"The Internal Audit Control Function and its Implication for Risk Assessment by the External Auditor: A Case of quoted Companies".

By

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DECLARATION

This management Research Project is my original work and has not been presented for any degree in any University.

Signed .... Date 20/11/2000

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This Management Research Project has been submitted with my approval as University Supervisor.

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DEDICATION

To my parents, brothers, sisters and my wife and daughter for their untiring love, patience and dedication.

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A project of this kind is without doubt beyond the effort of my own self. In this regard, I wish to acknowledge the contribution of a number of people.

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ABSTRACT

This study sets out principally to identify the effects of internal audit departments on the risk assessments process by external auditors and to establish the empirical association between the strength of internal audit departments and extent of reliance on internal controls by external auditors. As a prelude, the relative importance of other risk indicators besides internal controls were also addressed.

A structured questionnaire addressed to audit managers of both quoted companies and audit firms was used to collect the data necessary for the study. A subset of the questionnaire was used to construct a set of variables for the purpose of establishing the empirical associations. To analyze the data, both descriptive and non-parametric statistics were used.

The analysis found out that though, in relative terms, internal audit departments of firms in financial investment sector was rated strongest, there was no significant differences in the strength of internal audit departments across industries implying that auditors should rely equally on the systems emanating from this departments if internal controls are sensitive to strength of internal audit departments. However, except in two cases, there was no evidence that there was any significant difference in the extent to which external auditors relied on the internal controls of firms across sectors.

Further, no empirical association was located between the strength of internal audit departments and extent of reliance on internal controls by external auditors.

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ABBREVIATIONS

AAA-American Accounting Association

ICPA(K)-Institute of Certified Public Accountants of Kenya

IASC-International Accounting Standards Committee

AICPA-American Institute of Certified Public Accountants

CICA-Canadian Institute of Certified Accountants

IFA-International Federation of Accountants

CPAs-Certified Public Accountants

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

In the accounting profession, three broad categories of the audit function exist, namely: internal audit, external audit and public sector audit. The basic distinction between the three is that while an internal audit is performed by an employee of the entity, the external audit is carried out by an independent practitioner whereas public sector auditing is performed by government auditors who may equally be qualified accountants. This study focuses on the first two categories of the audit function.

The Institute of Internal Auditors (1975) describes internal auditing as an independent appraisal activity within an organization for the review of the accounting, financial and other operations as a basis for service to management. **Millichamp** (1996) who views an internal audit function as a managerial control, which functions by measuring and evaluating other controls, supports this view

On the other hand external auditing has been defined in the **Explanatory Foreword to the Kenya Auditing Standards and Guidelines (ICPAK)** as an independent examination of and expression of opinion on the financial statements of an entity by an appointed auditor in the pursuance of that appointment and in compliance with any relevant statutory obligations. SAS 1 brings out the objective of an ordinary audit on financial statements by the independent auditors as that of expressing an opinion on the fairness with which they present fairly, in all material respects, financial position, results of operations and its cashflows in conformity with generally accepted accounting principles.

The overall objective of internal auditing is therefore to assist management in the effective discharge of their responsibilities by furnishing them with objective analyses, appraisals, recommendations and pertinent comments concerning the activities reviewed. The attainment of this overall objective involves such activities as; ascertaining the extent of compliance with established policies, plans and procedures, ascertaining the extent to which the company assets are accounted for and safeguarded from losses; ascertaining the reliability of accounting and other data developed within the organization and appraising the quality of performance in carrying out assigned responsibilities.

Although the internal auditor (being an employee of the firm) has a more vital interest in all aspects of company's operations and is more deeply interested in helping to make those operations as profitable as possible, **Loebecke** et.al **(1994)** points out that the external auditor may utilize the work of the internal auditor by taking into account such work and thereby reducing the extent of his audit tests.

The Statement on Auditing Procedure No. 33 points out that the management has the responsibility for adopting sound accounting policies, maintaining an adequate and effective system of accounts to facilitate a fair epresentation in the financial statements, for safeguarding of assets and for devising a system of internal control that will, among other things, help assure the production of proper financial statements. It must also police the system to ensure that prescribed procedures are carried out, that changes in operating conditions are recognized, and that corrective action is taken when the system breaks down. Therefore the internal auditor as part of management team and as part of the control function should ensure that an effective system of internal control is in place.

In regard to accounting matters, both internal and external auditors operate largely in the same field and they have two common interests: ascertaining that there is:-

(a) an effective system of internal check to prevent or detect errors and frauds and that it is operating satisfactorily.

(b) an adequate accounting system to provide the information necessary for preparing true and fair financial statements.

