

UNIVERSITY OF CAPE COAST

ASSESSMENT OF INTERNAL CONTROL SYSTEM OF SIC LIFE  
COMPANY LIMITED

BY

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DECLARATION

**Candidate's Declaration**

I hereby declare that this dissertation is the result of my own original work and that no part of it has been presented for another degree in this university or elsewhere.

Signature:.....Date.....

Candidate's Name: Augustine Amankwah

**Supervisors' Declaration**

I hereby declare that the preparation and presentation of the dissertation were supervised in accordance with the guidelines on supervision of dissertation laid down by the University of Cape Coast.

Signature:.....Date.....

Supervisor's Name: Prof. Edward Marfo-Yiadom

## ABSTRACT

In this study, the effectiveness of the system of internal control of SIC Life Company Limited is assessed via the famed *Internal Control – Integrated Framework* by the Committee of Sponsoring Organizations (COSO) of the Treadway commission. Forty-one members of staff at the company's head office in Accra are sampled for the study. Analyses of the responses to the questionnaire indicate that overall the internal control system of the SIC Life company is only marginally strong. Skewness of total scores for the internal control system components shows a marginal tilt toward the positive region. The theoretical proposition that the control environment component of the internal control system drives the remaining components of the internal control system is also verified. Correlational analysis between the control environment and each of the remaining components of the system of internal control supports this theoretical proposition. It is found that the control environment, which constitutes the philosophies of top management, organizational culture, ethics, integrity, and accountability of top management, is positively correlated with each of the remaining components of the system of internal control of the company. It is recommended that the company takes steps to tighten the internal control system. Particular attention should be paid to the control environment since a stronger control environment will translate into a stronger, effective and efficient overall system of internal control.

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## DEDICATION

To my family, Mrs.Elizabeth Amankwah, Rhoda Amankwah and Nana Kwame Kyeremateng.

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# **CHAPTER ONE**

## **INTRODUCTION**

### **Background to the Study**

The importance of internal control in the world of business today cannot be overemphasized. Documented and undocumented scandals that have hit organizations all over the world have put both management and regulators on their toes to rethink their approach to doing business (Kaplan, 2009; Sarbanes, 2002). Corporate governance has emerged as an antidote to the menace. The Cadbury Report (Financial Reporting Council (FRC)), 2012) defines corporate governance as a system by which companies are governed and controlled. Series of principles, and which keep increasing, are contained in corporate governance codes. Among the principles is the need to have a comprehensive risk management and internal control systems. For organization to survive into the “foreseeable future” and to achieve their objectives, it is very necessary for them to have a comprehensive profile of all risks that can impact negatively or positively on their objective and manage these risks effectively to maximize shareholders’ value (Quon, Zeghal, & Maingot, 2012).

Risk has been defined as the effect of uncertainty on objectives (International Organization for Standardisation, 2009). In the fields of Accounting and Finance, techniques such as decision trees, cost-volume-profit analysis, discounted cash flows and probability distributions can be used to generate some statistics about the risks facing an organization (Collier, Berry, & Burke, 2006). However this approach alone may not suffice. Organizations

need to continually perform SWOT analysis to keep track of the ever changing factors in the internal and external environments that can affect their strategy and ultimately their survival. It is imperative for a comprehensive (and continually updated) risk profile to be kept to provide guidance to management on the prioritization and treatment of risks (Committee of Sponsoring Organization of the Treadway Commission, 2004; International Organization for Standardisation, 2009).

The risk profile of an organization contains information on the various types of events that are “risky”, their probability of occurrence, and the magnitude of the impact on the organization. Such information assists organizations in their risk prioritization and treatment exercises. Organizations can respond to risks (risk treatment) in many ways including avoidance, sharing, acceptance and transfer. The management of an organization’s risks requires, in addition to the above, the implementation of internal control system. It has been the principal means through which organizational risks are managed (KPMG, 1999).

The Committee of Sponsoring Organizations of the Treadway Commission (1992), defines internal control 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 effectiveness and efficiency of operations, reliability of financial reporting, and compliance with applicable laws and regulations”. Due to its key role in the protection of assets of investors, internal control reporting by management is made a legal requirement for all public companies by the Sarbanes-Oxley

Act in the USA (Sarbanes, 2002). The same law also requires that the external auditor, on an annual basis, provides an opinion on management's assessment of Internal Control (Ashbaugh-Skaife, Collins, & Lafond, 2009).

Granted, internal control reporting for listed companies is not strictly legalistic in Ghana and many other countries as it is in the USA. For example in the USA it is a legal requirement for all public (listed) companies to have a section in their annual reports detailing the full assessment of internal controls. External auditors of these public firms are by law (SOX section 404) also required to provide an opinion on the assessment done by management. However higher level of importance is attached to the concept in every country. In Ghana the institute of internal auditors formed in 2008, and the enactment of the internal audit agency Act (Act 658) emphasize how important the concept of internal control is for the country.

The observations by Kaplan (2009) and Sarbanes (2002) noted earlier are evidenced by well documented corporate failures such as the cases of Herman Brothers, Enron, WorldCom, Arthur Anderson, ImClone, etc in the USA; Polly Peck, Bearings Bank, Bank of Credit and Commerce International (BCCI), Equitable Life Assurance Society, MG Rover Group, Northern Rock, Royal Bank of Scotland Group, etc. in the UK; Meridian BIAO (Ghana branch), Bank for Housing and Construction, and the Cooperative Bank in Ghana and many others in other parts of the world. In response to these catastrophes, many countries in the world today have developed for themselves an internal control framework as either a standalone framework or embedded in a risk management framework.

## Statement of the Problem

Over the years, there have been series of corporate scandals across the globe which has resulted in the demise of top companies like Enron (in the USA) and Bank for Housing and Construction (in Ghana). Investigations into the scandals highlight internal control and risk management as the key issues. Not too long ago in 2007/2008, the world economy experienced financial crisis (popularly referred to as credit crunch) which resulted in the collapse of Herman Brothers, Washington Mutual, etc. Others (AIG, Royal Bank of Scotland Group etc.) needed to be heavily supported, acquired or even nationalized in order to protect them from collapse (Wikipedia, 2015). Risk management and internal control again is the key contributing factor.

There is surely a pressing need for the board of directors and management of companies to rethink their internal control systems (Kaplan, 2009). National government and regulatory bodies, in an attempt to deal with the situation, have come up with laws (SOX in the USA, for example) and various frameworks (such as COSO's *Internal Control-Integrated Framework*, International Organization of Supreme Audit Institutions-INTOSAI, and Control Objectives for Information and Related Technology-COBIT).

Organizations of all sizes regardless of the industry are encouraged to subscribe to the implementation of internal control system. The problem is many organizations implement the system of internal control merely to comply with laws and regulations without really believing in the spirit of the implementation. This normally results in the situation where an internal control system does yield the intended purpose of safeguarding shareholders

assets. It is therefore deemed a step in the right direction to empirically assess the effectiveness of the system of internal control of organizations against globally acclaimed frameworks. At SIC Life Company Ltd., it is important that internal control issues are given the utmost attention. This includes continually assessing the effectiveness of the system of internal control. This study therefore seeks to evaluate the internal control system of the SIC Life Company Ltd. against the renowned COSO framework *Internal Control – Integrated Framework*.

### **Objectives of the Study**

The main objective of this study is to assess the effectiveness of internal control system of the SIC Life Company Ltd. This is broken down into the following three specific objectives:

1. Ascertain the effectiveness of internal control of the SIC Life company Ltd. based on the COSO model.
2. Ascertain the effectiveness of computer controls (software and hardware) of the SIC Life Company Ltd.
3. To determine the relationships between the Control Environment and the other components of the internal control system.

### **Research Questions**

In line with objectives one and two, the following research questions are formulated:



1. What is the effectiveness of each of the components of the internal control system of the SIC Life Company Ltd? These components are the Control Environment, Risk Assessment, Control Activities, Information and Communication, and Monitoring Activities.
2. What is the effectiveness of computer controls at the company?

### **Research Hypothesis**

Based on theoretical propositions that the control environment influences (stronger control environment will cause the rest of the components of the internal control system to also be stronger) the rest of the internal control system components, the following hypotheses are formulated:

- H<sub>1</sub> There are strong positive correlations between the Control Environment and each of the remaining components of the internal control system
- H<sub>0</sub> There are no correlations between the Control Environment and any of the remaining components of the internal control system.

### **Significance of the Study**

Companies set for themselves strategic and business objectives, then manage risks that threaten the achievement of those objectives. By so doing they are able to increase shareholder value. Internal control plays a pivotal role in assisting management to achieve the above objective (KPMG, 1999)

The collapse of companies in Ghana such as Meridian BIAO (Ghana branch), Bank for Housing and Construction, and Cooperative Bank are largely due to insufficient or ineffective system of internal control. This a

warning flag for all companies including SIC Life. The SIC Life Company is one of the biggest and strategic companies in Ghana. The collapse of such a strategic asset will have devastating effect on the whole of the Ghanaian economy. It is the responsibility and of course it should be in the interest of management of such a strategic asset to safeguard it. It is also in the interest of the government of Ghana and the general public that the SIC Life Company continues to “live” into the foreseeable future. This research assists the management of the SIC Life Company Ltd. in having a comprehensive knowledge of the company’s operations, risks and controls which in turn assists them in proper stewardship of the company (KPMG, 1999). They also benefit from the recommendations based on globally recognized internal control frameworks.

### **Organization of the Study**

This study is organized in five chapters. Chapter one presents the background to the study, statement of the problems and objectives of the study. It also outlines the research questions and the significance of the study. The second chapter reviews the relevant literature on theories, concepts and core issues of the study. It also presents the summary of the theoretical underpinnings, the research objectives and empirical validation in a conceptual map.

Chapter three outlines the methodology of the study, methodological issues considered here include approach to the research, the research design, study population, sampling procedures, data collection and processing. Other considerations are statistical procedures and data analyses.

Chapter four presents results or findings of the study. This section features an in-depth discussion of findings and their implications. The final Chapter is devoted to summary, conclusion and recommendations based on the findings of the study.

## CHAPTER TWO

### REVIEW OF RELATED LITERATURE

#### Introduction

This chapter provides the conceptual and empirical underpinnings of the study. First, review of internal control concepts and models is carried out. This is followed by the review of related concepts, empirical review, and finally a presentation of conceptual framework which encapsulates the research objectives, theoretical, and empirical propositions.

#### Review of Internal Control Models

The significance of internal control in the performance of business organizations has attracted attention of not only management and board of directors but also governments and regulatory bodies (Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS )), 2003. Following the major corporate scandals and collapses, the accountancy profession, other regulatory bodies and various national governments have intensified to promote the effective management of risks through the implementation of internal control (International Federation of Accountants, 2007). These have resulted in the publication of a number of internal control and risk management frameworks. This study reviews two of them: COSO's *Internal Control – Integrated Framework*, and the Turnbull guidance for internal control.

## COSO's Internal Control – Integrated Framework

In 1992 COSO came out with the first part of its framework on internal control labeled *Internal Control - Integrated Framework*. The second part of the framework followed in 1994. The framework is used across the world and recognized as the leading framework on internal control. It has five components: control environment, risk assessment, control activities, information and communication, and monitoring. The framework is made to be applicable across the operations, financial reporting and compliance activities of the firm. Figure 2 depicts the COSO Internal Control model and its five interrelated components.



Figure 1: The COSO Cube showing the Components of its Internal Control Model

Source: COSO (2013)

For a firm to be described as having a robust system of internal control all the five components must be present, well coordinated and working effectively.

