# Determinants of Internal Audit Effectiveness in Business Leadership: The Case of Commercial Bank of Ethiopia

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#### **Abstract**

Internal audit is essential for giving assurance, risk management, and the effectiveness of the corporate governance structure in an organisation. Thus, the objective of the study was to assess the determinant factors that affect internal audit effectiveness in the Commercial Bank of Ethiopia. Data was collected by distributing 108 five-point Likert scale selfadministrated questionnaires to the respondents. The regression result shows that management support, organisational independence, and management perception positively affect internal audit effectiveness, whereas the competences of internal audit negatively and significantly affect the internal audit effectiveness. Based on the findings, the study concludes and recommends that the internal audit of CBE emphasises internal audit function effectiveness, giving more attention to the development of internal auditors through continuous training and by arranging professional qualification opportunities for its staff to enhance the level of internal audit effectiveness, and as a result, strengthen the corporate governance structure of CBE.

**Keywords:** Internal Audit Effectiveness, Internal Audit, Corporate Governance, Management Support, Organisational independence, Competency of Internal Auditor, Management Perception

#### JEL Codes:

- M40: GeneralM41: AccountingM42: Auditing
- M48: Government Policy and Regulation
- M49: Other

## Introduction

The internal audit function's role is to ensure effective and efficient management of resources in any organisation, whether it is public or private. Commercial banks are increasingly being held more accountable by their stakeholders for their performance, to achieve profit maximisation and wealth creation, and are expected to operate efficiently and effectively. The need to focus on improving the profit maximisation and wealth creation capacity of banks has increased in many countries during the past few decades, especially with the emergence of SME, private banks, and financial institutions. The interaction between management support, organisational independence, and the attributes of the auditee results in internal audit effectiveness. On the other hand, internal audit effectiveness is argued to be the reason why it was established "(raison d'être)".

The function of internal audit would help the management due to its capability of providing value-added findings and recommendations. The management support by supplying sufficient resources and interest to implement the internal audit recommendations is crucial in getting audit effectiveness. The organisational setting in which internal audit functions, for example, the organisational structure of the sector, its policies, and procedures applying to each auditee, should enable smooth audits that lead to value-added audit findings. Further, the capability, attitudes, and level of cooperation of the auditee impact on the effectiveness of audits (Mihret & Yismaw, 2007). Generally, various authors have defined the word "effectiveness" as follows: Arena and Azzone (2009)

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defined effectiveness as "the ability to get results that are matched with targets"; Dittenhoger (2001) also described it by saying that effectiveness is the attainment of internal auditing aims and objectives using the variable measures delivered for determining such factors; and according to Mihret and Yismaw (2007), the term internal audit effectiveness (IAE) is defined as "the level at which an IA office achieves its intended objective or the magnitude to which it meets the projected result". All the above stated authors described the term internal audit function effectiveness from the view of attaining the internal audit goals and objectives. However, all the researchers deduced effectiveness in different ways. From the point of view of Mihret and Yismaw (2007), the following qualities of an effective internal audit are present: The internal audit provides useful and applicable recommendations for possible improvements, as well as independent assessment of financial statements, operating systems, and processes, participation in the process of achieving organisational goals, and the need for management's support for implementation of recommendations.

The management commitment is a natural 'quid pro quo' (expected) for effective internal audit. The internal audit recommendations were not given enough management consideration and were not given adequate support. As a result, they affected the internal audit effectiveness adversely. An effective internal audit function needs effective leadership, because leadership works towards the achievement of organisational goals. According to Michael Armstrong (2009), leadership is a process of getting people to do their best to achieve a desired result. It involves developing and communicating a vision for the future, motivating people, and gaining their engagement.

The internal auditors, the target of this study, are required to work without management interference, and objectively to "enhance the high quality of public services, to have a good internal control system, to evade corruption, to ensure a good corporate governance system, and to promote responsibility and greater transparency" (Coram et al., 2008; Van Peursem 2005; Belay, 2007). Thus, it is essential to have an effective internal audit (EIA) unit as part of the contemporary governance system in public sector offices. In corporate governance, the internal audit (IA) issue, due to different motives, has received significant attention and consideration in recent times. To mention some of them, internal audit links to the internal control-risk

management system; improves organisational efficiency and effectiveness through providing constructive criticism and recommendations about organisations' status; reduces information asymmetry during decision making; and serves as an important internal assurance in the business and financial reporting process of corporations (Soh & Bennie, 2011; Cohen & Sayag, 2010; Mihret & Yismaw, 2007). Likewise, the new Institute of Internal Audit's (IIA 2001) board of directors (BOD) defined internal audit as: "An independent, objective assurance and consulting activity designed to add and improve an organisation's operations." The internal audit function helps a business achieve its objectives by using a systematic, disciplined methodology to assess and improve the efficiency of risk management, control, and governance processes.

According to bank corporate governance directive No. SBB/71/2019 under sub-article 10.4.24 issued by the National Bank of Ethiopia, the governance body and the board of the financial institute, including banks, are responsible for ensuring an effective internal audit system, staffed with qualified personnel to perform internal audit functions (covering at least financial, operational, legal, technology, and management audit). Hence, the main objective of this study was to determine the factors that affect internal audit effectiveness in the Commercial Bank of Ethiopia.

#### **Review of Related Literature**

Auditing is the branch of financial management, which involves the examination or inspection of various books of accounts by an auditor, followed by physical checking of inventory, to make sure that all departments are following a documented system of recording transactions. It is done to ascertain the accuracy of financial statements provided by the organisation. An audit can be done internally by employees or heads of a particular department, or externally by an outside firm or an independent auditor. The idea is to check and verify the accounts by an independent authority to ensure that all books of accounts are done in a fair manner and there is no misrepresentation or fraud. By defining internal auditing as an independent, unbiased assurance and consulting activity intended to provide value and enhance an organisation's operations, it broadened the meaning of the term (Institute of Internal Auditors IIA, 2002). Thus, the scope of work of the internal audit function has expanded in recent times,

and now includes assisting management and the board of directors in ensuring effective corporate governance. Ineffectiveness and conflict of interest on the board, lack of involvement and independence of the audit committee, lack of independence and objectivity of the external auditor, and ineffectiveness and lack of independence of the internal audit function have all been blamed for corporate governance failures. Internal auditing is in high demand, and the internal audit function's area of work has expanded, giving the internal auditor a lot of responsibility. Internal auditors are needed to help management and the board of directors achieve good corporate governance.