However, the statement on auditing by the **Institute of Chartered Accountants of England and Wales in their Members' Handbook** notes that although the two forms of audit have a common interest in matters relating to accounting, there are some fundamental differences arising from:-

(a) **Scope**: The extent of the work undertaken by the internal auditor is determined by the management whereas that of the external auditor arises from the responsibilities placed on him by the statute.

(b) **Approach**: The internal auditors approach is with a view to ensuring that the accounting system is efficient so that the accounting information presented to management throughout the period is accurate and discloses material facts. The external auditors approach however is governed by his duty to satisfy himself that the accounts to be presented to the shareholders show a true and fair view of the profit or loss for the financial period and of the state of the company's affairs at the end of that period.

(c) **Responsibility**: The internal auditor's responsibility is to the management whereas the external auditor is responsible directly to the shareholders. It follows that the internal auditor, being a servant of the company does not have the independence of status which the external auditor possesses.

Not withstanding these important differences, **the IFA in their Technical Pronouncements (2000)** points out that the work of both the internal and external auditors is carried out largely by similar means, such as:-

- Examination of the system of internal check, for both soundness in principle and Effectiveness in operation.
- Examination and checking of accounting records and statements.
- Verification of assets and liabilities
- Observation, inquiry, the making of statistical comparisons and such other means as may be judged necessary.

In this respect, **Cashin (1971)** observes that most opinions by external auditors on financial statements include a statement which in part states that "our examination was made in accordance with generally accepted auditing standards....". and one of the standards reads:

[There is to be a proper study and examination of the existing internal control as a basis for reliance thereon and for the determination of the resultant extent of the tests to which auditing procedures are to be restricted].

In supporting this standard, **Johnson and Brasseaux (1965)** warns that the external auditor must evaluate the system of internal audit in the same way that he evaluates other aspects of the system of internal control. He must therefore satisfy himself that all requirements for an effective internal auditing have been met. The internal auditor and his staff must be suited by training and temperament for their work, audit programs used must be well planned and executed, reports emanating must be clear and conclusive and criticisms contained therein should be followed up promptly by management to ensure that corrective action is taken. Above all, the internal auditor must report to a highly placed official and should generally enjoy the support of management.

If the external auditor is to rely on the work of the internal auditor, then he must have confidence in the internal auditor (**Staffer 1974).** A first step in gaining this confidence is to learn the qualifications of the internal auditor. The internal auditor must not only have a knowledge of accounting and auditing techniques but must also have a clear understanding of management responsibility for the company's operations and the stewardship of its assets. He must therefore have imagination and perseverance in order to appreciate fully the significance of his findings and to follow them through to fitting conclusions. Finally, he must have the type of personality that inspires the confidence and support of management and the cooperation of executives and other employees whom he meets during the course of his examination.

From the above, it implies that the external auditor to some extent places reliance on the system of internal control in determining the extent and scope of audit tests and procedures. In any case the similarity between the means by which both auditors carry out their respective duties offers a considerable scope for reliance by the external auditor on the work done by the internal auditor (**Millichamp, 1996**), in a largely strong internal control environment which is normally established by management of which the internal auditor is part.

The implication is that where there is an adequate internal audit department, far greater reliance can be placed on the system of controls that leads to proper records and financial statements. The work of the internal auditor can be a valuable supplement but cannot however be a substitute for the work of the external auditor.

Brown (1962) points out that if the system of internal control is adequate, the probability that fraud or other errors exist in any magnitude is remote. Relying on the absence of fraud and data processing error, the external auditor can spend more time gathering evidence concerning the fairness of the presentation of financial position and results of operations.

From the above, it appears that where the internal control system is strong as evaluated by the external auditor, there is a perceived reduced audit risk and the implication is to reduce both compliance and substantive test procedure and vice versa.

1.2 Statement of the Problem

The continued expansion of modern business has added to the problems of an already heavily burdened company management in maintaining control over widespread operations. This has made it necessary to delegate responsibility and authority to many levels of supervision. However, management cannot delegate its overall responsibility or accountability.

Cashin (1971) notes that with the wide delegation of duties, management has turned to the control specialists - the internal auditors, for assistance in maintaining surveillance over the management control network. A systematic program of review and appraisal becomes necessary to determine that the delegated responsibilities are discharged and that established policies and procedures are carried out as expected. Furthermore, a regular review by a qualified staff to determine that the system of control is adequate and is operating effectively assures the integrity of the foundation for all control and objective reporting could be assured. From Cashin's argument it appears that for management to rely on the financial statements as a guide in making their daily decisions and for the external auditor to rely on the internal control system without increasing greatly the number of tests and the extent of audit procedures, a strong internal audit department is necessary.

