

**Determinants of Internal Audit Effectiveness in Ethiopian
Commercial Banks: the Perception of Internal Auditors.**

**A Research Thesis Submitted to Addis Ababa University, College of Business
and Economics, Department of Accounting and Finance, in Partial Fulfillment
of the Requirement of Master of Science (Msc) in Accounting and Finance**

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Ethiopian Commercial Banks

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ADDIS ABABA ETHIOPIA

June 2020

Statement of declaration

I undersigned declare that this research report is my original work and has not been presented for a degree in any other university, and all the materials used for this study have been duly acknowledged.

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Statement of Certification

This is to certify that Eyerusalem Araya has carried out this research thesis on the topic entitled “Determinants of internal audit Effectiveness in Ethiopian Commercial Banks” in partial fulfillment for the award of Masters of Science (Msc) in Accounting and Finance under my guidance and supervision. I certify that this research work is original in nature and has not presented in any means and to any award.

Approved by:

Internal Examiner: _____ Signature: _____ Date: _____

External Examiner: _____ Signature: _____ Date: _____

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ACRONYMS

ACCA	Association of Chartered Certified Accountants
AIS	Accounting Information System
BOD	Board of Directors
CIA	Certified Internal Auditor
COSO	Committee of Sponsoring Organizations of the Tread Way Commission
ECBs	Ethiopian Commercial Banks
FCPA	Foreign Corrupt Practices Act
GAAP	Generally Accepted Accounting Procedure
GDPR	General Data Protection Regulation
IFRS	International Financial Reporting Standard
IA	Internal Audit
IPPF	International Professional Practice Framework
IIA	Institute of Internal Auditors
SAI	Supreme Audit Institution

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ABSTRACT

While effective internal audit is a critical component of company management and a foundation for safe and sound operation of organizations, there is lack of mutual understanding with regards to the effective functioning of internal auditing. In this regard this study seeks to assess the determinants of internal audit effectiveness in Ethiopian commercial banks. The main objective of this study is to identify determinants of internal audit effectiveness for Ethiopian commercial banks. The researcher reviewed related literatures and adopted the explanatory research design. The study populations are staffs of internal auditors in Ethiopian commercial banks. A sample size of 225 respondents was used for the study and purposive sampling technique was adopted. Primary data was used to study this research which was collected through questionnaire and interview and the data got from the questioner was analyzed using STATA software based on the assumption of classical linear regression model (OLS). when we see the findings two variables from the predictors included in this study are becomes insignificant for the effectiveness of internal audit that are quality of audit work and usage of accounting information system but the other four that are competency of internal auditors, independency of internal auditors, top management support and organizational setting significantly affect internal audit effectiveness regarding on value adding roll, increase department performance and organizational performance. The researcher of this study mainly recommended ECB's to increase effectiveness of internal audit by giving their attention to increase competency of internal auditors in terms of international certifications, assuring independency of internal auditors in terms of giving their freedom to do their work independently, the management of ECB's has to be supportive in terms of staffing enough employees for audit , helping to prepare different trainings and development programs for audit department, allocating enough budget and preparing standardized procedure against which auditees work to be audited.

Keywords: effectiveness of internal audit, Ethiopian commercial banks and internal audit

Chapter One

1.1. Background of the Study

The Internal Auditing profession evolved steadily with the progress of management science after World War II. It is conceptually similar in many ways to financial auditing by public accounting firms, quality assurance and banking compliance activities. While some of the audit technique underlying internal auditing is derived from management consulting and public accounting professions, the theory of internal auditing was conceived primarily by Lawrence Sawyer (1911-2002), often referred to as "the father of modern internal auditing". and the current philosophy, theory and practice of modern internal auditing as defined by the International Professional Practices Framework (IPPF) of the Institute of Internal Auditors owes much to Sawyer's vision.(The institute of internal auditors Bangladesh,2018)

The institute of internal auditors define internal audit as "Internal audit is a dynamic profession involved in helping organizations to achieve their objectives. It is concerned with evaluating and improving the effectiveness of risk management, control and governance processes in an organization."

To do this internal auditors work with management to systematically review systems and operations. these reviews (audits) are aimed at identifying how well risks are managed including whether the right processes are in place and whether agreed procedures are being adhered to. Audits can also identify areas where efficiencies or innovations might be made. Internal audits are organized under an ongoing program of review and advisory activity this is based on the strategic needs of an organization.

In the course of their role, internal auditors work across all areas of an organization. In addition to core areas of financial control and IT, they review the tangible aspects of operations, such as an organization's supply chain or IT systems; as well as more intangible aspects such as organizational culture and ethics. In fact any system that has an impact on the effective operation of an organization may be included in internal audit's scope.(The institute of internal auditors in Australia,2000)

Internal auditors work in all sectors (public, private and not for profit) and may work as an employee of the organization or through an external service provider.(The institute of internal auditors in Australia,2000)

Internal auditing is an independent, objective assurance and consulting activity designed to add value to and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes. Internal auditing achieves this by providing insight and recommendations based on analyses and assessments of data and business processes. With commitment to integrity and accountability, internal auditing provides value to governing bodies and senior management as an objective source of independent advice. Professionals called internal auditors are employed by organizations to perform the internal auditing activity. (Global institute of internal auditors,2019)

The scope of internal auditing within an organization is broad and may involve topics such as an organization's governance, risk management and management controls over: efficiency/effectiveness of operations (including safeguarding of assets), the reliability of financial and management reporting, and compliance with laws and regulations. Internal auditing may also involve conducting proactive fraud audits to identify potentially fraudulent acts; participating in fraud investigations under the direction of fraud investigation professionals, and conducting post investigation fraud audits to identify control breakdowns and establish financial loss. (Global institute of internal auditors,2019)

Banks should have an internal audit function with sufficient authority, stature, independence, resources and access to the board of directors. Independent, competent and qualified internal auditors are vital to sound corporate governance. A strong internal control system, including an independent and effective internal audit function, is part of sound corporate governance. Banking supervisors must be satisfied as to the effectiveness of a bank's internal audit function, which policies and practices are followed and that management takes appropriate and timely corrective action in response to internal control weaknesses identified by internal auditors. An internal audit function provides vital assurance to a bank's board of directors and senior management (and bank supervisors) as to the quality of the bank's internal control system. In doing so, the function

helps reduce the risk of loss and reputational damage to the bank. (The Basel Committee on Banking Supervision, 2012)

1.2. Statement of the problem

The internal audit function plays a crucial role in the ongoing maintenance and assessment of a bank's internal control, risk management and governance systems and processes areas in which supervisory authorities have a keen interest. The internal audit function should develop an independent and informed view of the risks faced by the bank based on their access to all bank records and data, their enquiries, and their professional competence. The internal audit function should be able to discuss their views, findings and conclusions directly with the audit committee and the board of directors, thereby helping the board to oversee senior management. The internal audit function should not be involved in designing, selecting, implementing or operating specific internal control measures. (The Basel Committee on Banking Supervision, 2012) .

The presence of effective internal control system and their use is very vital to commercial banks which engaged in broader financial, economic and social roles.

Internal audit is an important part of the corporate governance structure within an organization. The central objective of this study is to investigate determinants of internal audit effectiveness in Ethiopian commercial Banks. there are many studies in the world conducted on this issue but in our country Ethiopia as the banking sector is the backbone of the economy the attention given by researchers in relation with internal audit effectiveness is very low, for example the studies done in the past periods in our country on this issue by considering the whole commercial banks is only this two studies as per the knowledge of the researcher with their own limitation by Tadiwos Misganaw 2016 and Temelket Awraris (2019). the researchers consider only four and five factors respectively the first four are considered by two of them the fifth one is only by the Temelket Awraris that are independence of internal auditors, management support, quality of audit work, competency of internal auditors and relation between internal and external auditors ; the researcher of this study reviews studies that relate to internal audit effectiveness and think the previous researchers miss factors that affect IAE , that are organizational setting and usage of accounting information system and must be considered, so this study will give its own

contribution to solve and prevent problems that may arise on the banking sector in relation with internal auditing effectiveness.

The studies conducted by many researchers doesn't have the same result on the effect of the determinants they considered for example the studies done by Hella Dellai and Mohamed Ali 2016; Dessalegn Getie and Aderajew Wondim 2007;Shewamene Hailemariam 2014;Medhanit Amare 2016, say that management support significantly affect internal audit effectiveness, on the other hand the study of Firehiwet Weldu 2017 says that management support doesn't have significant effect on internal audit effectiveness. Dessalegn Getie and Aderajew Wondim 2007 says organizational setting does not have significant effect on internal audit effectiveness but the study done by Medhanit Amare 2016 says that organizational setting has significant effect on internal audit effectiveness. The factors considered by many researchers are common which are like organizational independence of internal auditors, top management support, quality of audit work and competency of internal audit team. But when we see their conclusion on the same variable it deviate one from the other.

The researcher of this study believe that there are factors additional to the above four factors which affect the effectiveness of internal audit in commercial banking sector that are organizational setting and usage of accounting information system. The variability of results in the previous studies and not considering the above two new variables initiate the researcher to study on this area.

1.3. Objective of the Study

1.3.1. General Objective

The overall objective of the study is to examine determinants of internal audit effectiveness of Ethiopian commercial banks.

1.3.2. Specific Objectives

The study will help to achieve the following specific objectives related with the research hypothesis.

- □To examine the effect of Internal Auditors Independence on the effectiveness of internal audit in Ethiopian commercial banks;

- ☐ To analyze the effect of Top Management Support on the effectiveness internal audit in Ethiopian commercial banks.
- ☐ To examine the effect of Internal Audit Quality on the effectiveness of internal audit in Ethiopian commercial banks;
- ☐ To examine the effect of Internal Auditor's Competency on the effectiveness of internal audit in Ethiopian commercial banks;
- To examine the effect of Organizational Setting on the effectiveness of internal audit in Ethiopian commercial banks;
- To examine the effect of Usage of Accounting Information System on the effectiveness of internal audit in Ethiopian commercial banks;

1.4. Hypothesis of the study

The researcher of this study made the hypothesis below based on the researches done before by different researchers at different time and places .some of these are studies done by Hella Dellai and Mohamed Ali 2016; Dessalegn Getie and Aderajew Wondim 2007;Shewamene Hailemariam 2014;Medhanit Amare 2016, say that top management support, organizational independency of internal auditors, quality of audit work and competency of internal auditors have positive and significantly effect on internal audit effectiveness. the study done by (Omer Faruk Tan, 2016) says usage of AIS has significant and positive effect on internal audit effectiveness.

H1; Organizational independency of internal auditors have significant and positive effect on internal audit effectiveness.

H2; Top management support have significant and positive effect on internal audit effectiveness.

H3; Quality of audit work have significant and positive effect on internal audit effectiveness.

H4; Competency of internal auditors have significant and positive effect on internal audit effectiveness.

H5; Organizational setting have significant and positive effect on internal audit effectiveness.

H6; Usage of accounting information system have significant and positive effect on internal audit effectiveness.

1.5. Significance of the study

As the banking sector play a vital role in the economic and social aspects of the country its day today activities must be healthy so internal audit is basic for this. This study will add a new finding in this respect that helps Ethiopian commercial banks to make their internal audit effective .so,The implication of this paper will go to inform the members of corporate governance (board of directors, audit committee, internal auditors and external auditors) to use the findings to better perform internal audit function for their role in corporate governance effectiveness. Additionally it helps as a base for future studies that will be conducted in this area.

1.6. Scope and limitation of the study

1.6.1. Scope of the study

The study is limited to Ethiopian commercial banks with focus on head office internal audit department.

1.6.2. Limitation of the study

Because the work of auditing needs field work the researcher can't to get all of the auditors in their office. The main limitation of this study was that getting the opinion of all the auditors that are the source of primary data so the researcher believe that it has its own effect on the study. The other limitation of this study was that shortage of latest reference books and literature on the area in Ethiopian context.

1.7. Organization of Study

The research paper contains five chapters. Chapter one contains background of the study, statement of the problem, general objective of the study, specific objective of the study significance of the study, scope of the study, and limitation of the study. Chapter two deals about theoretical and empirical literature review to provide background information what is already known about the matter under study by different researchers .Chapter three describes research design and methodology parts, presents the study population, sample size, sampling techniques, methods of data analysis. In chapter four the researcher present disuse and interpret the results that is got from the analysis of the row data. Finally the last chapter shows include the conclusions and recommendations.

Chapter Two

2. Literature review

2.1. Introduction

In this part of the study we are going to see an overview to audit, internal audit, internal control, commercial banking sector and internal audit and different theories of audit. The first section of the chapter provides the theoretical issues on auditing and internal audit that include the definition of audit, difference between internal audit and internal control, types of audit ,process of audit, the difference between internal and external audit, internal audit and commercial banking sector. The second section examines the empirical issues on the variables which are expected to have effect on the effectiveness of internal audit by reviewing different researches on that area from other countries as well as in Ethiopia. The third section demonstrates the conceptual frame of the factors affecting internal audit effectiveness and finally, summary and literature gap of the reviewed literature

2.2. Theoretical review

The Institute of Internal Auditors (IIA, 1999, pp 64) defined internal audit as: “an independent, objective assurance and consulting activity designed to add value and improve an organization's operation. It helps an organization to accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes”.