The modern internal auditor is no longer viewed as a 'ticking auditor' whose duty is to verify vouchers and accounting records for accuracy, completeness, and reliability, but as a professional who adds value and improves an organisation's operations. To effectively execute the task of adding value and improving an organisation's operations, and by extension, the firm's corporate governance, internal auditors are expected to be highly competent, independent, and objective business experts and solution providers. Internal auditors carry out various tasks in the performance of their functions. Since internal auditors work on behalf of and report to management, the tasks they perform are dictated by management. Thus, the peculiar nature of an organisation and the demands of management determine the scope and nature of internal audit work. The assignments internal auditors execute are designed to identify, analyse, evaluate, and record sufficient information to assist management in performing its duties and making decisions.

## The Relation between Leadership, **Governance, and Internal Audit Function**

Effective leadership is vital for business success. Finding what makes a successful leader is an issue that has been argued for decades. Robbins, Coulter, and Vohra (2010) indicated that organisations want effective leaders. Leadership effectiveness is all about attaining desirable outcomes, like more output with less input, which implies high productivity and quality, and results in satisfaction. Gary Yukl (2013) defines leadership as "the process of persuading others to understand and agree on what needs to be done and how it should be done, as well as the process of aiding individual and community efforts to achieve agreed-upon objectives". It is an excellent place to start, and some of the key features of the definition should be recognised. To begin with, leadership comprises role specialisation as well as social influence methods (Cartwright, 1965). In the old model, all groups were thought to have role specialisation, which included a leadership role with certain responsibilities and functions that could not be shared too widely without compromising the group's efficacy.

Effective internal audit leaders can help achieve stakeholder alignment and better performance. As companies face more risks than ever, they are looking to their internal audit functions to deliver value by educating stakeholders on emerging risks and leading risk management practices that will improve the business. According to a recent report by PwC of over 1,600 chief audit executives (CAEs), senior management, and board members, internal audit functions that have very effective leadership perform better and add greater value to their business. More than half of the stakeholders who participated in PwC's 2016 state of the internal audit profession study revealed that they now believe internal audit is contributing significant value. Brendan Deegan, PwC Global Internal Audit Leader, says: "We are seeing a close correlation between strong leadership and internal audit's ability to add value and deliver high performance. To continue fostering internal audit functions to become trusted advisors within their organisations, stakeholders should promote strong internal audit leadership, while audit executives should work to elevate the performance and perceptions of their respective functions." According to PwC's report, create and follow through on a vision, source and retain the right talent, empower the internal audit function, demonstrate executive presence and communicate continuously, and align with the business in meaningful ways are the five actionable characteristics which are regularly displayed by the most effective internal audit leaders.

In a professional setting, the word 'business leadership' relates to how people make decisions, work towards goals, and exercise authority. Business leadership can take numerous forms, but it typically entails a CEO or a few higher-level employees mentoring and inspiring the rest of the team. Every leadership group will have its own leadership style. The purpose of business leadership is to discover the optimum leadership model for a certain firm and its employees. The strategic basis of senior leaders and companies, and persuade them that involving internal audit leaders in their strategies will make them more efficient. In addition to the value creation of enterprise risk management (ERM) in forming a more professional risk-based view to overcome future risks, maintain the organisation's governance and control process, and achieve strategic objectives.

In practice, corporate governance offers a legal framework for connecting organisational core members, whereas leadership provides the drive and commitment needed for corporate governance to succeed in achieving the organisation's mission and objectives (Davies, 2006). Corporate governance sets the tone for top-level leadership, while also having an indirect but important impact on the processes of lower-level leadership. Corporate governance institutions can be revived with effective leadership, and corporate leadership can be retained with solid governance. A set of qualities define corporate governance, including ensuring shareholder or stakeholder accountability (Keasey & Wright, 1997). It is commonly considered as one of the most extensively explored topics that can be used to prevent managementinvestor conflicts of interest. Corporate governance's main purpose is to protect capital owners from management's opportunistic behaviour (Abdurrouf, 2011; Jensen & Meckling, 1976; Pandya, 2011). Furthermore, corporate governance empowers directors to make sound decisions in the best interests of shareholders to achieve goals (Shleifer & Vishny, 1997). The fact that organisations with greater corporate governance outperformed their competition is evident (Irina & Nadezhda, 2009).

The mechanism through which firms are directed and controlled is how corporate governance is defined (Cadbury, 2000, p. 8). Control encompasses components of corporate governance, such as compliance, responsibility, and openness (MacMillan et al., 2004). Corporate governance and leadership have one thing in common: they are difficult to articulate in a single definition that covers their entire scope and objectives. However, it is argued that in terms of uncertainty and lack of agreement, leadership has a substantial advantage over governance (Bryman et al., 2011). We define leadership as "an influence relationship between leaders and followers who intend real changes that reflect their mutual purposes" (Rost, 1993, p. 10) and corporate governance as "the process by which people in power direct, monitor, and

lead corporations, and thus either create, modify, or destroy the structures and systems" (Rost, 1993, p. 10). Karagiorgos, Drogalas, Gotzamanis, and Tampakoudis (2010) studied the relationship between internal audit and the fundamental pillars of corporate governance in their contribution to the discussion on the role of internal audit in corporate governance. They also point out that, in terms of the internal auditor's relationship with the board of directors, the internal auditor's contribution to corporate governance is to provide information to the board of directors that they need to do their job of managing the company.

Chevers et al. (2016) investigate the factors that influence the effectiveness of the internal audit function in Jamaican commercial banks. The study found that the quality of audit investigation, organisational independence, professional proficiencies, and management support have a significant impact on internal audit effectiveness. It is imperative that the various stakeholders and policy makers understand the important role internal audit plays in the financial viability and financial health of any financial institution. Al-Jaifi et al. (2017), in their analysis of the relationship between the strength of corporate governance and stock market liquidity in Malaysia, found that companies with strong corporate governance – and strong internal audit – have a positive effect on their stock market liquidity. In recent years, research on internal audit has developed significantly. Numerous papers have discussed the importance of internal auditing (IA) as a central pillar of the corporate governance system. Through its activities, IA supports the audit committee and the CEO/C-Level. As an independent, objective assurance and advisory function, it is designed to add value through the audit of the internal control system, risk management and the governance processes. Interestingly, research on internal audit unfortunately rarely corresponds to these added value concepts defined in the core responsibilities. Therefore, this literature review attempts to highlight the possible perspectives of the added value discussion and to help define future research avenues.