AICPA points out that the special concern of the external auditor is that the system of internal control must be under continuing supervision to determine whether prescribed policies are being carried out, changes in operating conditions have not made the procedures cumbersome, obsolete or inadequate and effective corrective measures are taken promptly where breakdowns in the system appear. An internal audit staff therefore becomes a strong factor in a system of internal control since he provides a means of surveying the effectiveness of adherence to the prescribed procedures.

While it is the desire of every company to maintain a strong internal audit department, there exists a diversity in strength of internal audit department from one company to another depending on their ability to attract and maintain qualified personnel in this department. To many, a strong internal audit department should automatically translate to a strong internal control system that can be relied upon by both management and external auditor. The researcher is not aware of any study that has been carried out to link the strength of internal audit departments to strength of internal controls as perceived by external auditors.

1.3 Objective of the Study

The objectives of this study are two fold;

(i) To establish whether the existence of an adequate internal audit function translates into a strong internal control system that can be relied upon by the external auditor.

(ii) To assess the relative importance of various audit risk indicators to the external auditor.

1.4 Importance of the Study

The findings of this study will be important to a variety of interested parties such as:

The internal auditors. This study will enable the internal auditors know of the extent to which external auditors place reliance on their internal control systems in their risk assessment process.

The management. This study will enable the management know whether their investing in strong audit department is worthwhile and is of any relevance to the external auditor's risk assessment process.

The academic community. This study will provide a base for further research especially in the area of relationships between internal audit function and external auditors risk assessment process.

CHAPTER TWO: LITERATURE REVIEW

2.1 Definition of Terminology

External Auditing. This has been defined by the **American Accounting Association (AAA)** as "a systematic process of objectively obtaining and evaluating evidence regarding assertions about economic actions and events to ascertain the degree of correspondence between those assertions and some established criteria and communicating the results to interested users.

External Auditors (also called Certified Public Accountants, CPA). These are professionals who provide their services to organizations for a fee. Their primary function is to examine the financial statements of a client. However, they also perform other work such as book keeping and accountancy services, tax accounting, management consulting and the preparation of financial statements for clients.

Internal Auditors. These are employees within an organization whose primary responsibility is to determine whether organizational policies and procedures are being carried out correctly and to safeguard organizational assets as well as assessing the efficiency of internal control systems within the organization.

Internal Control System. Many accounting institutions such as ICPA(K), IASC and AICPA define internal control system as the whole system of controls, financial and otherwise established by management in order to carry on the business of the entity in an orderly and efficient manner, ensure adherence to management policies, safeguard the assets and secure as far as possible the completeness and accuracy of the records. The individual components are known as internal controls.

Internal Auditing. This has been defined by the Institute of Internal Auditors as a series of processes and techniques through which an organization's own employees ascertain for the management by means of first-hand on-the-job observation whether established management controls are adequate and are effectively maintained, records and reports reflect actual operations accurately and promptly and that each division, department or other unit is carrying out the plans, policies and procedures for which it is responsible.

Auditing procedures: AICPA(1963) broadly defines auditing procedures as the acts performed by the auditor in the course of attaining the objectives of the examination of financial statements.

Inherent risk. Is a measure of the auditor's assessment of the likelihood that there are material mistatements in a segment before considering the effectiveness of the internal control structure.

Acceptable audit risk. A measure of how willing the auditor is to accept that the financial statements may be materially misstated after the audit is completed and an unqualified opinion has been issued. When the auditor decides on a lower acceptable audit risk, it means that the auditor wants to be more certain that the financial statements are not materially misstated.

2.2 The Concept of Audit Risk

CICA defines audit risk as the risk that the auditor will fail to express a reservation in the audit opinion on financial statements that are materially misstated, thus giving a wrong opinion and causing damage to the audit firm.

Among possible consequences for a firm when an auditor makes an erroneous opinion include: an increase in audit procedures, damages to the client, losses following a court decision or an out of court settlement, legal fees, time spent by partners and other auditors involved in the file, tarnished reputation for the firm, time needed for a peer review and potential loss of the right to practice. A wrong opinion means saying for example that the accounts show a true and fair view when in fact they do not. Accounting firms must consider the risk associated with the method of obtaining and evaluating audit evidence. Though the accounting profession has developed tools and, more specifically a risk model, to better define and control audit risk. **Cockburn (1994)** affirms that firms should focus on managing audit risk more effectively by adjusting, and not replacing, an auditor's decision-making process.

Audit costs have been rising steadily in the last few years due to higher salaries, high office costs and higher professional indemnity premiums. At the same time, audit fee resistance has risen due to competition, low growth in the market and the growth of competitive tendering for audits. Consequently, audit firms are continually trying to reduce audit costs while at the same time reducing audit risk. This has led to the idea of risk based auditing being to some sense a distinct approach to auditing. Historically, auditing has progressed from being a largely substantive testing process through a largely systems based process into a risk based method which uses a range of audit techniques including substantive testing, internal control compliance, analytical review and the use of inherent factors.

