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INTEGRATED APPROACH TO INTERNAL CONTROL MANAGEMENT: ACCOUNTING AND INFORMATION SYSTEM SECURITY

Authors: Confidence Adimchi Chinonyerem

AHMEED YUSUFF

Correspondents Email. Chinonyeremconfidence57@gmail.com

Ahmed Yusuff: ahmeedyusuff86@gmail.com

ABSTRACT:

In today's complex business environment, effective internal control management is crucial for ensuring the accuracy, reliability, and security of financial data and information systems. This paper presents an integrated approach to internal control management, focusing on the synergistic relationship between accounting and information system security. By adopting a holistic framework that combines best practices in internal controls, accounting standards, and information security protocols, organizations can mitigate risks, enhance governance, and optimize their financial management processes. This approach enables the identification and assessment of potential vulnerabilities, implementation of robust controls, and continuous monitoring of accounting and information systems. The result is a secure, efficient, and reliable financial management system that supports informed decision-making and sustains organizational growth. It is survey research. Data were collected from primary and secondary sources, including questionnaires, personal observations, textbooks, journals, and the Internet. A sample of 92 was collected by random sample method. Three hypotheses were formulated and tested using Z-test statistics, while questionnaires were analyzed using simple percentages. We discovered among other things that internal audit assists management in managerial decisions.

Keywords: internal control management, accounting, information system security, integrated approach, risk management, governance, risk management.

INTRODUCTION

Effective internal control management is crucial for ensuring the accuracy, reliability, and security of financial data and information systems (COSO, 2013). According to the Committee of Sponsoring Organizations of the Treadway Commission (COSO), internal controls are essential for mitigating risks, preventing fraud, and ensuring compliance with regulatory requirements (COSO, 2013). However, the rapidly evolving landscape of accounting and information systems poses significant challenges to internal control management (Weber, 2018)

An integrated approach to internal control management, combining accounting and information system security, is essential for addressing these challenges (Rezaee, 2017). This approach recognizes that accounting and information systems are interdependent and that effective internal controls must consider both aspects (Kumar, 2019).

This article presents a comprehensive framework for an integrated approach to internal control management, focusing on the synergistic relationship between accounting and information system security. By adopting this framework, organizations can enhance their internal control management, ensure the integrity of their financial data and information systems, and support informed decision-making.

Effective internal control management ensures accurate and reliable financial reporting, supporting informed decision-making. An integrated approach helps identify and mitigate risks, minimizing potential losses and reputational damage.

The study can inform organizations on how to meet regulatory requirements and industry standards for internal control management.

focusing on the integration of accounting and information system security, this study aims to provide a comprehensive understanding of internal control management and its impact on organizational performance. Developing a comprehensive framework for integrating accounting and information system security (Weber, 2018, p. 30).

Examining the components of internal control management, including control environment, risk assessment, control activities, information and communication, and monitoring. Analysing information system security measures, including access controls, data encryption, and network security. Exploring the integration of accounting and information system security measures to ensure a comprehensive internal control management system.

Literature Review

Internal control is defined as a process affected by an organization's structure, work, and authority flows, people, and management information systems, designed to help the organization accomplish specific goals or objectives

Internal control management is critical to organizational governance, ensuring the accuracy, reliability, and security of financial data and information systems. This literature review examines the current state of research on internal control management, focusing on the integration of accounting and information system security.

Definitions

There are many definitions of internal control, as it affects the various constituencies of an organization in multiple ways and at different levels of aggregation. Under the COSO Internal Control-Integrated Framework, a widely-used framework in the United States, internal control is broadly defined as a process, effected by an entity's board of directors, management, and other personnel, designed to provide reasonable assurance regarding the achievement of objectives in the following categories: a) Effectiveness and efficiency of operations; b) Reliability of financial reporting; and c) Compliance with laws and regulations. (Dr. Mir Mohammad Azad 2011)

Information system security is a standard security procedure with accounting systems is to back up data and save the backup in a safe place outside the premises. The point is that if something happens to the system, such as fires, floods, or other losses, data is safe and can be restored. A good security measure is to perform overnight backups as well as to restore backups once in a while to make sure the data is safe and usable. (sheila Shanker 2024).

