAFF	JUNIOR STAFF	TOTAL	PERCENTAGE
Strong/Agree	10	3	13	32.5%
Agree	6	6	12	30%
S/disagree	2	1	3	7.5%
Disagree	2	5	7	17.5%
Undecided	4	1	5	12.5%
Total	24	16	40	100%

Source: Field survey, May 2013.

The table above shows that 32.5% of the respondents strongly agreed that special trainings are usually organized to train forensic auditors so as to enable them investigate on the rationales behind fraud occurrence. 30% of the respondents agreed, 7.5% strongly disagreed, 17.5% of the respondents disagreed while 12.5 of the respondents were undecided.

QUESTION 9

In investigating fraud skills are not necessarily needed as any auditor is capable of investigating fraud.

Table 4.2.14

OPTIONS	SENIOR STAFF	JUNIOR STAFF	TOTAL	PERCENTAGE
Strong/Agree	1	3	4	10%
Agree	1	1	2	5%
S/disagree	10	2	12	30%
Disagree	18	2	20	50%
Undecided	-	2	2	5%
Total	30	10	40	100%

Source: Field survey, May 2013.

In analyzing the above tale, 10% of the respondents strongly agreed that in investigating fraud, skills are not necessarily needed as any auditor is cable of investigating fraud. 5% of the respondents agreed, 30% of the respondents strongly disagreed, 50% of the respondent disagreed while 5% were undecided.

QUESTION 10

Forensic auditors are mainly professionals who have no need for training as well as methods for acquiring investigative skills.

Table 4.2.15

OPTIONS	SENIOR STAFF	JUNIOR STAFF	TOTAL	PERCENTAGE
Strong/Agree	-	1	-	2%
Agree	2	4	6	16%
S/disagree	11	5	16	40%
Disagree	10	6	16	40%
Undecided	-	1	1	2%
Total	23	17	40	100%

Source: Field survey, May 2013

In analyzing the table above, 2% of the respondents were strongly agreed that forensic auditors are mainly professionals who have no need for training as well as methods for acquiring investigative skills. 16% of the respondent agreed. 40% of the respondents strongly disagreed, 40% again of the respodnet disagreed while 2% were undecided.

4.3 TEST OF HYPOTHESES

In this section, the hypothesis earlier formulated by the researcher in chapter one will be tested to enable an opinion and inference to be drawn. The Anova statistical technique will be adopted by the researcher with a 5% level of significance.

HYPOTHESIS 1

HO₁: There is no significant relationship between automated forensic auditing and fraud control.

HA₁: There is a significant relationship between automated forensic auditing and fraud control.

FIGURE 4.3.1 CONTINGENCY TABLE OF VALUE

OPTIONS	SENIOR STAFF	JUNIOR STAFF	TOTAL
SA	13	1	14
A	17	4	21
SD	-	1	1
D	-	1	1
U	2	1	3
Ex	32	8	40
$\bar{\chi}$	6.4	1.6	8
$\epsilon\chi^2$	458	20	648

Computation

$$\text{TSS} = \frac{\sum \varepsilon \varepsilon x^2 - (\sum \varepsilon x)^2}{n}$$

$$\text{where } \sum \varepsilon \varepsilon x^2 = 458 + 20 = 478$$

$$(\sum \varepsilon x)^2 = (40)^2 = 1600$$

$$n = 5 \times 2 = 10 \text{ (no of rows } \times \text{ no of column)}$$

$$\text{TSS} = \frac{478 - (40)^2}{10}$$

$$= \frac{478 - 1600}{10}$$

$$= 478 - 160$$

$$\text{TSS} = 318$$

$$\text{TRSS} = \frac{n[(\sum \varepsilon \varepsilon x)^2 - r(\sum \varepsilon \varepsilon x)^2]}{N}$$

$$\text{Where } n = 5 \text{ (no of columns)}$$

$$\sum \varepsilon \varepsilon x = 6.4 + 1.6 = (8)^2$$

$$N = 10 \text{ (no of columns } \times \text{ no of rows)}$$

$$r = 2$$

$$\epsilon\epsilon x = 32 + 8 = 40$$

$$TRSS = 5 [(8)^2 - 2 (40)^2]$$

$$10$$

$$5[(64 - 2(4)^2]$$

$$5[(64 - 2(16)]$$

$$5[64-32]$$

$$5[32]$$

$$TRSS = 160$$

$$ESS = TSS - TRSS$$

Where TSS = 318

$$TRSS = 160$$

$$\therefore 318 - 160$$

$$= \mathbf{158}$$

Figure 4.3.2

ANALYSIS OF VARIOUS TABLE (ANOVA)

SOURCE OF VARIANCE	DF	SS	MS	FCAL
Treatment	2-1=1	160	160	3.1
Error	8	158	19.75	
Total	9	318		

Source: Extract from table 4.3, field survey.

