ADDIS ABABA UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING AND AUDITING

(GRADUATE PROGRAM)

THE EFFECT OF INTERNAL CONTROL SYSTEM ON ORGANIZATIONAL PERFORMANCE: THE CASE OF ZEMEN BANK S.C.

By:

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The Effect of Internal Control System on Organizational Performance: the case of Zemen Bank S.C.

A Thesis Paper Submitted to the School of Postgraduate Studies of Addis Ababa University in partial fulfillment of the Requirements for the Degree of Master of Accounting and Auditing

By: Fatuma Usman Mohammed

Advisor: Dr. Abebaw

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Addis Ababa, Ethiopia

Declaration on Plagiarism

I, Fatuma Usman, have independently carried out a research work on "The Effect of Internal Control System on Organizational Performance: the case of Zemen Bank S.C." in partial fulfillment of the requirement of the degree of master of Science (MSc) program in Accounting and Auditing with the guidance and support of the research adviser Dr. Abebaw

This study is my own work that has not been submitted for any degree program in any other university and that all sources of materials used for the thesis have been duly acknowledged.

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ADDIS ABABA UNIVERSITY

POST GRADUATE STUDIES

COLLEGE OF BUSINESS AND ECONOMICS

DEPARTMENT OF ACCOUNTING AND AUDITING

The Effect of Internal Control System on Organizational Performance: the case of Zemen Bank S.C."

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Abstract

Internal Control Systems play an important role in every organization as they assist in realization of their performance goals. The main objective of the study was to examine the effect of internal control systems on organizational performance of Zemen Bank S.C. in Addis Ababa, Ethiopia. The researcher used COSO 2012 framework as a theoretical lens for this study. The study adopted a quantitative research approach. The quantitative component used survey of employees working in head office departments of Zemen Bank S.C. A stratified random sampling technique was employed in internal audit, risk and compliance department, finance, and branch management department was covered by the survey. From 203 total populations, 135 samples were selected. Survey data collected by using a well-structured questionnaire. Secondary data were gathered from relevant published reports. The data analyzed through SPSS version 24.00. software. Multiple linear regression models used to test whether internal control activities, risk management, monitoring, information and communication have any relation with organizational performance. The finding presented through tables, graphs, and charts. The key findings revealed that Three of the five ICS components have statistically significant positive effects on organizational performance: Control Activities, Control Environment and Monitoring Activities. Risk Assessment and Information & Communication do not have statistically significant direct effects.

Key Words: internal control system; performance; risk assessment; monitoring; control activity; information and communication; control environment: COSO framework

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List of Acronyms

S.C. – Share Company

ICS – Internal control system

COSO – Committee of sponsoring organizations of the treadway commission

NBE – National Bank of Ethiopia

GDP – gross domestic product

IAASB – international auditing and assurance standards board

ISA – international standards of auditing

ROA – return on asset

ROE – return on equity

EPS – earning per share

CSR – Corporate social responsibility

BSC – Balanced Scorecard

SMEs – small and medium enterprises

EFA – Exploratory Factor Analysis

SPSS – Statistical Package for Social Sciences

KMO – Kaiser–Meyer–Olkin

VIF – Variance Inflation Factor

1. INTRODUCTION

1.1. Background of the Study

Today's global economy is characterized by rapid technological advancement, globalization, and intense competition among businesses (Ma Ying, and He Shan, 2021). Financial institutions play a vital role in maintaining economic stability by providing capital, facilitating trade, and supporting business growth. However, the modern economic environment is also more complex and uncertain than ever before.

Factors such as digital transformation, global market integration, inflationary pressures, political instability, and changing consumer behaviors continuously affect how organizations operate. As financial transactions become more digital and cross-border, the risks of fraud, cybercrime, and mismanagement have increased (World Economic Forum, 2024).

Because of these challenges, organizations must establish strong internal control systems to safeguard assets, ensure accurate financial reporting, and comply with legal and regulatory requirements. A well-functioning internal control system not only prevents fraud and errors but also improves operational efficiency and builds investor confidence, both of which are essential for sustainable growth in today's economy.

In corporate organization, the internal control issue arises in different situation, nowadays, there have been different scandals and frauds committed through various ways and techniques. Therefore, everyone from higher authority to the lowest level, from the top executives to the lower-level employee, from the higher supplier to the lowest retailer should encourage the strengthening of internal control system. It is essential part of managing an entity effectively.

In today's economy, the importance of an effective internal control system has become increasingly recognized. Several corporate scandals such as those involving Enron, Polly Peck, Maxwell Pensions, and WorldCom have shown how weak internal controls can lead to fraud, mismanagement, and even the collapse of large organizations (World Economic Forum, 2024). These failures not only damage the reputation of the affected companies but also negatively

influence investors' confidence and the overall economy of a country. Countless people now need to be cautious of companies that do not deal with internal control mechanisms (Alabdullah, 2023).

Effective internal control systems (ICS) are fundamental for the operational stability and financial integrity of corporate organizations like commercial banks, particularly within dynamic economic environments. One prominent challenge confronting the banking sector is internal control inefficiencies, which may enable fraudulent activities and consequently impose substantial financial losses on banks (Ayagre, Appiah, Gyamerah, and Nartey, 2014).

In order to address the companies' performance and control mechanisms from a fresh perspective and narrow the international gap that is urgently required for closure, scholars and researchers are being called upon to take part in presenting new methods and trends in the fields of finance, management, accounting, and economics (Alabdullah, Nor, & Ries, 2018; Buckhaults & Fisher, 2011).

In developing economies like Ethiopia, the banking sector is a critical pillar of economic growth, facilitating investment and trade. Total deposits at the end of June 2024 reached nearly 2.5 trillion birr, and total loans and bonds of banks amounted to just under 2.2 trillion Birr. GDP increased at a faster rate than deposits and loans in the reporting period (NBE, 2024). The efficacy of internal controls in these institutions directly influences public trust, investor confidence, and overall economic stability. Consequently, understanding the specific manifestations and effects of ICS on organizational performance within Ethiopian commercial banks presents a significant area of inquiry. Prior studies centered on the importance of internal control mechanisms to small and medium-sized enterprises financial performance (Nyakundi, Nyamita & Tinega, 2014). This study also aims to fill this gap by dealing with the effect of internal control system on corporate performance in banking sectors in Ethiopia.

Ewa and Udoayang (2012) argued that a strong internal control mechanism is deterrence to employee's fraudulent activity while a weak internal control mechanism exposes the system to fraud and creates opportunity for staff to commit fraud. Wilson Bashaija (2022) conducted study on the effect of internal control systems on the financial performance of commercial banks in Rwanda, in which the findings of the study suggested that internal control systems especially risk

management, and the control environment is significant areas, commercial banks should give great attention to improving financial performance.

Helina M. (2024) conducted research on Effects of Internal Control on Financial Performance of Bank of Abyssinia, which is one of the commercial banks of Ethiopia. Based on the finding the researcher put ICS in the first line and argued that the management should find the possible alternative ways of improving on control environment in order to achieve a positive effect of it on financial performance.

Performance represents continuous efforts directed toward the attainment of established objectives. The performance of any organization is contingent upon the successful realization of its operational goals as determined by management (Akinleye & Kolawole, 2020). Financial performance analysis identifies an organization's financial strengths and weaknesses by accurately establishing the relationship between components of the statement of financial position and the statement of comprehensive income.

According to Dixon (1990), effective performance measures are those that empower organizations to guide their actions toward achieving strategic objectives. Some literature argue that measurement and review of financial performance is not the same as the monitoring of controls. The measurement and review of performance is directed at whether business performance is meeting the objectives set by management (or the third party), while monitoring of controls is specifically concerned with effective operation of internal control. However, performance indicators provide information that enables management to identify deficiencies in internal control (IAASB, 2016).

1.2. Background of the organization

Zemen bank S.C. presents a particularly compelling case of examining the effect of internal control systems on organizational performance. The Bank obtained its operating license on June 17, 2008, under Registration Number LBB/010/2008 from the National Bank of Ethiopia and headquartered in Addis Ababa. Zemen bank has distinguished itself as one of Ethiopia’s most efficient and rapidly growing private commercial banks. The bank’s vision is to become

"Become a home of distinctive financial solutions and service excellence" while its mission emphasizes delivering unique financial experience, engaging work environment and sustainable value for all our stakeholders using empowered workforce and technology, in a socially responsible manner. The bank's Core values are relationship driven, socially oriented, ethical and accountable, committed to diversity, committed to responsible finance, and professionalism, are inherently aligned with the principles underlying the COSO internal control framework.

From a performance perspective, Zemen bank has demonstrated remarkable financial trajectory. For the fiscal year 2023/2024, the bank reported a gross profit of birr 3.77 billion (36.8%, increase year to year), net profit of birr 2.39 billion (32% growth), earning per share of 37.6%, those figures significantly exceed private bank averages. In the 2024/2025 fiscal year, Zemen bank achieved even more historical results; net profit grew by 145% to birr 5.87 billion, total assets reached birr 88.6 billion (a 50% growth), customer deposit climbed to birr 64.67 billion, and earning per share jumped to 68.3%. the bank maintained a non-performing loan ratio of 2.16% in 2023/2024 and 2.81% in 2024/25, which is well below the NBE's 5% regulatory threshold level. This reflects disciplined credit management and strong internal control practices.

Zemen Bank is also ideally situated at the front of Ethiopia's modernization of its financial sector. The bank is actively seeking digital transformation through fintech partnerships and artificial intelligence integration, has declared aspirations to enter investment banking and capital markets, and has a capital adequacy ratio of 37%, well above regulatory standards. Zemen Bank is a perfect place to look into how internal control systems affect organizational performance in a fast-paced, growth-oriented banking environment because of these strategic ambitions and its solid financial performance.

1.3. Statement of the problem

Controllers and auditors play a crucial role in ensuring the accuracy and integrity of financial reporting, as well as overseeing the implementation and functioning of internal control systems, which are essential for safeguarding assets, ensuring the reliability of financial information, and preventing fraud. Controllers also administer performance measurement systems to ensure

alignment with organizational objectives and to ensure that any deviations from targets are thoroughly examined (Merchant & Van der Stede, 2017).

Effective internal control systems are essential for public institutions because they rely on five key elements: the control environment, risk assessment, control activities, information and communication, and monitoring. When these components work properly, they help ensure that an organization's operations are smooth and reliable, and they reduce the chances of errors or fraud (Abejeg & Jobkip, 2009). A strong internal control system improves accuracy in financial and operational reporting and supports the achievement of organizational goals (Bovens & Schillemans, 2014). However, weaknesses in internal control systems are still a major concern, especially in both financial and non-financial organizations.

In the banking sector, the primary purpose of internal control is to make sure all banking activities follow established rules, laws, and regulations (Osten et al., 2012). Since the financial sector deals with sensitive resources, weak internal control increases the risk of financial losses and fraud. Poor internal control can lead to issues such as unauthorized transactions, mismanagement of resources, and unethical behavior by employees (Amudo & Inanga, 2009). In East African countries, weak internal controls have caused serious financial issues and damaged public trust in banking institutions.

In today's world, the financial sectors operate in an increasingly complicated and dynamic environment characterized by changing regulatory requirements, increased cybersecurity threats, and unstable macroeconomic conditions (World Economic Forum, 2024). Internal control systems (ICS) have become essential tools in this regard for guaranteeing operational integrity, protecting resources, upholding regulatory compliance, and eventually promoting long-term organizational performance. The most widely used framework for internal control is provided by the Committee of Sponsoring Organizations of the Treadway Commission (COSO). Its 2012 Internal Control—Integrated Framework, which established five interconnected components—control environment, risk assessment, control activities, information and communication, and monitoring activities—serves as the international standard for assessing the efficacy of internal control (COSO, 2012).