## **Internal Auditing Function**

The IIA defines IA as an "independent, objective assurance and consulting activity designed to add value and improve an organisation's operations. It helps an

organisation accomplish its objectives by bringing a systematic disciplined approach to evaluate and improve the effectiveness of risk management, control, and governance processes" (IIA 2020). Furthermore, the IIA offers an additional explanation for the added value: "The internal audit activity adds value to the organisation (and its stakeholders) when it provides objective and relevant assurance, and contributes to the effectiveness and efficiency of governance, risk management, and control processes" (IIA 2020). Finally, the mission statement of the IIA added a supplementary perspective: "To enhance and protect organisational value by providing riskbased and objective assurance, advice and insight" (IIA 2020). Based on IIA's definition, mission statement, and additional explanation, the added value seems to be clear at first sight. Nevertheless, since the potential areas where the IA can be used are so manifold, the value discussion is based on: a) the concrete activities performed and results delivered by the IA and b) the specific stakeholder needs and roles IA has to fulfil.

Independence is established by the organisational and reporting structure, while objectivity is achieved by an appropriate mind-set. Millichap (2002) defines internal auditing as an independent appraisal function established by the management of an organisation for the review of the internal control systems as a service to the organisation. It objectively examines, evaluates, and reports on the adequacy of internal controls as a contribution to the proper, economical, efficient, and effective use of resources. In the course of their work, and in an attempt to discharge their responsibilities, internal auditors often find themselves in an anomalous position. They are supposed to report to senior management within the organisation, yet at the same time are expected to objectively review the same management's conduct and effectiveness. This then creates a dilemma and a situation that could compromise the independence, objectivity, and effectiveness of the internal audit function. A satisfactory solution to this problem is for the internal audit function to report primarily to the board and its audit committee, rather than to the senior management. Obtained from the Ministry of Finance and Economic Development (MOFED, 2004) internal audit guide book, internal audit faces many challenges from the organisation in which they work. Some of the challenges they faced are: lack of management respect, lack of independence, assigning of internal auditors to many tasks and being ignored (conflict

of interest), and lack of professional development. However, internal auditors have many roles and impact the organisation and the public concern.

The internal audit activity evaluates risk experiences linked to the organisation's information systems governance, and operations in relation to efficiency and effectiveness of operations, reliability and truthfulness of financial operational information, compliance laws, regulations and contracts, and safeguard of the company assets and property. Based on the results of risk assessment, the internal auditors evaluate the adequacy and effectiveness of risk identification and management systems in place. They also assess other aspects in the organisation, such as the ethical standards, values, performance management, and communication of risk and control information, to facilitate good corporate governance (IIA Research Foundation, 2004).

In the area of opportunities or deficiencies observed and/ or identifying areas of improvement, internal auditors are expected to give advice and recommendations. While management is responsible for internal controls, the internal audit activity provides assurance to management and audit committee that internal controls are effective and working as intended. The CIA delineates the scope, authority, and independence for the internal audit function in a written charter that is approved by the audit committee. An effective internal audit function is a valuable resource for management and the board or its equivalent and the audit committee, due to its understanding of the organisation and its culture, operations, and risk profile. The objectivity, skills, and knowledge of an effective internal audit function can significantly add value to an organisation's internal control, risk management, and governance process. Similarly, an effective internal audit function can provide assurance to the other stakeholders, such as regulators, employees, providers of finance, and shareholders (IIA Research Foundation, 2004).

The internal audit profession is guided by the International Standards for Professional Practice of Internal Auditing (IIA, 2008). According to these standards, "the purpose, authority and responsibility of the internal audit activity must be formally defined in an internal audit charter, consistent with the definition of the internal auditing, the code of ethics and the auditing standards". Professor Walter B. Meigs of America states that internal auditing consists of a continual, critical

assessment of financial and operating activities by a staff of auditors serving as full-time salaried workers. Internal audit indicates an audit of the accounts by the personnel of the business. The work is done by a separate group of people who may or may not be certified auditors. The role of an internal auditor is nearly identical to that of an auditor. Furthermore, an internal audit must ensure that there is no waste and that the organisation is run properly and successfully. Again, if an internal auditor discovers that the concern has suffered a loss as a result of management inefficiency, it is their responsibility to report the fact.

To enable management to achieve the company's goal in the planned manner, the internal auditor must report to management whether the policy and plans of activities prescribed by them have been implemented, whether the internal controls and checks established were adequate, whether the actual results obtained differed from the estimates, and so on. The role of the internal auditor is widely recognised as becoming increasingly important in developing strong corporate governance arrangements (Allegrini et al., 2006; Carcello et al., 2005; Nagy & Cenker, 2002). Internal auditors are increasingly providing management with a far broader variety of information on the organisation's financial, operational, and compliance operations, to improve management performance and activities' effectiveness, efficiency, and economy in today's business climate (Rezaee, 1996). As a result of corporate governance, internal auditing is expected to improve, and the internal auditor is expected to benefit the external auditor as well (Holm & Laursen, 2007).

## **Conceptual Review**

A conceptual framework is a written concept that describes the core things to study. The key factors are concepts or variables, and the assumed correlation between them in the form of graphics or narratives (Njihia & Makori, 2015). Deribe and Regassa (2014) used internal audit quality as the dependent variable and competence, objectivity, performance, and information technology of internal auditors as the independent variables in their study of 15 Ethiopian commercial banks (Hailemariam, 2014; Mihret & Yismaw, 2007). They studied internal auditing in the public sector using dependent and independent variables. The dependent variables include

management support, management perception, auditor independence, availability of adequate staff, and the competency of the auditor. The dependent variable was internal audit effectiveness. The study results of Mihret and Yismaw (2007) show that internal audit effectiveness is significantly affected by management support, and furthermore, due to the auditees' wrong perception, auditors understand that the university under study does not adequately use audit reports, and the management response to the internal audit investigation results and recommendations is not satisfactory. The study by Bekele (2013) used two aspects of COSO, namely the control environment and the control activities, to analyse an effective and efficient internal control system for Oromia Cooperative Bank's cash operations.