Computation of degree of freedom (DF)

$$\text{Treatment } r-1 (2-1) = 1$$

$$\text{Error } n-r (10-2) = 8$$

$$\text{Total } n-1 (10-1) = 9$$

Computation of mean square (MS)

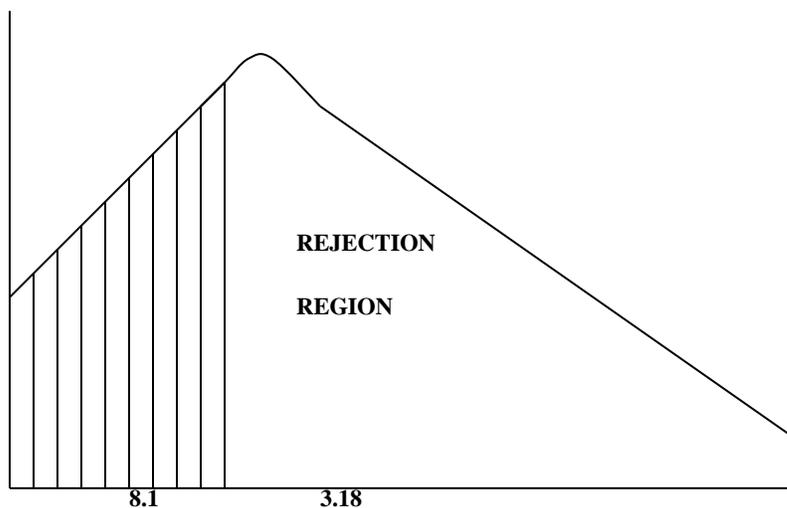
$$\text{Treatment } \frac{160}{1} = 160$$

$$\text{Error } = \frac{158}{8} = 19.75$$

$$F\text{-cal} = 8.1$$

$$\therefore F\text{-tab} = F_{1,8,0.05} = 3.18$$

Figure 4.3.3. GRAPHICAL PRESENTATION OF THE REJECTION OF H_0



Since F-calculated is greater than F-table, the researcher therefore rejects the null hypothesis (H_{O1}) and accepts the alternative hypothesis (H_{A1}), thereby concluding that there is a significant relationship between automated forensic auditing and fraud control.

HYPOTHESIS 2

H_{O2}: There are no methods adopted to adequately train forensic auditors with investigative skills.

H_{A2}: There are methods adopted to adequately train forensic auditors with investigative skills.

FIGURE 4.3.4 CONTINGENCY TABLE OF VALUES

OPTIONS	SENIOR STAFF	JUNIOR STAFF	TOTAL
SA	17	3	30
A	14	4	18
S.D	-	-	-
D	-	-	-
U	2	-	2
Ex	33	7	40
$\bar{\chi}$	6.6	1.4	8
$\epsilon\chi^2$	489	25	728

Computation

$$\text{TSS} = \frac{\sum \epsilon x^2 - (\sum \epsilon x)^2}{N}$$

Where

$$\sum \epsilon x^2 = 489 + 25 = 514$$

$$(\sum \epsilon x)^2 = (40)^2 = 1600$$

$$n = 5 \times 2 = 10 \text{ (no of rows x no of columns)}$$

$$\text{TSS} = \frac{514 - (40)^2}{10}$$

$$= \frac{514 - 1600}{10}$$

$$= 514 - 160$$

$$\text{TSS} = \mathbf{354}$$

$$\text{TRSS} = n \left[\frac{(\sum \epsilon x)^2}{N} - r (\sum \epsilon x)^2 \right]$$

N

Where $n = 5$ (no of columns)

$$\sum \epsilon x = 6.6 + 1.4 = (8)^2$$

$N = 10$ (no of columns x no of rows)

I.e. $2 \times 5 = 10$

$r = 2$

$\sum \epsilon_i = 33 + 7 = 40$

$TRSS = 5 [(8)^2 - 2 (40)^2]$

10

$5[(64 - 2 (4)^2)]$

$5[(64 - 2 (16))]$

$5[64-32]$

$5[32]$

$TRSS = 160$

$ESS = TSS - TRSS$

Where $TSS = 354$

$TRSS = 160$

$:= 354 - 160$

$= 194$

FIGURE 4.3.5 ANALYSIS OF VARIANCE TABLE (ANOVA)