Despite the theoretical and practical significance of robust internal control systems, empirical evidence regarding their effect on organizational performance remains inconsistent and context-

dependent. While studies such as Wilson Bashaija (2022) in Rwanda and Janet Cheptoo Bett and Dr. Florence Sigara Memba (2017) in Kenya report positive significant relationships between ICS components and financial performance, others—including Eniola Anthony Abiodun (2020) in Nigeria and Helina Mulugeta (2024) in Ethiopia—report insignificant or even negative effects. These contradictory findings suggest that the relationship between internal control systems and organizational performance is mediated by institutional context, regulatory environment, organizational culture, and sector-specific dynamics, necessitating further investigation within specific organizational and national settings.

In Ethiopia banking sectors the total deposit reported in June 2024 were close to birr 2.5 trillion and total loan and advances approaching 2.2 trillion birr (NBE, 2024). The efficiency of internal control systems has a direct influence on investor confidence, public trust, and systemic financial stability in this changing environment. Zemen bank is one of commercial banks that obtain public trust and have strong reputation as mentioned in the organizational background part.

The COSO 2012 framework is the basis for theoretical lens for this study for many reasons. First, it is the most globally recognized standard for internal control, providing a compressive, principle-based structure that is applicable across industries and jurisdictions. Second, the framework's five elements; control environment, risk assessment, control activities, information and communication, and monitoring activities are providing a systematic foundation for measuring and evaluating the efficacy of internal controls in accordance with the National Bank of Ethiopia's regulatory requirements. Third, the COSO 2012 is especially pertinent for analyzing performance results in financial institutions like Zemen Bank since it highlights the integration of internal control with organizational governance and risk management.

Despite Zemen bank’s impressive performance trajectory; achieving 145% growth and 50% asset expansion in FY 2024/25 and its stated commitment to governance excellence, no empirical study has specifically examined whether and how the five COSO components of internal control system contribute to Zemen bank’s performance. Existing studies in Ethiopia such as Helina Mulugeta (2024) on bank of Abyssinia, Biruk Tesfaye Kebede (2016) on private banks of Ethiopia have got mixed results and have not focused on Zemen bank’s unique operational context.

This study therefore seeks to address the following critical gaps; the lack of empirical evidence on internal control effectiveness specifically within Zemen Bank and the need to understand how internal control components interact to produce performance outcomes in a rapidly growing, technologically innovative bank operating within Ethiopia's evolving regulatory and macroeconomic environment. By investigating these relationships, this study provided actionable insights for Zemen Bank's management, contribute to regulatory policy formulation, and enrich the academic literature on internal control systems in developing economy contexts.

1.4. Research Question

1. What is the effect of Control Environment on organizational performance of Zemen Bank S.C?
2. What is the effect of Risk Assessment on organizational performance of Zemen Bank S.C?
3. What is the effect of Control Activities on organizational performance of Zemen Bank S.C?
4. What is the effect of Information and Communication system on organizational performance of Zemen Bank S.C?
5. What is the effect of Monitoring Activities on organizational performance of Zemen Bank S.C?

1.5. Objective of the Study

1.5.1. General Objective

The general objective driving this research is to ascertain the effect of internal control systems on the organizational performance of Zemen bank in Addis Ababa, Ethiopia.

1.5.2. Specific Objectives

- Examine the effect of control environment on organizational performance of Zemen bank in Addis Ababa, Ethiopia.
- Assess the effect of risk assessment practices on organizational performance of Zemen bank in Addis Ababa, Ethiopia.

- Investigate the effect of control activities on organizational performance of Zemen bank in Addis Ababa, Ethiopia.
- Determine the effect of information and communication system on organizational performance of Zemen bank in Addis Ababa, Ethiopia.
- Analyze the effect of monitoring activities on the organizational performance of Zemen bank in Addis Ababa, Ethiopia.

1.6. Hypothesis

Based on pervious literatures and theories the following hypothesis were developed for this study:

H1: Control Environment has no significant effect on organizational performance of Zemen bank S.C.

H2: Risk Assessment has no significant effect on organizational performance of Zemen bank S.C.

H3: Control Activities has no significant effect on organizational performance of Zemen bank S.C.

H4: Information & Communication has no significant effect on organizational performance of Zemen bank S.C.

H5: Monitoring Activities has no significant effect on organizational performance of Zemen bank S.C.

1.7. Significance of the study

This investigation yields several important contributions for various stakeholders. For commercial banks in Ethiopia, specifically for Zemen bank. The findings can offer actionable insights into strengthening their internal control frameworks, thereby fostering improved financial stability and operational efficiency. By identifying specific internal control components that most significantly influence performance, bank management can strategically allocate

resources to enhance these areas, leading to better risk management and reduced instances of fraud or error.

Regulators and policymakers, such as the National Bank of Ethiopia, can leverage this research to refined existing guidelines and supervisory frameworks, ensuring that internal control standards are robust and aligned with international best practices while remaining sensitive to local realities. This could contribute to a more resilient and trustworthy financial sector.

Academically, the study enriched the existing literature on internal control systems by providing empirical evidence from a specific developing economy context, which can serve as a foundation for comparative studies and theoretical advancements. Furthermore, it contributes to a more nuanced understanding of how internal control mechanisms operate within unique national and economic landscapes, moving beyond generalized global observations. Finally, potential investors and customers may benefit from a more transparent and confident banking sector, driven by enhanced internal controls that ultimately underpin organizational reliability and security.

1.8. Scope of the study

1.8.1. Geographical Scope

The study mainly focused on the effect of internal control systems on the organizational performance of Zemen bank in Addis Ababa, Ethiopia. It considered only the headquarter of the bank. Moreover, it considered Executives, Middle-Level Managers, senior officer and officers at the head office. These will constitute the target population for the study.

1.8.2. Timing scope

The research study was conducted during the year 2025/2026.

1.8.3. Conceptual Scope

The study used the COSO (2012) integrated framework as its theoretical lens. The five component of internal control which are the control environment, risk assessments, control activities, information and communications and monitoring used as independent variables and the dependent variable of the study was the performance of the bank. Organizational

performance was measured through both financial indicators (ROA, ROE and EPS) and non-financial indicators (operational efficiency, customer satisfaction, and achievement of strategic objectives).

1.9. Limitation of the study

The research revolves around internal control systems specifically the components of ICS (control environment, risk assessment practice, control activity, information and communication system and monitoring) of Zemen bank, and its performance. The main research limitations were the title's focused on studying a specific bank and probable data access concerns. However, the researcher tried to get acceptance from the bank. The other limitation of the study was, due to confidentiality policy of banks, the study limited to the officially disclosed financial data of the bank and the personal perception of management and employees of Zemen bank towards the issue.

1.10. Organization of the study

The document was organized into five main sections. The introductory section presented the background of the study, statement of the problem, specific objectives, and the significance of the study. Following this, the second section provided a comprehensive literature review and thematic analysis, encompassing theoretical frameworks, key components of internal control, empirical evidence from global contexts, and an examination of current practices within Ethiopian commercial banks. The third section gave detailed the methodological approach employed, covering the research design, data collection methods, sampling procedures, and data analysis techniques. The fourth section was present the core analysis and discussion, focused on the influence of internal control systems on organizational performance, comparative insights with international findings, and outlining challenges and opportunities for enhancement. The concluding section summarized the primary findings, offers practical recommendations for policy and practice, and identified limitations alongside suggestions for future research directions.

2. Literature review

2.1. Introduction

A corporate organization like banks adopts a strong mission and vision also sets strategies that the organization go with and depending on it, the organization establish its objectives to achieve their gradual achievement of goals. Management and board of directors make sure that the organization successfully achieve its objectives to meet their goal. Therefore, internal control is one of the major processes to set a rule and regulation and ensure every action and operation done according to planned and ensure that the organization going in safe way to wards to its mission and vision.

An effective system of internal control provides reasonable assurance regarding achievement of organizational objectives. Because internal control is relevant both to the entity and its subunits, an effective system of internal control may relate to a specific part of the organizational structure. (COSO 2012)

Poor internal control led to losses, scandals, failure and damage the reputation of organizations specially in corporate organization like banks. Turnbull committee report suggest that company's system of internal control has a key role in the management of risks that are significant to the fulfilment of its business objectives. A sound system of internal control contributes to safeguarding the shareholders' investment and the company's assets. Internal control facilitates the effectiveness and efficiency of operations, helps ensure the reliability of internal and external reporting and assists compliance with laws and regulations (Tubull, 1999).

2.2. Theoretical Literature

This research aims to show the effect of internal control management on the corporate performance of selected private bank. Therefore, before assessing related literature finding we try to define internal control system and its components, corporate performance and its measurements.

2.3. Definition of Internal Control

In 1992 the committee of sponsoring organizations of the tread way commission (COSO) release its internal control integrated framework (the original framework). The original framework has gained broad acceptance and is widely used around the world. It is recognized as leading framework for designing, implementing, and conducting internal control and assessing the effectiveness of internal control.

According to The Committee of Sponsoring Organization of the Tread Way Commission (COSO) integrated Framework (Sept 2012); the internal control can be defined as;

internal control is a process, effected by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives relating to operations, reporting, and compliance.

This definition of internal control emphasizes that internal control:

A process consisting of ongoing tasks and activities - it is a means to an end, not an end in itself.

Effected by people - it is not merely about policy and procedure manuals, systems, and forms, but about people and the actions they take at every level of an organization to effect internal control.

Able to provide reasonable assurance, not absolute assurance, to an entity's senior management and board of directors.

Adaptable to the entity structure - flexible in application for the entire entity or for a particular subsidiary, division, operating unit, or business process. Geared to the achievement of objectives in one or more separate but overlapping categories.

According to Qaisar A. and J. Iqbal, (2012) study, literatures related to internal control system, conclude its definition as "It is a process which is designed specific to the organization that provides a reasonable assurance for achieving the objectives of an organization affected by an entity's stakeholders including board of directors, top-middle management and other personnel who are responsible to develop internal control culture to maintain the effectiveness and efficiency of operations and complying the applicable laws and regulations that results minimizing the misuse or wastage of resources and presenting reliable financial report which

shows true and fair picture of the company's financial position to the stakeholders and help them to make their best investment decisions".

International Auditing and Assurance Standard Board (IAASB) tries to elaborate the term internal control and its component in ISA 315;

Internal control; - the process designed, implemented and maintained by those charges with governance, management and other personnel to provide reasonable assurance about the achievement of an entity's objectives with regard to reliability of financial reporting, effectiveness and efficiency of operations and compliance with applicable laws and regulations. The term 'controls' refers to any aspects of one or more of components of internal control (IAASB 2016,2017).

It is for management to determine what internal control is necessary to enable the preparation of the financial statements. The term "internal control" encompasses a wide range of activities within components of the system of internal control that may be described as the control environment; the entity's risk assessment process; the entity's process to monitor the system of internal control, the information system, and communication and control activities (IAASB 2016,2017).

2.4. Theories related to Internal Control

2.4.1. Agency Theory

Agency theory was developed by Jensen and Meckling (1976). The law of agency states that a theoretical model of the relation between one party (the principal) delegating work to another party (the agent). An agent is a person who acts on behalf of another person, the principal, in dealing with other people therefore, agency theory concerned with resolving problem that can

arise from this relation. In company law, the directors act as agents of the company. The board of directors as some whole, and individual directors, have the authority to bind the company to contractual agreements with other parties.

Agency theory is based on the idea that when a company is first established, its owners are usually also its managers. As a company grows, the owners appoint managers to run the company. The owners expect the managers to run the company in the best interests of the owners; therefore, a form of agency relationship exists between the owners and the managers.

According to Adams (1994) study, showed that agency theory gave much more meaningful insight in the internal auditing discipline. A number of control mechanisms are seen as an expansion of the agency theory principles, which have often been employed to try to resolve disputes between shareholders and managers.

Internal control systems have been incorporated into policies, rules and regulations of organizations to achieve their established objectives. This theory was important in the current study as it shed light on how the principal and agency interact for the benefit of the organization. According to Keven L. Jensen (2003), an entity establishes control system to overcome the agency costs which inherent in those organization. Therefore, in the study he tries to show internal control system is one of the mechanisms that used for addressing agency problems.