Internal controls are more than just a compliance requirement. They are important mechanisms that uphold financial integrity, boost operational efficiency and foster a culture of accountability. They act as the framework for sound governance within any organization.

Organizations deploy various controls to safeguard financial data, and these controls fall into four key categories:

1. Directive
2. Preventative
3. Detective
4. Corrective

Each type plays a unique role in risk mitigation, ensuring the accuracy and reliability of financial statements.

Directive Controls in Financial Reporting

Directive controls in financial reporting establish the policies, procedures and guidelines that govern financial activities within an organization. This includes the formulation and communication of accounting policies, segregation of duties and the implementation of an internal control framework. By clearly outlining expectations and responsibilities, directive controls create a foundation for maintaining the integrity of financial information. Directive controls happen before information is input into the financial reporting system. In the simplest of terms, it is the process of letting your people know how to do their job and what is expected of them.

Preventative Controls in Financial Reporting

Preventative controls in the context of financial reporting focus on proactively reducing the risk of errors, fraud or misstatements in financial statements. These controls include measures such as access controls to financial systems, encryption of sensitive financial data and implementation of approvals and authorizations. By establishing barriers deterring unauthorized access and ensuring the accuracy and completeness of financial transactions, preventative controls contribute to the reliability of financial reporting. Similar to detective controls, preventative controls happen before the information is input into the financial reporting system.

Detective Controls in Financial Reporting

Detective controls are critical in identifying and detecting anomalies, errors or fraudulent activities in financial reporting. Examples include regular reconciliations, data analytics, exception reporting, physical asset counts, and benchmarking. These controls help organizations spot irregularities at an early stage, enabling timely investigation and correction of financial discrepancies. Detective controls are essential for maintaining the accuracy and reliability of financial statements by promptly identifying and addressing potential issues. Unlike directive and preventative controls, detective controls happen after the information is input into the financial reporting system.

Corrective Controls in Financial Reporting

Corrective controls come into play when errors or irregularities are identified in financial reporting. These controls focus on rectifying the issues, mitigating the impact on financial statements, and preventing their recurrence. Additional employee training, timely adjustments, and reassessment of duties of key personnel are examples of corrective controls. The goal is to address the root causes of discrepancies, restore accurate financial reporting and strengthen processes to prevent similar issues in the future. Similar to detective controls, corrective controls happen after the information is input into the financial reporting system. Steven Peiffer January (16, 2024)

Internal Audit Is an Internal Part of Internal Control.
The internal audit is a part of the internal control system and at the same time complements all the operation of the internal control systems. (Ms. Afshan Younas and Dr Aza Azlina Md Kassim2019) Thus, taking the various elements of control operation would be ineffective. To this end, it is worthwhile to define internal control itself.
Types of Internal Audit:
According to (Isaac Clarke 2022)
Compliance Audits evaluate compliance with applicable laws, regulations, policies, and procedures. Some of these regulations may have a significant impact on the company's financial well-being .
Environmental Audits assess the impact of a company's operations on the environment. They may also assess the company's compliance with environmental laws and regulations.
Internal Financial Audits may be performed to recalculate internal financial reporting related to the business overall, budgets, capital assets, or projects. These may also be performed to check the validity and accuracy of billing, expenditures, or expense reimbursements.
Information Technology Audits evaluate information systems and the underlying infrastructure to ensure the accuracy of their processing, the security and confidential customer information or intellectual property. They will typically include the assessment of general IT controls related to logical access, Change Management, system operations, and backup and recovery.
Operational Audits assess the organization's control mechanisms for their overall efficiency and reliability.
Performance Audits evaluate whether the organization is meeting the metrics set by management to achieve the goals and objectives set forth by the Board of Directors.
The risks and vulnerabilities of Accounting Information Systems may lead to material misstatements in financial reporting. Most times these risks harm the integrity, accuracy, reality, and availability of financial reports [2]; [3]; [4]. In this context, risk and AIS control approach is central to both financial and IT audit processes and IT governance processes within the organization.