COSO (1992, 1994) as follows:

## **Control environment**

The control environment refers to the tone at the top of the firm which influences the control consciousness of the entire organization. It is the foundation for all the other components of internal control, providing discipline and structure. Control environment factors include the integrity, ethical values and competence of the firm's management. It also involves management's philosophy and operating style; their way of assigning authority and responsibility, organizing and developing its people; and the attention and direction provided by the board of directors (Shim, 2011; COSO, 1992, 1994). A strong system of internal control thrives on a strong control environment.

## **Risk assessment**

Every entity faces a variety of risks from external and internal sources that must be assessed. A precondition to risk assessment is establishment of objectives, linked at different levels and internally consistent. Risk assessment is the identification and analysis of relevant risks which can hobble the firm in the achievement of its objectives (COSO, 1992, 1994). It also forms the basis for determining how the risks should be treated (avoidance, sharing, transferring or acceptance). Because economic, industry, regulatory and operating conditions will continue to change, mechanisms are needed to identify and deal with the special risks associated with change (Shim, 2011).

### **Control activities**

Control activities are the policies and procedures that help ensure management directives are carried out. Control activities must be risks-based meaning they are implemented in response to the assessed risks. Control activities must occur throughout the organization, at all levels and in all functions for effective management of the assessed risks. They include all measures a range of activities as diverse as approvals, authorizations, verifications, reconciliations, reviews of operating performance, security of assets and segregation of duties. The control activities component precedes the risk assessment component

### **Information and communication**

No organization in the world now can operate effectively without the availability of information. For the other four internal control components (and for that matter the firm) to function effectively, pertinent information must be identified, captured and communicated in a form and time frame that enable people to carry out their responsibilities. The firm must therefore have reliable information systems in place to produce reports about the strategic, operational, financial, and compliance aspects of the firm. This system must be complimented by reliable communication.

Information and communication systems deal not only with internally generated data, but also information about external events, activities and conditions necessary for informed business decision-making and external reporting. Effective communication also must occur in a broader sense, flowing down, across and up the organization (Shim, 2011). For controls to

work, all personnel must receive a clear message from top management that control responsibilities must be taken seriously. Personnel must understand their own role in the internal control system. They must have a means of communicating significant information (such as fraud and control failures) upstream. There also needs to be effective communication with external parties, such as customers, suppliers, regulators and shareholders.

### **Monitoring**

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, alongside normal routines of business. It includes regular management and supervisory activities, and other actions personnel take in performing their duties such as reconciliations. 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.

The COSO's internal control framework has currently (in May 2013) been updated to take into account of changes in technology and business operations over the last twenty years (COSO, 2013; KPMG, 2013). The 2013 version makes the understandability and usability of the framework more simplified by the introduction of seventeen (17) guiding principles and more detailed points of focus which expand the five control components. It must



however be noted that the five components of internal control (described above) as contained in the original framework still stay intact.

Table 2 summarizes all the changes in the 2013 version of the internal control framework.

The update was released with some useful guidance documents including: *Internal Control –Integrated Framework: Illustrative Tools for Assessing Effectiveness of a System of Internal Control* (Illustrative Tools), which provides templates to assist users in documenting their assessment of principles, components, the overall system of internal control, and scenarios of how the templates could be used; *Internal Control Over External Financial Reporting: A Compendium of Approaches and Examples* (the Compendium), which features examples of internal control over financial reporting and illustrations on how users might apply the principles of the 2013 Framework to external financial reporting objectives.

Table 1: *Summary of Changes made to the COSO Internal Control Model*

Control Environment	Risk Assessment	Control Activities	Information and Communication	Monitoring
1. Demonstrates commitment to integrity and ethical values	6. Specifies suitable objectives	10. Selects and develops control activities	13. Uses relevant information	16. Conducts ongoing and/or separate evaluations
2. Exercises oversight responsibilities	7. Identifies and analyzes risk	11. Selects and develops general controls over technology	14. Communicates internally	17. Evaluates and communicates deficiencies
3. Establishes structure, authority and responsibility	8. Assesses fraud risk	12. Deploys through policies and procedures	15. Communicates externally	
4. Demonstrates commitment to competence	9. Identifies and analyzes significant change			
5. Enforces accountability				

Source: COSO (2013)

This update with the attendant documents are intended to enhance the framework's usefulness for the SOX requirements for firms and auditors to externally report on the effectiveness of internal control and risk management.

**Internal Control: Revised Guidance for Directors on the Combined Code (The Revised Turnbull Guidance)**

In the UK, *Internal Control: Guidance for Directors on the Combined Code* (The Turnbull guidance) was first issued in 1999. In 2004, the Financial Reporting Council established the Turnbull Review Group to consider the impact of the guidance and the related disclosures and to determine whether the guidance needed to be updated. In 2005, the FRC issued a revised version of the turnbul guidance which reflects the trends in internal control in the modern business environment.

Internal control is defined by the Financial Reporting Council (2005, p. 5) as

an internal control system encompasses the policies, processes, tasks, behaviors and other aspects of a company that, taken together: facilitate its effective and efficient operation by enabling it to respond appropriately to significant business, operational, financial, compliance and other risks to achieving the company's objectives. This includes the safeguarding of assets from inappropriate use or from loss and fraud and ensuring that liabilities are identified and managed; help ensure the quality of internal and external reporting. This requires the maintenance of proper records and processes that generate a flow of timely, relevant and reliable information from within and outside the organization; help ensure compliance with applicable laws and regulations, and also with internal policies with respect to the conduct of business. A company's system of internal control will reflect its control environment which encompasses its organizational structure. The system will

include: control activities; information and communications processes; and processes for monitoring the continuing effectiveness of the system of internal control.

A company's system of internal control has a key role in the management of risks that are significant to the fulfillment 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.

### **Maintaining a Sound System of Internal Control**

A company's objectives, its internal organization and the environment in which it operates are continually evolving and, as a result, the risks it faces are continually changing too (Krstić & Ćorņević, 2012). These risks present opportunities (upside risk) and threats (downside risks). Internal control system exists to mitigate the downside risks and to take advantage of upside risks faced by the organization (Berry, Coad, Harris, Otley, & Stringer, 2009).

In describing the features of a sound internal control, the Financial Reporting Council (2005) notes some key features. A sound system of internal control therefore depends on a thorough and regular evaluation of the nature and extent of the risks to which the company is exposed. This requires regular review of the internal and external environments of the organization for events which may pose risks. Since profits are, in part, the reward for successful risk-taking in business, the purpose of internal control is to help manage and control risk appropriately rather than to eliminate it (David, 2011; Financial Reporting

Council, 2005). The maintenance of a sound system of internal control helps to safeguard shareholders' investment and the company's assets.

An effective system of internal control should have board and senior management support. The directors should, at least annually, conduct a review of the effectiveness of the company's system of internal control and should report to shareholders that they have done so. The review should cover all material controls, including financial, operational and compliance controls and risk management systems. It is the role of management to implement board policies on risk and control. In fulfilling its responsibilities management should identify and evaluate the risks faced by the company for consideration by the board and design, operate and monitor a suitable system of internal control which implements the policies adopted by the board. The control system should be championed by the top level management of the firm. The development of the internal control framework, policy and plan should be led by the board of directors. (Committee of Sponsoring Organizations of the Treadway Commission, 1992)

All employees have some responsibility for internal control as part of their accountability for achieving objectives. They collectively, should have the necessary knowledge, skills, information, and authority to establish, operate and monitor the system of internal control. This will require an understanding of the company, its objectives, the industries and markets in which it operates, and the risks it faces.

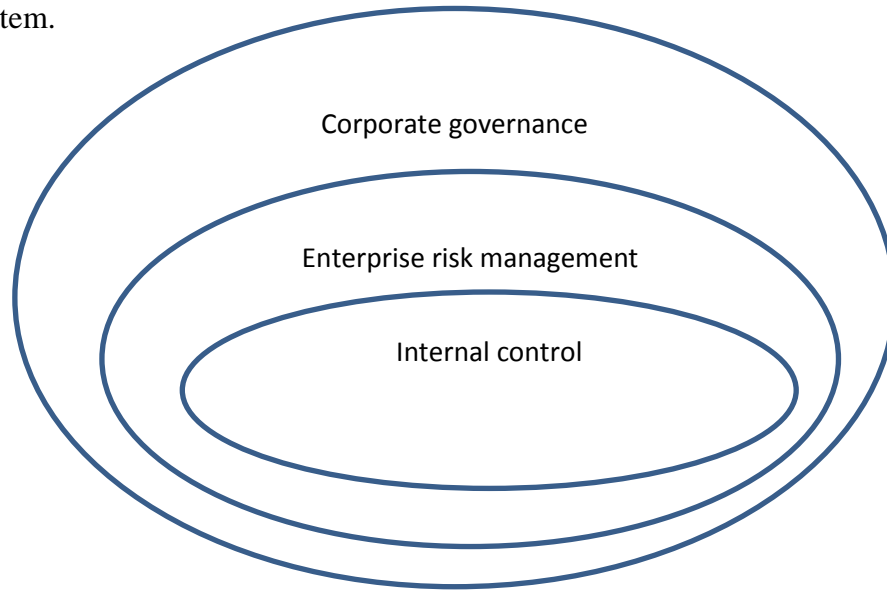
An effective system of control is embedded into the culture, values and systems of the firm. Firms with good control systems tend to have a risk aware culture. The people in the firm, from top to bottom, should live risk management by making sure controls work on the organization. In this way risk management is the responsibility of every individual in the firm and it is seen as a factor of the success of the firm and not merely as an issue of compliance with laws and regulations. Embedding internal control and risk management into systems means that the designs of the various control systems in the firm are risk-based. When risk management is effectively embedded into the culture, values and systems of the firm, risk management then becomes a normal activity for every individual in the firm (International Organization for Standardisation, 2009).

A sound system of internal control should have up-to-date infrastructural support. Internal control will be effective if a sound information system is in place. Computer and internet technologies are of particular importance in building a sound information system and a robust infrastructure for a firms risk management system (David, 2011).

### **Internal control related concept**

Internal control is directly related to the concepts of corporate governance and enterprise risk management. According to McShane, Nair, and Elzotbek (2011), internal control and enterprise risk management are two sides of the same coin. Corporate governance is the broader concept which encompasses risk management and internal control. These two concepts are reviewed so as to

holistically understand the current views on the concept of internal control system.



*Figure 2: How internal control is related with other corporate governance concepts.*

Author's construct (2015)

### **Corporate governance**

Corporate governance is defined by the Financial Reporting Council (FRC) (2012) as a system by which organizations are governed and controlled. The concept of corporate governance emanated from the UK in response to the collapse of their major companies. The problem of corporate collapse is now a global phenomenon. Every country in the world has experienced corporate failure (documented or not documented) (Mallin, 2001). Appendix A gives a profile of some of the major corporate failure the world has witnessed. Corporate governance has its focus on all the possible means of ensuring wealth creation by companies including proper dialog between board of directors and shareholders;

board composition; sub-board committees; remuneration for board of directors; responsibilities of the board of directors etc. (Brown & Caylor, 2004).

Most corporate governance codes touch on the issue of internal control as a sub-component and as one of the means to achieving good corporate governance (Committee of European Insurance and Occupational Pensions Supervisors (CEIOPS)), 2003). Figure 3 shows this relationship.

### **Enterprise risk management**

Risk management and internal control are two side of the same coin. Investigations into most of the corporate scandals (see appendix C) highlighted lack of or non-existent of proper risk management (Kaplan, 2009). Risk management involves the identification of all the risks that can have effect on the achievement of a firm's objective and deciding on how best to respond to these risk (risk treatment strategies), given the firm's risk appetite. One of the means of keeping a firm's risks to an acceptably low level is the implementation of a sound system of internal control (Institute of Directors, Airmic, Chartis Europe, PricewaterhouseCoopers, & Willis UK, 2012).