Auditing is the process of providing assurance about the reliability of the information contained in a financial statement prepared in accordance with the auditing rules. Auditing is a systematic process of objectively obtaining and evaluating evidence regarding assertions about economic actions and events to ascertain the degree of correspondence between those assertions and established criteria and communicating the result to interested user. (ALarens Al,1996).

It is known that Internal Audit section is a department which is a cost center in a company it does not generate revenue. However, a good internal audit function can be strongly important to the survival and prosperity of any organization. Unlike external auditors, internal auditors look beyond financial statement reporting risk internal auditors consider broader issues such as the

organization's reputation, operational efficiency, and strategic growth, its impact on the environment, and how employees are treated in the company. Evaluating new technologies, Analyzing opportunities, investigating global issues, Assessing risks, controls, ethics, quality, economy, and efficiency, Assuring that controls now used are adequate to minimize the risks, Communicating information and opinions with clarity and accuracy, Such types of different duties gives internal auditors a broad point of view on the organization. That is the case makes internal auditors a valuable resource to executive management and boards of directors in accomplishing overall goals and objectives, as well as in strengthening internal controls and organizational governance. When effectively managed, internal auditing becomes an important element in helping an organization achieve its objectives. Organizations with internal audit activities are better able to identify business risks and system inefficiencies, take appropriate corrective action, and ultimately support continuous improvement. However, to maintain and enhance internal audit's credibility, its effectiveness and efficiency must be monitored.(Institute of internal auditors, 2020)

Internal auditing is effective if it provides the audit committee and executive management with the assurance they need, namely that they can rely on the organization's processes and systems to manage risks to the achievement of the organization's objectives. That means providing assurance on the risks that matter to the organization today, in a form and timeframe that is useful.(Norman Marks 2013.)

2.2.1. What are Internal Audit, Internal Check and Internal Control?

Internal control includes internal check, internal audit and other devices of control. Although internal control and internal audit are closely related, they are distinct from each other. Internal control is the systems, policies, procedures, and processes affected by the board of directors, management and other personnel to safeguard the company's assets, limit or control risks, and achieve a company' objectives. Internal audit provides an objective, independent review of a company's activities, internal controls, and management information systems to help the board and management monitor and evaluate internal control adequacy and effectiveness. Internal control is a company's system, defined and implemented under its responsibility.

Here we can see how clearly these three ideas differ one from the other

Internal Audit-It is an independent appraisal activity within an organization to review the operations and records as to service for management and is done by specially assigned staff.

Internal Check-It means a system under which the work relating to carrying out and recording of transactions is arranged in such a manner that the work of one staff member is automatically checked by another. Thus under this system possibilities of fraud and error or irregularities are minimized, if not completely eliminated.

Internal Control-it means not only internal check and internal audit but the whole system of controls-financial and otherwise, established by the management in the conduct of a business in an orderly manner, safeguard its assets and maintain the accuracy and reliability of its operations and records. Thus it is apparent that internal control expression is used in a wide sense and includes internal check and internal audit besides other forms of control.*(Ravinder Kumar, Virender Sharma 2005)*.

An internal auditor must be independent of the department heads and other executives whose work he reviews. Internal auditors, however, can never be independent in the same sense as the independent auditors because they are employees of the company they are examining. **(Rick, Roger, Arnold, & Philip, 2005)**.

Internal control is a broad term with a wide coverage. It covers the control of the whole management system in order to carry on the business of the enterprise in an orderly and efficient way by having an automatic check and balance overall the transaction. The control may be financial and or non-financial. It has become one of the basic and essential factors for efficient and effective management. Effective internal control also helps in managing change to cope with shifting environments and evolving demands and priorities. As programs change and as agencies strive to improve operational processes and implement new technological developments, management must continually assess and evaluate its internal control to assure that the control activities being used are effective and updated when necessary.(Federal Managers' Financial Integrity Act of 1982).

Effective internal controls also reduce the possibility of significant errors and irregularities and assist in their timely detection frauds and error. The internal control system is equally important to the management and the auditor concerned. It helps to the organization to meet its own goals more effectively. (*Internal Control Comptroller's Hand Book January 2001*)

The lower effectiveness of internal auditing might be an indication of low value-added. By attuning its strategies to the mission and vision of the corporation, internal audit could play a significant value-adding role through its contribution in the risk management (Barac, et al., 2009; Mihret & Woldeyohannis, 2008; Yee, et al., 2007).

The reports that are prepared in different years by COSO (1992), Basel (1998), COSO (2013) said that: an internal control system is effective if the Board of Directors and the managers achieve the following criteria:

- They understand clearly the objectives of their organization
- The financial statements are prepared and presented reliably
- The laws and the regulations are being complied.

Control environment is one of the key components of an entity's internal control; it sets the tone of an entity, influences the control consciousness of all people within the organization and is the foundation for all other components of internal control system (**Ramos, 2004**).

The internal audit function has become well-recognized as a one of the key governance mechanisms and that role has evolved over time. Despite its earlier role as company's 'watch-dog' for the organization, the nature of internal audit processes today has extended and typically encompasses consulting role, including risk management, control assurance and compliance work. This is reflected by the new definition of internal auditing by the Institute of Internal Auditors (IIA, 2011) that defined it as an independent, objective assurance and consulting activity designed to add value and improve an organization's operations. It helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes. Even though the definition of internal audit may change via time, there are some difficulties encountering to understand the internal audit function and its importance in the system. Internal audit has turned from being a tool of internal control to be broader and more comprehensive than this traditional

concept, and now is not only a tool to regular auditing for the effectiveness of internal control, verification of manipulation, or assist the external auditor, but its role extended to include the definition of the risks faces the company, and advising senior management in this regard. To reach and obtain all the reward of internal audit function, the other parties in the system (Management, Accountants, Audit Committee and so on) should have sufficient considerate of the audit function (Staciokas and Rupsys, 2005.)

2.2.2. Internal audit and commercial banking sector

Banking sector is unique sector in the economy. It provides different kind of services to the customers and handles massive volume of funds daily. All activities in the economy depend on the strength and stability of the banking sector. Due to these facts the necessity of internal control system in the banks cannot undermine. The basis of safe and sound banking system is effective internal controls. A system of tough internal controls can support to ensure that the goals and objectives of banks will be met, that the bank will help to attain long-term profitability targets, and maintain reliable financial and managerial reporting. Such a system can also help to ensure that the bank will comply with laws and regulations as well as policies, plans, internal rules and procedures and decrease the risk of unexpected losses or damage to the bank's reputation. This help bank's Board of directors and management to safeguard the bank's resources, produce reliable financial reports and comply with laws and regulations. Meantime it supports to reduce possibilities of substantial errors and irregularities and assists in their timely detection when they do occur. **(Basel Committee on Banking Supervision,2012)**

A strong internal control system, including an independent and effective internal audit function, is part of sound corporate governance. Banking supervisors must be satisfied as to the effectiveness of a bank's internal audit function that policies and practices are followed and that management takes appropriate and timely corrective action in response to internal control weaknesses identified by internal auditors. An internal audit function provides vital assurance to a bank's board of directors and senior management (and bank supervisors) as to the quality of the bank's internal control system. In doing so, the function helps reduce the risk of loss and reputational damage to the bank.**(Basel Committee on Banking Supervision,2012)**

Every bank should have an internal audit department on which with regard to the volume and nature of its activities it can rely. In smaller banks internal audit is often provided externally. The internal audit department in a banking institution must be independent from the activities which it controls and must likewise be independent from the day-to-day internal control processes. In this way it is guaranteed that this department performs its activities objectively and impartially. Internal auditors may not have a conflict of interests with the bank. Every bank should have formalized principles of internal audit providing for its position and powers in the framework of the bank. **(Basel Committee on Banking Supervision,2012)**

2.2.3. Types of Internal Audits

While a significant portion of internal audit covers internal controls over financial reporting within the organization as they pertain to generally accepted accounting procedures (GAAP) impacting their financial statements. Many organizations also recognize the need for other types of assessments or audits outside of accounting or finance. Some of these key areas include compliance (i.e., regulatory), environmental, information technology, operational and performance audits.

2.2.3.1. Compliance Audits

Compliance audit evaluate compliance with applicable laws, regulations, policies and procedures. Some of these regulations may have a significant impact on the company's financial well-being. Failure to comply with some laws, such as the Foreign Corrupt Practices Act (FCPA) or General Data Protection Regulation (GDPR), may result in millions of dollars in fines or preclude a company from doing business in certain jurisdictions.

2.2.3.2. Environmental Audits;

it assess the impact of a company's operations on the environment. They may also assess the company's compliance with environmental laws and regulations.

2.2.3.3. Information Technology Audits

may evaluate information systems and the underlying infrastructure to ensure the accuracy of their processing, the security and confidential customer information or intellectual property.

They will typically include the assessment of general IT controls related logical access, change management, system operations, and backup and recovery.

2.2.3.4. Operational Audits

Operational audit assess the organization's control mechanisms for their overall efficiency and reliability.

2.2.3.5. Performance Audits

evaluate whether the organization is meeting the metrics set by management in order to achieve the goals and objectives set forth by the Board of Directors .(Isaac Clarke November 28, 2018)

2.2.4. Process of Internal Audit

Although every audit project is unique, the audit process is similar for most engagements and normally consists of four stages: Planning (sometimes called Survey or Preliminary Review), Fieldwork, Audit Report, and Follow-up Review.

The following provides a brief synopsis of each phase.

Planning

During the planning process, the internal audit team will define the scope and objectives, review guidance relevant to audit (e.g., laws, regulations, industry standards, company policies and procedures, etc.), review the results from previous audits, set a timeline and budget for the audit, create an audit plan to be executed, identify the process owners to involve, and schedule a kick-off meeting to commence the audit.

Fieldwork

Fieldwork is the actual act of auditing. Throughout this phase, the audit team will execute the audit plan. This usually includes interviewing key personnel to confirm an understanding of the process and controls, reviewing relevant documents and artifacts for an example execution of the

controls, testing the controls for a sample over a period of time, documenting the work performed, and identifying exceptions and recommendations.

Reporting

As you might guess, internal audit will draft the audit report during the reporting phase. The report should be written clearly and succinctly to avoid misinterpretation and to encourage the intended audience to actually read and understand the report. Findings should be accompanied by recommendations that are actionable and lead directly to process improvements. The process of issuing an internal audit report should include drafting the report, review the draft with management to ensure the accuracy of findings, and issuance and distribution of the final report.

Follow-up

The final stage is an important one that is often overlooked and neglected. Following up is critical to ensure that the recommendations have been implemented to address the findings identified. This process should include appropriate follow-up with process owners needing to implement the recommendations as well as Board oversight of the company's overall status in addressing findings identified by internal audit. If an organization fails to follow-up on the implementation of recommendations, it is unlikely that the changes will be made.(Isaac Clarke November 28, 2018).

2.2.5. Objectives of Internal audit

To conduct a successful business, the management has to specify objectives; lay plans to meet them; allot responsibilities and authorities; set standards of performance; and evaluate results. And to permit it to keep its grasp on the affairs of the business; to devote its primary attention to policy-making and planning; to confine its participation in routine affairs to those areas only where special attention is needed, businessmen have evolved the concept of "management by exception." By this they are able to focus their attention on high-level matters, the unusual, and the troublesome. It is within this framework that internal auditing comes into being. As a service to management, its mission is:

- (1) To assure management that the controls are effective, both in operation and as media to identify and reveal matters needing management review;
- (2) To bring to attention instances where the controls fail to meet these needs; and
- (3) To act on management's behalf as an instrument of check on various aspects of the business controls. (M. B. T.Davies,1956)

2.2.6. Roll of internal audit

The Institute of Internal Auditors (IIA) defines Internal Auditing as:

“An independent, objective assurance and consulting activity designed to add value and improve an organization’s operations. The internal audit activity helps an organization accomplish its objectives by bringing a systematic, disciplined approach to evaluate and improve the effectiveness of risk management, control and governance processes.”

Consistent with its mission, the Internal Audit Department provides management with information, appraisals, recommendations, and counsel regarding the activities examined and other significant issues.

The department executes an approved audit plan and will perform the following tasks in accordance with its overall strategy:

- Verify the existence of assets and recommend proper safeguards for their protection;
- Evaluate the adequacy of the system of internal controls;
- Recommend improvements in controls;
- Assess compliance with policies and procedures and sound business practices;
- Assess compliance with state and federal laws and contractual obligations.
- Review operations/programs to ascertain whether results are consistent with established objectives and whether the operations/programs are being carried out as planned;
- Investigate reported occurrences of fraud, embezzlement, theft, waste, etc.