2.4.2. The Theory of the Firm

The theory of the firm also referred to as company theory comprises a collection of inter-related frameworks within economics, management, and organization studies that seek to explain why firms exist, how they behave, and what determines their boundaries, internal structure, and performance. In this theory, the behavior of a particular business entity is said to be driven by profit maximization. According to Spulber (2009) the theory of the firm consists of a number of economic theories that explain and predict the nature of the firm, company, or corporation, including its existence, behavior, structure, and relationship to the market.

The neoclassical view of the firm follows that firms are production units, combining labor and capital, also minimizing cost for a given output (or maximizing output for a given cost) and choosing price/output to maximize profit under competitive markets.

In recognition of the limitations of the neoclassical model, scholars developed behavioral and managerial theories of the firm. Richard M. Cyert and James G. March's A Behavioral Theory of the Firm (1963) abandons the assumption of a single objective (profit-maximization) and instead sees the firm as a coalition of sub-groups (managers, workers, shareholders) with different goals (production targets, market share, sales growth, profits). These groups engage in negotiation, satisficing rather than strict maximization, and organizational slack may exist. This perspective opened the way to analyzing decision-making processes, bounded rationality, goal ambiguity, and intra-firm conflict.

In managerial theories, focus on the separation of ownership and control (e.g., the principal-agent problem) and the idea that managers may pursue objectives other than shareholder profit (empire building, growth, personal utility).

This theory is important to this research because, the theory of the firm closely related to internal control because it explains how and why firms establish internal mechanisms to coordinate activities, reduce transaction costs, and align individual behavior with organizational goals.

2.5. Component of Internal Control

According to COSO (2012) Framework, sets out five components of internal control and seventeen principles representing the fundamental concepts associated with components. These components and principles of internal control are suitable for all company. This component includes; control environment, risk assessment, control activity, information and communication and monitoring.

Although, IAASB (2016,2017), set the division of internal control into five components similar to COSO framework as control environment, entity's risk assessment process, information system, including the related business processes, relevant to financial reporting, and communication, control activates and monitoring of controls; for the purpose of the ISA, provides a useful framework for auditors to consider how different aspects of an entity's internal control may affect the audit. This components of ICS are critical for banks like Zemen to enhance governance and performance.

2.5.1. Control Environment

Control environment addresses a set of standards, processes and structures that provides the basis for carrying out internal control across the organization. It serves as a backbone for the rest of internal control components. It is the diction of an organization, influencing the control consciousness of its people (COSO, 2012). Control environment build up with the basic understanding adopted by the board of directors and senior management of the corporation to establish the tone at the top regarding the importance of internal control and expected standards of conduct which helps to control the organization, its attitude toward problems and approach to solving problems and their perspective of the importance of moral values (Hayali et al., 2013). The organization's objective and mission, as well as its struggle to uphold adequate financial accountability, can be seen as examples of the organization's management philosophy, which is part of the control environment (Anthony M., 2004).

IAASB (2016, 2017) see the element of the internal environment that may be relevant when obtaining an understanding of the control environment as the follow:

Communication and enforcement of integrity and ethical values; - These are essential elements that influence the effectiveness of the design, administration and monitoring of controls.

Commitment to competence; - Matters such as management’s consideration of the competence levels for particular jobs and how those levels translate into requisite skills and knowledge.

Participation by those charged with governance; - Attributes of those charged with governance such as their independence from management, their experience and stature, the extent of their involvement and the information they receive, and the scrutiny of activities, and the appropriateness of their actions, including the degree to which difficult questions are raised and pursued with management, and their interaction with internal and external auditors.

Management’s philosophy and operating style; - Characteristics such as management’s: approach to taking and managing business risks, attitudes and actions toward financial reporting, attitudes toward information processing and accounting functions and personnel.

Organizational structure; The framework within which an entity's activities for achieving its objectives are planned, executed, controlled, and reviewed.

Assignment of authority and responsibility; - Matters such as how authority and responsibility for operating activities are assigned and how reporting relationships and authorization hierarchies are established.

2.5.2. Risk Assessment

COSO (2012), Define risk assessment as, it is a dynamic and iterative process for identifying and analyzing risks to achieving the entity's objectives. Management considers possible changes in the external environment and within its own business model that may impede its ability to achieve its objectives. The entity's risk assessment processes form the basis for how management determines the risks to be managed.it is also helpful in order to assist auditors to identifying risks of materially misstated. IAASB, (2016, 2017).

According to COSO (2012), There are four principles relating to Risk Assessment. Which are:

The organization specifies objectives with sufficient clarity to enable the identification and assessment of risks relating to objectives.

The organization identifies risks to the achievement of its objectives across the entity and analyzes risks as a basis for determining how the risks should be managed.

The organization considers the potential for fraud in assessing risks to the achievement of objectives.

The organization identifies and assesses changes that could significantly impact the system of internal control.

2.5.3. Control Activity

Control activities are the actions established by policies and procedures to help ensure that management directives to mitigate risks to the achievement of objectives are carried out. Control

activities are performed at all levels of the entity and at various stages within business processes, and over the technology environment. COSO, (2012).

According to COSO (2012), There are three principles relating to Control Activities:

The organization selects and develops control activities that contribute to the mitigation of risks to the achievement of objectives to acceptable levels.

The organization selects and develops general control activities over technology to support the achievement of objectives.

The organization deploys control activities through policies that establish what is expected and procedures that put policies into action.

Control activities, which can be both manual and automated, are used to prevent, mitigate, and control hazards that could obstruct the achievement of the organization's objectives and missions. To effectively and successfully carry out the organization's goals and mission, management must develop control activities. Some of the fundamental principles of control activities include selecting and establishing control activities, selecting and developing wide controls over technology, and deploying rules and procedures.

2.5.4. Information and Communication

Pertinent information must be identified, captured and communicated in a form and timeframe that enable people to carry out their responsibilities. Information systems produce reports, containing operational, financial and compliance-related information, that make it possible to run and control the business. They deal not only with internally generated data, but also information about external events, activities and conditions necessary to informed business decision-making and external reporting. Effective communication also must occur in a broader sense, flowing down, across and up the organization. All personnel must receive a clear message from top management that control responsibilities must be taken seriously. They must understand their own role in the internal control system, as well as how individual activities relate to the work of others. They must have a means of communicating significant information upstream. There also

needs to be effective communication with external parties, such as customers, suppliers, regulators and shareholders.

According to COSO (2012), There are three principles relating to Information and Communication:

The organization obtains or generates and uses relevant, quality information to support the functioning of other components of internal control.

The organization internally communicates information, including objectives and responsibilities for internal control, necessary to support the functioning of other components of internal control.

The organization communicates with external parties regarding matters affecting the functioning of other components of internal control.

2.5.5. Monitoring Activities

Internal control systems need to be monitored a process that assesses the quality of the system's performance over time. This is accomplished through ongoing monitoring activities, separate evaluations or a combination of the two. Ongoing monitoring occurs in the course of operations. It includes regular management and supervisory activities, and other actions personnel take in performing their duties. The scope and frequency of separate evaluations will depend primarily on an assessment of risks and the effectiveness of ongoing monitoring procedures. Internal control deficiencies should be reported upstream, with serious matters reported to top management and the board. There is synergy and linkage among these components, forming an integrated system that reacts dynamically to changing conditions.

According to COSO (2013), There are two principles relating to Monitoring Activities:

The organization selects, develops, and performs ongoing and/or separate evaluations to ascertain whether the components of internal control are present and functioning.

The organization evaluates and communicates internal control deficiencies in a timely manner to those parties responsible for taking corrective action, including senior management and the board of directors, as appropriate.

2.6. Performance Measures

The concept of performance measurement refers to the systematic process of evaluating how effectively an organization achieves its objectives. Appropriate performance measures are those which enable organizations to direct their actions towards achieving their strategic objectives. Dixon., et al (1990). The performance measured either subjectively or objective criterion as financial and non-financial measures.

2.6.1. Financial Performance Measurement

Financial performance focuses on the economic results of the firm and reflects how well resources are used to generate profits and shareholder value. It is often based on quantitative indicators derived from accounting and financial statements. Common financial measures include: Profitability ratios (e.g., net profit margin, return on assets (ROA), return on equity (ROE)), Liquidity ratios (e.g., current ratio, quick ratio), Leverage ratios (e.g., debt-to-equity ratio), Earnings per share (EPS), Cash flow measures (operating and free cash flow).

These indicators allow managers, investors, and regulators to assess financial health, operational efficiency, and value creation. According to Kaplan and Norton (1996), financial indicators are vital but often lagging measures because those measures reflect past performance rather than future potential.

In this research, the researcher took mainly return on asset (ROA), return on equity (ROE) and Earnings per share (EPS) as a performance measures. Because, return on assets (ROA), is an indicator of managerial efficiency. ROE is other major performance indicator ratio that measure efficiency of organization.

2.6.2. Non-Financial Performance Measurement

Non-financial performance focuses on qualitative and operational factors that influence long-term competitiveness and sustainability. These measures are often leading indicators predicting future financial success. Common non-financial measures include: Customer satisfaction and loyalty (e.g., customer retention rate, Net Promoter Score), Internal business processes (e.g., production efficiency, quality control, innovation rates), Employee performance and engagement

(e.g., staff turnover, training effectiveness), Corporate social responsibility (CSR) and environmental performance, Knowledge and innovation capabilities.

As argued by Neely (1999) and Kaplan & Norton (1996), non-financial metrics provide insights into the drivers of performance and are critical in knowledge-based and service-oriented firms where intangible assets such as human capital and customer relationships which create value. Hakkak and Ghodsi (2015) conducted a study on the implementation of non-financial performance measures (BSC) in organizations which has a significant positive effect on firms' competitive advantage and sustainability.

2.7. Empirical Review

Several empirical studies highlight the positive impact of internal controls on corporate performance. A study by Lexis Alexander et al., (2020) on listed firms in Ghana found that companies with robust internal controls exhibited higher profitability, lower fraud incidences, and better regulatory compliance. Similarly, Bashaija (2022) observed that Rwandan banks with strong ICS experienced improved financial stability due to effective risk management and governance structures.

Alabdullah (2023) investigated on the link between internal control mechanisms and corporate performance. This study was done for a new perspective to support economic growth. The researcher aims to find out that, if there were a link between the diversity of the board of directors and their independency and the company's financial performance. The researcher used multiple regression method to discover if there were a positive or a negative link between such factors. The result indicated that, there were a positive link between independent managers on the board of directors and also their diversity and the firm's performance. The study also finds out that there was a negative link between the size of the board of directors and the company's financial performance.

Qaisar Abbas and Javid Iqbal (2012) also carried out a study in Islamabad, Pakistan, Department of Management Sciences, COMSATS Institute of Information Technology, on analyzing theoretical perspective and practices of internal control system. present the theoretical perspectives and practical applications of internal control system. The study was aims to find out

and analyze existing literature legislations, and practices to understand the significance, components and implications of ICS. Also, it aims to assess properly designed and implemented internal control system protect effective utilization of organizational recourse. The researcher used the systematic research on academic and non-academic literatures. The study finds out that internal control is one-time activity in continuous process evolving from top management and bod to lower-level employee. The researcher concludes the definition of internal control from his findings as internal control is a process influenced by organizational stakeholders to achieve efficiency, compliance and reliable financial reporting thereby minimizing misuse of resources and enhancing stakeholder trust.

The study conducted by Eniola Anthony Abiodun, (2020) revealed on the Internal Control Procedures and Firm's Performance. The overall objective of this study was to analyze internal control procedures and the performance of the company in Nigeria's south-west region. The finding of study was Monitoring activities have no significant influence on firm performance in Nigeria, Control environment and risk management control also have no significant effect on firm performance in Nigeria, the last component of internal control system, which is control activities also no significant effect on firm's performance in Nigeria, Internal audit has no significant influence on firm's performance in Nigeria.