The Committee of Sponsoring Organization of the Treadway Commission (2004) defines enterprise risk management as

a process, effected by an entity's board of directors, management and other personnel, applied in strategy setting and across the enterprise, designed to identify potential events that may affect the entity, and manage risk to be within its risk appetite, to provide reasonable assurance regarding the achievement of entity objectives.



This definition highlights certain key issues: risk management should be championed by the top officials of the company; risk management should be embedded in the company's strategy formulation, implementation and execution; and risk management should be the responsibility of all. According to Pagach and Warr (2010), enterprise risk management can help a firms to comprehensively identify all the upside and downside risks and to coordinate efforts of the various parts of the of organization towards the effective and efficient management of firm's risks. By helping in the mitigation of downside risks and fostering the achievement of upside risks, a sound system of internal control becomes one of the means of achieving an enterprise risk management. Figure 3 demonstrate how internal control relates with enterprise risk management and corporate governance. Corporate governance is the central concept and contains enterprise risk management and internal control concepts.

### **Review of Empirical Findings**

Due to its perceived importance in managing risks and contributing to good corporate governance, studies on internal control is widespread. Beneish, Billings, and Hodder (2008) study 336 US firms making SOX mandated internal control weaknesses disclosure. They find a significantly negative (weakly positive) price response for disclosing (non-disclosing) firms consistent with resolution of information uncertainty in both groups. For disclosing firms they find that the negative market response to disclosure is exacerbated by conditions associated with higher inherent reporting risk, including auditor turnover and

high-risk industry membership. However, they find that the negative market response to disclosure is mitigated when the firm has engaged a high quality auditor. In addition, they find that the negative market reaction for disclosing firms is dampened when the firm's previously reported earnings have an abnormally high accruals component. This result is consistent with the disclosure having lower information content when poor earnings quality has already been conveyed by high abnormal accruals.

After controlling for other risk factors, Ashbaugh-Skaife et al. (2009) find that firms with internal control deficiencies have significantly higher idiosyncratic risk, systematic risk, and cost of equity. Their change analyses document that auditor-confirmed changes in internal control effectiveness (including remediation of previously disclosed internal control deficiencies) are followed by significant changes in the cost of equity that range from 50 to 150 basis points. Overall, their cross-sectional and inter-temporal change test results are consistent with internal control reports affecting investors' risk assessments and firms' cost of equity.

Allegrini and D'Onza (2003) study the features of internal auditing and internal control systems of Italian listed companies. Survey results show that all the financial institutions and Mib30 companies have an internal audit unit. They observe that in banks and insurance firms, the internal audit department has been established mainly to comply with regulatory requirements; in some cases, it represents an evolution of the previous 'compliance office'.

Ndamenenu (2011) studies the contribution of internal control system towards the efficiency and effectiveness of Ecobank (Ghana) Ltd. He finds that

generally Ecobank has a system of internal control. Some lapses are identified including lack of coordination between the internal audit function and some operational activities. Affum (2011) finds that although Papso Ghana Ltd has implemented internal control system, its internal audit function does not operate with independence. This study has as an objective, an assessment of the internal control system of the SIC Life company Ltd. It is deemed imperative therefore to look at the company profile of SIC Ltd.

### Conceptual Framework

Conceptual frameworks are the system of concepts, assumptions, expectations, beliefs and theories that supports and informs the study (Maxwell, 1996). This study assesses the internal control of SIC Life Company using the COSO, and Turnbull frameworks. Figure 3 encapsulates the research objectives, literature and empirical review as the conceptual framework.

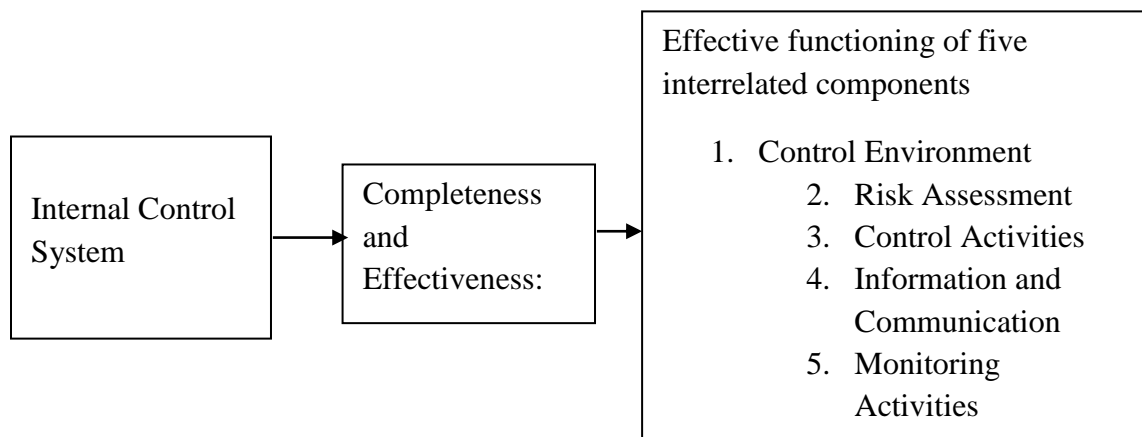


Figure 3: Conceptual framework for assessment of internal control system

Source: Author's construct (2015)

It is clear from the conceptual framework that the completeness and effectiveness of a system of internal control is manifest by the proper functioning of five

interrelated components. The most critical component of the five is the Control Environment, on which the effectiveness of the remaining components depend (Committee of Sponsoring Organization of the Treadway Commission, 2013).

## **CHAPTER THREE**

### **RESEARCH METHODS**

#### **Introduction**

This chapter deals with the collection, measurement and analysis of data. It covers discussions on the research, study population and sampling. The profile of the company under study is also presented here.

#### **Research Design**

This study aims at assessing the effectiveness of the internal control system of the SIC Life Company against the COSO's *Internal Control – Integrated Framework*. The field survey design is used in order to measure the attitudes, beliefs, values or tendencies of the participants as they pertain to the research objectives and questions. Field surveys capture snapshots of practices, beliefs, or situations from the study population or a random sample of subjects in field settings through a survey questionnaire or less frequently, through a structured interview (Bhattacharjee, 2012).

#### **Study Population and Sample**

The population for this study consists of all staff at the head office of the company (Accra). The study sample is chosen considering the available resources (time, funds, etc.) for the study. The selection of the study units is largely non-probabilistic. This means that we lack the tools offered by the theory of probability to test the representativeness of the sample. It must be noted that this method of sampling does not strictly imply that the sample is non-representative.

In fact this method may yield a highly representative sample (when the sample size is large), only that we lack the means to test this fact (Keller & Warrack, 2003; Spiegel & Stephens, 2008)

### **Data Collection Instrument**

Questionnaire is the major instrument used in the study. The questions are largely closed-ended. The questionnaire is used due to its power to collect accurate responses which facilitates easy analysis.

### **Method of Data Analysis**

This study employs the services of Statistical Package for the Social Sciences (SPSS) version 20 and Microsoft Office 2010 in the analysis of data. The statistical techniques used are the descriptive statistics including means, median, mode, percentages, charts as well as Pearson product-moment correlation.

### **SIC Life – Company Profile**

The SIC Life company originally existed as the Life division of the reputable multi-line insurer – the State Insurance company of Ghana Limited (SIC). SIC has been in operation since 1962 when it was registered as a Public Corporation. In 1995 however, it was converted into a public limited liability company as part of the Government of Ghana initiative to divest part of its shareholding in all state corporations.

In conformity with the provision of the Insurance Act 2006, Act 724, the Life Division of the reputable State Insurance Company (SIC) became SIC Life

Company Limited (SIC Life) a fully licensed life insurance company in 2007. Currently, SIC life is the largest and most reputable life company in Ghana controlling the largest share of the insurance market for both life and non-life insurance business lines.

The company is the leader in the life insurance industry in terms of key performance indicators such as capital base, shareholders fund, total assets, profitability and market share. With its solid financial base, couple with highly motivated and experience human resource, SIC Life is well positioned to maintain its dominance of the insurance market through prudent management and sound technical practices.

SIC life enjoys a favorably image within the life insurance industry both locally and internationally. SIC Life has a wide network of area and branch offices throughout the country. It also has a large agency force whose focus to respond professionally to the varying needs of the public.

#### Vision and Corporate Mission

The vision of the company is to be the leading, most dependable and customer-focused life insurance company in the country. SIC Life Company Limited is committed to employing a highly motivated and efficient workforce to offer innovative; valued-priced life insurance and other financial product to clients' whilst ensuring optimal returns to the shareholders. The vision and corporate mission of SIC Life is one issue all employees are committed to and work towards it realization.

## Core Values

The core values of SIC Life Company Limited flow from the mission statement and the guiding principles which govern decisions and characterize the manner in which day-to-day business is conducted. Management is keen on ensuring that the company stay focused on its core values, the core values are the spirit of SIC Life.

## Corporate Objectives

The thrust of SIC Life Company Limited is to achieve total customer satisfaction and growth in premium income through efficient customer delivery. This will enable the company to secure and maintain the largest share of the life insurance market and be the most profitable company in the life insurance industry.

## Success of SIC Life

SIC Life Company the leading life insurance company in the country has defied the odds in the insurance industry to post a premium income of GH ₵ 71.9 million. The Managing Director who made this known to City & Business Guide in an interview in September 2012 said the figure was a fifty percent increase over the 2010 figure of GH ₵ 48.04 million.

SIC Life Company Ltd was also adjudged the life insurance company of the year 2016, 2014, 2012 and 2010 ‘The Final Journey Plan ‘was also adjudged the radio advert of the year 2012 (CIMG). The citation that accompanied the CIMG award attest to the fact that SIC Life has indeed achieve its vision and



corporate mission. The company currently offers the following products to the public: Family Security plan, Flexi-child Education Plan, Education Plan, Ultimate Life Plan, Key-Man Assurance, School Fees Protection Plan, Mortgage Protection Plan, Group Life (term assurance) Policy, Group Life (endowment) Policy, Guaranteed Endowment Policy, Final Journey Plan, and Sika Plan (Okumka).

Due to the geographical dispersion of company coupled with its numerous products and services, and sophisticated operations, the company is predisposed to a lot of risks. To mitigate these risks, internal control needs to be taken seriously. Currently there is no research on the assessment of internal control system of the company. This study therefore serves as the premier study and it centers on the corporate office and all others area/branch offices.

## CHAPTER FOUR

### RESULTS AND DISCUSSION

#### **Introduction**

This chapter presents the results and discussion of the findings. The demographic characteristics of the respondents are presented followed by results and discussions of the findings based on the research questions.

#### **Demographic Statistics**

There are forty one (41) respondents categorized as twenty nine (29) males and twelve (12) females. Majority of these respondents have served the SIC Life company over six (6) years. These statistics are presented in tables 2 and 3. The years of service statistic gives the assurance that quite a good number of the employees have worked with SIC Life for more than two years, a good time to understand the internal control system of the company.

Table 2: *Sex distribution of respondents*

Sex	Frequency	Percent
Male	29	70.7
Female	12	29.3
Total	41	100.0

Source: Field survey

Table 3: *Distribution of number of years of service of respondents*

Years of service	Frequency	Percent
1-3 Years	5	12.2
4-6 Years	16	39.0
Over 6 Years	20	48.8
Total	41	100.0

Source: Field survey

### **Control Environment**

This component of the internal control system is essentially about the culture that the top management creates for the entire firm. This culture is created and sustained by the leadership style, belief, philosophy, integrity, ethics, etc. The stronger and positive these elements, the stronger the control environment, all other things being equal (Committee of Sponsoring Organizations of the Treadway Commission, 1992). This multidimensional construct is measured on a nineteen (19) item scale of one (1) to four (4). See appendix A for more information on the control environment scale. According to Bhattacharjee (2012), such a scale, for social science purposes, is assumed to be an interval/ratio scale. This measurement is chosen due to the need for correlational analysis between the control environment and the other components of the internal control system (see study objective three and the related hypothesis in chapter one). The responses of the respondents measured on the scale produced the mean scores (with the standard deviation and the standard error statistics) reported in table 4.