The study by Tackie, Marlo and Achina (2016) revealed that there exists high quality of audit work due to compliance with the international standards on auditing and local audit legislations. Professional proficiency, organisational independence, and career advancement were found to have a statistically significant positive relationship with internal audit effectiveness, while top management support was found to have no effect on internal audit effectiveness. Shamki and Alhajri (2017) found that there is an insignificant relation between internal audit effectiveness and senior management's response. Based on the findings, awareness has to be maximised on employees to cooperate better with internal audit staff to improve the applications of internal audit standards. Managers are interested in organisations' activities and performance depending on the internal audit findings and observations. The board of directors has to take in its considerations the reasons of these insignificant results if the reasons are related to the small size of the managers' sample. The study's contribution is to provide evidence regarding the influence of the three mentioned factors on the internal audit effectiveness in the public sector.

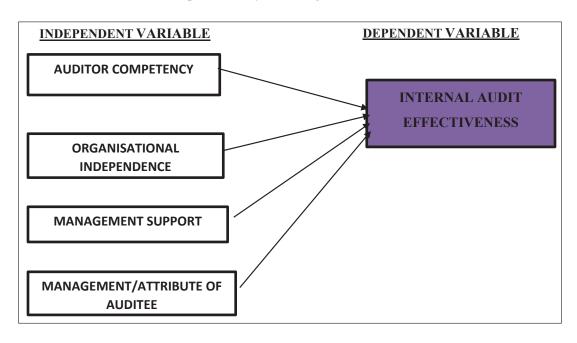
Lenz et al. (2017) examined the relationship between chief audit executives (CAEs) and senior management (SM) and its relationship with internal audit (IA) effectiveness. The study revealed differences between more and less effective IA functions and offers explanations by studying organisational, personal, and interpersonal factors within the German corporate governance context. The findings showed that the pattern of interaction between CAEs and SM is a key determinant of IA effectiveness.

Musah, Gapketor and Anokye (2018) examined factors that determine internal audit effectiveness among SOEs in Ghana. The study was conducted in response to various scandals among Ghanaian SOEs, and the lack of empirical studies on determinants of internal audit effectiveness that can deal with these problems. The study specifically examined the respondent's perception about the impact of factors, such as competence of internal audit unit, size of internal audit unit, relation between internal and external auditors, management support for internal audit function, and independence of internal audit unit on internal audit effectiveness among SOEs in Ghana. They surveyed internal auditors, accountants, and management of these sampled SOEs in Ghana. The results of the study showed that management support for internal audit function is the most significant determinant of internal audit effectiveness. The study also revealed that size of internal audit unit, competence of internal audit staff, independence of internal audit unit, as well as good relationship between internal and external auditors were significant determinants of internal audit effectiveness.

Rudhani, Vokshi and Hashani (2017) undertook a study that investigated the relationship between effectiveness and contributing factors. The data for the study were collected through an online questionnaire and direct hand-outs of such. The results of the empirical analysis

proved that effectiveness has a positive relationship with internal audit quality, the competence of the internal audit team, the independence of internal audit, as well as with the support of internal audit from the management. Dellai and Omri (2016) examined factors influencing internal audit effectiveness in the Tunisian context. Data was collected from responses to a questionnaire addressed to the chief audit executives of 148 Tunisian organisations. Multiple regression analysis examines the association between the effectiveness of the internal audit function and six principal factors. Results revealed that the effectiveness of internal auditing is influenced by: the independence of internal audit, the objectivity of internal auditors, the management support for internal audit, the use of internal audit function as a management training ground, and the sector of organisation. The study provided useful information to practitioners and academics who are interested in identifying the determinants of internal auditing effectiveness in developing countries.

Regarding this research, the effectiveness of the internal audit function (IAE) is the dependent variable, and the independent variables will be management support, organisational independence, the competency of the auditor, and management perception, as demonstrated with the help of the conceptual framework model (see Fig. 1).



Source: Adopted and Modified from Mihret and Yismaw (2007) and Hailemariam (2014).

## Fig. 1: Conceptual Frame Work

Internal auditors are crucial in monitoring a company's risk profile and recommending areas where risk management could be improved (Goodwin & Kent, 2006). The referenced studies used several variables that affect internal audit effectiveness for the public sector and Ethiopian commercial banks. The researchers examined the determinant factors affecting internal audit effectiveness, specifically the Commercial Bank of Ethiopia, for the purpose of this study, by providing empirical evidence that will add to the base of knowledge in understanding the determinant factors that affect internal audit effectiveness.

## **Literature-based Hypotheses**

Based on the literature, the following research hypotheses were formulated:

- H<sub>1</sub>: Management support positively affects internal audit effectiveness in the Commercial Bank of Ethiopia.
- H<sub>2</sub>: Organisational independence positively affects internal audit effectiveness in the Commercial Bank of Ethiopia.
- H<sub>3</sub>: Competency of internal auditors positively affects internal audit effectiveness in the Commercial Bank of Ethiopia.
- H<sub>4</sub>: Management perception positively affects internal audit effectiveness in the Commercial Bank of Ethiopia.

#### **Methods and Materials**

To meet the research objective, the study used quantitative research methods. According to Kothori (2004), quantitative research is based on the measurement of quantity or amount. It is applicable to phenomena that can be expressed in terms of quantity. The purpose of quantitative research is to gather, analyse, and measure statistical data. In quantitative research, a number of objects are selected and studied, to increase the ability to draw general conclusions. Based on this, the research used questionnaires to determine the relationship between factors affecting internal audit and internal audit effectiveness in Commercial Bank of Ethiopia. The

study used a non-probability sampling method which is intended to be used to select sample respondents from overall auditors. Purposive sampling is used to asses those who have in-depth knowledge of a particular issue (Kothari, 2004). Therefore, the research will select all managerial positions and experienced auditors of the head office internal audit staff, excluding new entrant auditors.