Types Of Internal Control

COSO defines internal control as having five components: Control Environment-sets the tone for the organization, influencing the control consciousness of its people. It is the foundation for all other components of internal control. Risk Assessment-the identification and analysis of relevant risks to the achievement of objectives, forming a basis for how the risks should be managed. Information and Communication-systems or processes that support the identification, capture, and exchange of information in a form and time frame that enable people to carry out their responsibilities

Control Activities- the policies and procedures that help ensure management directives are carried out. Monitoring processes are used to assess the quality of internal control performance over time.

The COSO definition relates to the aggregate control system of the organization, which is composed of many individual control procedures.

1. There is a positive relationship between an integrated approach to internal control management and the effectiveness of accounting and information system security.

2. Organizations that adopt an integrated approach to internal control management experience fewer instances of financial data breaches and errors compared to those that do not.

3. An integrated approach to internal control management is associated with improved financial reporting quality and reduced risk of material weaknesses.

Financial management is the business function concerned with profitability, expenses, cash, and credit. These are often grouped under the rubric of maximizing the firm's value for stockholders. Finance management merges management and accounting, using the financial management cycle to create strategic plans for clients. Finance management is the strategic planning and managing of an individual or organization's finances to better align their financial status to their goals and objectives. Depending on the company's size, finance management seeks to optimize shareholder value, generate profit, mitigate risk, and safeguard the company's financial health in the short and long term. When working with individuals, finance management may entail planning for retirement, college savings, and other personal investments (Coursera Staff, 2023).

Belkaoui (2002:9) defines management accounting information system as " the set of humanand capital resources within an organization that is responsible for the productionand dissemination of information deemed relevant for internal decision making".
Thus, management accounting information system has a broad scope that allows managers to obtain information that is needed in economic decision making to success in long term (Hoque, 2003:6). Then, the quality of management accounting information system (MAIS) is a specification that can be used as a framework that is integrated within organization by utilizing the resources for providing relevant information to managers and employees in an organization, both financial and non-financial information, for decision making in achieving objectives particularly in organization (Napitupulu, 2015).

Accounting information system is an integrated framework in company that uses physicalresources to transform economic data into financial information, such as to operate and manage company's activities also to report achievements of the company to stakeholders (Wilkinson, 1989:4). Accounting information systems work to collect and process transaction data and then disseminate financial information to stakeholders (Kieso et al, 2011:88).
The accounting information system of an organization has two major subsystems: financial

accounting information system and management accounting information systems, in which the two sub-accounting systems are distinguished on the goal, the input nature and the process type which are used to transform inputs into outputs (Hansen & Mowen 2007:7; Susanto, 2013:84).

Information System Control

Control is a mechanism that is applied to protect company from risks and to minimize the risksimpact on the company if the risk occurs (McLeod & Schell, 2007:219).

Objective Of Accounting Information System

AIS aims to form a centralized system for all financial data of an organization. Large MNCs have operations throughout the world. So financial information is inserted into the AIS software by authorized personnel from everywhere. AIS helps to form a centralized location, which will give access to all information inserted from any part of the world to be in reach at a single point.

AIS helps in streamlining of work. There are several departments in an organization. There are sales, accounts receivable, accounts payable, purchases, etc. All these are being dealt by independent teams. AIS helps to pull a report of individual super-heads separately. So a sales team will only pull a report of the sales and check whether the balancing figure is tallying as per their records. So AIS objective is to help in auditing.

AIS plan to keep a proper channel of information. The origination of any financial information can be tracked in AIS. So it builds a trust of the stakeholders in an organization Madhuri Thakur (2023)

Research Questions:

1. What is the impact of an integrated approach to internal control management on the effectiveness of accounting and information system security?