(2019 Marquette University)

2.2.7. Theories of Internal Audit

2.2.7.1. Agency theory

Agency theory suggests *that* there is relationship between ownership structure and companies performance. The principal (owners of business) contracts an agent (managers of business) who is mandated to run a business on their behalf through delegated decision-making authority. According to Jensen and Meckling (1976), agency relationship is a contract which one or more person(s) (Principal(s)) engage another person (agent) to perform some service on behalf, which involves delegating some decision-making authority to the agent. Agency relationship could be defined as a contract among the organization owner(s) and its top management. Managers work with the organization as agents to perform some service on behalf of owners who delegate some decision making authorities to managers. These authorities could be misused by managers to meet their own personal interests. Therefore, the existence of the audit committees, the external and internal auditors will help the organization in enhancing their performance, and also will ensure that the management carries out its plans according to procedures (Adams, 1994). Therefore, at the heart of the agency theory is the separation of ownership and control. Because both parties are utility maximizing, Principal-Agent conflict occurs which is termed as the agency problem. Effective internal controls may address the agency problem and minimize agency costs through elimination of information asymmetry that may exist between the principal and the agent. Existing literature suggest that ownership structure and corporate governance influence performance. Banks with stringent and value based ownership have better profitability than mutual, or state owned banks. The principal-agent model suggests that managers are less likely to engage in strictly profit maximizing behavior in the absence of strict monitoring by shareholders (Agrawal & Knoeber, 1996).

Internal auditors often are employed by senior management, but at the same time, they are also agents of the board and audit committee who trust in the internal auditors' ability to evaluate senior management's works. However, internal auditors may have varying motives to act against the board of directors' interests and its audit committee and these motives include financial rewards from managers, personal relationships with them, and the power of senior management in shaping the future position of internal auditors and their salaries. In such a work environment, internal auditors as agents may have an incentive to be bias of information flows, which leads to

new concerns of the board and audit committee about their trust on the internal auditors' objectivity, and preventing such threats of objectivity becomes necessary for the board and its audit committee. Internal auditors as agents must perform audit processes at the professional level requiring education and professional certifications, experience, and other competencies needed to perform their responsibilities perfectly. Having internal auditors with such requirements and the existence of training programs for internal auditors, would increase the confidence level of the board and audit committee in the internal auditor competence. At the same time, internal auditors, by proving their duties in accordance with the professional level, can refute charges of neglecting their duties. (khaled Endaya & Mustafa Hanefah, 2013).

Based on the above discussion institutional theory is useful to explain the variables that are included in this study.

2.2.7.2. Institutional theory

It originated from works done by Meyer and Rowan (1977) and DiMaggio and Powell (1983). This theory proposes that organizations develop and design structures, processes and systems not primarily on rational economic cost-benefit analysis but because they are more or less required to incorporate new practices and procedures. According to Meyer and Rowan (1977),

Institutional theory explains how organizational structures and practices are shaped through changes induced by normative pressures, including both external and internal sources such as laws and regulations, or by the professions (Zucker, 1987; Mihret et al., 2010). Similarly, Arena and Azzone (2007) identified the following external forces that impact both individuals and organizations: 1) laws and regulations (coercive isomorphism); 2) choices of other organizations (mimetic isomorphism); and 3) consultation or professional bodies (normative isomorphism).

Based on the above discussion, it can be seen clearly that, the institutional theory is a valid theory for internal audit effectiveness and it is a useful theory, which can explain the relationship between some variables of the study, and it is relevant to be included in the development of this study.

2.2.7.3. Communication theory

Earlier studies confirm the importance of effective communication skill in organizations specifically in IAD (Golen, 2008; Hahn, 2008). In ability to communicate effectively can be related to inappropriate information or communication complexity (Endaya&Hanefah, 2013). Both little and much information are not suitable to communicate effectively (Hahn, 2008). Internal auditors effective communication can be explained through the existence such effective communication between internal auditors and auditees, internal auditors and organization members, and internal auditors themselves. (khaled Endaya & Mustafa Hanefah, 2013)

effective communication and interpersonal relationships between managers and staff have a strong contribution to improve profitability, and productivity; and it leads to higher quality of services and products, and reduction in costs (Clampitt & Downs, 1993). According to both IIA Standards and previous studies, the study of effective communication in internal auditing is necessary, and hence this study should consider the communication theory for its achievement. (khaled Endaya & Mustafa Hanefah, 2013)

Effective communication skill is a need for internal auditors and internal audit effectiveness since this study examined such a skill through communication theory.

2.2.7.4. Contingency Theory

The goal of an audit is to test the reliability of a company's information, policies, practices and procedures. Government regulations require that certain financial institutions undergo independent financial audits, but industry standards can mandate audits in other areas such as safety and technology. Regardless of the audit subject, various factors impact a company's final results, and the contingency theory takes these factors into account during the audit process. The contingency theory of leadership and management states that there is no standard method by which organizations can be led, controlled and managed. Organizations and their functions depend on various external and internal factors. The functions of audits are themselves, types of organizations that are affected by various factors in the environment. The presence of such factors is why auditing can be managed by applying the contingency theory, with a recognition that processes and outcomes of audits are dependent on variable and contingent factors. In his book, "Organization Theory and Design," Richard L. Daft writes: "Contingency means: one

thing depends on other things” and “Contingency theory means: it depends.” Audit functions are task-oriented and can be loosely structured. The functions also can vary considerably, depending on the area of a company under audit and the type of business model, so auditors must carefully manage their inspections and take variables into account to get the job done. The contingency theory also can be applied to an internal audit effectiveness study. Theoretically, it is generally accepted that optimal structure of an organization is contingent upon different factors such as the nature of organizational work, organizational technology and market conditions (Nasrallah & Qawasmeh, 2009). This is in line with the finding of Drazin and Van de Ven (1985) which suggested that organizational performance can be well explained through contingency theory. This shows the historical important of contingency theory. The word “contingency” means something is only true under specified conditions (Chenhall, 2003). (Mu’azu Saidu Badara,2017)

Contingency has also refers to the situation that the effects of one variable on another variable depend on third variables (Donaldson, 2001). Contingency theory is a behavioral theory developed by Woodward (1958) which posited that there is no best way to manage. In line with this, Haldma and Laats (2002) and Reid and Smith (2000) also pointed out that there is no perfect way to provide a good management accounting system but rather depend upon some contingencies to dictate the best option of management accounting system in each particular condition. In this regard, this research provided that internal audit effectiveness can be best explains through contingency theory.(Mu’azu Saidu Badara,2017)

2.3. Empirical review

In the previous years, there are several studies researching the determinants of internal audit so in this part of the study the researcher try to presents a review of previous related literatures the findings on the variables to be studied will be presented from previously conducted literatures. The variables to be seen in this part of the study are organizational independence of auditors, competency of auditors, management support to the internal audit, quality of audit work, organizational setting and auditors usage of accounting information system will be reviewed.

2.3.1. Organizational independence of internal audit

Independence is the desired characteristic of the environment in which internal audit is performed.

audit's independency is defined as that audit function which is free from any conditions that can threaten the internal audit function ability to implement its responsibilities in an unbiased way and being free from any interferences within setting its scope, performing work and communicating the results **(IIA, 2009)**.

Van Peurse (2004) find out that the internal auditors are highly associated with the Management which in turn can threaten their independency. **(Sarens and de Beelde 2006)** examined this association for five Belgian companies and they found a lack in objectivity and weak association with auditing committee when internal auditors operate in managements support role.

Independence means ensuring the possibility of objective performance of internal auditor's duties, and is linked to the organizational positioning of internal audit in the company, reporting relationships with boards of directors, audit committee, or other governing bodies separated from the management, authority for the evaluation of information, reports, and the like.

The need of organizational independence and which can allow the audit activity to conduct work without interference by any party for the audit task. The independence of internal auditing is with respect to both assurance services and consulting for the organization. Independence is closely related where the freedom from conditions that may threaten objectivity and no significant quality compromises are made during rendering the audit service. Without independence, internal audit simply becomes a part of the management team, losing its ability to offer a fresh perspective **(Yee et al., 2008.)**

In fact, the audit activity should have sufficient independence from those it is required to audit so that it can both conduct its work without interference and be seen to be able to do so. This is very crucial element in conducting audit because the auditors can access to any document relating to the audit work without favor and fear. This will make the auditors provide the objective report and reliable professional judgment on the auditing work to achieve the mandate

given to them with integrity. Independence of auditors would not be considered to be impaired if the auditors do not appear to act in a capacity equivalent to a member of client management or as an employee. In certain extent there is a confusion of the role of IA as internal auditors are part of the management team and at the same time to independently evaluate management's effectiveness and efficiency. However, in more recent years, there has been heightened interest in issues associated with the independence and objectivity of internal audit. This could affect the effectiveness of internal auditing as even though internal auditor are charged with upholding the best interests of their employer, they may be reluctant to counter management, regardless of consequences.(Mary 2007).

Independence can be considered from the perspective of autonomy. Internal auditors are said to be independent if they carry out their work freely and objectively without fear or having to subordinate their judgment to management or others on audit matters; (Mary 2007).

Many researchers in our country Ethiopia and other countries found positive results about the effect of organizational independence of internal audit team members on the effectiveness of internal audit which is organizational independence have positive and significant effect on the dependent variable which is internal audit effectiveness. Among these ;

(Medhanit A. 2016), (Tadios M.2016),(Temelket a.2019)(Helladellai and Mohamed ali 2016),and (Drogalas George, Karagiorgos Theofanis and Arampatziskonstantinos Greece 2015),

H1: Organizational independencies of internal auditors have significant and positive effect on internal audit effectiveness.

2.3.2. Top Management Support

Internal audit departments must have the right and the resources needed to hire the right number of highly qualified staff, to maintain modern in training and development, to obtain and maintain physical resources (Sayag, 2010 and Tamene et al, 2014). The audit function requires support from the senior management, preferably the CEO to accomplish its day to day activities. This will provide for an appropriate stature for the function such as having unrestricted access to staff, information and documentation (Sarens& De Beelde, 2006). The guidance previously issued by the Basle Committee typically included discussions of internal controls affecting specific areas

of bank activities in this guidance the committee states that :The board of directors should have responsibility for approving and periodically reviewing the overall business strategies and significant policies of the bank; understanding the major risks run by the bank, setting acceptable levels for these risks and ensuring that senior management takes the steps necessary to identify, measure, monitor and control these risks; approving the organizational structure; and ensuring that senior management is monitoring the effectiveness of the internal control system. The board of directors is ultimately responsible for ensuring that an adequate and effective system of internal controls is established and maintained. The board of directors and senior management are responsible for promoting high ethical and integrity standards, and for establishing a culture within the organization that emphasizes and demonstrates to all levels of personnel the importance of internal controls. All personnel at a banking organization need to understand their role in the internal controls process and be fully engaged in the process. Management and employees should establish and maintain an environment throughout the organization that sets a positive and supportive attitude toward internal control. Since internal auditors display their findings as observations and recommendations, managements play an essential role in implementing good controls in terms of determining the controls' needs; designing appropriate controls; implementing them; checking the correct application; and maintaining and updating the control systems (Pickett, 2011).

While creating internal control systems is managements' responsibility, internal auditors' responsibility is making an objective assessment for those systems (Lin Ct et al., 2009).

As internal auditors pay more attention about what is useful to assess risks and undertake efficient control, their recommendations could assist management in strengthening internal control systems (Badara and Saidin, 2013).

Practically managements have a tangible influence on the internal audit department. This causes difficulties to float out for the reasons of the influence of managers' positions, the power in audit appointment and the need to assume managers' honesty. Therefore, risks will arise when those managers might override the internal control by dealing with it as a managerial tool (Churyk et al., 2008). An effective manager could be defined as that one who cannot feel afraid of internal auditor when identifying issues in the operations. Badara and Saidin,(2013) state that instead

managers have to encourage their internal auditor by a proactive policy and do not worry about whether or not the issue will be reported. What is important is to show that actions have already been taken after the issue was found.

Audit findings and recommendations would not serve much purpose unless management is committed to implement them. Adams (1994) used agency theory to explain that it is in the interest of management to maintain a strong internal audit department. Implementation of audit recommendations is highly relevant to audit effectiveness (Van Gansberghe, 2005) and the management of an organization is viewed as the customer receiving internal audit services. As a result, management's commitment to use audit recommendations and its support in strengthening internal audit is vital to audit effectiveness (Sawyer, 1995). The management's commitment to implement audit recommendations improves the operation of the auditee, as a result of which the auditee attributes would improve to the benefit of audit effectiveness. Further, management retains the authority to improve the organizational setting and influence the auditee towards a positive effect on audit effectiveness, which in turn, benefits audit

The last hypothesis tested management supports positive association with the effectiveness of IA in ECBs.(Tadiwos 2016)

H1: Top managements support have significant and positive effect on internal audit effectiveness.

2.3.3. Quality of audit work

This study considered audit quality in respect of good audit planning and supervision (Prawit, et al., 2010), internal audit field work (Ratliff, et al., 1996), finding and reporting, follow-up of IA recommendations, and effective communication with external auditors.

The main factor considered in the usage of internal audit work by external auditing process is quality of audit work. the internationally recognized auditing professional standard (SAS NO.65,AICPA,1991,ISA NO.610) require external auditors to first consider the quality of internal audit work namely in terms of objectivity, competency and work performed by the internal audit function before relaying on the work of internal audit. The performance standards of the IIA (2004; 2009) require the auditor to plan and perform the work such that he or she

would be able to arrive at useful audit findings and forward recommendations of improvement. The office's ability to properly plan, perform and communicate the results of audits is substitution for audit quality (Moraa, 2012). Therefore, audit quality is basically a function of extensive staff expertise. The internal audit guide line also states that internal auditors are expected to comply with standards for the professional practices of internal auditing published by the institutes of internal auditors (IIA) (2012) so as to conduct quality audit work. It also states that the quality assurance and improvement program should cover all aspects of the internal audit activity and continuous monitoring of its effectiveness which includes ongoing internal monitoring and periodic internal and external quality assessments (Tamene et al, 2014). IA plan includes strategic and annual planning, audit objectives and audit programs for each audit engagements (Mihret&Yismaw, 2007). In this case, annual IA plan is the main mechanism to match the work of IA to the needs and expectations of the audit committee, external auditors, and senior management (IIA, 2001). Internal audit quality, which is determined by the internal audit department's capability to provide useful findings and recommendations, is central to audit effectiveness. Internal audit has to prove that it is of value to the organization and earn a reputation in the organization (Sawyer, 1995). Internal audit has to evaluate its performance and continually improve its service (Ziegenfus, 2000). audit quality is a function of the level of staff expertise, the scope of services provided and the extent to which audits are properly planned, executed and communicated.