SOURCE OF VARIANCE	DF	SS	MS	FCAL
Treatment	2-1=1	160	160	6.6
Error	10-2 = 8	194	24.25	
Total	10-1=9	354		

Source extract from table 4.5, field survey

Computation of degree of freedom (DF)

$$\text{Treatment } r-1 (2-1) = 1$$

$$\text{Error } n-r (10-2) = 8$$

$$\text{Total } n-1 (10-1) = 9.$$

Computation of mean square (MF)

$$\text{Treatment} = \frac{160}{1} = 160$$

$$1$$

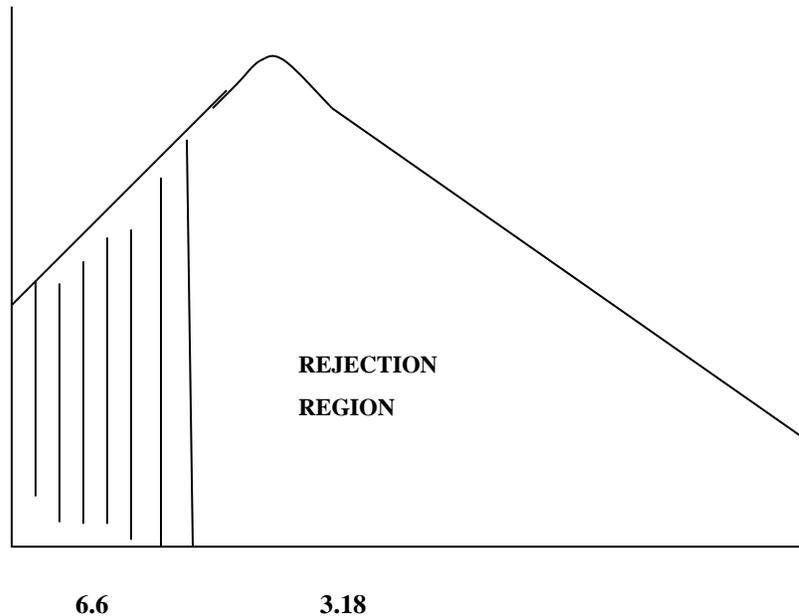
$$\text{Error} = \frac{194}{8} = 24.25$$

$$8$$

$$f\text{-cal} = \frac{160}{24.25} = 6.6$$

$$\therefore f\text{-tab} = f_{1,8,0.05} = 3.18$$

FIGURE 4.3.6 GRAPHICAL PRESENTATION OF THE REJECTION OF THE REJECTION OF H_0



Since $F_{\text{calculated}}$ is greater than F_{table} , the researcher therefore rejects the null hypothesis (H_0), and accepts the alternative hypothesis (H_A), thereby concluding that there are methods adopted to adequately train forensic auditors with investigative skills.

HYPOTHESIS 3

H_0 : There are no measures employed to solve the problem of insufficient documented materials necessary for investigating suspects.

H_A : There are measures employed to solve the problem of insufficient documented materials necessary for investigating suspects.

FIGURE 4.3.7 CONTINGENCY TABLE OF VALUES

OPTIONS	SENIOR STAFF	JUNIOR STAFF	TOTAL
S.A	3	2	5
A	16	1	17
S.D	2	-	2
D	5	3	8
U	7	1	8
Ex	33	7	40
$\bar{\chi}$	6.6	1.4	8
ϵx^2	343	15	446

COMPUTATION

$$TSS = \frac{\epsilon \epsilon x^2 - (\epsilon x)^2}{n}$$

Where

$$\epsilon \epsilon x^2 = 343 + 15 = 446$$

$$(\epsilon x)^2 = (40)^2 = 1600$$

$$n = 5 \times 2 = 10 \text{ (no of rows x no of columns)}$$

$$TSS = 446 - \frac{1600}{10}$$

$$= 446 - 1600$$

$$10$$

$$= 446 - 160$$

$$\text{TSS} = \mathbf{286}$$

$$\text{TRSS} = n \left[\frac{(\sum \epsilon \epsilon x)^2}{N} - r (\sum \epsilon \epsilon x)^2 \right]$$

$$N$$

Where $n = 5$ (no of columns)

$$\sum \epsilon \epsilon x = 6.6 + 1.4 = (8)^2$$

$N = 10$ (no of columns x no of rows)

$$r = 2$$

$$\sum \epsilon \epsilon x = 33 + 7 = 40$$

$$\text{TRSS} = 5 \left[\frac{(8)^2}{10} - 2 (40)^2 \right]$$

$$5[(64 - 2(4)^2)]$$

$$5[(64 - 2(16))]$$

$$5[64 - 32]$$

$$5[32]$$

$$\text{TRSS} = \mathbf{160}$$

$$\text{ESS} = \text{TSS} - \text{TRSS}$$

Where TSS = 286

TRSS = 160

∴ 286 – 160

= **126**

FIGURE 4.3.8 ANALYSIS OF VARIANCE TABLE (ANOVA)