The results show that majority of the respondents rate this control component as being only marginally stronger (with a mean score averaging 3). The control environment measurement scale is drawn with higher scores of 3 and 4 signifying strong and very strong respectively. Scores of 1 and 2, on the other hand connote very weak and weak respectively. The mean scores for the individual dimensions of the control environment construct are generated in table 4. For integrity and ethical values, the average score is 3, meaning that it is perceived by the respondents that top management of the company are strong (not very strong though) in integrity an ethical values.

Not too different grading is also given to Commitment to Competence and Excellence. However, Management’s Philosophy and Operating Style, and Organizational Policies are given relatively lower grading (in the regions of 2). In a situation of mix grading, such as in this case, it is not clear what the perception is about the overall construct of control environment.

Table 4: *Mean scores, standard errors, and standard deviations for individual items of the control environment construct.*

	Mean	Std. Deviation	
	Statistic	Error	Statistic
<b>Integrity and Ethical Values</b>			
Appropriate entity policies regarding such matters as acceptable business practices, conflict of interest, and codes of conduct have been established and are adequately communicated.	3.02	.089	.570
Management does demonstrate appropriate tone at the top, including explicit moral guidance about what is right and wrong and this is communicated			

both in words and deeds.	3.05	.104	.669
Everyday dealings with employees, suppliers, customers, and all other stakeholders are based on honesty and fairness.	3.05	.104	.669
<b>Commitment to Competence and Excellence</b>			
Employee job description/responsibilities, including specific duties, reporting responsibilities, and constraints have been clearly defined and established in writing and effectively communicated.	3.15	.113	.727
Management, accounting, and information technology personnel are sufficiently competent to perform their assigned responsibilities.	3.10	.068	.436
The organization adequately compensates employees in order to attract qualified individuals.	2.68	.133	.850
Employee evaluation techniques are in place to identify incompetent or ineffective employees.	2.68	.128	.820
<b>Management's Philosophy and Operating Style</b>			
Management and operating decisions are not dominated by one or a few individuals.	2.95	.104	.669
Management set organization-wide objectives that include broad statements about what the organization desires to achieve that are supported by related strategic plans.	3.24	.091	.582
Resources are adequate to assist personnel to perform their duties.	2.83	.077	.495
Periodic (monthly, quarterly, etc.) reports on the status of actual to budget performance are prepared and reviewed by top management.	3.26	.482	3.124
Operations are made in accordance with statutes governing the company.	2.83	.077	.495
The internal control structure is supervised and reviewed by management to determine if it is operating as intended.	3.02	.089	.570
The company does compare its actual performance with its goals and objectives on periodic basis.	3.05	.092	.590
The company has a functioning internal audit section to review its operations.	2.68	.133	.850
The internal audit staff report to an official	2.95	.104	.669

independent of the operation under review.

**Organizational Policies**

There are written policies and procedures for all major areas of the organization.	2.68	.128	.820
Controls for authorization of transactions are established at an adequately high level.	3.02	.089	.570
There is adequate supervision and monitoring of decentralized operations.	2.83	.077	.495

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Source: Field survey

To overcome this challenge, total score for the control environment scale (Total Control Environment) is computed. The total score for each respondent for the control environment construct represents their overall rating of the control environment component of the internal control. The rating by all the respondents together, represented by Total Control Environment, communicating the perceived effectiveness or otherwise of the control environment. The control environment scale is constructed in such a way that higher scores means stronger control environment and lower scores means weaker control environment.

Specifically, the skewness of the Total Control Environment distribution estimates this perceived effectiveness. Skewness is the degree of asymmetry of a distribution (Doane & Seward, 2011; Spiegel & Stephens, 2008), meaning how unbalanced (skewed) the distribution is with reference to the center. A balanced distribution is where the mean=median=mode of the distribution and the coefficient of skewness = 0 (Doane & Seward, 2011). A skewed distribution deviates from this mathematical principle and can be skewed to left or to the right. When a distribution is skewed to the left, it means there are more (higher frequency) data to the left of the horizontal axis than to the right (the distribution

is made up of more smaller values than bigger ones). This results in frequency curve (smoothed frequency polygon) that has a longer tail to the right. Such a distribution is said to be skewed to the right or positively skewed and its coefficient of skewness is positive (Doane & Seward, 2011; Keller & Warrack, 2003).

On the other hand a negatively skewed distribution or a distribution that is skewed to the left has more of the bigger values than the smaller ones. It has a longer tail to the left of the horizontal axis as well as a negative skewness coefficient. This therefore implies that negatively skewed distribution means that the control environment is strong or very strong (depending on the coefficient of skewness) while positively skewed distribution means weak or very weak control environment (depending on the coefficient of skewness) (Spiegel & Stephens, 2008). Tables 5 and 6, and figure 4 are SPSS and MS Excel outputs displaying information about the skewness of the distribution for the Total Control Environment as negatively skewed with a skewness coefficient of -0.054.

Table 5: *Skewness and mean of distribution of scores for the total control environment*

	Mean		Std. Deviation		Variance		Skewness	
	Statistic	Std. Error	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Total Control Environment	29.7561	.61761	3.95462	15.639	-.054	.369		
Valid N (listwise)								

Source: Field survey

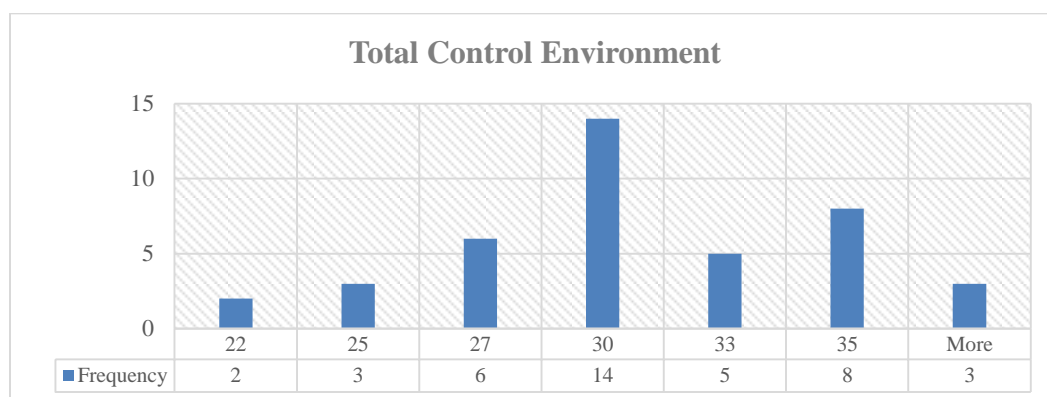


Figure 4: Distribution of total scores for the control environment component of internal control

Source: Field survey

Figure 4 displays visually the distribution of total scores for the control environment component of the internal control system of the SIC Life company ltd. This corresponds with table 4 which shows a skewness statistic of -0.054. Figure 4 and table 4 combine to show that there is skewness in the distribution of the total control environment, but the skewness is very marginal. With reference to the first research objective (ascertaining the effectiveness of controls relating to the Control Environment), it can be inferred that this component of the internal control system is meagerly strong. In fact this strength can be seen to be insignificant. According to Spiegel and Stephens (2008), if skewness is between -0.5 and 0 or 0 and 0.5, then the distribution is approximately symmetric. From table 4, the skewness coefficient of -0.054 is far lower than -0.50 and therefore this distribution is even more approximately symmetrical (neither weak nor strong). This can be confirmed from figure 4 and table 6. Majority of the



respondents rate this control component at the median score. The tilt towards the higher score region is very marginal.

Table 6: *Mean, median and mode statistics for total control environment*

N	Valid	41
	Missing	0
Mean		29.7561
Median		30.0000
Mode		29.00 <sup>a</sup>

a. Multiple modes exist. The smallest value is shown

Source: Field survey

Source: Field survey

### **Risk Assessment**

This component of the internal control system involves the company's arrangements in place to identify and analyze events that can throw its objectives overboard, including fraud risk and major changes in the company. It first of all entails specifying clear company objectives (Burns & Simer, 2013). Like the control environment component, higher scores mean more effective risk assessment arrangement/system in place, and vice versa. The effectiveness of this construct is measured using the Risk Assessment scale (see appendix A). The scale is made up of eight (8) items carefully designed to measure the effectiveness of the construct. The mean scores (together with the standard deviation and standard error) for each of the nine items are shown in table 7. But the mean scores for the individual items give only the rating on the individual items that measure the Risk Assessment construct.

Table 7: Mean scores, standard errors, and standard deviations for individual items of the risk assessment construct.

	Mean	Std. Error	Std. Deviation
There are mechanisms to identify and react to changes that can have a dramatic and pervasive effect on the entity (e.g. new laws or regulations that affect the entity and its operations; new or redesigned information systems; new technology incorporated.	3.05	.092	.590
Controls exist for approving decisions regarding financing alternatives and accounting principles, practices and methods.	3.12	.094	.600
Management has identified and analyzed all organizational risks relating to circumstances such as changes in the operating environment, new personnel, new or revamped information systems, rapid growth, restructuring, and new programs or services.	2.93	.095	.608
The accounting department has communication channels in place to be notified of changes in business practices that may affect the method or the process of recording transactions.	2.95	.078	.498
Management ensures that risk identification considers both internal and external factors and their impact on the achievement of objectives.	3.05	.098	.631
The organization periodically performs an assessment of its exposure to fraudulent activities and how its operations could be impacted.	3.05	.110	.705
The organization's assessment of fraud risks considers opportunities for unauthorized acquisition, use, and disposal of assets, altering of reporting records, or the commitment of other inappropriate acts.	3.12	.100	.640
The organization has mechanisms in place to identify and react to risks presented by changes in government, regulatory, economic, operating, or	2.95	.110	.705

other conditions that could affect the achievement of the goals and objectives of the organization.

Source: Field survey

To ascertain the overall effectiveness of the Risk Assessment component, the total score is computed and the coefficient of skewness of the total risk assessment distribution of scores is estimated. Table 8 shows an SPSS output depicting a negative coefficient of skewness of -0.865 for total Risk Assessment distribution. This means that the risk assessment systems in the company are strong (not too strong though). This can be visually read from figure 5.

Table 8: Mean and skewness statistics for total risk assessment

	Mean		Std. Deviation		Variance		Skewness	
	Std. Error		Statistic		Statistic		Statistic	
	Statistic	Error	Statistic	Error	Statistic	Error	Statistic	Error
Total Risk Assessment	24.2195	.49940	3.19775		10.226		-.865	.369
Valid N (listwise)								

Source: Field survey

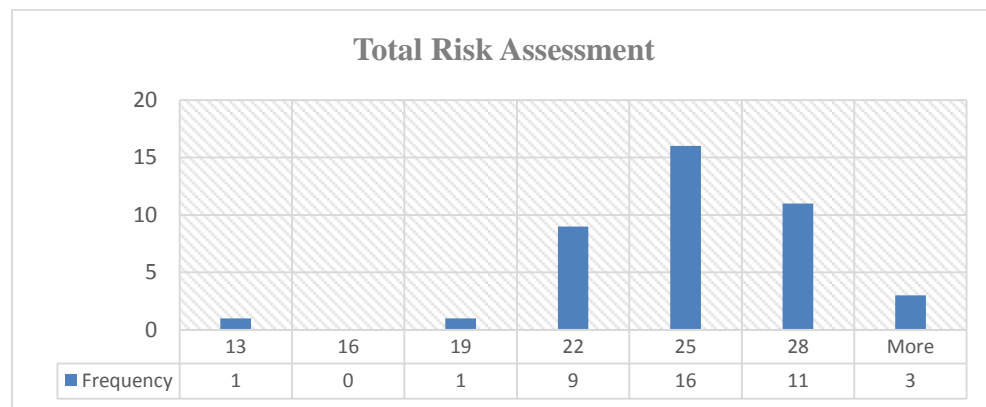


Figure 5: Distribution of total scores for the risk assessment component of internal control

Source: Field survey

Table 9: *Mean, median and mode statistics for total risk assessment*

N	Valid	41
	Missing	0
Mean		24.2195
Median		24.0000
Mode		24.00

Source: Field survey

From figure 5, and table 9, it is more clearer that majority of the respondents rate this internal control component stronger. Majority of the scores are above the median and mean scores, an indication that there is strong risk assessment system at SIC Life company Ltd, as assessed by the 41 respondents. If skewness is between -1 and -0.5 or between 1 and 0.5, then the distribution is moderately skewed (Spiegel & Stephens, 2008). By extension this component of the internal control system is moderately stronger.