Inherent factors include background knowledge of the client and past audit record indicating no special difficulties. According to **Mautz (1964)**, it is a valid auditing postulate that "in the absence of any evidence to the contrary, what has held true for the client in the past will hold true in the future".

Essentially, auditing is the gathering of evidence about each part of the accounts but an absolute assurance is impossible, there is always some element of residual risk which has to be accepted (**Stettler, 1974**). However, the extent of that acceptable risk is a matter of judgment. It can be seen as the product of the separate risks accepted in each type of evidence gathering. Care has to be taken to weigh the risk from each source of evidence as it is gathered and then to avoid over auditing in the remaining evidence gathering.

2.2.1 Factors influencing audit risk

The existence of inherent risk in the audit function implies that auditors should attempt to predict where mistatements are most and least likely in the financial statements segments. This information affects the total amount of evidence that the auditor is required to accumulate and influences how the auditors efforts to gather the evidence are allocated among the segments of the audit. There is always some risk that the client has made mistatements that are individually or collectively large enough to make the financial statements misleading (**Cockburn, 1994**). These mistatements can be intentional or unintentional and they can affect the account balances or disclosure. Inherent risk can be low in some instances and extremely high in others.

At the beginning of the audit there is not much that can be done about changing inherent risk. Instead, the auditor must asses the factors that make up the risk and modify audit evidence to take them into consideration. The auditor should therefore consider several major factors (discussed below) when assessing inherent risk.

(a) **Nature of the Clients Business**

Inherent risk for certain accounts is affected by the nature of the clients business. For example, there is a greater likelihood of obsolete inventory for an electronic manufacture than for a steel fabricator. Inherent risk is most likely to vary from business to business for account such as inventory accounts and loans receivable, and property plant and equipment. The nature of the clients business should have little or no effect on inherent risk for accounts such as cash, notes and mortgages payable. Information gained while obtaining knowledge about the client industry and business is useful for assessing this factor.

(b) **Integrity of Management**

When management is dominated by one or a few individuals who lack integrity, the likelihood of significantly misrepresented financial statements is greatly increased. The integrity of Management affects the auditors' assessment of acceptable audit risk and, in extreme cases, may cause the auditor to reject the client.

When management has an adequate level of integrity for the auditor to accept the engagement **(Willingham, 1971)**, but cannot be regarded as completely honest in all dealings, auditors normally reduce acceptable audit risk and also increase inherent risk. For example, management may deduct capital items as repairs and maintenance expense on tax returns. The auditor should first evaluate the cycles or accounts where management is most likely to make mistatements. A higher level inherent risk is appropriate wherever the auditor believes material mistatements may occur.

(c) **Client Motivation**

In many situations management may believe that it would be advantageous to misstate the financial statements, especially in cases where management receives a percentage of total profits as bonus. Also, there may be a considerable motivation for intentional understatement of income when management wants the company to pay less income taxes. If management lacks integrity, some specific type of motivations may then lead them to misstate financial reports.

(d) **Results of Previous Audits**

Mistatements found in the previous year's audit have a high likelihood of occurring again in the current years audit. This is because many types of mistatements are systematic in nature and organizations are often slow in making changes to eliminate them. Therefore, an auditor would be negligent if the results of the preceding year's audit were ignored during the development of the current years audit program. For example, if the auditor found a significant number of mistatements in pricing inventory, inherent risk would likely be high and extensive testing would have to be done in the current audit as a means of determining whether the deficiency in the clients system had been corrected. If, however, the auditor has found no mistatements for the past several years in conducting tests of an audit area, the auditor is justified in reducing inherent risk, provided that changes in relevant circumstances have not occurred.

(e) **Transactions with Related Parties**

Transactions between parent and subsidiary companies and those between management and the corporate entity are examples of related party transactions. Because these transactions do not occur between two independent parties dealing at "Arm's length", a greater likelihood exists that they might be misstated, causing an increase in inherent risk.

(f) **Non-routine Transactions**

Transactions that are unusual for the client are more likely to be incorrectly recorded by the client than routine transactions because the client lacks experience in recording them. Examples include fire losses, major property acquisitions and lease agreements. Knowledge of the client's business and review of minutes of meetings are useful to learn about nonroutine transactions.

(g) **Susceptibility to defalcation**

The auditor should be concerned about the risk of possible defalcation in situations where it is relatively easy to convert company assets to personal use. Such is the case when currency, marketable securities or highly marketable inventory are not closely controlled. When the likelihood of defalcation is high, inherent risk is increased.