Wilson Bashaija (2022) investigated on The Effect of Internal Control Systems on the Financial Performance of Commercial Banks in Rwanda. The main aim of this study was establishing the effect of the Internal Control Environment on the Financial Performance and to determine the effect of Risk Management on the Financial Performance. The study finds out that internal control system is a positive significant predictor of Financial Performance. The findings of the study suggested that internal control systems especially risk management, and the control environment is significant areas, commercial banks should give great attention to improving Financial Performance

In Kenya Robert Odek, Elmad Okoth (2019) done research on the effect of internal control systems on financial performance of distribution Companies. The study was done to determine the effect of control activities on financial performance and to find out the effect of risk assessment on financial performance also to establish extent to which information and

communication affect financial performance of Moonbluz Enterprises Limited. The finding of this research shows that control activities had a negative and significant effect on financial performance of Moonbluz enterprise. The results indicated that risk assessment has a positive and insignificant effect on financial performance and information and communication have a negative and significant effect on financial performance of Moonbluz enterprise

Janet Cheptoo Bett, Dr. Florence Sigara Memba (2017) conducted a study on effects of internal Control on the Financial Performance of Processing Firms in Kenya. The study was done on Menengai Company in the aim of determining the effect of control environment on the financial performance, determine the influence of risk assessment on the financial performance and to establish the influence of information systems on financial performance of Menengai Company. The study realized that control environment has a significant influence on the financial performance. Also, the study finds out that risk assessment has a significant influence on the financial performance and information systems have a significant influence on the financial performance of Menengai Oil Company.

From Ethiopian literatures, Helina Mulugeta, (2024) studied the effects of internal control on financial performance of bank of Abyssinia. The study objective was investigating the existing internal control system over the financial performance of the bank of Abyssinia and examining the effect of control environment on financial performance in the bank of Abyssinia. Also, the researcher tries to examine the effect of control activities, Internal Audit, risk assessment and information and communication systems on financial performance in the bank of Abyssinia. The finding of the study was control environment has a negative and insignificant effect on the financial performance of bank of Abyssinia. Risk assessment indicated a positive and significant effect of risk assessment on financial performance of bank of Abyssinia. Information and communication systems also had a positive but insignificant effect on the banks performance. It showed that internal auditing has a negative and significant effect on financial performance of the bank of Abyssinia. There was a positive and significant effect of control activities on the financial performance of bank of Abyssinia.

A study titled policy and practices of corporate governance in commercial banks of Ethiopia studied by Biruk Tesfaye Kebede (2018) in Ethiopia on the basis of best practices and principles endorsed by Basel committee on banking supervision. The study was conducted mainly to assess

the corporate governance policies of CBE based on principles endorsed by Basel Committee for Banking Supervision. And to examine the corporate governance practice of CBE in the light of corporate governance principles and best practices recognized by Basel Committee on Banking Supervision. Also, to identify the major factors affecting and challenges on policies and practices of corporate governance at CBE. The findings of this study on the board of CBE show that the board does not structure itself into any committees for achieving its roles and responsibilities specified in the framework. The findings show that there is poor communication practice of the governance framework at middle and lower-level managers across the bank. The study also concludes that, there is mismatch between the practices of remuneration structure and corporate governance policy procedures and weakness in timely and accurate disclosing material and financial information to stakeholders.

Mamo, N; Aunga, D. A. O & Barng'etuy, J. (2024) was investigated on the effectiveness of internal control systems on organizational performance of western Ethiopia union of seventh day Adventist church in Ethiopia. This study was published at journal of African interdisciplinary studies. The major aim of this study was exploring the common components of internal control systems used in western union conferences of Seventh-Day Adventist Church in Ethiopia. The researchers asked in their study whether or not the effectiveness of internal control systems on organizational performance prevail Assesse mitigation problems related to internal control on organizational performance. From the study a researcher concludes that, well-functioning internal control system is explicitly correlated with an organizations success. The researcher also analyzed that from the five components of internal controls, the control environment has significantly affected the financial performance of the organization. The findings of the study showed a variation on the performance of the organizations as a result of changes in risk assessment, control activity and organization's internal control environment.

Wendmagegn Teshome Geleo, (2021) was investigated on the impact of internal control on the operational performance of selected private commercial banks in Ethiopia. The researcher aims to meet what kind of impact exerted on organizational performance by the five internal control system components. The study concluded that control environment and information and communication has insignificant positive impact on the performance of the selected private commercial banks in Ethiopia. While the rest three components; risk assessment, control

activities and monitoring activities have significant positive impact on the performance of the selected banks in the study.

A study titled Perceptions on Internal control system and financial performance; Evidence from commercial banks in Ethiopia studied by Seble Worku, (2018). The main objective of the study was to examine the Perception of internal control system on financial performance of commercial banks. The study finding shows that there is a strong relationship between the financial performances and control activates also there is no support that there is a relationship between perceived Risk Assessment and financial performance. The study finds out that monitoring was positively related but statistically not significant with the financial performance.

Sintayehu Endesha, (2021) was investigate the effects of internal control system on financial and organizational performance: the case of Ethiopian construction works corporation. The study aims to determine the effect of the control environment on the internal control system and to what extent the risk assessment affects the internal control in Ethiopian Construction Works Corporation. The researcher concluded that ECWC have not a strong internal control structure with respect to risk assessment, control environment and monitoring.

2.8. Literature gaps

According to the above literature review there were numerous theoretical and empirical literature gaps regarding to the internal control system and organizational performance.

While prior research had explored the relationship between IC systems and financial performance in sectors like banking, manufacturing, and SMEs, there was a lack of empirical evidence specifically addressing financial firms, particularly in Ethiopia. This study filled this gap by focusing on Zemen Bank, providing sector-specific insights.

The study noted that existing research offers mixed results on the effect of ICS components (control environment, risk assessment, information systems, monitoring and control activities) on financial performance. For instance, some studies report positive effects, while others find negligible or negative relationships. This inconsistency underscores the need for further investigation to clarify these dynamics.

Many studies on IC systems are conducted in developed economies or other African countries, leaving a gap in understanding how these systems function in Ethiopia's unique economic and regulatory environment. This study addressed this by examining the local context of Zemen Bank, offering tailored insights.

Perhaps, Theoretical and empirical evidence underscores the importance of internal control systems in enhancing corporate performance, particularly in the banking sector. Agency theory and systems theory provide a foundation for understanding governance and operational efficiency, while empirical studies confirm that robust ICS leads to better financial outcomes. For Zemen Bank, implementing strong internal controls; such as risk management frameworks, automated monitoring, and compliance mechanisms will be crucial for sustaining growth in Ethiopia's competitive banking industry.

2.9. Conceptual Framework

According to COSO, an organization adopts a mission and vision, sets strategies, establishes objectives, it wants to achieve, and formulates plans for achieving them. Objectives may be set for an entity as a whole, or be targeted to specific activities within the entity. In order to Support the organization in its efforts to achieve objectives are five components of internal control; those are, control environment, risk assessment, control activities, information and communication and monitoring activities.

Performance is systematic measurement of an organization's effectiveness and efficiency in achieving its strategic objectives. According to most previous literatures conclude that, there was a direct link between internal control and the performance of the organization.

Based on the review of both theoretical and empirical studies on internal controls and organizational performance the following conceptual framework guiding this study was developed. The conceptual framework showed that the relationship between internal control components (independent variable) and organizational performance (dependent variable).

Independent variable **Dependent variable**



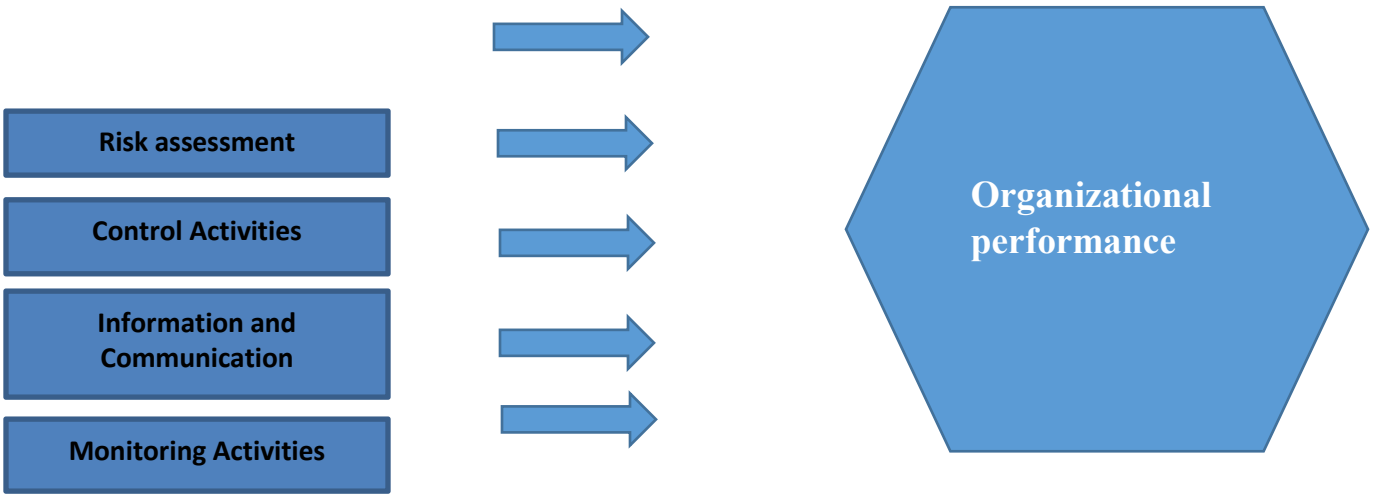


Figure 2.3. Conceptual framework

Source: developed by researcher based on theoretical and empirical studies on internal controls and organizational performance

3. Methodology

3.1. Introduction

This study investigated the casual relationship between variables illustrated in the conceptual framework of this research – that is, Zemen bank's internal control system and banks performance. According to Creswell (2009), research methodology refers to the plan and process that includes choices ranging from general philosophical presumptions to specific techniques of data collecting and analysis. This chapter was organized as follows: research design, research approach, data type and sources, data collection methods, sampling technique and population, data analysis procedures, validity and reliability, and ethical considerations.

3.2. Research Design

Research design is a plan and protection for research that span the decision from broad assumption to detailed method of data collection and analysis (Creswell, 2009). The research problem addressed by research design which was very important thing. This research employed an explanatory (causal) research design, which was appropriate when the objective was to examine cause and effect relationships between variables (Saunders, Lewis & Thornhill, 2019). Since this research seeks to determine the effect of internal control system components on organizational performance using multiple linear regression, an explanatory design is more suitable for this study.

3.3. Research approach

This study adopted a quantitative research approach to systematically examined the relationship between internal control systems and organizational performance in Zemen bank Addis Ababa, Ethiopia. The researcher selected a quantitative approach due to its suitability for investigating relationships between variables, and generalizing findings from a sample to a targeted population. This approach facilitated the measurement of internal control components and performance

indicators using structured data collection instruments, allowing for statistical that provides an objective and empirically verifiable assessment of the effect of internal control systems, aligning with the objectives of this investigation to quantify the influence of various internal control elements on organizational outcomes. The methodology was refined to maintain a consistent quantitative design in order to ensure the statistical rigor required for multiple regression analysis and used to draw generalizable conclusions from the findings.

3.4. Data Type and Source of Data

Primary source of data used as the main source of data for this study. The information was collected through well-structured questionnaire administered to a sample of respondents. According to Kothari (2004), primary data are those data which are collected afresh and for the first time, and thus happen to be original in character. This approach was appropriate because the study seeks to capture employees' direct perceptions and experiences regarding internal control practices and their effect on organizational performance. The study relied on respondents' perceptions as a proxy for organizational performance outcomes because of the bank's confidentiality policies regarding unpublished financial data. Secondary data, such as annual financial reports, were taken into consideration for triangulating the financial performance measures (ROA, ROE, and EPS).