### **Control Activities/Procedures**

This component involves the implementation of procedures, policies and principles about how things are carried out in the organization. Control activities include such issues as access controls for sensitive company assets, segregation of duties, bank reconciliations, etc. The effectiveness of this construct is measured using the control activities scale (see appendix A). Like the predecessor scales, higher scores indicate higher rating (or stronger controls), while lower scores depict weaker controls for the control activities scale. Table xxx shows the mean scores (with the standard deviation and standard error). The ratings for the mean

scores for the individual items of the scale show that the control activities component of the internal control system is strong (with an average score of 3).

Table 10: *Mean scores, standard errors, and standard deviations for individual items of the control activities construct.*

	Mean	Std. Error	Std. Deviation
	Statistic	Statistic	Statistic
Large expenditure for purchases, travel, etc. is obligated ahead of time to ensure budgeted funds are available.	3.22	.089	.571
Receipts are given for all transactions that are conducted -whether by cash register or prenumbered receipt.	3.54	.079	.505
Receipt books are regularly reviewed for missing receipt numbers by someone other than the cashier.	3.37	.115	.733
Receipts are recorded promptly and deposited within 24 hours (at least) at the bank.	3.54	.086	.552
Someone independent of the cash receipt process reconciles receipt records (receipts, mail logs, cash register) to the deposit slip.	3.32	.118	.756
Cash funds are periodically counted on a surprise basis by another employee other than the cashier.	3.15	.124	.792
Adequate physical facilities such as safe, or locking drawer are provided for safeguarding cash.	3.83	.059	.381
The organization has a process that ensures a regular back-up of computer files and testing of the back-up files to ensure proper functionality.	3.22	.108	.690
The organization maintains policies and procedures necessary to facilitate the recording and accounting of transactions in compliance with laws, regulations, provisions of contracts and grant agreements.	3.41	.099	.631

Source: Field survey

To complement the results in table 10, the total control activities score is computed. The overall effectiveness of this control component is measured by the coefficient of skewness of the total control activities variable. A positive skewness coefficient denotes weaker control activities, while negative coefficient of skewness connotes a stronger control activities (depending on the magnitude of the coefficient, anyways).

SPSS output of the analysis of the total control activities variable produces a skewness coefficient of -0.208 (see table 11). This means that generally the control activities component of the internal control system of the company is perceived by the respondents to be slightly strong. If skewness coefficient is between -0.5 and 0 or between 0 and 0.5, then the distribution is approximately symmetric, meaning the degree of asymmetry is insignificant. By implication, the strongness of the control activities is a “tip of an iceberg”, it does not carry any significant weight. Figure 8 is an MS Excel output and gives a visual confirmation of negative skewness of the distribution of respondents’ scores (ratings) for the total control activities variable. Figure 6 could be read in conjunction with table 9 for a clearer picture.

Table 11: Mean and skewness statistics for total control activities

	Mean	Std.	Variance	Skewness
		Deviation		
	Statistic	Error	Statistic	Error
Total Control Activities	30.5854	.51794	3.31644	10.999
Valid N (listwise)				-.208
				.369

Source: Field survey

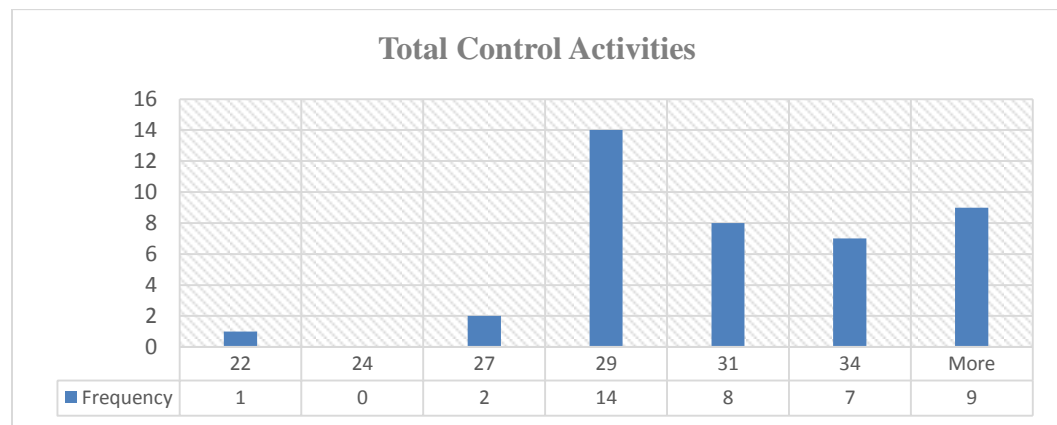


Figure 6: Distribution of total scores for the control activities component of internal control

Source: Field survey

Table 12: Mean, median and mode statistics for total control activities

N	Valid	41
	Missing	0
Mean		30.5854
Median		31.0000
Mode		31.00

Source: Field survey

## Information and Communication

The whole control system thrives on quality, timely and relevant information. Particularly, risk assessment requires the thorough audit of both the internal and external organizational environments. Proper environmental audit required good information systems. The information once gathered, analyzed, and summarized needs to be communicated to the right people and systems to facilitate decision making and the carrying out of operational activities. It is an undeniable fact that today's competitive business environment strongly dictates that business organizations install robust information and communication systems as a good control measure. At the SIC Life Company, the effectiveness of this component of the system of internal control is measured via the information and communication scale (see appendix A). Table 13 provides the mean scores, standard errors and standard deviations of each of the six items that constitute the risk assessment construct. The individual items of the construct are scored a little above 3. This indicates that on the average the respondents overall rating for the risk assessment component of the internal control system is relatively stronger.

Table 13: *Mean scores, standard errors, and standard deviations for individual items of the information and communication construct.*

	Mean	Std. Error	Std. Deviation
	Statistic	Statistic	Statistic
The information system provides management with necessary reports on the performance of departments/sections/units relative to established objectives, including relevant external and internal information.	3.07	.095	.608



Procedures have been implemented in the organization to verify the accuracy of data in management and all other important reports.	3.02	.096	.612
Management does commit the appropriate human and financial resources to the development of the necessary financial reporting information systems.	3.07	.095	.608
The organization maintains and follows procedures for recording, filing, retention, and disposal of accounting records and supporting documentation in accordance with applicable regulations.	3.29	.072	.461
Management has a process for the development, approval, and implementation of policy updates and communicates those updates to staff.	3.02	.108	.689
The organization has a whistleblower policy for people to report suspected improprieties regarding fraud; errors in financial reporting, procurement, and contracting; improper use or disposition of equipment; a misrepresentation or false statements.	2.51	.168	1.075

Source: Field survey

To ascertain this overall rating, total scale is computed. Skewness coefficient from the computed total information and communication variable is -0.361 (see table 14). This confirms that respondents generally assess this control component to be slightly stronger. Skewness coefficient of -0.361 indicates this control component is only slightly stronger.

Table 14: *Mean and skewness statistics for total information and communication*

	Mean	Std. Deviation	Variance	Skewness	
	Statistic	Statistic	Statistic	Statistic	Std. Error
Total Information and Communication	18.0000	2.61725	6.850	-.361	.369
Valid N (listwise)					

Source: Field survey

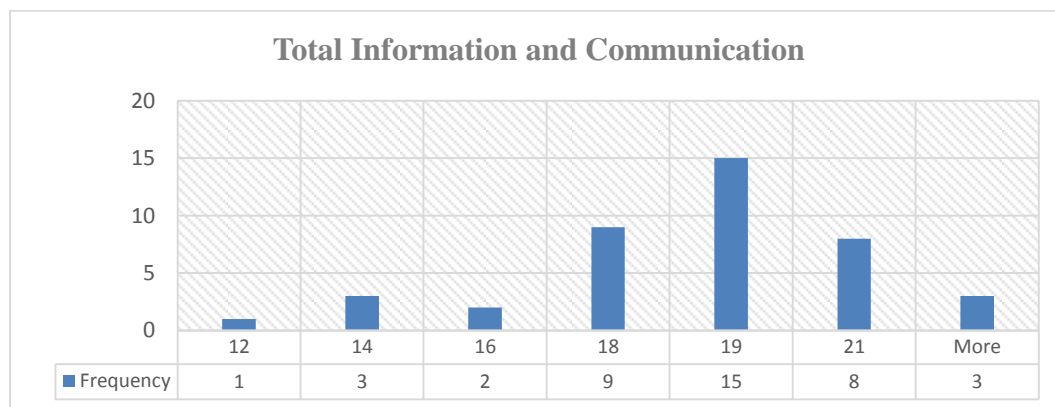


Figure 7: Distribution of total scores for the information and communication component of internal control

Figure 7 and table 15 combine to communicate this message clearer. Only a slight majority of the scores are above the median score.

Table 15: *Mean, median and mode statistics for total information and communication*

N	Valid	41
	Missing	0
Mean		18.0000
Median		18.0000
Mode		19.00

Source: Field survey

### Monitoring Activities

This involves conducting ongoing and/or separate evaluation of the above four control components for effectiveness and deficiencies. Because the modern business landscape is increasingly getting riskier, it is imperative that monitoring is effective to track all redundant controls and those that are needed to handle the current and foreseeable risky conditions. Monitoring activities as an internal control component is assessed via the monitoring activities scale (see appendix

A). Table 16 shows the mean scores, standard errors and standard deviations of each of the seven items measuring the monitoring construct.

Table 16: *Mean scores, standard errors, and standard deviations for individual items of the monitoring activities construct.*

	Mean	Std. Error	Std. Deviation
The information system provides management with the necessary reports on the organization's performance relative to established objectives, including relevant external and internal information.	3.12	.094	.600
The information provided to the various departmental/divisional heads is in sufficient detail, and timely to enable them carry out their responsibilities efficiently and effectively.	3.00	.099	.632
The information provided to management by the various divisional heads is in sufficient detail and timely to enable management carry out their responsibilities efficiently and effectively.	2.98	.089	.570
Management reviews key performance indicators when monitoring financial reporting activities.	2.93	.081	.519
Management perform and review analyses to identify unusual fluctuations in account balances.	3.12	.072	.458
Management periodically reviews financial reports for compliance with applicable financial reporting frameworks.	3.41	.085	.547
The internal audit function of the organization reports to sufficiently high level of authority to assure that its findings and recommendations will receive consideration.	3.44	.093	.594

Source: Field survey

To ascertain the overall rating for the monitoring activities component of the internal control system, total score is computed for the scale to represent

respondents' overall assessment of this control function. Table 17 shows the output from SPSS on skewness of the total monitoring activities distribution of scores. The coefficient of skewness of -0.030 indicates that monitoring activities are only marginally rated to be strong by the respondents. It must be noted that if coefficient of skewness -0.5 and 0.5, the distribution is approximately symmetric (Spiegel & Stephens, 2008).