The researcher used a purposive sampling method to select samples from all the internal audit staff of Commercial Bank of Ethiopia in the head office, with different posts (Director Corporate Audit, Director Branch Audit, Director Follow-up Audit, Director Credit and IFB Financing Audit, Director IT Audit, Manager Fraud Investigation, all managers under all directors, team leaders, and ordinary auditors), focusing on different types of audit work. The population of this study is the internal audit employees of CBE, working at the Addis Ababa head office. At the time of the study, CBE had a total of 163 internal auditors at the Addis Ababa head office (see Table 1).

**Table 1: Total Number of Population** 

Sr. No.	Name of Department	No. of Auditors
1.	Branch Audit	88
2.	Corporate Audit	35
3.	IFB Financing & Credit Audit	10
4.	Follow-up Audit	5
5.	IT Audit	11
6.	Special/Fraud Investigation Audit	14
	Total	163

The researchers used Solvin's formula to determine the sample size, because it is easy to use and it is also used to calculate appropriate sample size from population (Solvin, 1960).

The formula is 
$$\frac{N}{1+N(e)2}$$

Where, n = sample size, N = population, and e = sampling error (5%). So, the sample size to distribute the questionnaires is 110; purposive sampling is used to select internal auditors.

In line with the aim of investigating the factors that determine internal audit effectiveness in the Commercial Bank of Ethiopia, data will be collected from primary data sources. Based on the research, objective questionnaires

will be distributed to identify factors which determine the effectiveness of internal audit in the Commercial Bank of Ethiopia. After collecting the data from primary sources through the use of questionnaires obtained from respondents, it was analysed using the Statistical Package for Social Science (SPSS) version 20. Reliability and normality tests were conducted to select and assess the final items of the construct that are finally used for statistical testing (see Table 2 and Table 3).

**Table 2: Reliability Statistics** 

Case Processing Summary		
	N	%
Cases	Valid	108
	Excludeda	0

a. List-wise deletion based on all variables in the procedure.

## **Reliability Statistics**

Cronbach 's Alpha	No. of Items
.890	26

**Table 3: Result of Test of Normality** 

		MGS	OID	COIA	MGP	IAE
N	Valid	108	108	108	108	108
N	Missing	0	0	0	0	0
Skewness	ewness		342	.159	319	407
Std. Error Skewness	Std. Error of Skewness		.233	.233	.233	.233
Kurtosis	Kurtosis		720	784	547	810
Std. Error Kurtosis	Std. Error of Kurtosis		.461	.461	.461	.461

Tests for multicollinearity were conducted. It was done using the variance inflation factor (VIF) (see Table 4). As a rule of thumb, if the VIF of a variable exceeds ten, there is a serious multicollinearity problem.

**Table 4: Multicollinearity Test** 

M	lodel	Collinearity Statistics			
Tol	erance	VIF			
	MGS	.478	2.091		
1	OID	.450	2.222		
1	COIA	.405	2.470		
	MGP	.693	1.442		

a. Dependent Variable: IAE

The VIF (variance inflation factor) shows whether the predictor (independent variable) of the study has a strong linear relationship or not. Myers (1990) suggests that a value of ten is a good value at which to worry. Associated with the VIF (variance inflation factor) is the tolerance statistic. The tolerance statistic factor is the reciprocal of the VIF, which is 1/VIF. Values below 0.1 of the tolerance statistic factor indicate serious problems, even though Menard (1995) suggests that values below 0.2 are worthy of concern. To analyse the quantitative factors that determine the effectiveness of internal audits, frequency, mean, percentage, tables, and correlation will be used to facilitate interpretation of research findings. To find out the factors which determine internal audit effectiveness, the multiple regression models, used in the analysis of the relationship between dependent and multiple independent variables, was developed as follows:

IAE = 
$$\alpha_0 + \beta_1 MGS + \beta_2 OID + \beta_3 COIA + \beta_4 MGP + \epsilon_i$$

IAE = Internal Audit Effectiveness

 $\alpha_0$  = Constant

MGS = Management Support

OID = Organisational Independence

COIA = Competency of Internal Audit

MGP = Management Perception/Auditee Attribute

 $\beta_1 - \beta_4$  = Coefficients in which every marginal change in the independent variable affects internal audit effectiveness

 $\varepsilon_{i}$  = Error term

#### **Result and Discussion**

Internal audit effectiveness and determinant factors that affect internal audit effectiveness were measured using a five-point Likert scale, which extends from the level of strongly disagree (value of 1) to the level of strongly agree (value 5). According to the data gathered from the distributed questionnaires, the demographic data implied that most of the respondents were in the age group of above 40 years, with an experience of above six years; the respondents also had at least a BA degree. However, the data shows that almost all of the internal auditors are not involved in any professional training. Out of the total of 108 respondents, only eight have a professional certification training. This implies that the bank has not

given due attention to accredited training like CISCO (Corporation Information System Control), Certification of Fraud Investigation (CFE), and Chartered Internal Auditor (CIA) training, which helps internal auditors become skillful and competent in their audit work (see Table 5).

**Table 5:** Demographic Characteristics of Respondents

Demographic	Measure	Frequency	Per
Variable		(n) = 108	cent
	Accounting	43	40%
	Banking & Finance	10	10%
	Computer Science	2	2%
	Economics	2	2%
Field of Study	Information System	8	7%
	Law	1	1%
	Management	39	36%
	Procurement	2	2%
	Accounting 43  Banking & Finance 10  Computer Science 2  Economics 2  Information System 8  Law 1  Management 39  Procurement 2  Total 108  Auditor 67  Team leader 17  Manager 20  Director 4  Total 108  6-10 years 8  11-15 years 27  16-20 years 30  Total 108  CPA (Certified Public Accountant)  CIA (Certified Internal Auditor)  None Certified 100  Other 5	108	100
	Auditor	67	62%
Position	Team leader	17	16%
	Manager	20	19%
	Director	4	3%
	Total	108	100
	6-10 years	8	7%
	11-15 years	27	25%
Work Experience	16-20 years	43	40%
	>20 years	30	28%
	Total	108	100
	CPA (Certified Public	-	-
	Accountant)		
Professional		3	3%
Certification	None Certified	100	92%
	Other	5	5%
	Total	108	100

To determine the factors affecting internal audit effectiveness, the respondents were asked seven questions, to know the level of management support for internal audit function effectiveness that emanated from previous studies. The instrument, a five-point Likert scale, extending from strongly disagree to strongly agree, was used. It can be seen that the mean score of the dependent variable was above the average. The mean

score of respondents about management support is 4.10 (see Table 6).