Internal audit scope has been extended to include most of financial transactions' verification, and Gradually moved from auditing for management to auditing of management approach (Reeve, 1986). IIA (2010) defined internal audit effectiveness as the degree to which establish objectives are achieved. The performance standards of the IIA (1999b) require the auditor to plan and perform the work such that he or she would be able to arrive at useful audit findings and forward recommendations for improvement. The office's ability to properly plan, perform and communicate the results of audits is a base for audit quality. Therefore, audit quality is arguably a function of extensive staff expertise; reasonableness of the scope of service; and effective planning, execution and communication of internal audits.

The internal auditors have to be characterized with the highest professional objectivity levels of communicating skills including gathering and evaluating information related to the examined activities or processes (IIA, 2009).

While management's increased attention to internal audit recommendations encouraged internal auditors to provide their best efforts, the lack of management attention gives the auditee a bad idea regarding the importance of internal auditing which in turn adversely affect the auditee attributions (Mihret and Yismaw, 2007).

When evaluating organization's internal control, external auditors rely on internal auditors' results illustrating their effective role in evaluating and improving that organization internal control system. It is concluded that internal auditors have more effective role if they are working in a strong business risk environment and having a strong relationship with the audit committee. With high quality findings of internal audit, the internal audit function will be highly effective (Munro & Stewart, 2011).

H1: quality of audit work have significant and positive effect on effectiveness of internal audit

2.3.4. Competency of internal auditors

Competencies within the internal auditing profession refer to the abilities, skills and attributes required for the internal auditors to perform their duty or task (International Federation of Accountants, 2014). The IIA's standard 1210 refers to that auditor's proficiency requires the internal auditors to be with high skills, knowledge and other competencies to better perform their responsibilities (IIA, 2011). Auditing general experience is related to audit's years of experience, training, knowledge, skills and expertise that can be applied to any client (Wright and Wright 1997).

Highly experienced auditors have been usually tasked to evaluate and control various tasks within the audit firms (Arel et al., 2005). Accordingly, managements turn their attention towards judgments of the highly experienced group than those of the lower experienced group (Kaplan et al., 2008). Audit experience has been considered by Musig and Ussahawanitchakit (2011) as the skills that the auditors gained when auditing the tasks by applying relevant audit standards, accounting guidance and then their error specific experiences.

Expert auditors have to be sure that their judgments in any issue must always be accurate enough to keep on going along with the standards. Bierstaker and Thibodeau (2006) indicated that auditors with high level of experience could acquire and consider the relevant information better

than those with less experience because the former has the ability to utilize more concepts in their memory in a way that leads them to acquire more relevant information. Staff competence is an important key to the effectiveness of the internal audit activities (Al-Twaijry *et al.*

2003; Alzeban & Gwilliam 2014). The International Standards for the Professional Practice of Internal Auditing (ISPPPIA) highlights the importance of internal audit team who possesses the knowledge, skills, and other competencies necessary to perform their responsibilities (ISPPPIA, Standard 1210). Indeed, internal auditors must collectively have the necessary education, professional qualifications, experience and training to be able to add value and improve the organization's operations (Mihret & Woldeyohannis 2008; Ali & Owais 2013). Ziegenfuss (2000) put the auditor education levels, the staff experience, the percent of certified staff and the training hours per internal auditor among the most important inputs of the internal audit performance. Hung & Han (1998) found that the training and professional abilities of internal auditors positively and significantly affect the progress of annual auditing plan. studies suggest that lack of competence of internal auditors is an obstacle to the effectiveness of IA in a number of African countries as Ethiopia, Ghana and Kenya (Mihret & Yismaw 2007; Onumah & Yao Krah 2012; Walter & Guandaru 2012).

H1: competency of internal auditors have significant and positive effect on internal audit effectiveness

2.3.5. Organizational setting

When we say Organizational setting it refers to the organizational profile, internal organization and budgetary status of the internal audit office and also the organizational policies and procedures that guide operation of auditees. It provides the context in which internal audit operates. Thus, organizational setting can exert influence on the level of effectiveness that internal audit could achieve. The auditee attributes relate to the capability of the auditee to meet its intended objectives. Auditee attributes with implications on audit effectiveness include the auditees' proficiency to efficiently and effectively meet organizational sub-goals; their attitude towards internal audit; and the level of cooperation provided to the auditor.

IA effectiveness is governed by institutional pressures that come from relationship between IA and managers at different level. IA to be effective should periodically communicate to auditee,

senior management and the board of directors or its internal committee on the internal audit activity's purpose, authority, responsibility and performance relative to its plan. Reporting must also include significant risk exposures and control issues, including fraud risks, governance issues and other matters needed or requested by senior management and the board (IIA, 2016: standard No 2060) and the results of engagement (IIA, 2016: standard No 2400).

H1: organizational setting has significant and positive effect on internal audit effectiveness

2.3.6. Usage of accounting information system (AIS) by internal auditors

An accounting information system (AIS) is a structure that a business uses to collect, store, manage, process, retrieve and report its financial data so it can be used by accountants, consultants, business analysts, managers, chief financial officers (CFOs), auditors, regulators, and tax agencies.

Specially trained accountants work in-depth with AIS to ensure the highest level of accuracy in a company's financial transactions and record-keeping, as well as make financial data easily available to those who legitimately need access to it all while keeping data intact and secure.. AIS are vital for internal auditors because they process the transactions, that is, they maintain financial records. Such systems identify, assemble, analyze, classify record, summarize, and report transactions and other events. IT helps auditing by improving the quality of different aspects of internal auditing. Research results also show that using IT causes auditors to spend less time on performing content tests and accuracy of mathematical calculations of office accounts rapidly. The increasing sophistication of technology has opened up the use of accounting information systems (AIS) to companies. These systems are important because they enable all levels of management to access comprehensive information that goes into the planning and controlling of activities within business organizations. In addition, AIS provide quality information to internal and external users and typically cover six main aspects: people, procedures, data, software, information technology infrastructure, and internal controls.(AMY Fontinelle,2020)

Internal audits are designed to evaluate the effectiveness of an operation's internal controls by first gathering information about how a unit operates, identifying points at which errors or inefficiencies are possible, and identifying system controls designed to prevent or detect such

occurrences. Then, they test the application and performance of those controls to assess how well they work. Managers ought to routinely evaluate controls in their department's operations by following the same process. Computers and networks provide most of the information needed for auditing. In order to be effective, auditors must use the computer as an auditing tool, audit automated systems and data, understand the business purposes for the systems, and understand the environment in which the systems operate. The other important uses for computers and networks by auditors are in audit administration. By seeking new uses for computers and communications, auditors improve their ability to review systems and information and manage their activities more effectively. Automated tools allow auditors to increase individual productivity and that of the audit function. By recognizing the importance of emerging environment and requirement to perform audit task effectively, auditors must recognize the key reasons to use audit tools and software. Many corporations rely on computers and software programs to deliver accurate and timely information to efficiently manage their business. Information technology has become a crucial requirement for business success. Accounting information systems (AIS), one of the most critical systems in an organization, have changed the way they capture, process, store, and disseminate information.(AMY Fontinelle,2020)

With well-designed AIS, everyone within an organization who is authorized to do so can access the same system and get the same information. AIS also simplify getting information to people outside of the organization, when necessary. For example, consultants might use the information in an AIS to analyze the effectiveness of the company's pricing structure by looking at cost data, sales data, and revenue. Also, auditors can use the data to assess a company's internal controls, financial condition and compliance with the Sarbanes-Oxley Act (SOX).The AIS should be designed to meet the needs of the people who will be using it. The system should also be easy to use and should improve, not hinder efficiency.(AMY Fontinelle,2020)

AIS are indispensable to managing an organization and implementing internal control systems. AIS are defined as computer-based systems that process financial information and support decisions taken in the context of coordination and control of organizational activities. They undertake the functions of processing, categorizing, data gathering, and reporting financial events to deliver relevant information for score keeping, attention drawing, and decision making. These systems are seen as crucial for efficient decision-making and control in organizations.

They typically cover six aspects: people, procedures, data, software, information technology infrastructure, and internal controls. People are the users of the systems, such as consultants, accountants, managers, and business analysts. Procedures comprise the methods for storing, collecting, and retrieving data. Data refers to all financial information related to the business practices of organizations. Software alludes to the computer-based program used to retrieve, store, process, and analyze the company's financial data. Information technology infrastructure is the hardware for operating AIS. Internal controls refer to the protection of data against unauthorized access and limiting it to users within the company. Therefore, AIS contribute to all business modules, amid the rising complexity and volume of financial and operational transactions. In today's business world, auditors should be knowledgeable about both accounting and technology. **(ÖmerFaruk Tan, 2016)**

According to the Institute of Internal Auditors (IIA), internal auditing is an independent consulting activity whose objective is to enrich and advance an organization's operations. It helps organizations reach its objectives by bringing a systematic and disciplined approach. AIS contribute to internal control and auditing. AIS can be integrated with other management information systems, such as enterprise resource planning. They help keep track of all events in an efficient manner and encourage an effective use of resources and operations by providing a computer-based database system to store and retrieve data. They also contribute to the reliability of financial reporting i.e., GAAP and IFRS. AIS enhance compliance with laws and accounting Standards and improve controls by limiting access to company data; they raise awareness of the need for internal controls, which increases the budget but also the success of such controls. AIS cover policies, procedures, organizational designs, and physical barriers that contribute to the control structure and provide preventive controls, which are designed to discourage errors or irregularities, and comprise detective controls, which are designed to identify errors or irregularities after they have occurred. **(ÖmerFaruk Tan, 2016)**

As per the knowledge of the researcher studies done in Ethiopia on the determinant of internal audit effectiveness the researchers doesn't consider accounting information system as a factor . The study done in turkey by (Ömer Faruk Tan, 2016) shows there is a positive relationship between accounting information systems and internal auditing effectiveness. So the researcher made this hypothesis.

H1; usage of accounting information system have significant and positive effect on internal audit effectiveness

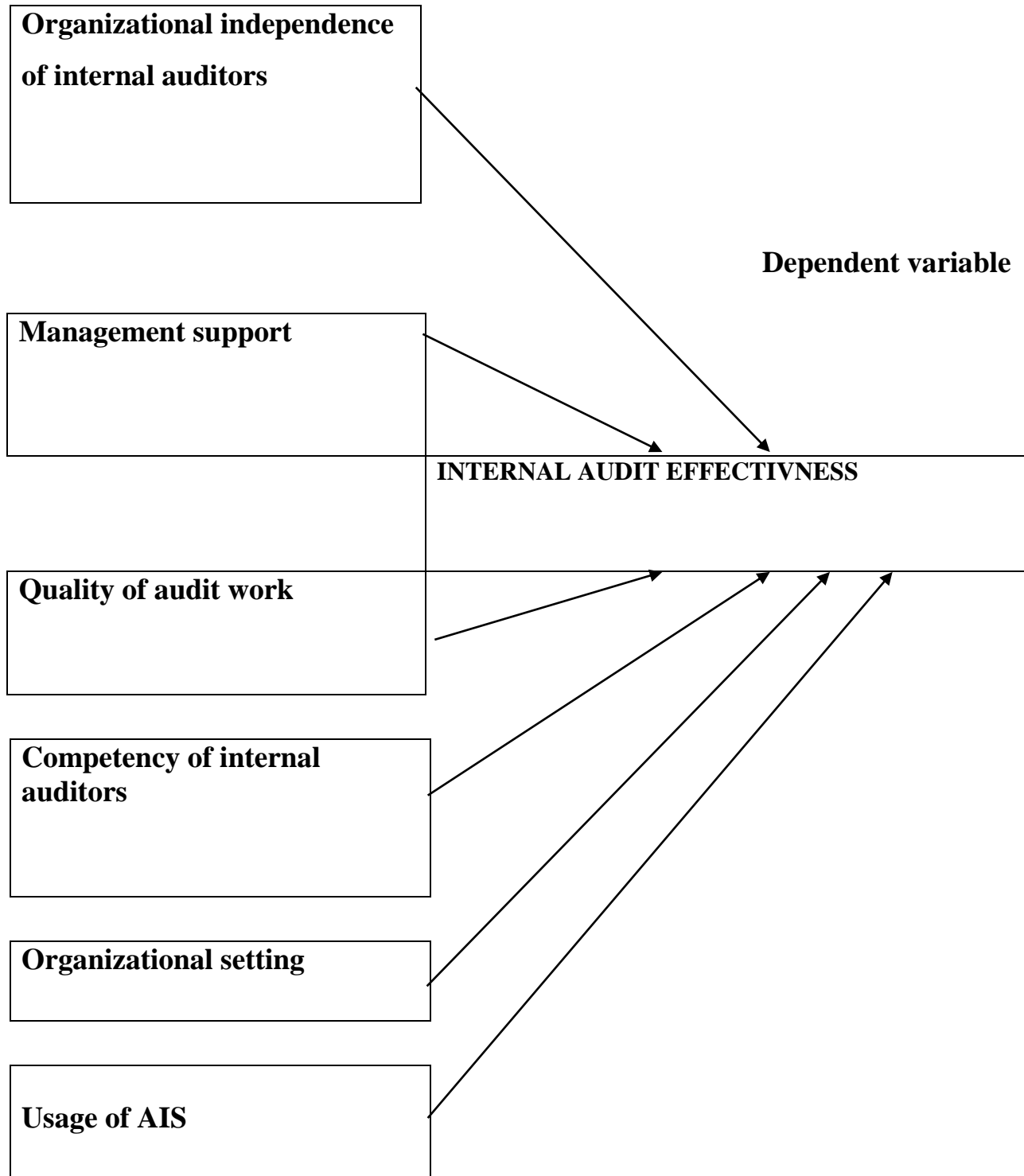
2.3.7. Conclusion and Knowledge Gap

From the studies conducted in our country and outside our country the researcher try to review literatures related with internal audit effectiveness and its determinants. This literature review chapter is discussed six main factors related with the effectiveness of IA. These are competence of IA teams, organizational independence of IA, quality of IA work, top management support, organizational setting and usage of AIS. Effective internal audit can add value to the sector, and improve the department and organizational performance. According to the literature review, the researcher has seen the following gaps in the literatures:

- ✓ Limited studies have been conducted on the determinants of internal audit effectiveness of Ethiopian commercial banks.
- ✓ there are factors that was has to be consider as determinants of internal audit effectiveness in commercial banks of Ethiopia but the previous studies conducted in our country as per the knowledge of the researcher not included these factors are organizational setting , and auditors usage of AIS.
- ✓ As the banking sector is the back bone of the economy and a very sensitive sector internal audit helps to give solution before problems happen so to enhance effectiveness of internal audit researches has to be done continuously. and
- ✓ Many researchers suggest at the end of their study it is good if further studies conduct.

2.4. Conceptual Framework

Independent variables



Source; different literatures Graph 2.1 conceptual framework

CHAPTER THREE

3. RESEARCH METHODOLOGY AND DESIGN

3.1. Introduction

This part of the study shows how the researcher do the study which contains research design, data collection instrument, population of the study, sampling of the study, how data is analyzed and model specification.

3.2. Research Design

The study tries to investigate on the determinants of internal audit effectiveness in the Commercial banking sector. The data used to conduct this study is primary data obtained through questionnaires and interview. The questionnaires were distributed to the banks internal auditors at the head office. The researcher used explanatory research to discuss the outcome of study. Explanatory studies are showing the causal relationship between variables (Saunders, et al., 2009). Explanatory studies are necessary in such a study a situation or problem leads to the explanation of the relationship between variables. Therefore, studying the data in quantitative method through statistical tests such as correlation and regression in order to get the clearer view of the relationship has been explained in detail with reasons through qualitative data.

The researcher used a combination of quantitative and qualitative methods. It is appropriate for this study since IA effectiveness call for both qualitative and quantitative study approach (Mihret, et al., 2010; Abu-Azza, 2012). In this strategy, the researcher involves quantitative data to test the relationships between independent and dependent variable (Firestone, 1987). Whereas, qualitative data involves for both to explain the results which express using quantitative data and used to discuss in detail those data unexpected in quantitative studies (Creswell, 2009). This study used Cross sectional data. When cross-sectional survey is used, data can be collected at one point of time not overtime like longitudinal (Creswell J. , 2009). In this study the researcher used a self-administered questionnaire this gives some advantages like lowest cost option, give participants the chance to think more about the questions, perceived as more anonymous, and a rapid data collection technique (Cooper & Schindler, 2006). So, the survey is done to know the determinants of internal audit effectiveness with regard to independence of internal auditors

,management support, quality of audit work, competence of internal audit team., organizational setting, and usage of accounting information system .

3.3. Data Collection Instrument

The primary data is used to accomplish the study, to collect the data from the respondents included in the survey questionnaires was distributed and interview was made with audit managers. The researcher used questionnaire as a data collection instrument. The questionnaires was adopted and modified from the prior author and literatures. an approach which is recommended in methodological literature for studies of this nature (Bryman and Bell, 2007) and those questionnaires are prepared in the form of Likert-Scale type (showing respondents agreement or disagreement) by constructing into five point scale where the lowest scale represent strongly disagree and the highest scale represent strongly agree (Likert, 1932). The questionnaires distributed to the respondents were organized in to two parts; the first part comprises the demographic question regarding the respondents, and the second part contains items relating to the effectiveness of IA and its determinants.

3.4. Population of the Study

A research population is generally a large collection of individuals or objects that is the main focus of a scientific query. It is for the benefit of the population that researches are done. As the researcher try to show at the background of the study in the second chapter population of the study includes all of the internal auditors at head office of the seventeen (17) Ethiopian commercial banks.

3.5. Sampling of the Study

In this study the researcher used purposive sampling method because the use of purposive sampling method is linked to the nature of the study and recommended to our country commercial banking sector setting (Mihret, et al., 2010). The subjects of this study are internal auditors of Ethiopian commercial banks but Most ECBs do not have internal auditors in a branch level instead checkers and makers or controllers in some banks. In such context of a study area, using other sampling methods like random sampling would mean including checkers and makers as auditors so the researcher collect data from all commercial banks internal auditors at head

office. Sample size of this study was 225 and the researcher try's to shows the number of internal auditors of all the banks in appendix 2.

3.6. Data Analysis Method

Data analysis consists of examining, categorizing, tabulating, and recombining the evidence, to address the initial proposition of a study (Yin, 1989, p. 105). The researcher used STATA software to analyze the data that was collected though primary data collection instrument. After the quantitative data is collected, edited and processed and entered in to STATA software, a test for reliability will be made. Then after, a descriptive statistics mainly, measure of central tendency (mean), measure of dispersion (standard deviations) has been used to summarize and describe the results of the observation. To determine the relationship among the variables and to test the hypothesis, correlation and regression analysis was used by meeting the Ordinary Least Square (OLS) assumptions of the linear regression model.

3.7. Variables

3.7.1. Dependent variable

- Internal audit effectiveness

3.7.2. Independent variable

- Organizational independency of internal auditors
- TOP Management support
- Quality of audit work
- Competency of internal auditors
- Organizational setting
- Usage of accounting information system.

3.8. Model Specification

The following econometrics model is formulated for this research in order to test the research and to achieve the research objective and to test the research hypothesis.

Econometric model was used because it provides us numerical measure of the relationship between the dependent and independent variables; hence it shows the relationship between the dependent and independent variables and their effect on the effectiveness of internal audit.

$$\mathbf{IAE} = \alpha + \beta_1 \text{OIN} + \beta_2 \text{MGS} + \beta_3 \text{QAW} + \beta_4 \text{CMIA} + \beta_5 \text{OS} + \beta_6 \text{AIS} + \mu$$

- ✓ Organizational independence ; OIN
- ✓ Management support; MGS
- ✓ Quality of audit work; QAW
- ✓ Competency of internal auditor; CMIA
- ✓ Organizational setting ; OS
- ✓ Usage of accounting information system; AIS
- ✓ Is a constant represent the effectiveness of internal audit when all dependent variables became zero α
- ✓ Is the coefficient in which every marginal change in variables on internal auditors effectiveness affects correspondently. $\beta 1-6$
- ✓ Error term μ

CHAPTER FOUR

4. Data Presentation, Discussion and Analysis

4.1. Introduction

In this study the researcher works to identify the determinants of internal audit effectiveness in Ethiopian commercial banks. So the researcher is going to present and discuss the results that are collected from the respondents' in different forms that are questioner and interview.

4.2. Demographic Analyses

As it is described in chapter three the questioner is distributed to the head office internal auditors and audit managers of Ethiopian commercial banks. The questioner distributed was 330 and 225 is collected at a response rate of 68 percent. The demographic character of the respondents consists of sex, age, qualification, field of study, experience in commercial bank and experience in audit department. When we see the first character which is sex number of male respondent's are 153 which is 68% and the number of females was 72 it is 32% this shows many of internal auditors in ECB's are male so the banks have to give females the opportunity to join audit department in their internal or external vacancies . When we see age many of the auditors who participated in this study were between 30 and 40 years old which is 99 in number or 44%. The second largest number of respondents is between 25-30 years old which count 90 or 40%. auditors whose age above 20 years old less than 25 is 12 or 5.34% from the respondent the number of auditors whose age is above 40 years old is 24 or 10.66%. as per this study around 89.34% of the internal auditors in ECB's are aged between 20-40 yrs this is a good opportunity for the banks if they can to use properly as many researches shows peoples in this age are more productive. The next character is qualification from all the respondents there is no one who have diploma and below diploma. 136 of the respondents are a degree holder which is 60.45% the other 89 or 39.55% has master's degree. There is no one who has above masters. There were also 3 respondents (1.3%) those have a certification in addition to their highest academic qualification like ACCA, CIA, and CPA this is very low and it implies that Ethiopian commercial banks have to work to have enough certified internal auditors. From the field of study accounting and finance take the highest place which is 132 or 58.67% next to this management is the 2nd field of study which covers 44 or 19.55% business administration is the 3rd which is 27 or 12% the last one is economics which is 11 or 4.89%. the other character the researcher analyzed is Experience

in commercial banking sector the largest number of auditors who participate in this study have an experience above 5 year less than 10 years which is 93 when we see it in percent it is 41.33% the next large number is auditors who have experience above 10 years it is 63 or 28%. Auditors who have experience above 2 years less than 5 years covers the 3rd largest number 54 it is 24% the number of auditors less than 2 years of experience is 15 or 6.67%. as it is known experience gives more knowledge ECB's have to work to have an internal audit department with many experienced staffs. the last demographic character of this study is Experience in audit department the largest number of participants included in 2 years and less of audit department experience which is 84 or 37.33% the second large number of participants have an experience of audit department above 5 year and less than 10 year which is 72 or 32%. the 3rd one in which participants have an audit experience is above 2 years less than 5 years which count 54 or 24% the last one is above 10 years of experience in audit department which is 15 or 6.67%. as it is said above experience is key ECB's have to increase the number of experienced staffs in their internal audit department to have effective internal audit which leads to better success of their company.

Demographic question		Frequency	Percent	Cumulative
Gender	Male	153	68	68
	Female	72	32	100
	Total	225	100	
Age	Above 20 less than 25	12	5.34	5.34
	25-30	90	40	45.34
	30-40	99	44	89.34
	Above 40	24	10.66	100
	Total	225	100	
Qualification	Below diploma	-		
	Diploma	-		
	Degree(BA,BSC,)	136	60.45	60.45
	Masters(MA,MSC,MBA)	89	39.55	100
	Above masters	-		
	Total	225	100	
Filed	Accounting & finance	132	58.67	58.67
	Information technology	11	4.89	63.56
	Management	44	19.55	83.11
	Business administration	27	12	95.11
	Economics	11	4.89	100
	Total	225		
Experience in commercial banking sector	2yr and less	15	6.67	6.67
	Above 2 yrs less than 5 yrs	54	24	30.67
	Above 5yr less than 10yrs	93	41.33	72
	Above 10 yrs	63	28	100
	Total	225		
Experience in audit department	2yrs and less	84	37.33	37.33
	Above 2yrs less than 5yrs	54	24	61.33
	Above 5yrs less than 10yrs	72	32	93.33
	Above 10yrs	15	6.67	100
	Total	225	100	

Table 4.1 Sources survey; 2020

4.3. Reliability analysis

Reliability tells how consistently a method measures something; in our case how the likert-scale questioner used for data collection is consistent. When we apply the same method to the same sample under the same conditions, we should get the same results. If not, the method of measurement may be unreliable. That is, if the testing process were repeated with a group of test takers, essentially the same results would be obtained. In our case To measure such a reliability analysis, Cronbach’s Alpha (α) is the most common measure of reliability scale as indicated by (Mihret, et al., 2010; George, et al., 2015) for a likert-scale questioner. Cronbach's alpha examines reliability by determining the internal consistency of a test or the average correlation of items (variables) within the test. A reliability analysis value (α) greater than 0.600 is acceptable (Cronbach's, 1951). According to (Field, 2009) a reliability analysis value (α) greater than 0.700 is very acceptable. Based on graph below, the reliability analysis value for Cronbach’s Alpha (α) of this study shows that 0.7459 for all variables. Therefore, the responses generated from the variables in this study were very acceptable (reliable) for data analysis.

```
.. alpha iae oiia tms qaw cia ors uais, std item detail
```

```
Test scale = mean(standardized items)
```

Item	Obs	Sign	item-test correlation	item-rest correlation	average interitem correlation	alpha
iae	225	+	0.7547	0.6267	0.2587	0.6767
oiia	225	+	0.6833	0.5300	0.2796	0.6996
tms	225	+	0.2969	0.0730	0.3931	0.7953
qaw	225	+	0.5921	0.4127	0.3064	0.7261
cia	225	+	0.6047	0.4285	0.3027	0.7226
ors	225	+	0.7019	0.5548	0.2742	0.6938
uais	225	+	0.7720	0.6509	0.2536	0.6709
Test scale					0.2955	0.7459