This particular distribution is even more approximately symmetric since the skewness coefficient is far below the benchmark. Table 18 shows this more clearly by reporting mean=median=mode. Technically speaking, this principle means that the number of respondents who think this control component is weak is equal to the number of respondents who think they are strong, and therefore there is no majority. The skewness of -0.03 is approximately 0 and therefore this control component cannot be described as strong. Figure 8 gives a visual description of the above discussion.

Table 17: *Mean and skewness statistics for total monitoring activities*

	Mean		Std. Deviation		Skewness	
	Statistic	Std. Error	Statistic	Std. Error	Statistic	Std. Error
Total Monitoring Activities	22.0000	.39199	2.50998	.369	-.030	.369
Valid N (listwise)						

Source: Field survey

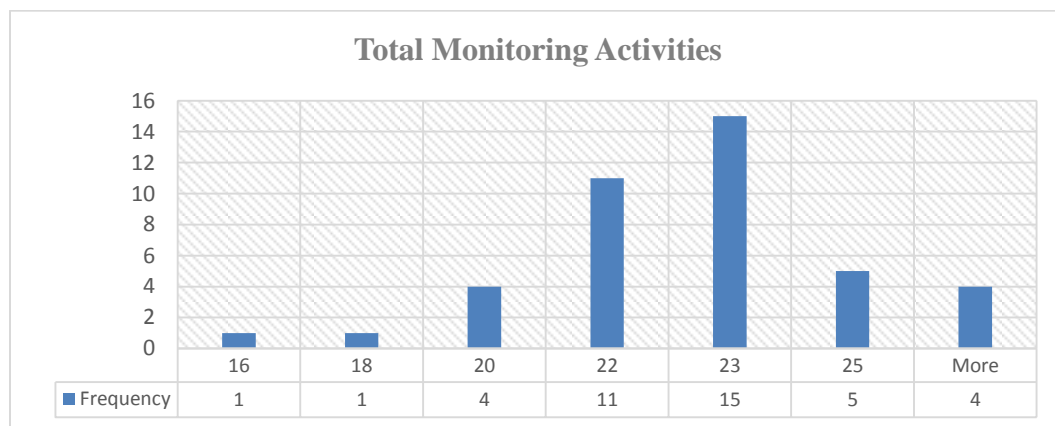


Figure 8: Distribution of total scores for the monitoring activities component of internal control

Source: Field survey

Table 18: Mean, median and mode statistics for total monitoring activities

N	Valid	41
	Missing	0
Mean		22.0000
Median		22.0000
Mode		22.00

Source: Field survey

### Computer (hardware and software)

This is not originally part of the COSO internal control components. However, since computers have become the driving force behind everything that takes place in the modern workplace, it is deemed fit that controls around computer hardware and software are assessed at the SIC Life company. The assessment is done using the computer (hardware and software) scale (see appendix A).

Table 19: *Mean scores, standard errors, and standard deviations for individual items of the computer controls construct.*

	Mean	Std. Error	Std. Deviation
	Statistic	Error	Statistic
The company has a coherent management plan for the purchase and continued investment in computer hardware and hardware.	3.02	.118	.758
Computer hardware and software are properly and safely installed.	3.15	.102	.654
The company has standard, regular hardware maintenance procedures.	2.80	.112	.715
The company uses virus protection software to screen for virus infection.	3.05	.130	.835
Management has identified confidential and sensitive data for which access should be restricted.	3.22	.074	.475
The company has established procedures for the periodic back-up of files.	3.10	.098	.625
Backed-up files are stored in a secure, off-site location.	3.15	.096	.615

Source: Field survey

The computer control construct is as well a multidimensional construct, made up of seven items. Mean scores, standard errors, and standard deviations for the individual items are shown in table 19. However for the assessment of the overall rating of this component of the internal control system, total score for the construct is computed. Computed total score for the scale represents the total assessment of this control component. The distribution of the total score shows that there are higher scores than there are lower scores. Lower scores mean weaker controls and higher scores means stronger controls. This is communicated by the skewness coefficient of -0.745 (see tables 20). Skewness coefficient of -

0.745 means that this control component is moderately strong. Figure 9 visually communicates this.

Table 20: Mean and skewness statistics for total computer controls

	Mean		Std. Deviation		Variance	Skewness	
	Std. Error		Statistic		Statistic	Error	
	Statistic	Error	Statistic	Statistic	Statistic	Statistic	Error
Total Computer Controls	21.4878	.49525	3.17114	10.056		-.745	.369
Valid N (listwise)							

Source: Field survey

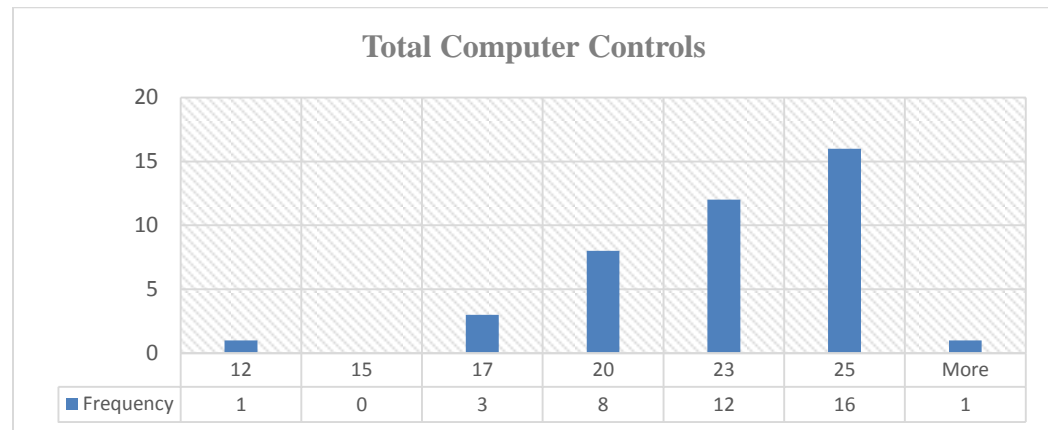


Figure 9: Distribution of total scores for the computer controls component of internal control

Source: Field survey

Table 21: Mean, median and mode statistics for total computer controls

N	Valid	41
	Missing	0
Mean		21.4878
Median		22.0000
Mode		21.00

Source: Field survey

## **The Relationships between the Control Environment, and the remaining Components of the Internal Control System**

The last question (actually a hypothesis) that the study answers or tests is whether the effectiveness of the control environment, as proposed in theory, determines the effectiveness of the remaining control components. Theoretically, the control environment constitutes the bedrock for the entire control system. A weaker control environment means a weaker entire control system and vice versa (Committee of Sponsoring Organizations of the Treadway Commission, 1992; Elder, Zhang, Zhou, & Zhou, 2009). To determine this assertion in respect of the SIC Life Company Limited, the study estimates the Pearson product-moment correlation coefficient between the control environment and the remaining five control components. Table 22 is an SPSS outputs depicting the correlation coefficients between the control environment and each of the five internal control components.

From table 22, it is noticed that there are positive correlations between total control environment and all the remaining components of the internal control system. The Pearson  $r$  between the control environment and the other components are as follows: total risk assessment ( $r = 0.576$ ); total control activities ( $r = 0.394$ ); total information and communication ( $r = 0.577$ ); total monitoring activities ( $r = 0.514$ ); and total computer controls ( $r = 0.278$ ). These correlations are all significant at 95% confidence interval. This indicates that there is enough evidence to reject the null hypothesis. The alternate hypothesis (there are strong positive correlations between the control environment and each of the remaining



components of the internal control system) is therefore accepted. Appendix B shows the scatter plots for the correlations, providing a visual reinforcement for the relationships.

Table 22: *Pearson product-moment correlation coefficients between total control environment and the remaining four control components*

		Total Risk Assessment	Total Control Activities	Total Information and Communication	Total Monitoring Activities	Total Computer Controls
Total Control Environment	Pearson Correlation	.576**	.349*	.577**	.514**	.287
	Sig. (2-tailed)	.000	.026	.000	.001	.069
	N	41	41	41	41	41

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Source: Field survey

## CHAPTER FIVE

### SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

#### Introduction

The concluding chapter of this study begins with a summary of the objectives of the study, its methodology and data analyses techniques. It proceeds with a summary of the key findings pertaining to each objective and the conclusions drawn from them. Conclusions drawn and recommendations made are reported for the consideration by the firms concerned and policy makers at large. The chapter ends with some suggestions for further research

#### Summary

The overall objective of the study is to assess the effectiveness of the internal control system of the SIC Life company using COSO's *Internal Control – Integrated framework*. Seven research questions are posed in achieving the seven sub-objectives of the study (see chapter one). Descriptive study design, specifically the survey design is used. Questionnaire is the data collection instrument used to collect data from forty-one company staff across the branches of the company. The respondents comprise staff from head office of the company including management and supervisors. Descriptive statistics is employed in the analysis of the data, using SPSS and MS Excel.

The first sub-objective of the study is to ascertain the effectiveness of the control environment component of the internal control system. It is found that this control component is only a little stronger. Since this control component forms

the bedrock of the internal control system, the nature or state of this control component directly influences the rest of the internal control components. This is validated by the positive correlation coefficients between the control environment and each of the remaining internal control system components. As reinforcement, the control activities, information and communication, and monitoring activities controls (except for the computer and risk assessment controls which are moderately strong) all show the same trend of marginal strength.

### **Conclusion**

The following conclusions are based on the findings of the study. From chapter for above, it can be found that the overall system of internal control is only meagerly strong. This overall picture is arrived at by assessing strength of each component of the internal control system. The control environment, which drives the entire internal control system at the SIC Life Company Ltd is generally assessed to be only marginally strong (see tables 4 and 5, and fig 4). As a result, the rest of the internal control system components (except for risk assessment and computer controls) are also not strong enough. This finding superficially buttresses the theoretical argument which is tested by the study hypothesis. The testing of the hypothesis, by the correlation analysis between the control environment and the other components, solidly confirms it (see table 16).

The assessment of the strength of rest of the components of the system of internal control can be confirmed from tables 6 to 15, and figures 5 to 9. Except for the risk assessment and the computer controls components, which portray some moderate strength, the rest are only marginally strong.

This position is not good for the company. Internal control system serves to provide “protection against the failure of the company and by extension the wealth of the shareholders. A weak system of internal control means that the company stands the higher risk of misappropriation of assets, poor decision-making etc. which can ultimately lead the unattainment of objectives.

### **Recommendations**

The management of SIC Life Company Ltd should reinforce the internal control system of the company most especially the control environment since this has direct impact on the entire internal control system. The control activities, information and communication, and monitoring in the company appear to be not good enough. These components need to be strengthened. This is important because the profitability and the survival of the company depend to a greater extent on the internal control system. The control system provides a reasonable assurance that the vision, mission, and the strategic objectives of the company will be achieved. Appendix C provides evidence of the devastating consequences of poor internal control system.

It is also recommended that management undertake further research using possibly census and different statistical test to confirm this observation or disprove it.

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**APPENDIX A**  
**QUESTIONNAIRE FOR THE COLLECTION OF DATA**  
**UNIVERSITY OF CAPE COAST**  
**SCHOOL OF BUSINESS**  
**DEPARTMENT OF ACCOUNTING AND FINANCE**

Dear Respondent,

This questionnaire is designed to gather information for a study *titled “the evaluation of the system of internal control of the SIC Life Company Limited”*. This is done in partial fulfillment of the requirement towards an award of Master of Business Administration at the Department of Accounting and Finance, School of Business, University of Cape Coast. The information you will provide will be used for academic purposes only. You are assured that your responses will be kept strictly confidential.