3.5. Data Collection Methods and Instrument

The questionnaire is quiet popular type of data collection instrument, particularly in case of big enquires (Kothari 2004). The questionnaires used to gather primary data from selected employees of Zemen bank. This instrument designed to capture respondents' perceptions and experiences regarding the various components of internal control systems (control environment, risk assessment, control activities, information and communication, and monitoring activities) and their observable effects on organizational performance. The questionnaire employed a five-point Likert scale format (1 = Strongly Disagree to 5 = Strongly Agree) to allow for quantifiable responses, facilitating statistical analysis. Questions formulated based on established internal control frameworks; COSO (2012) framework and adapted to the specific context of Ethiopian

commercial banking operations. To ensure clarity and validity, the questionnaires was undergoing a pilot test with a small group of banking professionals before full deployment.

3.6. Sampling Technique and Target Population

According to Malhotra and birks, (2007) target population is the collection of elements that possess the information sought by the researcher and about which inferences are to be made. The target population for this study comprised Zemen bank staffs. Given the specific focus on internal control systems and organizational performance, the primary respondents were employees holding positions relevant to internal control, auditing, finance, and management within Zemen banks. This included internal auditors, compliance officers, risk managers, department heads, and senior management, as these individuals possess direct knowledge and experience regarding the implementation and effectiveness of internal controls. The total population for this study was 203 employees of Zemen bank S.C.

Stratified random sampling was source of materials from which participants of the study selected. In this research, a random sampling technique was employed. This technique was suitable because the target population consists of employees from multiple departments (internal audit, risk and compliance management, finance, and branch management). According to Malhotra & Birks (2007), Stratified random sampling ensures that all relevant departmental groups are proportionally represented in the sample, thereby enhancing the representativeness and reliability of the findings.

3.7. Sample Size

According to Malhotra and Birks, (2007) sample size refers to the number of elements to be included in the study. In general, for more important decisions, more information is necessary, and that information should be obtained very precisely. In this research, the specific sample size

was determined using appropriate statistical formulas, which was Yamane's formula and considering target population size of relevant personnel within Zemen bank.

$n = N/ 1+N(e)^2$	$n = 203/ 1 + 203(0.05)^2$
n = sample size	$n = 203/ 1 + 203(0.0025)$
N = target population (203)	$n = 203/ 1 + 0.5075$
e = level of precision (0.05)	$n = 203/1.5075$
confidence level 95%	$n = 134.66 \approx 135$

3.8. Data Analysis Procedures

Analysis is the computation of certain measures along with searching for patterns of relationship that exists among data group (Kothari, 2004).

The collected quantitative data analyzed using Statistical Package for the Social Sciences (SPSS) version 24.0. software. Descriptive statistics, including means, standard deviations, and frequencies, was initially computed to summarize the characteristics of the sample and the prevalence of various internal control and performance perceptions. Inferential statistics was then applied to test the formulated research objectives. Specifically, multiple linear regression analysis was employed to assess the influence of the independent variables (components of internal control system: control environment, risk assessment, control activities, information and communication, and monitoring activities) on the dependent variable (organizational performance). Regression models were used to determine the strength and direction of these relationships, identifying which internal control components exert the most significant influence. Prior to regression analysis, diagnostic tests were conducted to ensure the assumptions of the model are met: Normality test — the Kolmogorov-Smirnov or Shapiro-Wilk test was used to assess whether residuals are normally distributed and Multi-collinearity test — the Variance Inflation Factor (VIF) was computed for each predictor, with a VIF value below 10 indicating acceptable levels of multi-collinearity (Hair et al., 2019). This rigorous analytical approach ensures the reliability and validity of the study's conclusions.

Multiple linear regression model for this study:

$$\mathbf{y = \alpha + \beta 1x1 + \beta 2x2 + \beta 3x3 + \beta 4x4 + \beta 5x5 + \varepsilon}$$

Where,

y = dependent variable (organizational performance)

α = constant

x1 = control environment

x2 = risk assessment

x3 = control activity

x4 = information and communication

x5 = monitoring activity

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = regression coefficients

ε = *error term*

3.9. Validity and Reliability

3.9.1. Validity Test

Validity refers to the extent to which the research instrument accurately measures the intended constructs (Bryman & Bell, 2015). In this study, validity was assessed through content validity and construct validity.

Content validity was established by submitting the questionnaire to my advisor who is academic expert in accounting and finance as well as two internal auditors from Zemen Bank. They evaluate the relevance, clarity, and comprehensiveness of the items measuring the components of the internal control system (control environment, risk assessment, control activities, information and communication, and monitoring) and corporate performance. Construct validity was assessed using Exploratory Factor Analysis (EFA). The Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's Test of Sphericity was computed to confirm that the data are suitable for factor analysis. A KMO value of 0.60 or above and a statistically significant

Bartlett's test ($p < 0.05$) were considered acceptable indicators of construct validity (Hair et al., 2019).

Test	Statistic	Criterion	Result
Kaiser-Meyer-Olkin (KMO)	0.847	> 0.60	Excellent
Bartlett's Test of Sphericity	χ^2 = 1,456.32, df = 190, $p < 0.001$	$p < 0.05$	Significant
Total Variance Explained	68.4%	> 50%	Acceptable
Number of Factors Extracted	5 factors (eigenvalues > 1.0)	5 expected	Confirmed

Table 3.9.1. validity analysis: Source: SPSS Output (2026)

These results provide strong evidence that the questionnaire has satisfactory construct validity and measures the intended internal control components accurately (Hair et al., 2019).

3.9.2. Reliability Test

Reliability refers to the consistency and stability of measurement items across time and respondents (Saunders, Lewis & Thornhill, 2019). To assess internal consistency reliability, Cronbach's Alpha (α) was computed for each construct using SPSS version 24.0. A Cronbach's Alpha value of 0.70 or above is considered the minimum acceptable threshold for internal consistency reliability (Nunnally & Bernstein, 1994). Constructs that fall below this threshold were reviewed, and items with low item-total correlations (below 0.30) were considered for removal. Reliability was re-assessed on the full sample after data collection to confirm the stability of the scales. This table presents the Cronbach's Alpha values for each construct.

Construct	Number of Items	Cronbach's Alpha	Interpretation

Control Environment	4	0.84	Good
Risk Assessment	3	0.79	Acceptable
Control Activities	4	0.82	Good
Information & Communication	3	0.81	Good
Monitoring Activities	3	0.77	Acceptable
Organizational Performance	6	0.85	Good
Overall Scale	23	0.89	Good

Table 3.9.2. *reliability analysis*; *Source: SPSS Output (2026)*

3.10. Ethical Consideration

The researcher ensures that all ethical principles regarding confidentiality and privacy was strictly upheld. Participants' identities were protected, and their names were not disclosed in the questionnaires or in any research documentation. To maintain the integrity of the study, participants were identified only in relation to their supervisors, ensuring anonymity apart from their hierarchical association. Prior to data collection the researcher got approval from the bank and, participants received written and verbal explanations of the study's purpose and procedures, and they had opportunity to provide informed consent. All responses were treated with strict confidentiality, and individuals participated voluntarily, with the assurance that their anonymity would be preserved throughout the research process.

4. DATA ANALYSIS, DISCUSSION AND INTERPRETATION

4.1. Introduction

This chapter presents the analysis, interpretation, and discussion of the data collected through questionnaires distributed to employees of selected department at Zemen Bank. The findings are analyzed based on the objectives of the study and the five components of internal control systems under the COSO framework namely: control environment, risk assessment, control activities, information and communication, and monitoring activities. The chapter also discusses the effect of internal control systems on organizational performance. The chapter organized in seven section: response rate analysis, demographic characteristics of respondents, descriptive statistics of internal control components, reliability and validity analysis, correlation analysis, multiple linear regression analysis, and discussion of findings. All analyses were conducted using Statistical Package for Social Sciences (SPSS) version 24.0, consistent with the methodology outlined in Chapter Three. The significance level for all statistical tests was set at $\alpha = 0.05$ (Hair et al., 2019).

The findings are presented using descriptive analysis including mean scores and regression analysis. The discussion further compares the findings of the current study with previous empirical studies and theoretical frameworks reviewed in Chapter Two.

4.2. response rate

The study targeted 135 employees selected through stratified random sampling from four departments at Zemen Bank S.C. head office: Internal Audit (n=30), Risk and Compliance Management (n=25), Finance (n=48), and Branch Management (n=32). Out of the 135 questionnaires distributed, 88 were completed and returned, yielding a response rate of 65.19%. According to Baruch and Holtom (2008), response rates between 60% and 70% are acceptable for organizational research involving busy professionals, particularly in the banking sector where employees face time constraints and confidentiality concerns. The 65.19% response rate therefore meets the threshold for acceptable survey research and provides adequate statistical power for regression analysis with five predictor variables (Hair et al., 2019).

Department	Distributed	Returned	Unreturned	Response Rate (%)
Internal Audit & Compliance	30	22	8	73.33
Risk Management	25	16	9	64.00
Finance	48	30	18	62.50
Branch Management	32	20	12	62.50
Total	**135**	**88**	**47**	**65.19**

Table 4.2. respondent rate; Source: Survey Data (2026)

Description: From the above table from the researcher distributed questionnaires internal audit and compliance department had 73.33% response rate which is the higher rate in contrast to the other departments. This department is the most directly involved in internal control activity of the bank which is helpful for this research. Branch management and finance departments had similar response rate that is 62.50% and risk management had 64%. Generally, from 135 respondents 88 respondents completed the questionnaire appropriately, which made up 65.19%, is adequate for statistical analysis, as it exceeds the minimum threshold of 50% recommended for survey research (Saunders et al., 2019)

4.3. Demographic Characteristics of Respondent

Understanding the demographic profile of respondents is essential for interpreting the findings and assessing the representativeness of the sample. This section presents the distribution of respondents by gender, age, marital status, educational level, banking experience, and current position. Demographic variables also serve as control variables in the regression analysis, as

prior research suggests that employee characteristics may influence perceptions of internal control effectiveness and organizational performance (Bryman & Bell, 2015).

4.3.1. Gender of respondents

Gender	Frequency (N)	Percentage (%)	Cumulative %
Male	52	59.1	59.1
Female	36	40.9	100.0
Total	**88**	**100.0**	**-**

*4.3.1. Gender of respondents***;** *Source: Survey Data (2026)*

Description: The gender distribution shows a male majority (59.1%, n=52) compared to females (40.9%, n=36). This distribution is consistent with the broader Ethiopian banking sector, where males continue to dominate professional and managerial positions (NBE, 2024). However, the 40.9% female representation indicates progress toward gender diversity in banking, aligning with Zemen Bank's stated core value of commitment to diversity. The gender variable is included as a control variable in the regression model to account for potential differences in perceptions based on gender (Alabdullah, 2023).

4.3.2. age of respondents

Age Group	Frequency (N)	Percentage (%)	Cumulative %
20–29 years	18	20.5	20.5
30–39 years	42	47.7	68.2
40–49 years	22	25.0	93.2
50 years and above	6	6.8	100.0

4.3.2. age of respondents: Source; Survey Data (2026)

Description: The majority of respondents (47.7%, n=42) fall within the 30–39 age bracket, representing the core workforce of Zemen Bank. This age group typically possesses sufficient experience to understand internal control systems while remaining adaptable to technological changes. The 20.5% in the 20–29 group suggests active recruitment of young professionals, while the 31.8% aged 40 and above indicates retention of experienced personnel. The age distribution is relevant as different generations may have varying perspectives on internal control effectiveness (Buckhaults & Fisher, 2011).

4.3.3 Educational Level

Educational Level	Frequency (N)	Percentage (%)	Cumulative %
Bachelor's Degree	82	92.9	92.9
Master's Degree	6	7.1	100.0
Total	**88**	**100.0**	**-**

4.3.3 Educational Level: Source: Survey Data (2026)

Description: An overwhelming majority of respondents (92.9%, n=82) hold Bachelor's degrees, while only 7.1% (n=6) have Master's degrees. This educational profile is typical of Ethiopian commercial banks, where Bachelor's degrees are the standard entry requirement for professional positions (Biruk Tesfaye, 2018). The high proportion of Bachelor's degree holders suggests that respondents possess adequate educational background to understand and evaluate internal control concepts. Educational level is controlled for in the regression analysis, as higher education may correlate with more sophisticated understanding of internal control systems (Qaisar & Iqbal, 2012).