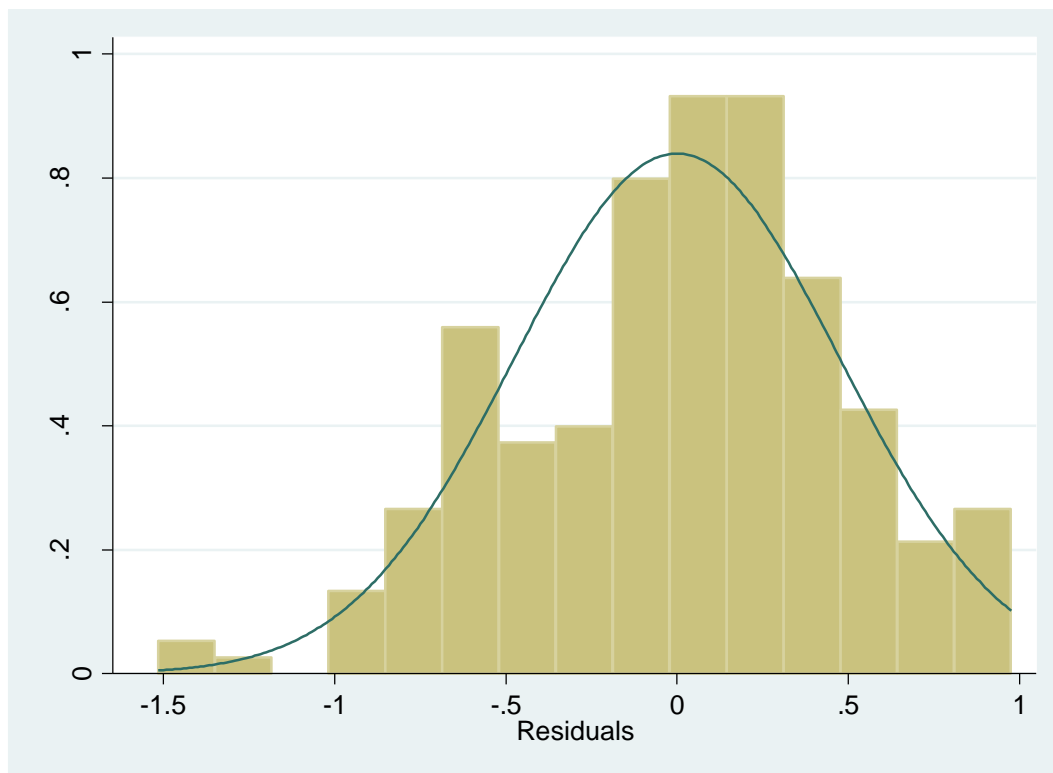
Graph 4.1 Cranach’s alpha reliability test

4.4. Assessment of Ordinary Least Square Assumptions

4.4.1. Assessment of Normality

It is assumed that the distribution of residuals is normal, If the normality assumption is violated our hypothesis testing is not reliable. The researcher used STATA 11 to test the skewness and kurtosis test of normality distribution. skewness is a statistical parameter that is related to the

asymmetry of the data. Kurtosis on the other hand, is a statistical parameter that is related to the shape (flatness/peakedness) of the random variable (Tarongi & Camps, 2010). A normal random variable will have a skewness of zero, assuming a zero-mean whereas a normal random variable will have a kurtosis of three, (Tarongi & Camps, 2010). The two common tests of normality are: histogram of residuals and the Jarque–Bera (JB) test. The researcher of this study used both of these testes and got a good result that can assure as the data are normally distributed. According to the result shown below in graph 4.2 and the detail in table 4.3 the skewness is -0.3116 which is close to zero, kurtosis were 2.9767 close to 3 and the graph is also bell shaped so the result of the histogram shows a normal distribution of data.



Graph 4.2; Source: Survey data, 2020 STATA output

1%	-1.297215	-1.516304		
5%	-.7590193	-1.406186		
10%	-.6204364	-1.297215	Obs	225
25%	-.3452294	-.9803934	Sum of Wgt.	225
50%	.0428738		Mean	5.56e-10
		Largest Std. Dev.	.4751707	
75%	.3225037	.9438745		
90%	.6129743	.9448904	Variance	.2257872
95%	.7330831	.9758303	Skewness	-.3116639
99%	.9448904	.9758303	Kurtosis	2.976779

Table 4.2 Source: Survey data, 2020 STATA output

To accept or reject The null hypotheses is that with 5% significant level if we get a $p > 0.05$ we failed to reject the null hypotheses, where there is no problem of normality .In short if the P-value of the test greater than 5% we do not reject the null hypotheses and we said the data is normally distributed The P value got from the JB test shows 0.1601 that is greater than 5%, therefore it indicates that the data were normal and reliable for analysis.

Jarque-bera normality test

jb uhat
Jarque-Bera normality test: 3.664 Chi(2) .1601
Jarque-Bera test for Ho: normality:

Table 4.3 Source: Survey data, 2020 STATA output

4.4.2. Assessment of Multi Co-Linearity

In regression, multi co - linearity refers to the extent to which independent variables are correlated. Multi co-linearity exists when one independent variable is correlated with another independent variable or one independent variable is correlated with a linear combination of two or more independent variables.

Multi co- linearity test help us to know if there is a correlation between the predictors. Having correlation among predictors is something undesired. The existence of r value greater than 0.80, is the causes for the multi co- linearity existence (Field, 2009; Myers,1990; Pallant, 2007).

```
. corr iae oiia tms qaw cia ors uais
(obs=225)
```

	iae	oiia	tms	qaw	cia	ors	uais
iae	1.0000						
oiia	0.5021	1.0000					
tms	0.1438	0.0094	1.0000				
qaw	0.3055	0.2103	0.0927	1.0000			
cia	0.4608	0.3046	0.0434	0.2259	1.0000		
ors	0.4596	0.5519	0.0155	0.2497	0.2282	1.0000	
uais	0.4531	0.4320	0.0033	0.5245	0.4009	0.5873	1.0000

Source: Survey data, 2020 STATA output

Graph 4.3 Assessment of Multi Co-Linearity

As shown above in graph 4.5 there were no variables have values greater than 0.8 among the predictors all are less than 0.8 so there is no multi co linearity problems that alters the analysis of the findings, rather it leads to a better acceptance.

4.4.3. Assessment of Autocorrelation

If there are patterns in the residuals from a model, then they can be considered as auto correlated (Brooks, 2008).

Autocorrelation is most likely to occur in time series data. The Durbin-Watson (DW) is a test for first order autocorrelation (Field, 2009). It assumes that the relationship between an error and the previous of an error. In this type of test, the null hypothesis can't be rejected when DW result is near 2 (Hair, et al., 1998). Because, it shows there is little or no evidence of autocorrelation. Based on Table below the Durbin-Watson (DW) statistics value of this study is 2.01 which is close to 2. Therefore, there is no evidence of autocorrelation among error terms in this study.

Model	R-squared	Adjusted R-squared	Durbin-Watson d-statistic
1	0.4244	0.4086	2.097473

Table 4.4 Source: Survey data, 2020 STATA output

4.4.4. Assessment of Heteroscedasticity/presence of Homoscedasticity

homoscedasticity (meaning “same variance”) is central to linear regression models. Homoscedasticity describes a situation in which the error term is the same across all values of the independent variables. Heteroscedasticity (the violation of homoscedasticity) is present when the size of the error term differs across values of an independent variable. For the regression output of the model Breusch-Pagan test for Heteroskedasticity was conducted on stata 11 to test for homogeneity of variance and a P-value of greater than 0.05 were acceptable.

Test of Heteroskedasticity

Hottest
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
Ho: Constant variance
Variables: fitted values of iae
chi2 (1) = 0.37
Prob > chi2 = 0.5442

Table 4.5 Source: Survey data, 2020 STATA output

4.5. Descriptive statistics

The first section of the questionnaire (Q1-Q4) which examines the organizational independency of internal auditors the mean value of the entire question shows greater than 3. The mean score of responses for this category as determinant was 4.1489. This implies that participants were agreed on the organizational independency of internal auditors in Ethiopian commercial banks. The standard deviation of all the question in this section were less than 1, It indicates that the respondents perception were close to one another. The interview that was done with the audit managers about independency of internal auditors includes the freedom to report audit findings directly to the audit committee and the freedom to do their works independently. The managers

say that the management of the company doesn't interfere on their work and also say that they have the freedom to do their work according to the audit procedure. Descriptive statistics of the data are presented in table 4.8 below.

Descriptive statistics of organizational independence of internal auditors

	Total mean of OIIA=4.148889	No of obs.	min	max	mean	Sta.dev
1	There are no expected operational roles or duties other than auditing that bring responsibility to members of the audit team	225	1	5	4.248889	.7501852
2	Audit reports are presented directly to the board and audit committee.	225	2	5	4.235556	.683072
3	Internal auditors have the freedom from conditions that threaten the ability to carry out internal audit responsibility in an unbiased manner.	225	2	5	4.128889	.6312623
4	Internal audit department has free access to all information, departments and employees in the organization that needed for audit work.	225	1	5	3.982222	.7557189

Table 4.6 Source: Field Survey, 2020

Based on the second section of the questionnaire (Q5-Q9) which examines top management support the entire question had a mean response greater than 3.00. The mean score of responses for this category as a whole is 3.9227. This implies that participants were agreed on the support of top management support in ECBs. The standard deviations of all questions were less than 1.00. It indicates that the respondents' perceptions were closer to each other.. The answers that are given by internal audit managers at the time of interview about the supports given by the top management in different forms that are preparing different trainings and development programs ,having sufficient staffs, giving opportunities to upgrade their qualification and as a whole readiness to support in all situation is perceived as good. Generally they say that the top

management of the organizations believes that as the above needs have to be satisfied and as top managements are ready for support. Descriptive statistics of the data are presented in table 4.9 below.

Descriptive statistics of top management support

	Total mean of TMS=3.9226668	No of obs.	Min	max	mean	Sta.dev
5	The senior management has the readiness to support the internal audit team.	225	1	5	4.28	.9338859
6	Internal audit department have enough personnel to carry out its duties	225	1	5	3.946667	.9242758
7	Internal audit have management support in terms of resource and budgetary allocation.	225	1	5	3.844444	.9002866
8	Top management gives attention to strategic issues that improve the operation and governance of the company.	225	1	5	3.715556	.9204899
9	Senior management is aware of internal audit needs.	225	1	5	3.826667	.9641799

Table 4.7 Source: Field Survey, 2020

According to the third section of the questionnaire (Q10-Q14) which examines quality of audit work all the question had a mean value greater than 3.00. The mean score of responses for this category as determinant was 3.7031. This implies that participants were agreed on the quality of audit work in ECBs. The standard deviations of Q10, Q11, and Q12 were less than 1.00. It indicates that the respondents' perceptions were closer to each other. But the standard deviation of Q13 and Q14 is greater than one which indicates the difference in perception between respondents on the ideas which are shown in the questions. the responses given by audit managers about the variables that measure quality of audit work like audit works done are according to the audit procedure, having a good audit plan, giving a recommendation that add value to the company and how the organization internal audit do its follow up to

recommendations is good .the internal audit departments prepare audit plan based on their professional standards, they say internal audit team give recommendations which can add value to the organization performance. Descriptive statistics of the data are presented in table 4.10 below.

Descriptive statistics of quality of audit work

	Total mean=3.7031112	No of obs.	min	max	mean	Sta.dev
10	The internal audit practice in this organization meets the internal, national and international standards of the profession and procedures.	225	1	5	4.115556	.7102425
11	The internal audit work done in this organization meets the internal audit objective.	225	3	5	4.08	.5997023
12	The organization management gives proper attention to the audit recommendation.	225	1	5	3.706667	.7867201
13	Internal audit gives recommendation that leads to valued and impactful improvements in governance, risk management and internal control in the organization.	225	1	5	3.328889	1.068339
14	Internal audit provide assurance, advice and insight to the right people at the right time.	225	1	5	3.284444	1.047522

Table 4.8 Source: Field Survey, 2020

According to the fourth section of the question which examine the competency of internal auditors all questions have a mean value of greater than three. The mean score of responses for

this category as determinant was 3.3899. It indicates that participants were agreed on the competency of internal auditors in Ethiopian commercial banks. Except for Q17 the standard deviation of the other entire question is below 1, this indicates that the perception of respondents cloth to each other. when we see the responses of the audit managers about the variables that evaluate competency of auditors like having the skill of problem identification and solution, having educational qualification and different certifications, having experienced team members in their department most of the time qualification of team members is limited to accounting and finance they say peoples who are certified in this filled doesn't want to works in banks as permanent employees because there are companies who can pay a better salary but they try to upgrade their employees by trainings and different programs . The descriptive of these question presented on table

Descriptive statistics of competency of internal auditors

	Total mean=3.38999975	No of obs.	Min	max	Mean	Sta.dev
15	Internal audit department employees have problem identification and solution skill.	225	1	5	3.413333	.9922917
16	Internal audit department employees have the desired educational qualification of auditing.	225	1	5	3.257778	.9798161
17	Internal audit department had a good cooperation with external auditor.	225	1	5	3.444444	1.092906
18	Internal audit department staffs get the desired training and development programs on time	225	1	5	3.444444	.9438607

Table 4.9.Source: Field Survey, 2020

According to the fifth section of the questionnaire (Q19-Q22) which examines organizational setting the entire question had a mean response greater than 3.00. The mean score of responses for this category as determinant was 3.9100; this implies that participants were agreed on the organizational setting in ECBs. The standard deviations of all questions were less than 1.00. It indicates that the respondents' perceptions were closer to each other. When we see the

qualitative evaluations the answers given by audit managers about the variables that measures organizational setting that are having a good criteria against which the work of the organization to be evaluated, getting enough budget, suitable environment for audit work is perceived as good. the managers say their organization has audit procedure against which the work of the auditee's to be evaluated and the allocation of budget is good but not enough in most of the commercial banks. Descriptive statistics of the data are presented in table 4.12 below.