1. What is your job title or position?

\_\_\_\_\_

2. Which is your sex?

Male

Female

3. How long have you served in the organization?

1 – 3 years     

4 – 6 years     

Over 6 years

4. Please read through the following statements which are designed to measure the effectiveness of Internal Control system of the SIC Life company against the principles of COSO’s *Internal Control – Integrate Framework*. For each of the scales below, there are a number of items. Using the scale provided write the number that best indicates your assessment.

**Assessment: 1 = Very weak (VW), 2 = Weak (W), 3 = Strong (S), and 4 = Very Strong (VS).**

<b>I. CONTROL ENVIRONMENT</b>		<i>Assessment of Policies, Procedures, and Processes</i>			
		<b>VW</b>	<b>W</b>	<b>S</b>	<b>VS</b>
<i>Management must convey the message that integrity and ethical values cannot be compromised, and employees must receive and understand that message. Management continually demonstrates, through word and action, a commitment to high ethical standards.</i>		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<b>Integrity &amp; Ethical Values</b>					
1.	Appropriate entity policies regarding such matters as acceptable business practices, conflict of interest, and codes of conduct have been established and are they adequately communicated.				
2.	Management does demonstrate appropriate tone at the top, including explicit moral guidance about what is right and wrong and this communicated in both words and deeds.				
3.	Everyday dealings with employees, suppliers, customers and all other stakeholders are based on honesty and fairness.				
<b>Commitment to Competence &amp; Excellence</b>					
4.	Employee job descriptions/responsibilities, including specific duties, reporting responsibilities, and constraints have been clearly defined and established in writing and effectively communicated.				

5.	Management, accounting, and information technology personnel are sufficiently competent to perform their assigned responsibilities.				
6.	The organizations adequately compensate employees in order to attract qualified individuals.				
7.	Employee evaluation techniques are in place to identify incompetent or ineffective employees.				
<b>Management's Philosophy &amp; Operating Style</b>					
8.	Management and operating decisions dominated are not by one or a few individuals.				
9.	Management set organization-wide objectives that include broad statements about what the organization desires to achieve that are supported by related strategic plans.				
10.	Resources are adequate to assist personnel to perform their duties.				
11.	Periodic (monthly, quarterly) reports on the status of actual to budget performance are prepared and reviewed by top management.				
12.	Operations are made in accordance with statutes governing the company.				
13.	The internal control structure is supervised and reviewed by management to determine if it is operating as intended.				
14..	The company does compare its actual performance with its goals and objectives on periodic basis.				
15.	The company has a functioning internal audit section to review its operations.				
16.	The internal audit staff report to an official independent of the operations under review.				
<b>Organizational Structure</b>					
17.	There are written policies and procedures for all major areas of the organization.				
18.	Controls for authorization of transactions are established at an adequately high level.				
19.	There is adequate supervision and monitoring of decentralized operations.				

<b>I. RISK ASSESSMENT</b>		<i>Assessment of Policies, Procedures, and Processes</i>			
		<b>VW</b>	<b>W</b>	<b>S</b>	<b>VS</b>
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<i>An entity's risk assessment involves identification, analysis, and management of the events and conditions that can have a downside or an upside consequences on the achievement of the entity's objectives</i>					
1.	There are mechanisms to identify and react to changes that can have a dramatic and pervasive effect on the entity, and may demand the attention of senior management. (e.g. new laws or regulations that affect the entity and its operations; new or redesigned information systems; new technology incorporated into the information systems; new and better methods by competitors, etc.)				
2.	Controls do exist for approving decisions regarding financing alternatives and accounting principles, practices and methods.				
3.	Management has identified and analyzed and organizational risks relating circumstances such as changes in the operating environment, new personnel, new or revamped information systems, rapid growth, restructuring, and new programs or services.				
4	The accounting department/section has communication channels in place to be notified of changes in business practices that may affect the method or the process of recording transactions.				
5.	Management ensures that risk identification considers both internal and external factors and their impact on the achievement of objectives.				
6	The organization periodically performs an assessment of its exposure to fraudulent activity and how the operations could be impacted.				

7.	The organization's assessment of fraud risks considers opportunities for unauthorized acquisition, use and disposal of assets, altering the reporting records, or committing other inappropriate acts.				
8.	The organization has mechanisms in place to identify and react to risks presented by changes in government, regulatory, economic, operating, or other conditions that could affect the achievement of the goals and objectives				

<b>I. CONTROL ACTIVITIES</b>		<i>Assessment of Policies, Procedures, and Processes</i>			
		<i>VW</i>	<i>W</i>	<i>S</i>	<i>VS</i>
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
Management, through specific instructions, policies, procedures, guidelines, etc., ensures that things are done in conformity with the organization's strategy. This is to ensure the achievement of objectives.					
1.	Large expenditure for purchases, travel, etc. are obligated ahead of time to ensure budgeted funds are available.				
2.	Receipts are given for all transactions that are conducted in person – whether by cash register or pre-numbered receipt.				
3.	Receipt books are regularly reviewed for missing receipt numbers by someone other than a cashier.				
4.	Receipts are recorded promptly and deposited within 24 hours at the bank.				
5.	Someone independent of the cash receipt process reconcile receipts records (receipts, mail log, cash register) to the deposit slip.				
6.	Cash funds are periodically counted on a surprise basis by another employee other than the cashier.				
7.	Adequate physical facilities such as a safe or locking drawer are provided for safeguarding cash.				
8.	The organization has a process that requires regular back-up of computer files and testing of the back-up files to ensure proper functionality.				
9.	The organization maintains policies and procedures to facilitate the recording and accounting of transactions in compliance with laws, regulations, and provisions of contracts and grant agreements.				

<b>I. INFORMATION AND COMMUNICATION</b>		<i>Assessment of Policies, Procedures, and Processes</i>			
		<b>VW</b>	<b>W</b>	<b>S</b>	<b>VS</b>
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
<i>Information is recorded, processed, summarized, and reported by information systems. relevant information includes industry, economic, and regulatory information obtained from external sources, as well as internally generated information</i>					
1.	The information system provides management with necessary reports on the performance of departments/sections/units relative to established objectives, including relevant external and internal information.				
2.	Procedures have been implemented in the organization to verify the accuracy of data in management and all other important reports.				
3.	Management does commit the appropriate human and financial resources to the development of the necessary financial reporting information systems.				
4.	The organization maintains and follows procedures for recording, filing, retention, and disposal of accounting records and supporting documentation in accordance with applicable regulations.				
5.	Management has a process for the development, approval and implementation of policy updates and communicates those updates to staff.				
6.	The organization has a Whistleblower policy for people to report suspected improprieties regarding fraud; errors in financial reporting, procurement, and contracting; improper use or disposition of equipment; and misrepresentation or false statements.				

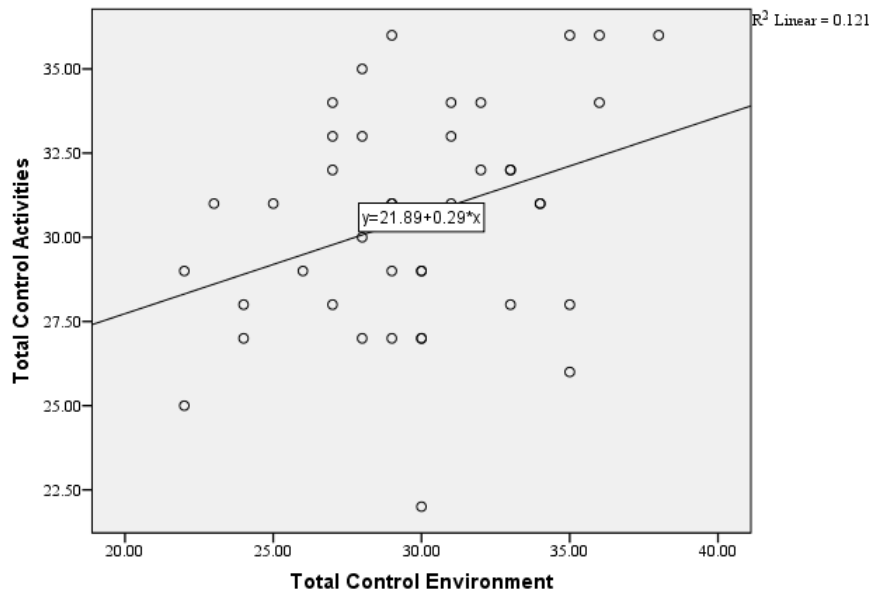
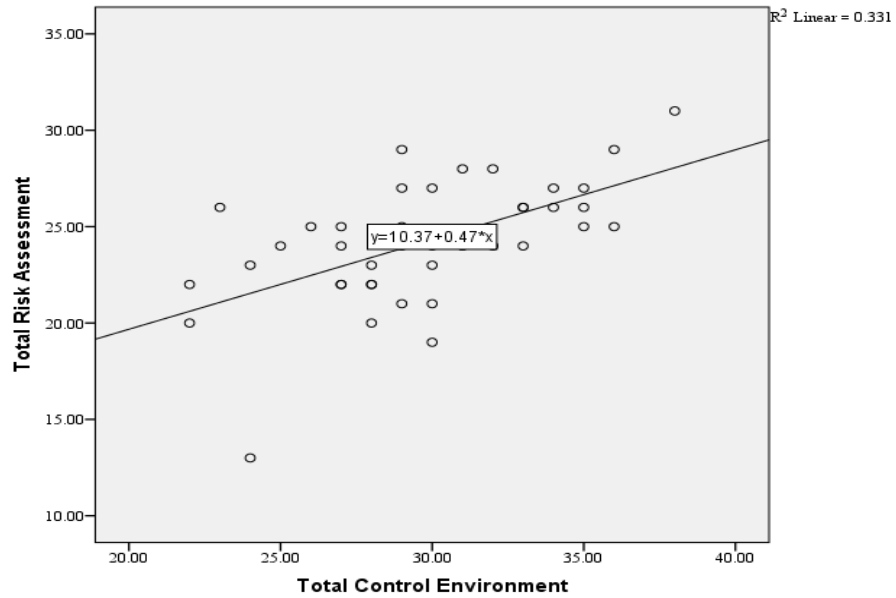