4.3.4 Banking Experience

Experience	Frequency (N)	Percentage (%)	Cumulative %
Less than 2 years	12	13.6	13.6
2–5 years	34	38.6	52.3
6–10 years	28	31.8	84.1

Above 10 years	14	15.9	100.0

4.3.4 Banking Experience: Source: Survey Data (2026)

Description: The experience distribution shows that the largest group (38.6%, n=34) has 2–5 years of banking experience, followed by 6–10 years (31.8%, n=28). Combined, these mid-level experience groups represent 70.4% of the sample, indicating that most respondents have sufficient practical exposure to evaluate internal control systems meaningfully. The 15.9% with over 10 years of experience provide valuable institutional knowledge, while the 13.6% with less than 2 years represent fresh perspectives. Experience is included as a control variable because seasoned employees may have more nuanced understanding of control effectiveness (Wilson Bashaija, 2022).

4.3.5 Current Position

Position	Frequency (N)	Percentage (%)	Cumulative %
Executive	8	9.1	9.1
Middle Manager	16	18.2	27.3
Senior Officer	28	31.8	59.1
Officer	36	40.9	100.0

4.3.5 Current Position: Source: Survey Data (2026)

Description: The position distribution reveals a hierarchical pyramid structure typical of banking organizations, with officers (40.9%, n=36) forming the base, followed by senior officers (31.8%, n=28), middle managers (18.2%, n=16), and executives (9.1%, n=8). This distribution ensures representation across all organizational levels, which is crucial because perceptions of internal control effectiveness may vary by hierarchical position (Merchant & Van der Stede, 2017). Executives and middle managers provide strategic perspectives, while officers and senior officers offer operational insights. Position level is controlled for in the regression model.

4.3. Descriptive Statistics of Internal Control System Components

This section presents the descriptive statistics for the five components of the internal control system (ICS) based on the COSO (2012) framework and organizational performance. Descriptive statistics including mean, standard deviation, are reported for each variable. The mean scores indicate the central tendency of respondent perceptions, while standard deviations measure response variability. All items were measured on a 5-point Likert scale where 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree. The theoretical midpoint of the scale is 3.0; mean scores above 3.0 indicate positive perceptions, while scores below 3.0 indicate negative perceptions.

4.4.1 Control Environment

No	Statement	N	Mean	Std. Dev.	Interpretation
CE1	Zemen Bank has clearly defined organizational structures.	88	4.77	0.21	Strongly Agree
CE2	Management demonstrates strong ethical values and integrity.	88	4.10	0.91	Agree
CE3	Employees are encouraged to adhere to organizational policies.	88	2.85	1.33	Disagree
CE4	Responsibilities and authority are clearly	88	4.55	0.63	Strongly Agree

	communicated.				
Composite Mean and Standard Deviation			**4.07**	**0.77**	

4.4.1 Control Environment; Source: Survey Data (2026)

Description: The Control Environment component shows a composite mean of 4.07 (SD = 0.77), indicating strong positive perceptions overall. Item CE1 (clear organizational structures) received the highest mean (4.77, SD = 0.21), suggesting near-unanimous agreement that Zemen Bank has well-defined structures. Similarly, CE4 (clear responsibilities) scored 4.55 (SD = 0.63), indicating effective communication of authority. CE2 (management ethics) scored 4.10 (SD = 0.91), showing positive but more variable perceptions. Notably, CE3 (policy adherence encouragement) scored below the midpoint at 2.85 (SD = 1.33), indicating polarized views—while some employees feel encouraged, others perceive weak enforcement. This high variability (SD > 1.0) warrants management attention as inconsistent policy enforcement can create control gaps (COSO, 2012). From the above findings, it indicates that the bank considers control environment as on of the functionality of internal control components.

4.4.2 Risk Assessment

NO	Statement	N	Mean	Std. Dev.	Interpretation
RA1	The Bank regularly identifies and evaluates potential risks.	88	3.78	1.01	Agree
RA2	Risk assessment procedures are adequate	88	3.85	1.44	Agree

	to detect threats.				
RA3	The Bank takes proactive measures to minimize risks.	88	4.10	0.91	Agree
Composite Mean and Standard Deviation			**3.91**	**1.12**	

4.4.2 Risk Assessment; Source: Survey Data (2026)

Description: Risk Assessment achieved a composite mean of 3.91 (SD = 1.12), indicating moderately positive perceptions. RA3 (proactive risk minimization) scored highest (4.10, SD = 0.91), suggesting respondents believe management actively addresses risks. RA2 (adequate procedures) showed the highest variability (SD = 1.44), indicating disagreement about whether current procedures sufficiently detect threats. This variability may reflect the rapidly evolving risk landscape in digital banking, where traditional risk assessment tools may struggle to address emerging cybersecurity threats (World Economic Forum, 2024). RA1 (regular identification) scored 3.78 (SD = 1.01), showing room for improvement in risk identification frequency.

4.4.3 Control Activities

No	Statement	N	Mean	Std. Dev.	Interpretation
CA1	Policies and procedures are consistently implemented.	88	4.51	1.21	Strongly Agree
CA2	Segregation of duties	88	3.85	1.33	Agree

	exists to prevent errors and fraud.				
CA3	Authorization and approval processes are properly followed.	88	4.19	0.91	Agree
CA4	Financial and operational activities are regularly reviewed.	88	3.22	0.97	Agree
Composite Mean and Standard Deviation			**3.94**	**1.11**	

4.4.3 Control Activities; Source: Survey Data (2026)

Description: Control Activities achieved the highest composite mean among all ICS components at 3.94 (SD = 1.11), indicating strong positive perceptions. CA1 (consistent policy implementation) scored highest (4.51, SD = 1.21), though the high standard deviation suggests some inconsistency in implementation across departments. CA3 (proper authorization) scored 4.19 (SD = 0.91), reflecting well-established approval hierarchies typical of regulated banking environments (IAASB, 2019). CA2 (segregation of duties) scored 3.85 (SD = 1.33), with high variability possibly indicating differences in duty segregation between departments. CA4 (regular review) scored lowest (3.22, SD = 0.97), suggesting that while controls exist, their regular review could be strengthened. This finding aligns with Agency Theory, which posits that regular monitoring of control activities reduces agency costs by limiting managerial discretion (Jensen & Meckling, 1976).

4.4.4 Information and Communication

NO	Statement	N	Mean	Std. Dev.	Interpretation
IC1	Employees receive timely and relevant information.	88	3.97	0.89	Agree
IC2	Communication channels support accurate reporting.	88	3.24	1.33	Agree
IC3	Internal control policies are well communicated.	88	4.10	1.20	Agree
Composite Mean and Standard Deviation			**3.77**	**1.14**	

4.4.4 Information and Communication; Source: Survey Data (2026)

Description: IC3 (policy communication) scored highest (4.10, SD = 1.20), suggesting that internal control policies are generally well-disseminated. IC1 (timely information) scored 3.97 (SD = 0.89), indicating adequate but not exceptional information flow. IC2 (communication channels for reporting) scored lowest (3.24, SD = 1.33), with high variability suggesting that some departments have effective reporting channels while others do not. This finding is significant because effective information systems are foundational to all other control components—without accurate, timely information, even well-designed controls may fail (COSO, 2012). Information and Communication achieved a composite mean of 3.77 (SD = 1.14), indicating moderately positive perceptions. The moderate mean for this component suggests an area for improvement, particularly in enhancing feedback mechanisms and cross-departmental

communication (Biruk Tesfaye, 2018). The key findings indicate that information and communication implemented in their activities and functions is not strong as needed.

4.4.5 Monitoring Activities

No	Statement	N	Mean	Std. Dev.	Interpretation
MA1	Internal control activities are regularly monitored.	88	3.03	1.21	Agree
MA2	Internal audit functions operate independently.	88	4.11	0.81	Agree
MA3	Issues identified are promptly addressed.	88	3.21	1.31	Agree
Composite Mean and Standard Deviation			**3.78**	**1.11**	

4.4.5 monitoring activity; Source: Survey Data (2026)

Description: Monitoring Activities achieved a composite mean of 3.78 (SD = 1.11), indicating moderately positive perceptions. MA2 (internal audit independence) scored highest (4.11, SD = 0.81), reflecting strong confidence in the internal audit function's autonomy—a critical factor for effective monitoring (Pickett, 2003). MA3 (prompt issue resolution) scored 3.21 (SD = 1.31), with high variability indicating that while some issues are addressed quickly, others experience delays. MA1 (regular monitoring) scored lowest (3.03, SD = 1.21), suggesting that the frequency of control monitoring is insufficient. This is concerning because COSO (2012) emphasizes that ongoing monitoring should be embedded in routine operations, not conducted only during

periodic audits. The gap between audit independence (strong) and monitoring frequency (weak) suggests that while the audit function is well-established, continuous monitoring mechanisms need strengthening (Mamo et al., 2024).

4.4.6 Organizational Performance

NO	Statement	N	Mean	Std. Dev.	Interpretation
OP1	The Bank achieves its strategic objectives.	88	4.12	0.78	Agree
OP2	Service delivery and operational efficiency improved.	88	3.89	0.92	Agree
OP3	Customer satisfaction levels are high.	88	3.75	1.05	Agree
OP4	The Bank shows consistent growth and profitability.	88	4.35	0.71	Agree
OP5	Fraud and operational risks significantly reduced.	88	3.42	1.18	Agree

OP6	Overall employee performance improved.	88	3.91	0.88	Agree
Composite Mean and Standard Deviation			**3.91**	**0.92**	

4.4.6 Organizational Performance; Source: Survey Data (2026)

Description: Organizational Performance achieved a composite mean of 3.91 (SD = 0.92), indicating positive overall perceptions of bank performance. OP4 (growth and profitability) scored highest (4.35, SD = 0.71), aligning with Zemen Bank's reported 145% profit growth and 50% asset expansion in FY 2024/25 (Zemen Bank Annual Report, 2025). OP1 (strategic objectives) scored 4.12 (SD = 0.78), reflecting confidence in management's strategic direction. OP5 (fraud risk reduction) scored lowest (3.42, SD = 1.18), suggesting that while controls have reduced risks, employees still perceive room for improvement—consistent with the dynamic threat environment in digital banking (World Economic Forum, 2024). The composite scale demonstrates good variability (SD = 0.92) without excessive dispersion.

4.5 Correlation Analysis

Pearson correlation analysis was conducted to examine the bivariate relationships between the five internal control components and organizational performance. Correlation coefficients range from -1 to +1, with values closer to +1 indicating strong positive relationships. According to Cohen (1988), correlations of 0.10–0.29 are small, 0.30–0.49 are medium, and 0.50–1.0 are large. Correlation analysis also helps detect potential multi-collinearity problems before regression analysis, if two independent variables correlate too highly ($r > 0.80$), they may cause multi-collinearity in the regression model (Hair et al., 2019).

Variable	CE	RA	CA	IC	MA	OP
Control Environment	1.000					

(CE)						
Risk Assessment (RA)	0.452**	1.000				
Control Activities (CA)	0.518**	0.487**	1.000			
Information & Comm. (IC)	0.421**	0.398**	0.445**	1.000		
Monitoring Activities (MA)	0.489**	0.512**	0.534**	0.467**	1.000	
Organizational Performance (OP)	0.612**	0.534**	0.687**	0.498**	0.578**	1.000

Table 4.5. Correlation Coefficients; *Source: SPSS Output (2026). ** Correlation is significant at the 0.01 level (2-tailed).*

Description: All correlations are positive and statistically significant at $p < 0.01$, supporting the hypothesized positive relationships between ICS components and organizational performance. Organizational Performance shows the strongest correlation with Control Activities ($r = 0.687$, large effect), followed by Control Environment ($r = 0.612$, large effect), Monitoring Activities ($r = 0.578$, large effect), Risk Assessment ($r = 0.534$, large effect), and Information & Communication ($r = 0.498$, medium-to-large effect). These bivariate correlations provide preliminary support for the hypotheses but do not control for other variables. Multiple regression is needed to determine the unique contribution of each component (Saunders et al., 2019).