Descriptive statistics of organizational setting

	Total mean=3.91000025	No of obs.	min	max	mean	Sta.dev
19	Internal audit department have enough budgetary status of the internal audit office	225	1	5	3.546667	.953752
20	The organization work for the existence of sound established criteria to evaluate auditees' practices	225	1	5	4.155556	.8005454
21	There are clear policies and procedures against which organizational practices are to be judged	225	2	5	4.168889	.5960518
22	The internal audit department offices are comfortable for audit work by considering audit work needs. For example to keep confidential documents properly and in a good position.	225	2	5	3.768889	.7439705

Table 4.10 Source: Field Survey, 2020

Based on the sixth section of the questionnaire (Q23-Q27) which observes the usage of accounting information system (AIS) they all show a mean response greater than 3.00. The mean score of responses for this category as determinant was 3.6240, This implies that participants were agreed on the usage of accounting information system in ECBs .The standard deviation of Q23andQ27, is greater than one which means the perception about AIS between the respondent is far one from the other. The mean of Q24, Q25 and Q26 is less than one It indicates that the

respondents perception were close to one another. The interview done with the audit managers try to evaluate the usage of AIS in the organizations the variables that used to measure are reliability of organization AIS, using updated software's and enough training about the new technological changes. they give an answer that as their organization is in a good place. . Descriptive statistics of the data are presented in table4.13 below.

Descriptive statistics of usage of accounting information system

	Total mean=3.6239998	No of obs.	min	max	Mean	Sta.dev
23	The organization accounting information system provides reliable information to internal and external auditors	225	1	5	3.542222	1.117732
24	Do you think that the organizationAIS used for collecting, storing, retrieving and processing data is secured.	225	1	5	3.773333	.9576758
25	The organization AIS is in line with the international accounting and auditing standards.	225	2	5	3.764444	.7749296
26	The organization AIS provide preventive controls, which are designed to discourage errors or irregularities	225	1	5	3.711111	.8919837
27	The organization AIS have a great contribution to internal auditing	225	1	5	3.328889	1.042966

Table 4.11 Source: Field Survey, 2020

The last category was composed of three question items designed to examine effectiveness of internal audit. In this category the mean value of all questions is greater than 3 The mean score of responses for this category as determinant was 3.7881, which shows that the level of responses regarding the value addition effect of internal audit to companies, department's performance improvement because of internal audit and internal audit contribution for organizational performance was positive. When we see the standard deviation which is above 1 for all the questions the perception of respondents about the question is far one from the other.

In the interview made with the audit managers they say that effective internal audit add value to business as a hole and also they are always working work hard for effective internal audit.

Descriptive statistics of internal audit effectiveness

	Total mean=3.788145	No of obs.	Min	max	mean	Sta.dev
28	Internal audit ensures that it adds value to the business.	225	1	5	3.72888	1.018714
29	Internal audit improve department's performance.	225	1	5	3.782222	1.150173
30	Internal audit improves organizational performance.	225	1	5	3.853333	1.073546

Table 4.12 Source: Field Survey, 2020

4.6. Regression result, Data interpretation and hypothesis testing

4.6.1. Regression result for internal audit effectiveness

In This study the researcher has intended to test six hypotheses that are considered as factor to determine internal audit effectiveness that factors are organizational independence of internal auditors, top management support, quality of audit work, and competency of internal auditors, organizational setting and usage of accounting information system (AIS). This section includes the discussion of testing the research hypotheses using classical linear regression model (OLS), and empirically examine whether there is a relationship between the explanatory variables and the internal audit effectiveness. In the course of model estimation, it is common practice to evaluate the appropriateness of a single descriptive model for the problem under study with the help of the coefficient determination, R². In empirical studies, the most important benefit of R² is that it serves as a fast and easily interpretable measure for the goodness of fit of the estimated model (Reisinger, 1997). However, R² is not an absolute indicator of goodness of fit. The regression result explores the necessary indicators of the internal audit effectiveness by using the variables identified in the model.

Regression analysis was done to establish the statistical significant relationship between the independent and dependent variables. The analysis applied STATA software and the result of the analysis is presented as follows.

```
. reg iae oiia tms qaw cia ors uais
```

Source	SS	df	MS			
Model	37.4423401	6	6.24039002	Number of obs =	25	
Residual	50.7800652	218	.232936079	F(6, 218) =	20.79	
Total	88.2224053	224	.393850024	Prob > F =	0.0000	
				R-squared =	0.4244	
				Adj R-squared =	0.4086	
				Root MSE =	.48263	

iae	Coef.	Std. Err.	t	P> t	[95% Conf. Interval]	
oiia	.2010548	.0483677	4.16	0.000	.1057266	.2963831
tms	.111654	.0493236	2.26	0.025	.0144418	.2088661
qaw	.102387	.0667213	1.53	0.126	-.0291145	.2338885
cia	.305031	.0610286	5.00	0.000	.1847495	.4253125
ors	.1918499	.0728854	2.63	0.009	.0481996	.3355002
uais	.0748784	.0851034	0.88	0.380	-.0928524	.2426092
_cons	.3083809	.3437726	0.90	0.371	-.3691626	.9859243

Graph 4.4 Source: Survey data, 2020 STATA output

As indicated in the model summary above the appropriate indicators of the variable used to identify the IAE were explored. That is, the value of R square used to identify how much of the variance in the dependent variable (IAE) identify by the model. The larger the value of R square, the better the model is.

The overall contribution of organizational independence of internal auditors, top management support, quality of audit work, competency of internal auditors, organizational setting, and usage of accounting information system to the IAE accounted for 42.44% (R² = 0.4244). This result shows 42.44% of the variation in the EIA is explained by this model, the rest 57.1% are other variables that are not included in this study.

This study depends on participant's perception which collected through questionnaire. Therefore, r-squared value more than 25% can be respectable and good to fit (Reisinger, 1997; Thompson, 2002).

The independent variable with the level of significance (sig.) value less than 5% can make a significant contribution to the predicted value of the dependent variable. Whereas, a variable beyond 5% level of significance (sig.) cannot make a significant contribution to the predicted value of the dependent variable (Brooks, 2008; Hair 1998).

According to the results generated by STATA from the six variables considered by the researcher as predictor only four of them has a coefficient (β) of less than 0.05 and significantly affect the change in internal audit effectiveness, these are organizational independency of internal auditors, top management support, competency of internal auditors and organizational setting. But two variables that were considered as predictor becomes insignificant that are quality of audit work and usage of accounting information system.

4.6.2. Data interpretation and hypothesis testing

This part of the study presents the results of quantitative and qualitative data analysis. The hypotheses testing are used to identify significant influence of independent variables on dependent variable (Field, 2009). In this study, the hypotheses testing done to identify whether this predictors which are organizational independence of IA, top management support, quality of audit work, competency of internal auditors, organizational setting, and usage of accounting information system significantly influence effectiveness of IA. According to Table above the p-value for organizational independency of internal auditors, top management support, competence of IA teams, and organizational setting were statistically significant at ($p < 0.05$) which shows a strong support for hypothesis 1, 2, 4 and 5. Whereas, the p-value for quality of audit work and usage of accounting information system was statistically insignificant at ($P < 0.05$) which lacks to support for hypothesis 3 and 6. Generally this section discussed the research hypotheses that are presented in chapter two of this study.

4.6.2.1. Organizational independency of internal auditors

In this part of the study the perception of participants regarding on the organizational independence of internal auditors as a factor may have effect on internal audit effectiveness is presented. The study examined organizational independence of internal auditors in respect of if there is expected operational role other than auditing which may bring responsibility, the freedom to report their audit finding directly to the BOD, freedom from any threat to do their task and the access to get information needed to do their work.

H1; organizational independency of internal auditors positively affect internal audit effectiveness.

The first hypothesis concerns the organizational independence of internal auditors. In this case, the regression analysis show a positive and significant relation between OIIA and IAE, that is independence of internal auditors has a positive effect on the effectiveness of IA in Ethiopian commercial banks, with ($\beta=0.2010$, $p < 0.05$), and t -value of 4.16. Based on this result we accept H1.that means if ECB's protect organizational independence of internal auditors in respect of if there is expected operational role other than auditing which may bring responsibility avoiding this, respecting freedom to report their audit finding directly to the BOD, freedom from any threat to do their work and the allowing to access information needed to do their work; this increases the effectiveness of internal audit.

This result is consistent with the work of (Sarens *et al.* 2009; Soh & Bennie 2011, Tackie, 2016,Deribe & Regasa, 2014,mustika, 2015 ,Drogalas, july,2015). The positive magnitude sign and t-value of more than 2 are indicating a strong relationship between the independent and dependent variable (Hair, et al., 1998).from the variables which are significantly affect internal audit effectiveness OIIA is the second one.

4.6.2.2. Top management support

In this part of the study the perception of participants regarding on the top management support as a factor may have effect on internal audit effectiveness is presented. the study examined top management support in respect of management readiness to support internal audit, to what extent the management support audit department to get enough personnel, adequate resource and budgetary allocation, top management attention to strategic issues that have effect on the operation of the organization and to what extent the management is aware of the need of audit department.

H2; top management support positively affect internal audit effectiveness.

The second hypotheses tested top management support shows a positive and significant effect on Ethiopian commercial banks at a significance level of ($p < 0.05$) where the magnitude (β) of the effect of this variable on the internal audit effectiveness is 0.1116 and the value of (t) 2.26 is higher than 2, indicating top management support is factor that determine internal audit effectiveness on Ethiopian commercial banks. Therefore we accept the hypothesis of the study that there is a positive relationship between top management support and the effectiveness of the

internal audit. The positive magnitude sign and t-value of more than 2 are indicating a strong relationship between the independent and dependent variable (Hair, et al., 1998). The result reveals that top management support have a material positive influence on internal audit effectiveness. Therefore, the management can contribute for the effective result of the internal auditors through their support in terms of fulfilling the necessary materials and facilities that the IA staff needs. The result of this study is consistent with the research done by (Tackie, 2016) (Cohen & Sayag's, 2010), (Azeban & Gwilliam, 2014) (Dellai & Brahim, 2016) (Mihret & Yismaw, 2007).

4.6.2.3. Quality of audit work

In this part of the study the perception of participants regarding on the quality of audit work as a factor may have effect on internal audit effectiveness is presented. The study examined quality of audit work in respect of if The internal audit practice in this organization meets the internal, national and international standards of the profession and procedures, The internal audit work done in this organization meets the internal audit objective, Internal audit gives recommendation that leads to valued and impactful improvements in governance, risk management and internal control in the organization, Internal audit provide assurance, advice and insight to the right people at the right time.

H3; quality of audit work positively affect internal audit effectiveness.

The investigator of this study based on the previous empirical evidences hypothesized that there is a positive relationship between quality of audit work and the internal audit effectiveness at a Statistical significance level ($p < 0.05$) however In accordance with regression output it has been found that there is weak correlation which is not statistically significant between quality of audit work and the internal audit effectiveness ($P = 0.133$), where the magnitude of the effect of this variable on the internal audit quality is ($\beta = 0.1023$) and the t-value of (1.53) is lower than the value (2). Therefore we reject the hypothesis of the study that there is a positive relationship between quality of audit work and the internal audit effectiveness. The result reveals that quality of audit work has not a material positive influence on internal audit effectiveness in Ethiopian commercial banks. this result is not consistent with the work of (Mihret & Yismaw, 2007, Drogalas, July, 2015, Rudhani, Vokshi, & Hashawi, 2017 temelket awraris 2019, Tran Thi Lan Huong, 2018.)

4.6.2.4. Competency of internal auditors

In this part of the study the perception of participants regarding on the competency of internal auditors as a factor may have effect on internal audit effectiveness is presented. The study examined competency of internal auditors in respect of if Internal audit department employees have problem identification and solution skill, Internal audit department employees have the desired educational qualification of auditing, Internal audit department had a good cooperation with external auditor and Internal audit department staffs get the desired training and development programs on time.

H4; competency of internal auditors positively affect internal audit effectiveness.