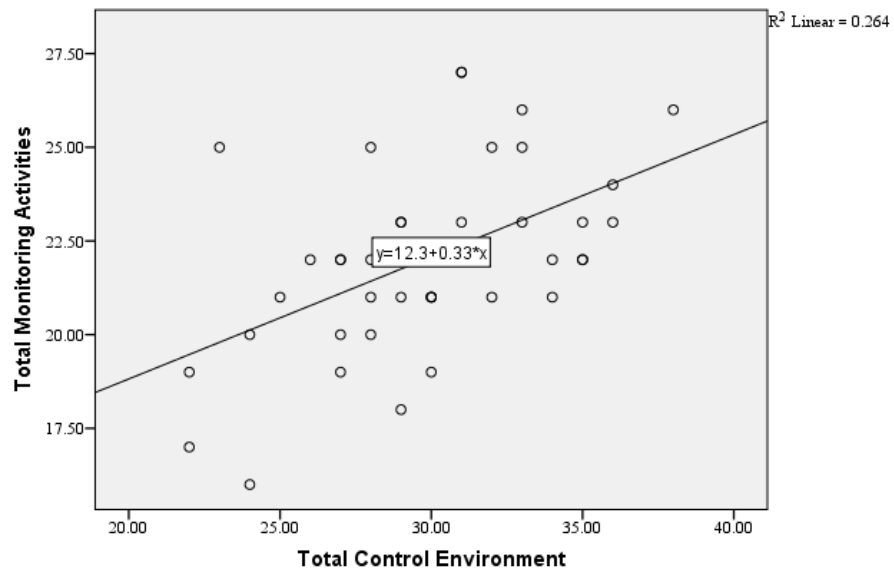
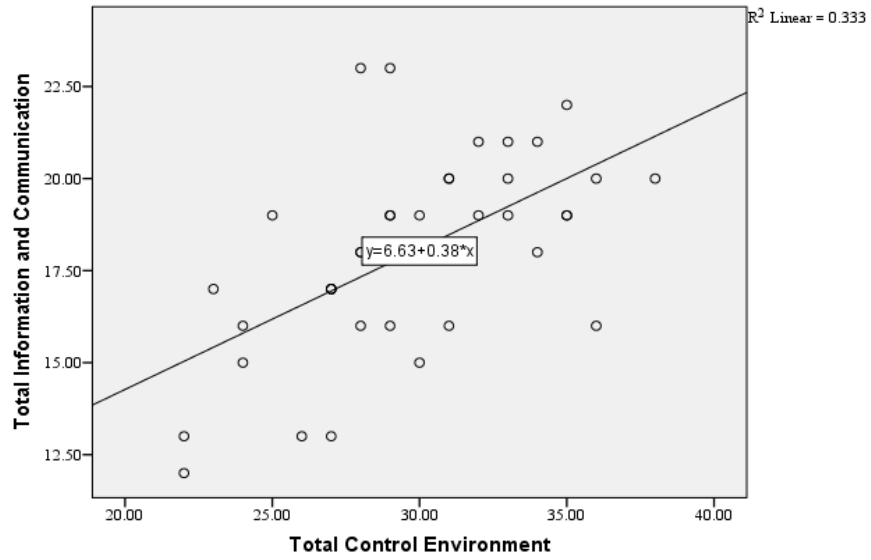
<b>II. MONITORING ACTIVITIES</b>		<i>Assessment of Policies, Procedures, and Processes</i>			
<i>Management requires reliable information to run the organizations operations. In some cases management directly monitors the performance of specific control procedures established to provide the information. In other situations, management evaluates the information in the normal course of monitoring the results of operations. Either directly or indirectly, these monitoring activities help ensure the reliability of financial reporting information.</i>		<b>VW W S VS</b>			
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
		1.	The information system provides management with necessary reports on the organization's performance relative to established objectives (e.g. budgets), including relevant external and internal information.		
2.	The information provided to the various departmental/divisional heads is in sufficient detail and on time to enable them carry out their responsibilities efficiently and effectively.				
3.	The information provided to management by the various divisional heads is in sufficient detail and on time to enable management carry out their responsibilities efficiently and effectively.				
4.	Management reviews key performance indicators (such as ...) when monitoring financial reporting activities.				
5.	Management performs and reviews analyses to identify unusual fluctuations in account balances.				
6.	Management periodically reviews financial reports for compliance with applicable financial reporting frameworks				
7.	The internal audit function of the organization reports to sufficiently high level of authority to assure that its findings and recommendations will receive consideration.				

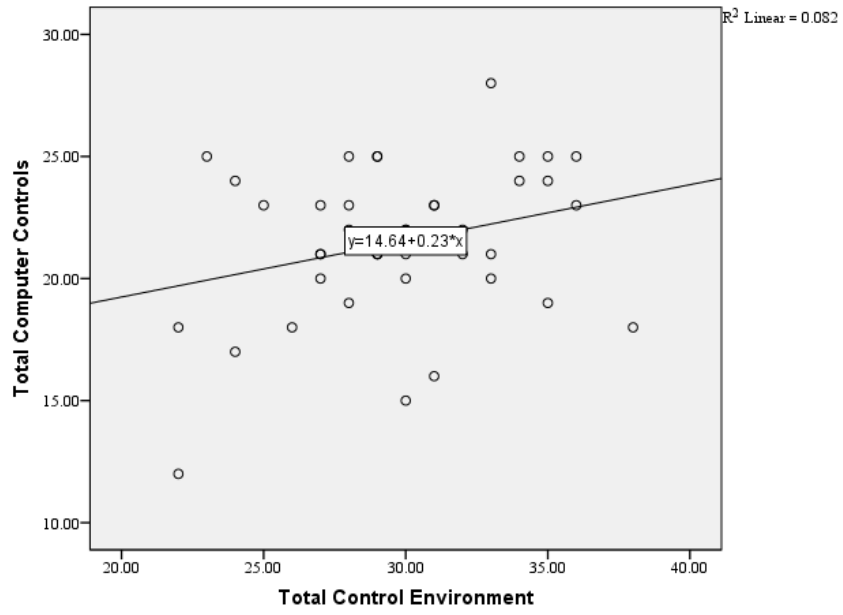
<b>III. COMPUTER (HARDWARE AND SOFTWARE)</b>		<i>Assessment of Policies, Procedures, and Processes</i>			
		<i>VW</i>	<i>W</i>	<i>S</i>	<i>VS</i>
		<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>
1.	The company has a coherent management plan for the purchase and continued investment in computer hardware and software.				
2.	Computer hardware and software are properly and safely installed.				
3.	The company has standard, regular hardware maintenance procedures.				
4.	The company uses virus protection software to screen for virus infections.				
5.	Management has identified confidential and sensitive data for which access should be restricted.				
6.	The company has established procedures for the periodic back-up of files.				
7.	Backed-up files are stored in a secure, off-site location.				

## APPENDIX B

### SCATTER PLOTS SHOWING THE CORRELATIONS BETWEEN THE CONTROL ENVIRONMENT AND THE REMAINING CONTROL COMPONENTS







## APPENDICES

### APPENDIX C

#### LIST OF CORPORATE FAILURES ACROSS THE GLOBE

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Name	Date	Business	Cause(s)
Cooperative Bank		Banking	Breakdowns of Internal Controls; Fraud; False Accounting Practices
Bank for Housing and Construction		Banking	Breakdowns of Controls
Meridian BIAO (Ghana branch)		Banking	Breakdowns of Internal Controls; Fraud; False Accounting Practices
Overend, Gurney & Co	June 1866	Banking	After Samuel Gurney's retirement, the bank invested heavily in railway stocks. It went public in 1865, but was badly affected by a general fall in stock prices. The Bank of England refused to advance money, and it

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			collapsed. The directors were sued, but exonerated from fraud.
Arcandor	9 June 2009	Retail	After struggling to maintain business levels at its brand names Karstadt and KaDeWe, Arcandor sought help from the German government, and then filed for insolvency.
Equitable Life Assurance Society	8 Dec 2000	Insurance	The insurance company's directors unlawfully used money from people holding guaranteed annuity rate policies to subsidize people with current annuity rate policies. After a House of Lords judgment in <i>Equitable Life Assurance Society v Hyman</i> , the Society closed. Though never technically insolvent, the UK government set up a compensation scheme for policyholders under the <i>Equitable Life (Payments) Act 2010</i> .
Dynegy	6 July 2012	Energy	After a series of attempted takeover bids, and a finding of fraud in a subsidiary's purchase of another subsidiary, it filed for Chapter 11 bankruptcy. It emerged from bankruptcy on 2 October 2012.
Pacific Gas and Electric	6 April 2001	Energy	After a change in regulation in California, the company determined it was

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Company			unable to continue delivering power, and despite the California Public Utility Commission's efforts, it went into bankruptcy, leaving homes without energy. It emerged again in 2004.
Bank of Credit and Commerce International	5 July 1991	Banking	Breach of US law, by owning another bank. Fraud, money laundering and larceny.
Polly Peck	30 Oct 1990	Electronics, food, textiles	After a raid by the UK Serious Fraud Office in September 1990, the share price collapsed. The CEO Asil Nadir was convicted of stealing the company's money.
BancoEspírito Santo (Rikhardsson, Best, Green, & Rosemann)	3 August 2014	Banking	An audit performed in 2013, for a capital raise performed in May 2014, uncovered severe financial irregularities and a precarious financial situation the bank. The same year, its CEO, Ricardo Salgado, revealed 95 billion € of losses. In July 2014, Salgado was replaced by economist Vítor Bento, who saw BES in an irrecoverable situation. Its good assets were bought by Novo Banco, a vehicle founded by Portugal's financial

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			regulators for that purpose, on August 3, which hired Bento as CEO, while its toxic assets stayed in the "old" BES, which got its banking license revoked by Portugal's regulators.
Bayou Hedge Fund Group	29 Sep 2005	Hedge fund	Samuel Israel III defrauded his investors into thinking there were higher returns, and orchestrated fake audits. The Commodity Futures Trading Commission filed a court complaint and the business was shut down after the directors were caught attempting to send \$100m into overseas bank accounts.
One.Tel	29 May 2001	Telecomms	After becoming one of the largest Australian public companies, losses of \$290m were reported, the share price crashed, and it entered administration. In ASIC v Rich the directors were found not to have been guilty of negligence.
Enron	28 Nov 2001	Energy	Directors and executives fraudulently concealed large losses in Enron's projects. A number were sentenced to prison.

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Chiquita Brands Int	28 Nov 2001	Food	Accumulated debts, after a series of accusations relating to breaches of labour and environmental standards. It entered a pre-packaged insolvency, and emerged with similar management in 2002.
Washington Mutual	26 Sep 2008	Banking	Following the sub-prime mortgage crisis, there was a bank run on WaMu, and pressure from the FDIC forced closure.
Herstatt Bank	26 June 1974	Banking	Settlement risk. Counterparty banks did not receive their USD payments, where Herstatt had received DEM earlier, prior to government forced liquidation.
Barings Bank	26 Feb 1995	Banking	An employee in Singapore, Nick Leeson, traded futures, signed off on his own accounts and became increasingly indebted. The London directors were subsequently disqualified, as being unfit to run a company in Re Barings plc (No 5).
Parmalat	24 Dec 2003	Food	The company's finance directors concealed large debts.
Schlecker	23 Jan 2012	Retail	After continual losses mounting from 2011 Schlecker, with 52,000

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			employees, was forced into insolvency, though continued to run.
WorldCom	21 July 2001	Telecomms	After falling share prices and a failed share buyback scheme, it was found that the directors had used fraudulent accounting methods to push up the stock price. Rebranded MCI Inc, it emerged from bankruptcy in 2004 and the assets were bought by Verizon.
Carrian Group	1983	Real estate	Accounting fraud. An auditor was murdered, an adviser committed suicide. The largest collapse in Hong Kong history.
AIG	16 Sep 2008	Insurance	Out of \$441 billion worth of securities originally rated AAA, as the US sub-prime mortgage crisis unfolded, AIG found it held \$57.8 billion of these products. It was forced to take a 24-month credit facility from the US Federal Reserve Board.
Lehman Brothers	15 Sep 2008	Banking	Lehman Brothers' financial strategy in from 2003 was to invest heavily in mortgage debt, in markets which were being deregulated from consumer protection by the US government. Losses mounted, and Lehman Brothers

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			was forced to file for Chapter 11 bankruptcy after the US government refused to extend a loan. The collapse triggered a global financial market meltdown. Barclays, Nomura and Bain Capital purchased the assets which were not indebted.
Arthur Andersen	15 June 2002	Accounting	A US court convicted Andersen of obstruction of justice by shredding documents relating to Enron scandal.
Anglo Irish Bank	15 Jan 2009	Banking	After the financial crisis of 2007-2008, the bank was forced to be nationalized by the Irish government.
Royal Bank of Scotland Group	13 Oct 2008	Banking	Following the takeover of ABN-Amro, and the collapse of Lehman Bros, RBS found it insolvent as the international credit market seized up. 58% of the shares were bought by the UK government.
Danatbank	13 July 1931	Banking	At the start of the Great Depression, after rumours about the solvency of the NorddeutscheWollkämmerei&Kammgarnspinnerei, there was a bank

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run, and Danatbank was forced into insolvency.

Adelphia Communications    13 Feb 2002    Cable  
television

Internal corruption. The Directors were sentenced to prison.

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Source: Wikipedia (2015)