**Table 6: Descriptive Statistic Question for MGS** 

MGS Q1 to	N	Mean	DA	D	N	A	SA
Q7							
Top management provides direct support and assistance to the internal audit team.	108	4.21	-	4%	12%	44%	41%
Members of the internal audit team are helped by their team leaders.	108	4.17	-	1%	7%	68%	25%
During their audit engage- ment, the members of the internal audit team get the expected help from the auditee.	108	4.18	-	6%	7%	51%	37%
Management provides adequate and appropriate resources to the internal audit team to conduct audit work.	108	4.05	1%	7%	8%	56%	29%
The management provides adequate support and encouragement for the internal audit staff's training and development.	108	4.06	1%	8%	8%	48%	34%
Internal audit recommendations are implemented by management in a timely manner.	108	3.89	-	16%	8%	47%	29%
Management's response to internal audit reports is reasonable.	108	4.17	-	4%	16%	41%	40%
Valid N (list-wise)	108						

This result indicates that the respondent's acceptance of manager support strongly affects internal audit effectiveness. Around 84.3% of the respondents show their agreement (agreed), and this implies that there is support from CBE management for the internal audit team. Next, the response to the question of how OID (organisational independence) of the internal auditor affects internal audit effectiveness was obtained. In this category, there are various questions asked. The first question in this category is, 'The internal audit is completely self-contained and conducts its task without intervention'. Around 42% or 45 out of 108 respondents strongly agreed, 17% or 18 out of 108 agreed, 32% or 35 of the respondents were neutral, and 10 or 9% disagreed. For the next question, 'Within the organisation, the IA reports to a higher level', 90% of the respondents (46% strongly agreed, 37% agreed), and the remaining 7% and 9% of the respondents were neutral and disagreed, respectively.

For the third question, 'The internal auditors freely decide on the scope, length, and extent of the auditing method based on auditing standards and the bank's policy', 38% or 41 out of 108 respondents strongly agreed, 25% or 27 out of 108 agreed, 11% or 12 out of 108 were neutral, 24% or 26 out of 108 disagreed, and 2% or 2 of the respondents strongly disagreed. 'All internal audit members feel free to include any audit findings/ outcomes of the audit work and can report directly to the accountable and responsible body' is the fourth statement in this category. Around 40% of the respondents strongly agree, 27% agree, 25% are neutral, and 8% or 9 out of 108 respondents disagree. The last or fifth question in this category is, 'Internal auditors have unrestricted access to all required documents, information, and data pertaining to the process under auditing, and are thus always acknowledged'. The result shows that 39% of the respondents strongly agree, 33% agree, 16% are neutral, and 12% or 13 out of 108 respondents disagree. The mean score of internal audit effectiveness as a result of the OID (organisational independence) of internal auditors is 3.96 (see Table 7); this implies that there is no interference by the management in the functioning of internal auditors of CBE.

**Table 7: Descriptive Statistic Question for Organisational Independence** 

	N	Mean	SD	D	N	A	SA%
The internal audit is completely self-contained and conducts its task without intervention.	108	3.91	-	9%	32%	17%	42%
Within the organisation, the IA reports to a higher level.	108	4.20	-	9%	7%	37%	46%
The internal auditors freely decide on the scope, length, and extent of the auditing method based on auditing standards and the bank's policy.	108	3.73	2%	24%	11%	25%	38%
All internal audit members feel free to include any audit findings/ outcomes of the audit work and can report directly to the one accountable and responsible body.	108	3.98	-	8%	25%	27%	40%
Internal auditors have unrestricted access to all required documents, information, and data pertaining to the process under auditing, and are thus always acknowledged.	108	3.99	-	12%	16%	33%	39%
Valid N (list- wise)	108						

Respondents were asked six questions related to the competency of internal auditors. Questions 13 to 18 of the questionnaire address the competency of internal auditors. The mean score of internal audit effectiveness as a result of the competency of internal auditors is 3.61, which indicates that even if the mean score is greater than the average of the measurement scale of 3, most of the respondents are inclined to agree and are neutral about the measurement scale. 'Does internal audit participate in the development of the company's process?' – the response to this question indicates that internal auditors' participation in the development of the company process is high. Around 68% agreed, 14% were neutral, and 4% disagreed about the degree to which internal auditors are capable of

planning risk-based auditing. Around 63% agreed (46% agree and 17% strongly), 12% were neutral, and 25% disagreed (23% disagree and 1.9% strongly disagree) with the statement about 'whether internal auditors are given relief or leave from stress if there is work overload that causes stress'. As a result, internal auditors can conduct the audit effectively, 59% agreed (44% agree and 15% strongly agree), 14% were neutral, and 30% disagreed with the statement. The communication between internal auditors and the auditee is effective. The number of internal auditors is enough to perform their duties, and all internal auditors are competent and have good investigation and analysis skills that help them conduct the audit engagement effectively (see Table 8).

**Table 8: Descriptive Statistic Question for Competency of Internal Audit** 

	N	Mean	SD%	D	N	A	SA
IA participates in the development of the company process.	108	3.85	.9%	8%	24%	38%	29%
Internal auditors are experts at risk-based planning.	108	3.94	-	4%	14%	68%	15%
Internal auditors are free of stress brought on by work overload, allowing them to conduct an effective internal audit.	108	3.65	-	19.5%	19.5%	38%	23%
Internal auditors are required to attend training and educational seminars on a regular basis to stay current with their profession.	108	3.53	1.9%	23%	12%	46%	17%
The communication between internal auditors and the auditee is effective.	108	3.46	.9%	30%	14%	44%	15%
The number of internal auditors is sufficient, and all internal auditors have excellent testing and analysis skills, which enable them to execute audits efficiently.	108	3.23	-	40%	14%	30%	17%
Valid N (list-wise)	108						

Management perception of the internal audit function has a determinant impact on internal audit effectiveness. The aggregate mean score result of the respondents in this category was 4.02. This result has shown most respondents' level of agreement regarding management perception

about internal audit office function highly affects internal audit effectiveness; the respondents are inclined positively towards management perception related to the effectiveness of internal audit. In this section, there are four questions presented to the respondents (see Table 9).