As the regression result shows there is a positive and significant relationship between the competences of internal auditors and the internal audit effectiveness at a statistical significance level ($p < 0.05$), where the magnitude (β) of the effect of this variable on the internal audit effectiveness is 0.3050 which the highest from all the predictors that affect internal audit effectiveness and the value of (t) 5.00 is higher than 2, all this results indicate competence is the determinant that affect internal audit effectiveness. Therefore we accept the hypothesis of the study that there is a positive relationship between competence of internal auditors and the effectiveness of internal audit. The result reveals that competence of internal auditors plays a material positive influence on internal audit effectiveness. This means that internal auditors' of Ethiopian commercial banks which have competence criteria will enhance the internal audit effectiveness. The result of this study is consistent with earlier studies of (mustika, 2015) (Drogalas, july,2015) (Tackie, 2016)(Deribe & Regasa, 2014),(Al-Twajjry, et al., (2003) (Endaya & Hanefah, 2013), (Hahn, 2008).

4.6.2.5. Organizational setting

Organizational setting is also the variable considered as predictor of internal audit effectiveness, because effectiveness of IA cannot be realized without good organizational setting. This section evaluates the views of participants regarding, does the Internal audit department have enough budgetary status of the internal audit office, The organization work for the existence of sound established criteria to evaluate auditees' practices, There are clear policies and procedures against which organizational practices are to be judged, and The internal audit department offices are

comfortable for audit work by considering audit work needs. For example to keep confidential documents properly and in a good position.

H5; organizational setting positively affect internal audit effectiveness.

The results of the analysis done shows There is a positive and significant effect of organizational setting on internal audit effectiveness at a significant level of ($p < 0.05$) where the magnitude (β) of the effect of this variable on the internal audit effectiveness is 0.1918 and the t-value of 2.63 which is higher than 2, indicating organizational setting is the determinant factor of internal audit effectiveness. It implies that organizational setting has a positive influence on internal audit effectiveness. This makes the hypothesis made previously correct. This result is similar with the previous study done by (medhanit amare 2016) (Mihret and Yismaw, 2007).

4.6.2.6. Usage of accounting information system

In this part of the study the perception of participants regarding on the usage of accounting information system (AIS) as a factor may have effect on internal audit effectiveness is presented. The study examined usage of AIS in the following views; does The organization accounting information system provides reliable information to internal and external auditors, the organization AIS used for collecting, storing, retrieving and processing data is secured, The organization AIS is in line with the international accounting and auditing standards, The organization AIS provide preventive controls, which are designed to discourage errors or irregularities, The organization AIS have a great contribution to internal auditing.

H6; usage of accounting information system (AIS) positively affect internal audit effectiveness.

In accordance with regression output, unexpectedly, it has been found that there is a weak positive correlation which is not statistically significant between usage of AIS and the internal audit effectiveness ($P = 0.380$), where the magnitude of the effect of this variable on the internal audit effectiveness is $\beta = 0.0748$ and the value of (t) 0.88 is lower than 2. Therefore we reject the hypothesis of the study that, there is a positive relationship between usage of AIS and the internal audit effectiveness. This result is not in line with the work of (Omer Faruk ,2016)

Chapter Five

5. Conclusion and Recommendation

5.1. Introduction

In this chapter the researcher provides that conclusion and recommendation. In conclusion section of the study the researcher tried to show the implications and the findings of the study and the researcher provides a recommendation according to the study result.

5.2. Conclusion

This study was planned to investigate determinants of internal audit effectiveness in Ethiopian commercial banks through quantitative and qualitative research methodology. The result of this study provide evidence that competency of internal auditors, organizational independence of internal auditors, top management support and organizational setting all contribute to the effectiveness of internal audit in ECB's. The finding also shows that competency of internal auditors as the key driver of internal audit effectiveness followed by organizational independency of internal auditors, organizational setting and top management support. On the other hand the usage of accounting information system (AIS) and quality of audit work does not have significant effect on internal audit effectiveness in EBC's based on this study. protecting independency of auditors in terms of giving the freedom to report their audit findings directly to the concerned party, freedom from any threat to do their task according to the procedure and access to get information needed to do their work increases the effectiveness of internal audit.

The other thing that increase internal audit effectiveness is that readiness to support internal audit in terms of, audit department to get enough personnel, adequate resource and budgetary allocation, giving attention to strategic issues that have effect on the operation of the organization and by proactively aware of the need of audit department. The main thing according to this study is that assuring Internal audit department employees have problem identification and solution skill, Internal audit department employees acquire the desired educational qualification of auditing, Internal audit department had a good cooperation with external auditor and Internal audit department staffs get the desired training and development programs on time. If the above things are not there ECB's have to give their attention and resource to get these things to their company.

Overall, this study adds to the existing literature on internal audit by examining the factors of internal audit effectiveness. The study also provides good insights for Ethiopian commercial banks.

5.3. Recommendation

1. As per the result of this study competency of internal auditors is the main factor for the effectiveness of internal audit however as it is seen in the descriptive part of the study result in chapter four when we see the background of the respondents in terms of certification such as CIA, ACCA, we see limitations of having this certification. Thus the management and peoples who have concern on the organization can increase the effectiveness of internal audit by working aggressively on the following things; working closely with internal audit department and team members to have auditors who are internationally certified in auditing and related fields, by communicating auditing professionals association preparing different trainings and development programs in which internal auditors meet each other and may share their experience by doing so ECB's can increase effectiveness of their internal audit.
2. As the results of this study suggest that independency of internal auditor is critical predictor of internal audit effectiveness so, ECB's should not compromise independency of internal auditors in any case. As it is known that the industry is sensitive it needs close follow up, the independency of the internal audit should be respected to alleviate if there are problems that may harsh the banks. Assuring independency also helps the internal auditors to provide the appropriate reports based on that the stakeholders can make their decisions accordingly. ECB's can assure independency of internal auditors by the following things; the bank's internal audit function must be independent of the audited activities, by giving the freedom to access all information that needed for audit work, and by giving the authority to report their finding to the concerned party.
3. Finally as the result of the study suggest that commercial banks of Ethiopia can to increase the effectiveness of internal audit by ensuring top management support and good organizational setting. The managements of Ethiopian commercial banks should have been supportive for the internal audit by staffing enough employees, preparing different trainings and development programs and giving their independency in work place. Banks also work to have good organizational setting in terms of allocation of enough budget and standardized policies and procedures the availability of this things increase the effectiveness of internal audit work in ECB's.

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Appendix

Appendix I Questionnaires

Questionnaire for Internal Auditors of Ethiopian commercial banks

ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING AND FINANCE

Dear Participant:

The aim of this questionnaire is to collect information about the determinants of Internal Audit (IA) effectiveness in Ethiopian commercial banks for the partial fulfillment of Master's Degree in accounting and finance at Addis Ababa University. The results of the study are expected to contribute to identify the determinants of internal audit effectiveness in Ethiopian commercial banks.

The conclusions of the study will be drawn in aggregate terms, without any reference to specific office or individual respondents. Please, do not write your name on the questionnaire.

I would also like to assure you that the information you provided will be treated as strictly confidential and used only for the purpose of this research only.

Your honest and thoughtful response is valuable Thank you in advance for your support and participation.

With Best Regards EYERUSALEM ARAYA

Mobile: +251- 9 20 95 87 78, Email: eyuacct@gmail.com

Part I: - General Information

1. Sex Male Female

2. Age 20- 25 25-30 30-40 above 40

3. Qualification (Educational background)

Below Diploma Masters (MA, MSC, MBA)

Diploma above Master

Degree (BA, BSC)

Certified like: CIA (Certified Internal Auditor), ACCA, CPA, or Other Other Specify

4. Field of study on your highest educational level:

Accounting and Finance Information Technology

Management Business administration Economics

Other Specify _____

5. Year of experience in commercial banking sector in any position

Two years and less above two years less than five years

Above five years less than ten years above ten years

6. Year of experience in internal audit department

Two years and less above two years less than five years

Above five years less than ten years above ten years

Part 2

The Questionnaire is prepared in Likert-scale form with five (5) point scales. I ask you to tick (√) or circle the appropriate scale (point) that indicates your opinion in table below. The values of scales are

5 = strongly agree, 4 = Agree, 3 = Neutral, 2 = Disagree, and 1 = strongly disagree

A. Organizational independency of internal auditors						
		SA	A	N	D	SD
1	There are no expected operational roles or duties other than auditing that bring responsibility to members of the audit team	5	4	3	2	1
2	Audit reports are presented directly to the board and audit committee.	5	4	3	2	1
3	Internal auditors have the freedom from conditions that threaten the ability to carry out internal audit responsibility in an unbiased manner.	5	4	3	2	1
4	Internal audit department has free access to all information, departments and employees in the organization that needed for audit work.	5	4	3	2	1
B. top management support						
5	The senior management has the readiness to support the internal audit team.	5	4	3	2	1
6	Internal audit department have enough personnel to carry out its duties	5	4	3	2	1
7	Internal audit have management support in terms of resource and budgetary allocation.	5	4	3	2	1
8	Top management gives attention to strategic issues that improve the operation and governance of the company.	5	4	3	2	1
9	Senior management is aware of internal audit needs.	5	4	3	2	1

C. quality of audit work

10	The internal audit practice in this organization meets the internal, national and international standards of the profession and procedures.	5	4	3	2	1
11	The internal audit work done in this organization meets the internal audit objective.	5	4	3	2	1
12	The organization management gives proper attention to the audit recommendation.	5	4	3	2	1
13	Internal audit gives recommendation that leads to valued and impactful improvements in governance, risk management and internal control in the organization.	5	4	3	2	1
14	Internal audit provide assurance, advice and insight to the right people at the right time.	5	4	3	2	1

D. competency of internal auditors

15	Internal audit department employees have problem identification and solution skill.	5	4	3	2	1
16	Internal audit department employees have the desired educational qualification of auditing.	5	4	3	2	1
17	Internal audit department had a good cooperation with external auditor.	5	4	3	2	1
18	Internal audit department staffs get the desired training and development programs on time	5	4	3	2	1

E. organizational setting

19	Internal audit department have enough budgetary status of the internal audit office	5	4	3	2	1
20	The organization work for the existence of sound established criteria to evaluate auditees' practices	5	4	3	2	1
21	There are clear policies and procedures against which organizational practices are to be judged	5	4	3	2	1
22	The internal audit department offices are comfortable for audit work by considering audit work needs. For example to keep confidential documents properly and in a good position.	5	4	3	2	1

F. usage of accounting information system

23	The organization accounting information system provides reliable information to internal and external auditors	5	4	3	2	1
24	Do you think that the organization AIS used for collecting, storing, retrieving and processing data is secured.	5	4	3	2	1
25	The organization AIS is in line with the international accounting and auditing standards.	5	4	3	2	1
26	The organization AIS provide preventive controls, which are designed to discourage errors or irregularities	5	4	3	2	1
27	The organization AIS have a great contribution to internal auditing	5	4	3	2	1

G. Internal audit effectiveness

28	Internal audit ensures that it adds value to the business.	5	4	3	2	1
29	Internal audit improve department's performance.	5	4	3	2	1
30	Internal audit improves organizational performance.	5	4	3	2	1

Please suggest if you have any kind of idea in relation to this topic of internal audit effectiveness that may not be addressed in this questionnaire. _

Interview questions for audit managers

1. Does the audit department have a good connection with professional associations of auditing to update its staffs?
2. Does Internal audit establishes a follow-up process to ensure that corrective actions have Been effectively implemented?
1. Does your organization appreciate its employees to upgrade themselves professionally? How?
2. Does the audit department try to have information about new technological changes that may approve the audit work?
3. Do you think that the companies' general setting is suitable for audit work?
4. Does the members of the audit team of this company communicate with external auditors?
5. Do you think employees of this organization get the appropriate trainings that may add value for the audit work?
6. Does the organization help member of audit department to do their work without any interference?
7. Does the audit department of this organization have a good audit Plan for its audit work based on the audit standards?
8. Does the organization audit procedure is in line with the international audit standard?
9. Do you think that the internal audit has the ability and readiness to correct errors before damage happens to the organization? How?
10. Do you think the organization audit procedure properly consider the financial industry?
12. Does the Internal audit as a department assesses that risk responses are appropriate and align with the organization's risk appetite?
13. Does Internal audit of this company evaluates the potential for the occurrence of fraud and how the organization manages fraud risk?

5.4. Background of the study area

In Ethiopia according to recent reports there are seventeen commercial banks with different establishment period and background.

NO	NAME OF THE BANK	YEAR OF ESTABLISHMENT	NO OF AUDITORS IN THE HEAD OFFICE
1	ABAY BANK S.C	2010	6
2	ADDIS INTERNATIONAL BANK	2011	9
3	AWASH INTERNATIONAL BANK	1994	35
4	BANK OF ABYSSINIA	1996	25
5	BERHAN INTERNATIONAL BANK	2010	9
6	BUNNA INTERNATIONAL BANK	2009	25
7	COMMERCIAL BANK OF ETHIOPIA	1963	116
8	COOPERATIVE BANK OF OROMIA(S.C)	2005	7
9	DASHEN BANK	2003	31
10	DEBUB GLOBAL BANK	2012	6
11	ENAT BANK	2013	8
12	LION INTERNATIONAL BANK	2006	13
13	NIB INTERNATIONAL BANK	1999	23
14	OROMIA INTERNATIONAL BANK	2008	10
15	UNITED BANKS.C	1998	12
16	WEGAGEN BANKS.C	1997	13
17	ZEMEN BANK S.C	2009	6
TOTAL			354