(h) **Management structure**

If a small number of individuals dominate the management of a company without an effective oversight or board ,there may be an increased risk of error.

(i) **Changes in business**

When significant changes occur it may be more difficult to report accurate financial information because of a lack of familiarity with new types of transactions or a new line of business.

2.3 Client's Concerns On Internal Control Structure

Many companies establish a system for control so as to help in meeting its own goals. The system consists of many specific policies and procedures designed to provide management with reasonable assurance that the goals and objectives will be met **(Cecil, 1985)**.

However, the control system must be cost effective and thus controls adopted are selected after a comparison of the costs and benefits. One benefit to management, but certainly not the most important, is the reduced cost of an audit when the auditor evaluates the system of internal control as good or excellent and assesses control risk as low.

Management therefore typically has three main concerns in designing an effective internal control structure:

2.3.1 Reliability of financial reporting

Overall, management is responsible for preparing financial statements for investors, creditors and other users. Management has both a legal and professional responsibility to be sure that the information is fairly prepared in accordance with reporting requirements such as generally accepted accounting principles.

2.3.2 Compliance with applicable laws and regulations.

There are many laws and regulations that organizations are required to follow. One of the laws requires that a company maintains proper records keeping systems. The penalties for violation of the act are severe and includes both fines and imprisonment of company officials. The act therefore makes maintaining a proper internal control structure a high priority item for public companies.

2.3.3 Efficiency and effectiveness of operations

Controls within an organization are meant to encourage efficient and effective use of its resources (including personnel) so as to optimize the company's goals. An important part of these controls is accurate information for internal decision making. A wide variety of information is used for making critical business decisions such as the price to charge for products which is based in part on information about the cost of making the products.

Another important part of effectiveness and efficiency is safeguarding assets and records. The physical assets of an organization can be stolen misused or accidentally destroyed unless they are protected by adequate controls. The same is true of non physical assets such as accounts receivable, important documents and records. Safeguarding certain assets and records has become increasingly important since the advent of computer systems. Large amounts of information stored on computer media such as magnetic tape can be destroyed if care is not taken to protect them. Safeguarding of accounting records also affects the reliability of financial reporting.

2.4 Auditor's Concerns on Internal Control Structure

The study of the clients internal control structure and the resulting assessment of control risk are important to auditors and specifically included as a generally accepted auditing standard in the second standard of field work which states:

[The auditor (external) should obtain a sufficient understanding of the internal control structure to plan the audit and to determine the nature, timing and extent of task to be performed]

2.4.1 Reliability of financial reporting

To comply with the second standards of field work, the auditor is interested primarily in controls that relate to the reliability of financial reporting which is the first of management's internal control concerns. The financial statements are not likely to correctly reflect the generally accepted accounting principles if the controls affecting the reliability of financial reporting are inadequate. However, the statements can be fairly stated even if the company's controls do not promote efficiency and effectiveness in its operations.

While auditors have a significant responsibility for the discovery of management and employee fraud and to a lesser degree, certain illegal acts, they are more concerned with the clients controls over the safeguarding of assets and companies with applicable laws and regulations if they affect the fairness of the financial statements.

Auditors should therefore emphasize control concerned with the reliability of data for external reporting purposes though controls affecting internal management information such as budgets **(Burns & Waterhouse, 1975)** and internal performance reports should not be completely ignored. These types of information often helps the auditor in deciding whether the finances statements are fairly presented. Should the controls over those internal reports are considered inadequate then the value of the reports as evidence diminishes.

2.4.2 Emphasis on controls over classes of transactions. The primary emphasis by auditors is on controls over classes of transactions rather than account balances. The reason is that the accuracy of the output of the accounting system is heavily dependent upon the accuracy of the inputs and processing. If controls are adequate to make say sure billings, cash receipts, sales, returns and allowances and charge - offs are correct the ending balance in accounts receivable is likely to be correct.

However during the study of the clients internal control structure and assessment of control risk the auditor does not ignore internal controls over account balances. For instance transaction related audit objectives; realizable value rights and obligations, and presentation and disclosure. The auditor is likely to make a separate evaluation as to whether management has implemented internal controls for each of these three balance - related audit objectives.

2.5 Qualities of an Effective Internal Audit Department

The Institute of internal Auditors practice Standards (1980) includes five categories of guidance that takes into consideration both financial and operational auditing: independence, professional proficiency, scope of work, performance of audit work and management of the internal auditing department.