SOURCES OF VARIANCE	D.F	S.S	M.S.	F.CAL
Treatment	2-1=1	160	160	10.2
Error	10-2=8	126	15.75	
Total	10-1=9	286		

Source extract from table 4.6 field survey

Computation of degree of freedom (DF)

Treatment $r-1$ (2-1) = 1

Error $n-r$ (10-2) = 8

Total $n-1$ (10-1) = 9

Computation of Mean Square (MS)

$$\text{Treatment} = \frac{160}{1} = \mathbf{160}$$

1

$$\text{Error} = \frac{126}{8} = 15.75$$

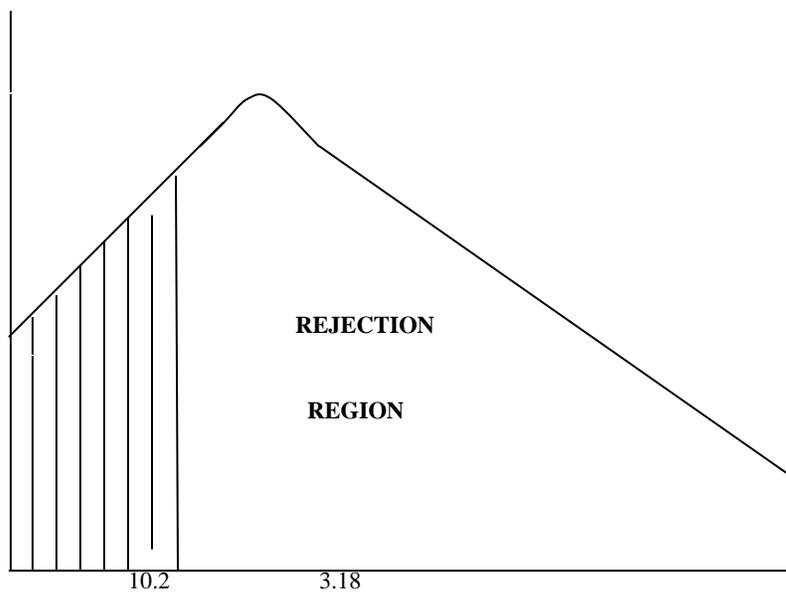
8

$$F\text{-cal} = \frac{160}{15.75} = 10.2$$

15.75

$$\therefore F\text{-tab} = F_{1,8,0.05} = 3.18$$

FIGURE 4.3.7 GRAPHICAL PRESENTATION OF THE REJECTION OF H_0



Since F-calculated is greater than F-table, the research therefore rejects the null hypothesis (H_0) and accepts the alternative hypothesis (H_A), thereby concluding that there are measures employed to solve the problem of insufficient documented materials necessary for investigating suspects.

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CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS.

5.1 SUMMARY OF FINDINGS

From the analysis in chapter four, the following findings were derived, and these include;

1. Automated forensic auditing has significance relationship with fraud control as it helps in the detection and prevention of fraud.
2. There are methods adopted to adequately train forensic auditors which can be useful in investigating fraud.
3. There are measures employed to solve the problems of insufficient documented materials necessary for investigating suspects, as it helps to foster the investigation process.
4. There are standard set for improving on techniques use for obtaining evidence.

5.2 CONCLUSION

Nigeria seems to have acquired a name that is synonymous with corruption. As a nation, it has carved out for itself the reputation of the most corrupt in the world. Our treatment in international politics as a parish state can either be reversed nor

(and our call for foreign investors) be meaningful if corruption is left un-embattled in Nigeria Chukwumaeze (2000).

However the quest to combat this economic monster called fraud brought about the concept of forensic auditing as well as Economic and Financial Crime Commission (EFCC) that are out to reduce the incessant occurrence of fraud in our financial system which has hampered the progress of organization's objectives and loss of confidence by investors who prefer to invest abroad rather than risk their resources in a country like Nigeria where fraud is perpetrated by many. Owing to this, Gbadamosi (2008) is of the opinion that fraud has become a pandemic disease, surpassing geopolitical boundaries, race, ideology or the level of economic development. Although, with determination and little effort, fraud can be managed to limit financial losses as well as frustrate and expose the criminals that victimize us all. Ezeilo (2010).