2. How does an integrated approach to internal control management influence the occurrence of financial data breaches and errors?

3. Is there a significant difference in financial reporting quality and risk of material weaknesses between organizations that adopt an integrated approach to internal control management and those that do not?

4. What are the key factors that influence the effectiveness of an integrated approach to internal control management in accounting and information system security?

5. How can organizations optimize their internal control management to achieve better accounting and information system security outcomes?

METHODOLOGY

Before this task could be effectively performed, some investigations were carried out, data was carefully collected and analyzed. In particular, questionnaires and personal observation were used as instruments for the study; techniques were selected in the merit of each one and so combined to satisfy the desire of the researcher. The method used could be grouped into two.

Data Collection Method

Questionnaire: This project was permitted by the management of Nigerian Breweries Plc Aba Abia State to serve as a questionnaire in the internal audit

Journal And News Paper: the researcher also spent a lot of time reading some accountants and journals kept by the school library which helped the researcher in compiling the project work.

Research Population and Sample Size

Out of the population of 120 staff, the researcher judgmentally selected 92 staff members, as the target population. The population is involved directly in the decision-making process. The targeted population of the study comprises all staff of the department of non-alcoholic malt drinks, soft drinks, and Nigerian Breweries Plc in Aba Abia State.

Simple percentage frequency and regression co-efficient statistics were used to analyze the results. The expected result from respondents which stands at 100% is the independent variable upon which the actual result varies. To determine the sample size, the population size Yaro Yamani's formula is used:

the formula for determining sample size is:

n = (Z^2 × P × Q) / E^2

where:
n = sample size
Z = Z-score (e.g. 1.96 for 95% confidence level)
P = population proportion (e.g. 0.5 for 50%)
Q = 1 - P
E = margin of error (e.g. 0.05 for 5%)

Yamane's formula, which is:

n = N / (1 + N(e^2))

where:
n = sample size
N = population size (120 in this case)
e = margin of error (e.g. 0.05 for 5%)

Plugging in the values, we get:

n = 120 / (1 + 120(0.05^2))
n = 120 / (1 + 120(0.0025))
n = 120 / (1 + 0.3)
n = 120 / 1.3
n = 92.31

RESULT AND DISCUSSION

This study investigated the effectiveness of an integrated approach to internal control management, combining accounting and information system security. The results are based on a survey of 92 staff members and a case study of a large organization.

1. Improved risk management: 85% of respondents agreed that an integrated approach to internal control management improved risk management and reduced potential losses.

2. Enhanced financial reporting quality: 90% of respondents agreed that an integrated approach improved financial reporting quality and reduced errors.

3. Strengthened information system security: 88% of respondents agreed that an integrated approach strengthened information system security and reduced cyber threats. Increased efficiency: 80% of

respondents agreed that an integrated approach increased efficiency and reduced cost through streamlined processes. Better decision-making: 85% of respondents agreed that an integrated approach supported informed decision-making and strategic planning.

CONCLUSION

In conclusion, an integrated approach to internal control management, combining accounting and information system security, is essential for ensuring the accuracy, reliability, and security of financial data and information systems. This study has demonstrated that an integrated approach can: Enhance risk management and internal control effectiveness. Improve financial reporting quality and reduce errors. Strengthen information system security and reduce cyber threats Increase efficiency and reduce costs through streamlined processes informed decision-making and strategic planning Organizations should adopt an integrated approach to internal control management, recognizing the interdependence of accounting and information system security. This requires:

A comprehensive framework for internal control management. Collaboration between accounting and IT departments Continuous monitoring and assessment of internal controls

Regular training and awareness programs for employees Alignment with regulatory requirements and industry standards

By adopting an integrated approach, organizations can ensure the integrity of their financial data and information systems, mitigate risks, and achieve their strategic objectives. Future research can explore the application of this approach in different industries and organizational contexts.

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