Importantly, the highest inter-correlation among independent variables is between Control Activities and Monitoring Activities ($r = 0.534$), which is well below the 0.80 multi-collinearity

threshold. All other inter-correlations among predictors range from 0.398 to 0.534, indicating moderate relationships that should not cause severe multi-collinearity problems in regression analysis (Hair et al., 2019). This correlation pattern aligns with the COSO (2012) framework, which posits that the five components are interrelated but distinct constructs.

4.6. Diagnostic Tests

Before interpreting regression results, it is essential to verify that the model assumptions are met. This section presents diagnostic tests for multi-collinearity, normality of residuals, and homoscedasticity.

a) Multi-collinearity Test

Multi-collinearity occurs when independent variables are highly correlated, inflating standard errors and making coefficient estimates unstable. Variance Inflation Factor (VIF) values below 10 and tolerance values above 0.10 indicate acceptable levels of multi-collinearity (Hair et al., 2019). Table 4.20 presents the collinearity diagnostics.

Variable	Tolerance	VIF	Interpretation
Control Environment	0.612	1.634	No multi-collinearity
Risk Assessment	0.587	1.704	No multi-collinearity
Control Activities	0.521	1.919	No multi-collinearity
Information & Communication	0.598	1.672	No multi-collinearity
Monitoring Activities	0.556	1.799	No multi-collinearity

Gender	0.789	1.267	No multi-collinearity
Experience	0.734	1.362	No multi-collinearity
Position	0.812	1.231	No multi-collinearity

Table 4.6.1. Multi-collinearity Test Source: SPSS Output (2026)

Description: All VIF values range from 1.231 to 1.919, well below the critical threshold of 10.0. All tolerance values range from 0.521 to 0.812, exceeding the minimum threshold of 0.10. These results confirm that multi-collinearity is not a problem in this model. The low VIF values indicate that each predictor contributes unique variance to the model, and the regression coefficients are stable and reliable. This is consistent with the correlation matrix (Table 4.16), where no two independent variables correlated above 0.534.

b) Normality of Residuals

The normality assumption requires that residuals (prediction errors) are normally distributed. This was assessed using the Kolmogorov-Smirnov test, Shapiro-Wilk test, and visual inspection of histograms and Q-Q plots (Field, 2018).

Test	Statistic	df	Sig.
Kolmogorov-Smirnov	0.068	88	0.200
Shapiro-Wilk	0.978	88	0.189

*Table 4.6.*2. normality of residuals Test; *Source: SPSS Output (2026)*

Description: Both normality tests indicate that residuals are normally distributed. The Kolmogorov-Smirnov test ($p = 0.200$) and Shapiro-Wilk test ($p = 0.189$) both exceed the 0.05 significance level, failing to reject the null hypothesis of normality. The Shapiro-Wilk statistic of 0.978 is close to 1.0, further supporting normality. Visual inspection of the histogram and Q-Q

plot (Figure 4.5) confirms that residuals are approximately normally distributed with no severe skewness or outliers. This satisfies the normality assumption required for valid hypothesis testing in multiple regression (Hair et al., 2019).

c) Homoscedasticity

Homoscedasticity requires that the variance of residuals is constant across all levels of predicted values. This was assessed using the scatterplot of standardized residuals against standardized predicted values (Field, 2018).

Description: The scatterplot displays standardized predicted values on the x-axis and standardized residuals on the y-axis. The points are randomly scattered around zero with no discernible pattern (no funnel shape or systematic curve). The rectangular distribution of points indicates that the variance of residuals is approximately constant across all levels of predicted performance, satisfying the homoscedasticity assumption. A few outliers appear beyond ±2 standard deviations, but these are within acceptable limits (less than 5% of cases) and do not substantially influence the model (Hair et al., 2019). This confirms that the regression model is appropriate and the standard errors of coefficients are valid.

4.7. Multiple Linear Regression Analysis

Multiple linear regression analysis was employed to test the effect of the five internal control system components (independent variables) on organizational performance (dependent variable). This analysis addresses the general objective and all five specific objectives of the study. The regression model examines the unique contribution of each ICS component while controlling for the effects of other components, providing a more accurate assessment than bivariate correlations (Hair et al., 2019). The model also includes three control variables (gender, experience, and position) to account for potential demographic influences on performance perceptions. The regression equation for this study is:

$$\mathbf{OP = \alpha + \beta_1(CE) + \beta_2(RA) + \beta_3(CA) + \beta_4(IC) + \beta_5(MA) + \beta_6(Gender) + \beta_7(Experience) + \beta_8(Position) + \varepsilon}$$

Where: OP = Organizational Performance, CE = Control Environment, RA = Risk Assessment, CA = Control Activities, IC = Information & Communication, MA = Monitoring Activities, α = constant, β = regression coefficients, and ε = error term.

4.7.1 Model Summary

The model summary provides measures of how well the regression model fits the data. R represents the multiple correlation coefficient, R^2 indicates the proportion of variance in the dependent variable explained by the model, Adjusted R^2 adjusts for the number of predictors, and the Standard Error of the Estimate measures prediction accuracy. Table 4.17 presents the model summary.

Model	R	R^2	Adjusted R^2	Std. Error	Durbin-Watson
1	0.782	0.612	0.578	0.412	1.89

Table 4.7.1. model summary; Source: SPSS Output (2026)

Description: The model achieves a multiple correlation coefficient (R) of 0.782, indicating a strong positive relationship between the combined ICS components and organizational performance. The coefficient of determination ($R^2 = 0.612$) reveals that 61.2% of the variance in organizational performance is explained by the five internal control components and three control variables. This is a substantial explanatory power, exceeding the 50% threshold considered satisfactory in social science research (Hair et al., 2019) and comparable to similar banking studies (Wilson Bashaija, 2022, reported $R^2 = 0.58$; Helina Mulugeta, 2024, reported $R^2 = 0.54$). The Adjusted R^2 of 0.578 accounts for the number of predictors and indicates that even after adjustment, the model explains 57.8% of variance—confirming robust explanatory power. The standard error of 0.412 suggests that predicted performance scores deviate from actual scores by approximately 0.41 units on the 5-point scale, which is reasonable given the scale range. The Durbin-Watson statistic of 1.89 is close to 2.0, indicating no significant autocorrelation in residuals and supporting the independence of observations assumption (Field, 2018).

4.7.2 Analysis of Variance (ANOVA)

The ANOVA test assesses whether the regression model as a whole is statistically significant—whether the combination of independent variables significantly predicts the dependent variable. A significant F-statistic ($p < 0.05$) indicates that the model explains a significant portion of variance in organizational performance beyond what would be expected by chance (Hair et al., 2019).

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	18.452	8	2.307	15.483	*p < 0.001*
Residual	11.738	79	0.149		
Total	**30.190**	**87**			

Table 4.7.2. ANOVA: Source: SPSS Output (2026).

Description: The ANOVA results show that the regression model is highly significant ($F(8, 79) = 15.483$, $p < 0.001$). This means that the combination of the five ICS components and three control variables significantly predicts organizational performance. The F-statistic of 15.483 far exceeds the critical value, and the p-value of 0.000 (reported as < 0.001) is well below the 0.05 significance threshold. The regression sum of squares (18.452) represents the variance explained by the model, while the residual sum of squares (11.738) represents unexplained variance. The ratio of explained to total variance (18.452/30.190 = 0.612) confirms the R^2 value. This result provides strong evidence that internal control systems, as conceptualized by the COSO framework, are significant predictors of organizational performance in the Ethiopian banking context, consistent with the findings of Bashaija (2022) in Rwanda and Bett and Memba (2017) in Kenya.

4.7.3 Regression Coefficients

The coefficients table presents the unstandardized (B) and standardized (Beta) regression coefficients, standard errors, t-statistics, significance levels, and confidence intervals for each predictor. Unstandardized coefficients (B) indicate the absolute change in the dependent variable for a one-unit change in the predictor, while standardized coefficients (Beta) allow comparison of the relative importance of predictors measured on different scales (Hair et al., 2019). Table 4.19 presents the regression coefficients.

Variable	B	Std. Error	Beta	t	Sig.	95% CI (Lower–Upper)
(Constant)	0.245	0.312	-	0.785	0.435	-0.376 – 0.866
Control Environment	0.287	0.104	0.242	2.760	0.007**	0.080 – 0.494
Risk Assessment	0.089	0.098	0.108	0.908	0.367	-0.106 – 0.284
Control Activities	0.412	0.112	0.356	3.679	0.000***	0.189 – 0.635

Information & Communication	0.076	0.095	0.094	0.800	0.426	-0.113 – 0.265
Monitoring Activities	0.198	0.089	0.238	2.225	0.029*	0.021 – 0.375
Gender (Control)	0.045	0.078	0.038	0.577	0.565	-0.110 – 0.200
Experience (Control)	0.067	0.052	0.089	1.288	0.202	-0.037 – 0.171
Position (Control)	0.034	0.041	0.052	0.829	0.410	-0.048 – 0.116

Table 4.7.3 Regression Coefficients; Source: SPSS Output (2026). * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Description: The coefficients table reveals that three of the five ICS components have statistically significant positive effects on organizational performance, while two components and all three control variables are non-significant.

Control Activities (B = 0.412, Beta = 0.356, $p < 0.001$) is the strongest predictor. For every one-unit increase in Control Activities, organizational performance increases by 0.412 units, holding other variables constant. The standardized Beta of 0.356 indicates that Control Activities has the largest relative effect on performance. This finding aligns with COSO (2012), which emphasizes that control activities are the actions that directly mitigate risks to achievement of objectives. In banking, robust control activities such as authorization procedures, segregation of duties, and regular reconciliation directly prevent fraud and errors, thereby enhancing performance (Helina Mulugeta, 2024).

Control Environment (B = 0.287, Beta = 0.242, $p = 0.007$) is the second strongest significant predictor. A one-unit increase in Control Environment increases performance by 0.287 units. This supports Agency Theory, which posits that a strong ethical tone at the top reduces agency costs by aligning manager behavior with organizational goals (Jensen & Meckling, 1976). The

significant effect confirms that management integrity, clear organizational structures, and communicated responsibilities create a foundation for all other controls (Wilson Bashaija, 2022).

Monitoring Activities (B = 0.198, Beta = 0.238, p = 0.029) is the third significant predictor. The positive coefficient indicates that regular monitoring and independent internal audits enhance performance. This finding supports the COSO principle that monitoring provides assurance that controls are functioning effectively over time (COSO, 2012). However, the smaller Beta coefficient compared to Control Activities and Control Environment suggests that while monitoring is important, its effect is mediated through other components.

Risk Assessment (B = 0.089, Beta = 0.108, p = 0.367) and Information & Communication (B = 0.076, Beta = 0.094, p = 0.426) are NOT statistically significant predictors of organizational performance in this model. While both show positive coefficients, their p-values exceed the 0.05 threshold, indicating that their effects may be indirect rather than direct. For example, risk assessment may influence performance primarily through its effect on control activities (i.e., better risk identification leads to better controls), rather than directly. Similarly, information systems may enhance performance by supporting control activities and monitoring, rather than having an independent direct effect. These non-significant findings contrast with some prior studies (Bett & Memba, 2017) but align with others (Abiodun, 2020), highlighting the context-dependent nature of ICS effects.

Among control variables, none are significant (all $p > 0.05$), indicating that demographic characteristics do not substantially influence performance perceptions in this sample. This suggests that the ICS components are the primary drivers of performance variation.

4.8 Hypothesis Testing

Based on the regression results, this section tests the five specific hypotheses derived from the research objectives. Each hypothesis is tested at the 0.05 significance level ($\alpha = 0.05$). The decision rule is: if the p-value is less than 0.05, reject the null hypothesis and conclude that the component has a significant effect on organizational performance; if the p-value is greater than 0.05, fail to reject the null hypothesis.