Table 9: Descriptive Statistic Question for MGP of Internal Audit

	N	Mean	SD	D	N	A	SA
There is a high level of cooperation by the auditee with the IA function.	108	4.10	-	8.3%	8.3%	48%	35.2%
Ad hoc assignment is given to internal audit by management.	108	3.91	2%	14%	7.4%	45%	31%
Auditee is capable of meeting the organisation's intended objective.	108	3.81	6%	13%	8%	41%	32.4%
The management/auditee has a positive attitude for the works of the internal audit.	108	4.26	2.8%	5.6%	1%	44%	46%
Valid N (list-wise).	108						

For the statement, 'There is a high level of cooperation by the auditee with the IA function', 38 out of 108 or 35% of the respondents strongly agreed, 52 out of 108 or 48% agreed, 9 or 8.3% were neutral, and 9 or 8% disagreed. For the second question, 'Ad hoc assignment is given to internal audit by management' 31% or 33 of the respondents strongly agreed, 45% or 49 out of 108 respondents agreed, 7.4% were neutral, 14% disagreed, and 2 out of 108 strongly disagreed. For the third question, 'Auditee is capable of meeting the organisation's intended objective', 33% strongly agreed, 41% agreed, 8% were neutral, 13% disagreed, and 6% strongly disagreed. The last question in this category is, 'Does the management/ auditee have a positive attitude towards the work of the internal audit?'.

The designed questionnaire finally included questions about the effect of the dependent variable, which was internal audit effectiveness, on the independent variables of management support, organisational independence of the auditor, competence of the internal auditor, and management perception. Around 89% agreed that management support is essential to internal audit effectiveness; 82% agreed that organisational independence is best for internal audit effectiveness; 79% agreed that the availability of competent and skilled internal auditors positively affects internal audit effectiveness; and finally, 90% agreed that management perception of or the auditee attribute towards the internal audit function affects internal audit effectiveness. The mean score value of the IAE category was 4.28, which falls between the degree of agree and strongly agree. This result indirectly shows that the mean score value of the overall question for the internal audit effectiveness (IAE) depends on the dependent variable described above, and it was agreed by the respondent. All the related questions presented in this category resulted in a mean score value of 4.32, 4.26, 4.15, and 4.40 for MGS (Management Support), OID (Organisational Independence), COIA (Competence of Internal Auditor), and MGP (Management Perception), respectively, representing that the respondents agreed on all questions (see Table 10).

**Table 10: Descriptive Statistics Question of IAE** 

Question Internal Audit Effectiveness	N	Mean	SD	D	N	A	SA
Management support ensures the effectiveness of internal audit, and as a result, helps internal audit add value to the business.	108	4.32	-	-	11%	45%	44%
Organisational independence allows IA function to be effective.	108	4.26	-	3%	15%	36%	46%
Competent and proficient internal audit staff is vital to the effectiveness of the audit processes.	108	4.15	-	4%	18%	39%	40%
Management perception of IA has an impact on the effectiveness of its function.	108	4.40	-	-	10%	40%	50%
Valid N (list-wise).	108						

The Pearson's correlation between various determinant factors of internal audit effectiveness was found using SPSS 20. The result of the correlation shows that all internal audit effectiveness determinant factors described

in this study have a positive relationship with internal audit effectiveness in the Commercial Bank of Ethiopia's internal audit sector (see Table 11).

Table 11: Pearson Correlation

		IAE	MGS	OID	COIA	MGP
	IAE	1.000	.657	.527	.469	.818
	MGS	.657 1.000 .603 .650	.535			
Pearson Correla-	OID	.527	.603	1.000	.719	.411
tion	COIA	.469	.650	.719	1.000	.451
	MGP	.818	.535	.411	.451	1.000

		IAE	MGS	OID	COIA	MGP
Sig. (1-tailed)	IAE		.000	.000	.000	.000
	MGS	.000		.000	.000	.000
	OID	.000	.000		.000	.000
	COIA	.000	.000	.000		.000
	MGP	.000	.000	.000	.000	
	IAE	108	108	108	108	108
N	MGS	108	108	108	108	108
	OID	108	108	108	108	108
	COIA	108	108	108	108	108
	MGP	108	108	108	108	108

The Pearson's correlation coefficient value was applied to test the effect of variables of management support, organisational independence, competence of the internal auditor, and management perception on the effectiveness of internal audit. The results show that internal audit effectiveness determinant factors, such as management support (MGS), with r = .667, P < 0.01; organisational independence (OID), with r = +.527, P < 0.01; competency of the internal auditor, with r = .527, P < 0.01; and management perception, with r = .81, P < 0.01 have a positive relationship with internal audit effectiveness.

The analysis of variance test was conducted in this study

to test the relationship between the dependent variable, which is internal audit effectiveness (IAE), and factors that determine the effectiveness of internal audit (independent variables), such as management support, organisational independence, competence of internal auditors, and management perception. The variance analysis test (ANOVA) output of SPSS 20 demonstrates the result of the model. As indicated in Table 12, the value that shows significance (P = .000) and variance analysis factor (F = 78.832) implies that there is a strong relationship between the predictors (Constant), such as MGS, OID, COIA, and MGS, and the dependent variable (IAE).

**Table 12: Test of Variance Analysis (ANOVA)** 

$ANOVA^a$								
Model		Sum of Squares	df	Mean Square	F	Sig.		
	Regression	22.340	4	5.585	78.832	.000 <sup>b</sup>		
1	Residual	7.297	103	.071				
	Total	29.637	107					
a. Dependent Variable: IAE								
b. Predictors: (Constant), MGP, OID, MGS, COIA								

The model's fit is used to determine the impact of the independent variables on internal auditing effectiveness. The results confirm that the model is well suited to determining the effect of independent variables on the effectiveness of internal audit.