(a) **Independence**: This is an essential element to the effectiveness of the internal auditing function and requires internal auditors to be independent of all the activities that they may be required to audit. This independence has two major aspects:

(i) **Organizational Status**: The organizational status of the internal auditor and the support accorded to him by management are major determinants of the range and value of the services which management will obtain from the internal audit function. The head of the internal auditing department should therefore be responsible to an officer of sufficient rank in the organization as will assure a broad scope of activities and adequate consideration of and effective actions on the findings or recommandations made by him.

(ii) **Objectivity**. Since complete objectivity is essential to the audit function, internal auditors should not develop and install procedures, prepare records or engage in any other activity which they normally would be expected to review and appraise.

However, **Schneider (1988)** is quick at pointing out circumstances that may limit independence of internal auditors. Such conditions include:

- If internal auditors audit those who play a role in evaluating their performance and determining rewards, they would find it difficult to criticize those who decide their pay and promotion.
- If internal auditors have been previously involved in the company's management, they might be reluctant to criticize decisions made in their previous capacity.
- If internal auditors had a hand in designing or implementing a system under audit, they might hesitate to report anything which would reflect negatively upon themselves.
- If internal auditors have friends or relatives who are being audited, they might refrain from reporting negative findings.
- If internal auditors expect to audit the individuals in the future, they might not wish to antagonize those whose co-operation they would like on future audits.

This therefore implies that common in internal audit reports is positive rather than negative reporting. Strengths of the internal controls are reported only by internal auditors with the hope of assisting management avoid spending on improving a system when it might be adequate. Positive reporting also encourages reliance by external auditor thus reducing costs associated with such audits.

(b) **Competent Personnel:** The proper functioning of any system depends on the competence and integrity of those operating it. The staff employed should therefore be competent and experienced in their fields. If need be, staff should be continuously updated through in-house and/ or off - the job training.

(c) **Professional Proficiency**. Internal audits should therefor be performed with proficiency and due professional care. To achieve this:

- The internal auditing department should provide assurance that the technical proficiency and educational background of internal auditors are appropriate for the audits to be performed.
- The internal auditing department should posses or should obtain the knowledge, skills and disciplines needed to carry out its audit responsibilities.

- The internal auditing department should provide assurance that internal audits are properly supervised.
- Internal auditors should comply with professional codes of conduct.
- Internal auditors should possess the knowledge, skills and disciplines essential to the performance of internal audits.
- Internal auditors should posses good public relations skills in dealing with people and should communicate effectively.
- Internal auditors should maintain their technical competence through continuing professional education.(CPE)
- Internal auditors should exercise due professional care in performing internal audits.

(d) **Scope of work.** The scope of work of the internal audit department should encompass the examination and evaluation of the adequacy and effectiveness of the organizations system of internal control and the quality of performance in carrying out assigned responsibilities. Internal auditors should therefore:

- Review the reliability and integrity of financial and operating information and the means used to identify, measure, classify and report such information.
- Review the systems established to ensure compliance with those policies, plans, procedures, laws and regulations that could have a significant impact on operations and reports and should determine whether the organization is in compliance.
- Review the means of safeguarding assets and as appropriate, verify the existence of such assets.
- Appraise the economy and efficiency with which resources are employed.
- Review operations or programs to ascertain whether results are consistent with established objectives and goals and whether the operations of programs are being carried out as planned.

(e) **Performance of audit work.** Internal auditors should:

- Plan each audit.

Programmes for review: The internal audit department should have comprehensive programmes so as to ensure that no major aspect of the operations are overlooked. The department should avoid being involved in activities not falling within their audit function as this may prevent it from following their normal programme closely.

- Collect, analyze, interpret and document information to support audit results.
- Report

(f) **Report:** Proper reports should be written after every audit and communicated periodically to all interested parties within the organization. Recommendations made on such reports should be clear and achievable.

- Follow up to ascertain that appropriate action is taken on reported audit findings.

(g) **Management of the Internal Audit Department:** The director of internal auditing should properly manage the internal audit department. The director of internal auditing should:

- Have a statement of purpose, authority and responsibility for the department.
- Establish plans to carry out responsibilities of the department.
- Provide written policies and procedures to guide the audit staff.
- Establish a program of selecting and developing the human resources of the department.
- Coordinate both internal and external audit efforts.
- Establish and maintain quality assurance program to evaluate the operations of the department.

2.6 Components of the internal control structure

Many authors have identified various categories of policies and procedures designed and implemented by management so as to provide a reasonable assurance that management's control objectives will be met. These are; the control environment, management's risk assessment, the accounting information and communication system, control activities and monitoring. Each of these categories contain many control related policies and procedures. However, the auditor is concerned primarily with those designed to prevent or detect material misstatements in the financial statement. Each of these aspects is now discussed in detail.

2.6.1 The Control Environment

The essence of an effectively controlled organization lies in attitude of its management.