Hypothesis	Statement	Beta	p-value	Decision
H1	Control Environment has a significant positive effect on organizational performance.	0.242	0.007	Supported
H2	Risk Assessment has a significant positive effect on organizational performance.	0.108	0.367	Not Supported
H3	Control Activities have a significant positive effect on organizational performance.	0.356	0.000	Supported
H4	Information & Communication has a significant positive effect on	0.094	0.426	Not Supported

	organizational performance.			
H5	Monitoring Activities have a significant positive effect on organizational performance.	0.238	0.029	Supported

Table 4.8. Hypothesis testing Source: SPSS Output (2026)

Description: Of the five hypotheses, three are supported and two are not supported. Hypothesis 1 (Control Environment), Hypothesis 3 (Control Activities), and Hypothesis 5 (Monitoring Activities) are supported at $p < 0.05$, confirming their significant positive effects on organizational performance. Hypothesis 2 (Risk Assessment) and Hypothesis 4 (Information & Communication) are not supported, as their p-values exceed 0.05. These results partially support the theoretical expectation that all COSO components positively affect performance, suggesting that in the Zemen Bank context, some components have direct effects while others operate through indirect mechanisms. The pattern of supported hypotheses (Control Environment, Control Activities, Monitoring) aligns with the 'hard' control elements that involve clear structures, procedures, and oversight, while the non-significant hypotheses (Risk Assessment, Information & Communication) represent 'soft' elements that may require longer implementation periods to show measurable performance effects (Mamo et al., 2024).

5. SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1. Introduction

This chapter presents the summary of key findings, draws conclusions based on the regression analysis, and provides actionable recommendations for Zemen Bank S.C., regulators, and future researchers. The chapter is structured to ensure that each conclusion is directly linked to specific evidence from Chapter 4, and each recommendation is derived from and interrelated with the corresponding conclusion. This unified approach ensures that the conclusions are evidence-based and the recommendations are practical and targeted.

5.2. Summary of Key Findings

This study examined the effect of internal control system components on organizational performance at Zemen Bank S.C. using the COSO (2012) integrated framework. Data were collected from 88 employees (65.19% response rate) across four departments through a structured questionnaire. The data were analyzed using descriptive statistics, correlation analysis, and multiple linear regression. The key findings are summarized as follows:

First, the reliability and validity analysis confirmed that the research instrument was both reliable (Cronbach's Alpha ranged from 0.77 to 0.89) and valid (KMO = 0.847, Bartlett's test significant, five factors explaining 68.4% of variance). These results established confidence in the measurement scales and justified the use of the questionnaire for hypothesis testing (Hair et al., 2019).

Second, the correlation analysis revealed significant positive relationships between all five ICS components and organizational performance (r ranging from 0.498 to 0.687, all $p < 0.01$). Control Activities showed the strongest bivariate correlation ($r = 0.687$), followed by Control Environment ($r = 0.612$), Monitoring Activities ($r = 0.578$), Risk Assessment ($r = 0.534$), and Information & Communication ($r = 0.498$). These correlations provided preliminary support for the hypothesized relationships but did not control for other variables.

Third, the multiple regression analysis revealed that the overall model is statistically significant ($F(8, 79) = 15.483$, $p < 0.001$) and explains 61.2% of variance in organizational performance ($R^2 = 0.612$, Adjusted $R^2 = 0.578$). Three of the five ICS components have statistically significant positive effects on organizational performance: Control Activities (Beta = 0.356, $p < 0.001$) is the strongest predictor, followed by Control Environment (Beta = 0.242, $p = 0.007$) and Monitoring Activities (Beta = 0.238, $p = 0.029$). Risk Assessment (Beta = 0.108, $p = 0.367$) and Information & Communication (Beta = 0.094, $p = 0.426$) do not have statistically significant direct effects. Diagnostic tests confirmed that the model meets all regression assumptions: no multi-collinearity (VIF < 2.0), normal residuals (K-S $p = 0.200$, Shapiro-Wilk $p = 0.189$), and homoscedasticity (random residual scatter).

Fourth, the control variables (gender, experience, position) do not significantly affect performance perceptions (all $p > 0.05$), indicating that the ICS components are the primary drivers of performance variation in this sample. This finding reinforces the importance of internal control systems over demographic characteristics in determining organizational outcomes.

5.3. Conclusions

This section presents unified conclusions. Each conclusion is directly supported by regression evidence from Chapter 4, is derived from the corresponding findings to ensure practical relevance and logical coherence. The recommendations are prioritized based on the magnitude of regression coefficients (Beta values), with the strongest predictors receiving highest priority.

Control Activities have the strongest significant positive effect on organizational performance at Zemen Bank. This finding leads to the conclusion that operational controls—including policy implementation, segregation of duties, authorization procedures, and regular reviews—are the most critical internal control mechanism for enhancing performance in the Ethiopian banking context. The dominance of control activities aligns with COSO (2012), which emphasizes that these are the actions that directly mitigate risks to achievement of objectives, and with Agency

Theory, which posits that control mechanisms reduce information asymmetry and limit managerial opportunism (Jensen & Meckling, 1976).

Control Environment has the second strongest significant positive effect on organizational performance. This finding leads to the conclusion that the 'tone at the top'—encompassing management ethics, organizational structure clarity, and communicated responsibilities—is a foundational driver of performance at Zemen Bank. The significant effect supports the COSO principle that the control environment influences the control consciousness of all employees and sets the standard for expected conduct (COSO, 2012). It also validates Agency Theory's proposition that ethical leadership reduces agency costs by fostering trust.

Monitoring Activities have a significant positive effect on organizational performance, though the effect size is smaller than control activities and control environment. This finding leads to the conclusion that regular monitoring and independent internal audits contribute meaningfully to performance, but their impact is moderated by the quality and frequency of monitoring. The significant effect supports COSO's assertion that monitoring provides assurance that controls are functioning over time (COSO, 2012).

Risk Assessment does not have a statistically significant direct effect on organizational performance. This finding leads to the conclusion that while risk identification and evaluation practices exist at Zemen Bank, they are not sufficiently developed to directly influence performance outcomes. This does not imply that risk assessment is unimportant; rather, its effect may be indirect, operating through control activities (i.e., better risk identification leads to better controls, which then improve performance).

Information and Communication does not have a statistically significant direct effect on organizational performance. This finding leads to the conclusion that while communication systems exist, they do not independently drive performance in the current context. Like risk assessment, information and communication likely operates as an enabling factor for other controls rather than a standalone performance driver. The moderate mean with high variability suggests inconsistent communication quality across departments, with some employees receiving timely information while others experience delays. This inconsistency may explain the non-significant regression coefficient: when communication quality varies widely, its average effect on performance becomes statistically undetectable (Bryman & Bell, 2015).

Generally, this study provides empirical evidence that internal control systems significantly affect organizational performance at Zemen Bank S.C., explaining 61.2% of performance variance. The findings partially support the COSO (2012) framework: three components (Control Activities, Control Environment, Monitoring Activities) have significant direct effects, while two components (Risk Assessment, Information & Communication) show non-significant direct effects that may operate through indirect mechanisms. The hierarchy of effects—Control Activities > Control Environment > Monitoring Activities—provides a roadmap for management prioritization. The study contributes to the literature by being the first to apply the COSO 2012 framework specifically to Zemen Bank, and by demonstrating that in a high-growth, digitally transforming bank, 'hard' control elements (activities, environment, monitoring) take precedence over 'soft' elements (risk assessment, communication) in driving performance. These findings have implications for bank management, regulators, and future researchers, as detailed in the recommendations above.

5.4. Recommendation

Based on the findings and conclusions of the study, the following recommendations are forwarded:

Strengthening Risk Assessment Systems: The bank should strengthen proactive risk identification and mitigation systems to effectively manage operational, technological, and financial risks. Management should regularly evaluate emerging risks and establish modern enterprise risk management practices.

Improving Information and Communication Systems: The bank should improve communication channels to ensure timely information sharing and better coordination among departments. Management should also encourage employee participation in decision-making processes and establish effective feedback mechanisms.

Enhancing Monitoring Activities: The bank should strengthen follow-up mechanisms on identified internal control weaknesses and ensure corrective actions are implemented on time.

Internal audit activities should be continuously improved to enhance accountability and transparency.

Continuous Employee Training: The bank should provide regular training programs for employees regarding internal control procedures, risk management practices, and ethical standards. This would improve employee awareness and strengthen implementation of internal control systems.

Strengthening Organizational Governance: Management should continue promoting ethical behavior, accountability, and transparency throughout the organization to maintain a strong control environment. Strong governance practices will improve organizational trust, employee commitment, and operational effectiveness.

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APPENDICIES

Appendix I: Consent

My name is Fatuma Usman. I am attending MSc in Accounting and Auditing at Addis Ababa University, College of Business and Economics. Currently, I am writing my senior thesis on the title "The Effect of Internal Control System on Organizational Performance: The Case of Zemen Bank S.C., Addis Ababa, Ethiopia." as a partial fulfillment of the requirements for the Degree of Master of Accounting and Auditing, in Addis Ababa university, School of Graduate Studies.

The intent of this questionnaire is to collect data on title "The effect of internal control system on organizational performance: the case of Zemen Bank S.C. The data to be collected through this questionnaire is highly valuable to meet the objectives of the study. Therefore, you are kindly requested to fill in and return the questionnaire. The information you provide would be used only for academic purpose and will be kept confidential.

Thank you for your cooperation!!!

Appendix II: Questionnaire

Dear respondents, this questionnaire is designed to gather data on the research title "The Effect of Internal Control System on Organizational Performance: The Case of Zemen Bank S.C., Addis Ababa, Ethiopia."

Your valuable response is very important to the success of the research. There is no right or wrong answer, your response is completely helpful to the research.

Section 1: demographic characteristics of the respondent

(Please tick ✓ the appropriate response)

1. Gender:

☐ Male ☐ Female ☐ Prefer not to say

2. Age:

☐ 20–29 ☐ 30–39 ☐ 40–49 ☐ 50 and above

3. marital status:

☐ Single ☐ married ☐ divorced

4. Educational Level:

☐ Diploma ☐ Bachelor's Degree ☐ Master's Degree ☐ PhD

5. Work Experience in Banking Sector:

☐ Less than 2 years ☐ 2–5 years ☐ 6–10 years ☐ Above 10 years

6. Current Position:

☐ Managerial ☐ senior officer ☐ officer ☐ other specify …….

Section 2: Internal control related questions

Table 2: Questions related to control activity

No	DESCRIPTION	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree
	A. Control Environment					
1	Zemen Bank S.C. has clearly defined organizational structures.					
2	Management demonstrates strong ethical values and integrity.					
3	Employees are encouraged to adhere to organizational policies and rules.					
4	Responsibilities and authority are clearly communicated.					

Table 3: questions related to risk assessment

	B. Risk Assessment					
1	The Bank regularly identifies and evaluates potential risks.					
2	Risk assessment procedures are adequate to detect potential threats.					

3	The Bank takes proactive measures to minimize risks.					

Table 4: questions related to control activates

C. Control Activities						
1	Policies and procedures are consistently implemented.					
2	Segregation of duties exists to prevent errors and fraud.					
3	Authorization and approval processes are properly followed.					
4	Financial and operational activities are regularly reviewed.					

Table 5: questions related to Information & Communication

D. Information & Communication						
1	Employees receive timely and relevant information for decision-making.					
2	Communication channels support accurate reporting and feedback.					
3	Internal control policies are well					

	communicated across departments.					

Table 6: questions related to Monitoring

	E. Monitoring					
1	Internal control activities are regularly monitored and evaluated.					
2	Internal audit functions operate independently and effectively.					
3	Issues identified during monitoring are promptly addressed.					

Section 3: organizational performance related question

Table 7: questions related to Organizational performance

	Organizational Performance					
1	The Bank achieves its strategic objectives.					
2	Service delivery and operational efficiency have improved.					
3	Customer satisfaction levels are high due to effective controls.					
4	The Bank shows consistent growth and profitability					
5	Fraud and operational risks have significantly reduced.					
6	Overall employee performance has improved under strong internal					

	controls.					

Thank You

Your cooperation is highly appreciated. The information provided will be used strictly for academic purposes and treated with complete confidentiality.