However, the automated forensic tools which was discussed earlier in this research work has being a helpful tool for identifying root cause of fraudulent practices and facilitation of security measures in organizations. It also ensures the validity and reliability of information used in curbing fraudulent acts.

5.3 RECOMMENDATION

1. The internal control system of every organization should be strengthened through regular audit exercise, so as to reduce the occurrence of fraudulent practices.
2. Training of forensic auditor should be done regularly so as to enable them carry out investigations successfully.
3. Seminars should be organized to encourage the use of automated tools by organizations, so as to make them aware of the fact that they can save more in preventing frauds unlike when the fraud has already occur.

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APPENDIX 1

Department of Accountancy,

Faculty of Management and Social Sciences,

Caritas University Amorji-Nike,

P.M.B 01784,

Enugu State.

20th may 2013.

Dear Sir/Madam,

REQUEST TO ANSWER A QUESTIONNAIRE

I, Ohiri Ifeanyichukwu F, a student of the above named institution is carrying out a research work on the topic “Automated Forensic Auditing and Fraud Control”. In partial fulfillment for the award of B.Sc. in Accountancy.

I also wish to state that all the information you will give in this questionnaire is solely for academics purposes and will only be used for this research work.

Thanks for your anticipated co-operation.

Yours’ faithfully,

Ohiri Ifeanyichukwu .F.

(Researcher)

APPENDIX II
QUESTIONNAIRE

You are requested to indicate your response by ticking (√) in the box provided

SECTION A

1. Sex of Respondents. Male Female

2. Age Bracket 21-25 years 26-30 years 31-35 years
36-40 years 41 years and above

3. Marital status Married Single

4. Staff category. Senior staff Junior staff

5. Qualification of respondents. WASSC/GCE OND/HND BSC
MBA/PHD
Others Specify _____

SECTION B

GENERAL QUESTIONS

6. There is a significant relationship between automated forensic auditing and fraud control. Do you agree?

Strongly agree Agree Strongly disagree Disagree

Undecided

7. Automated forensic auditing plays a very crucial role in fraud control. Do you agree?

Strongly agree Agree Strongly disagree Disagree
Undecided

8. Automated forensic auditing makes it easier for fraud to easily detected. Do you agree?

Strongly agree Agree Strongly disagree Disagree
Undecided .

9. Fraud is so dynamic that it cannot be controlled even if automated equipments are put in place. Do you agree to this? Strongly Agree Agree

Strongly Disagree Disagree Undecided

10. Traditional or manual process is more preferable when impaired to automated procedures, due to high cost of automated equipment. Do you agree?

Strongly Agree Agree Strongly disagree Disagree Undecided

9. There are methods adopted to train forensic auditors with investigation skills. Do you agree? Strongly Agree Agree Strongly Disagree

Disagree undecided

10.If the methods adopted for training forensic auditors are not adequately worked on, it will affect the investigation process. Do you agree?

Strongly Agree Agree Strongly disagree Disagree Undecided

11.Special trainings are usually organized to train forensic auditors so as to enable them investigate on the rationales behind fraud occurrence. Do you agree?

Strongly Agree Agree Strongly disagree Disagree Undecided

12.In investigating fraud, skills are not necessarily needed as any auditor is capable of investigating fraud. Do you agree?

Strongly Agree Agree Strongly disagree Disagree Undecided

13.Forensic auditors are mainly professionals who have no need for training as well as methods for acquiring investigative skills. Do you agree?

Strongly Agree Agree Strongly disagree Disagree Undecided

14.There are measures employed to solve the problem of insufficient documented materials for investigating suspects. Do you agree to this?

Strongly Agree Agree Strongly disagree Disagree Undecided

15.In order to eradicate the problem of insufficient documented materials, all financial processes must be automated. Do you agree?

Strongly Agree Agree Strongly disagree Disagree Undecided

16.Historical events are necessary for investigating suspects, with regard to proper documentation. Do you agree?

Strongly Agree Agree Strongly disagree Disagree Undecided

17. Automated tools when compared to manual procedures are better measures for documenting evidential materials. Do you agree?

Strongly Agree Agree Strongly disagree Disagree Undecided

18. There are standards set for improving on techniques that are meant for obtaining evidence. Do you agree?

Strongly Agree Agree Strongly disagree Disagree Undecided