Loebecke and Arens (1994) points out that if top management believes that control is important, others in the organization will sense that and respond by conscientiously observing the policies and procedures established. It therefore implies that if other members of the organization come to realise that control is not an important concern to top management and is given lip service rather than meaningful support, it is almost certain that management's control objectives will not be effectively achieved.

The control environment consists of those actions, policies and procedures that reflect the overall attitudes of top management, directors and owners of an entity about control and its importance to the entity. For the purpose of understanding and assessing the control environment the following are the most important sub - components the auditor should consider.

(a) **Integrity and ethical values**

Integrity and ethical values are the product of the entity ethical and behavioral standards and how they are communicated and reinforced in practice. They include management's action to remove or reduce incentives and temptations that might prompt personnel to engage in dishonest, illegal or unethical acts. They also include the communication of entity values and behavioral standards to personnel through policy statements and codes of conduct and by example.

(b) **Commitment to competence**

Competence is the knowledge and skills necessary to accomplish tasks that define the individuals' job. Commitment to competence includes managements consideration of the competence levels for specific jobs and how those levels translate into requisite skills and knowledge.

(c) **Management's philosophy and operating style.**

Management provides clear signals to employees about the importance of control. For example, does management take significant risks or are they risk averse, are profit plans and budget data set as "best possible" plans or "most likely" targets? Can management be described as "fair and bureaucratic", "lean and mean", dominated by one or a few individuals or is it "just right" **(Anderson, 1984)**. Undertaking these and similar aspects of management's philosophy and operating style gives the auditor a sense of its attitude about control.

(d) **Organizational Structure**

The entity's organizational structure defines the lines of responsibility and authority that exist by understanding the clients organizations structure, the auditor can learn the management and functional elements of the business and perceive how control related policies and procedures are carried out.

(e) **Board of directors or audit committee**

An effective board of directors is independent of management and its members are involved in and scrutinize management's activities. The audit committee is usually charged with oversight responsibility for the entity's ongoing communication with both external and internal auditors. This allows the auditors and directors to discuss matters that might relate to such things as the integrity or actions of management.

(f) **Assignment of authority and responsibility**

Besides informal aspects of communication formal methods of communication about authority and responsibility and similar control related matters are equally important. These might include such methods as memoranda from top management about the importance of control and control - related matters, formal organizational and operating plans and employee job descriptions and related policies.

(g) **Human resource policies and practices**

The most important aspect of any internal control structure is personnel. If employees are competent and trustworthy, other controls can be absent but still reliable financial statements will result. Honest, efficient people are able to perform at a high level even when there are few other controls to support them. Even if there are numerous other controls, incompetent or dishonest people can reduce the system to a shambles however, even though personnel may be competent and trustworthy, they have certain innate shortcomings such as becoming bored or dissatisfied, personal problems can disrupt their performance, or their goals may change.

Because of the importance of competent trustworthy personnel in providing effective control the methods by which persons are hired, evaluated, trained, promoted and compensated are an important part of the internal control structure.

2.6.2 Management Risk Assessment

Risk assessment for financial reporting is management's identification and analysis of risk relevant to the preparation of financial statements in conformity with generally accepted accounting principles. For instance if a company frequently sells products at a price below inventory costs because of rapid technological changes it is essential for the internal control structure to incorporate adequate controls to overcome the risk of overstating inventory.

Management's risk assessment differs from, but is closely related to, the auditor risk assessment process (**Barefield, 1975**). While management assesses risks as a part of designing and operating the internal control structure to minimize errors and irregularities, external auditors assess risks to decide the evidence needed in the audit. If management effectively assesses and responds to risks, the auditor will typically accumulate less evidence than when management fails to identify or respond to significant risks.

2.6.3 The Accounting Information and Communication System.

The primary purpose of an entity's accounting information system is to identify, assemble, classify, analyze, record and report the entity's transactions and to maintain accountability for the related assets (**Wallace, 1991**). An effective accounting information system must therefore satisfy transaction - related audit objectives such as ensuring existence, completeness, accuracy proper classification, timing and posting and summarization of transactions.

For a small company with active involvement by the owner, a simple micro computer accounting system involving primarily one honest competent accountant may provide an adequate accounting information system. A large company requires a more complex system that includes carefully defined responsibilities, policies and procedures.

2.6.4 Control Activities

Though the specific control features in any system depends on factors such as nature of operations, size of the organization and among others, the objectives of the organization for which the system was designed, **Loebecke et al (1994)** points out that certain components are necessary for a good internal control system almost in any large organization. In defining internal controls, AICPA categorizes them as either being accounting or administrative controls.