The regression analysis was executed on SPSS 20 to determine how determinant factors of internal audit affect internal audit effectiveness. Coefficient determination

below indicates that the adjusted R-square (R<sup>2</sup>) value specifies internal audit effectiveness as a determinant factor of management support, organisational independence, competence of internal audit, and management perception. The adjusted R-square value of the model is .744. This means that 74.4% of the effect on internal audit effectiveness is accounted for by independent variables of this research, and the remaining 25.6% is accounted

for by other factors which are beyond the scope of this research (see Table 13). The regression results predicting internal audit effectiveness through determinant factors of MGS (management support), OID (organisational independence), COIA (competency of internal audit), and MGP (management perception) are shown in Table 14.

**Table 13: Model Summary** 

Model	R	R Square	Adjusted R	Standard Error	Statistics Change				
			Square	of the Estimate	R Square Change	F Change	dfI	df2	Sig. F Change
1	.868a	.754	.744	.26617	.754	78.832	4	103	.000
a. Predictors: (Constant), MGP, OID, MGS, COIA									
b. Dependent Variable: IAE									

Management support (MGS) has a positive and significant effect on internal audit effectiveness, at  $\beta = .362$ , P = .000, which is P < 0.05. Organisational independence and management perception also have a positive and significant effect on internal audit effectiveness at  $\beta = .125$ , P = .009 and  $\beta = .620$ , P = .000, respectively. However, the competence of internal auditors (COIA) surprisingly showed a negative and significant effect on internal audit effectiveness, at  $\beta = -.139$ , P = .049).

The t-test measures whether the predictor is making a significant contribution to the model (Field, 2009). Therefore, if the t-test associated with alpha and beta values is significant (if the value in the column labeled Sig. is less than .05), then the predictor is making a significant contribution to the model. The smaller the value of Sig., the larger the value of t, the greater the contribution of that predictor (Field, 2009). The t-test results (see Table 14) for the individual regression coefficients for three of the four independent variables, management support (MGS), organisational independence of internal audit (OID), and management perception (MGP) were 4.114, 2.663, and 11.089 positive, respectively.

**Table 14: Regression Analysis Result** 

Model B		Unstandardised Coefficients		Standardised Coefficients	t	Sig.
		Std. Error	Beta			
	(Constant)	.309	.262		1.179	.241
	MGS	.362	.088	.291	4.114	.000
1	OID	.125	.047	.194	2.663	.009
	COIA	139	.070	153	-1.997	.049
	MGP	.620	.056	.651	11.089	.000

This shows that these variables made significant contributions to the model at Sig. less than 0.05. The t-test of competency of internal audit (COIA) was -1.997. However, the t-test results for risk, which means it made a negative contribution to the model. To understand the association between the dependent and independent variables, correlation test was applied. As per Saunders et al. (2009), a correlation coefficient enables quantifying the strength of the linear relationship between variables. This coefficient is usually represented by 'r'.

The correlation between management support and internal audit effectiveness (r-value is .657) implies that it is highly correlated, and p < 0.05 means management support affects internal audit effectiveness in CBE.

Correlation between organisational independence and internal audit effectiveness (r-value is .527) implies that it is highly correlated, and p < 0.05 means organisational independence affects internal audit effectiveness in CBE.

The correlation between competency of internal auditor and internal audit effectiveness (r-value is .469) implies that it is moderately correlated, and p < 0.05 means competency of internal auditor affects internal audit effectiveness in CBE.

The correlation between management perception and internal audit effectiveness (r-value is .818) implies that it is highly correlated, and p < 0.05 means management perception about internal audit function affects internal audit effectiveness in CBE.

According to the model summary, adjusted R-square computed to be 0.744 = 74.4%. This implies that internal audit effectiveness in CBE is 74.4% affected by the

studied independent variables (MGS, OID, COIA, and MGP). The remaining 25.6% is accounted for other factors which are beyond this research.

The ANOVA table shows the significance or (P = .000), and the variance analysis factor (F = 78.832) implies that there is a strong relationship between the predictors (Constant) such as MGS, OID, COIA, and MGS, and the dependent variable (IAE). The model's fit is used to determine the impact of the independent variables on internal auditing effectiveness.

In the coefficients table, the study indicates that MGS, OID, COIA, and MGP had a significant relation to internal audit effectiveness in CBE at 95% confidence level, since their p-values are 0.000, which is less than the significance level 0.05.

The t-test results for the individual regression coefficients (see Table 14) for three of the four independent variables, such as management support (MGS), organisational independence of internal audit (OID), and management perception (MGP) were 4.114, 2.663, and 11.089 positive, respectively. This shows that these variables made significant contributions to the model at Sig. less than 0.05. The t-test of competency of internal audit (COIA) was -1.997, p < 0.05, which means it made a negative contribution to the model.

#### Conclusion

Based on the objectives of the study, attempts have been made to give answers to previously stated research questions.

- This study concludes that management support (hypothesis 1), organisational independence (hypothesis 2), and management perception (hypothesis 4) have determined internal audit effectiveness in the Commercial Bank of Ethiopia.
- However, the competency of the internal auditor (hypothesis 3) negatively affects the internal audit effectiveness of the Commercial Bank of Ethiopia. It means that lack of competency also significantly affects internal audit effectiveness negatively in CBE.

The value of Beta in the case of the Commercial Bank of Ethiopia indicates that management support is the most important determinant factor affecting the effectiveness of internal audit, followed by management perception and organisational independence, whereas, the competence of internal audit negatively determines internal audit effectiveness in CBE.

#### **Recommendations for Future Studies**

- This paper is based only on the responses of the Commercial Bank of Ethiopia head office internal audit staff and has few independent variables. Therefore, future studies will include the practice of the district internal auditors in other branches, other banks, and financial institutions.
- In addition, the determinant factors of internal audit effectiveness (i.e. MGS, OID, COIA, and MGP) accounted for 74.4 per cent of the study's findings. Other variables, which are not included in this analysis, account for the remaining 25.6 per cent. As a result, those factors should be considered in future research.

## **Data Availability Statement**

- All the necessary data is included in the manuscript.
- The authors confirm that the data supporting the findings of this study are available within the article [and/or] its supplementary materials.

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