Accounting controls comprises of the plan of an organization and all methods and procedures that are concerned mainly with and relate directly to safeguarding of assets and the reliability of the financial records. They generally include such controls as the systems of authorization and approval, separation of duties concerned with record keeping and accounting reports from those concerned with operations or asset custody, physical controls over assets and internal auditing.

Administrative controls comprise of the plan of organization and all methods and procedures that are concerned mainly with operational efficiency and adherence to managerial policies and usually relate only indirectly to financial records (**Meigs et al 1988**). They generally include such controls as statistical analyses, time and motion studies, performance reports, employees training programs and quality controls.

We now discuss individually the features of an effective internal control.

(a) **Plan of the organization:** This is a diagrammatic representation of the structure of the organization. The purpose is to show how the company has been divided into departments and departments into sections and what responsibility and authority are assigned to each. This will ensure that groups and individuals work together effectively and efficiently without any duplication of efforts.

Research conducted to identify the best structure for organization revealed that there is no clear and fast rule'. **Cubson** et al (1976) reveals that the ideal organizational structure depends on size, technology, environment and the strategy adopted.

(b) **Adequate Separation of Duties**

Four general guidelines for separation of duties to prevent both intentional and unintentional misstatements are of special significance to auditors.

(i) **Separation of the custody of assets from accounting**

A custodian of an asset should not perform an accounting function relating to that asset. The reasons for not permitting this is to protect the firm against defalcation. When one person performs both functions, there is an excessive risk of that person disposing off the asset for personal gain and adjusting the records to relieve oneself of responsibility.

(ii) **Separation of the authorizations of transactions from the custody of related assets**

Where possible it is desirable to prevent persons who authorize transactions from having control over the related asset and being in possession of ownership documents of such assets. The authorization of a transaction and the handling of the related asset and ownership documents by the same person increase the possibility of defalcation within the organization.

(iii) **Separation of the operational responsibility from record - keeping responsibility**

If each department or division in an organization were responsible for preparing its own records and reports, there would be a tendency to bias the results to improve its reported performance. In order to ensure unbiased information, record keeping is typically included in a separate department (accounting).

Naturally, the extent of separation of duties depends heavily on the size of the organization. In many small companies, it is not practical to segregate the duties to the suggested extent. In such circumstances audit evidence may require modification.

(iv) **Separation of duties within the accounting function**

A system of internal control should not allow an employee to process a transaction from its original to its ultimate posting and preparation of the financial statements. This would allow for non-detection of intentional or unintentional errors and sloppy performance of duties.

(v) **Proper Authorization of Transactions and Activities**

Every transaction must be properly authorized if controls are to be satisfactory. If any person in an organization could acquire or expend assets at will, complete chaos would result. Authorization can be either general or specific. General authorization means that management establishes policies for the organization to follow. Subordinates are instructed to implement these general authorizations by approving all transactions within the limits set by the policy.

Specific authorization has to do with individual transactions. Management is often unwilling to establish a general policy of authorization for some transactions. Instead, it prefers to make authorizations on a case-by-case basis. An example is the authorization of a sales transactions and by the sales manager for a used company car.

The individual or group who can grant either specific or general authorization for transactions should hold a position commensurate with the nature and significance of the transactions the policy for such authorizations should be established by top management.

(c) **Adequate Documents and Records**

Documents and records are the physical objects upon which transactions are entered and summarised. They include such diverse items as sales invoices, purchase orders, subsidiary records, sales journals and employee time cards. Both documents of original entry and records upon which transactions are entered are important but the inadequacy of documents normally causes greater control problems.

Documents perform the functions of transmitting information throughout the clients organizations and between different organizations. The documents must be adequate to provide reasonable assurance that all assets are properly controlled and all transactions correctly recorded.

Certain relevant principles dictate the proper design and use of documents and records. Documents and records should be **(Loebbecke, 1994)**;

- Pre numbered serially so as to facilitate control over missing documents as well as easy retrieval when needed.
- Prepared as soon as a transaction takes place.
- Sufficiently simple to ensure that they are clearly understood.
- Designed for multiple uses whenever possible
- Constructed in a manner that encourages correct preparation.

(d) Physical control over such assets and records

Internal control also requires that assets of the business enterprise like plant and equipment , motor vehicle, furniture, stock, cash and records should be kept safely. The access to the assets and records should be limited to authorized personnel only. The procedures designed and security measures taken for safeguarding these assets should be adequate and comprehensive. Without these measures, the assets cannot be maintained properly.

The most important type of protective measure for safeguarding assets and records is the use of physical precautions such as use of storerooms for inventory to guard against pilferage. When the storeroom is under the control of a competitive employee, there is also further assurance that obsolescence is minimized. Fireproof safes and safety deposit vaults for the protection of assets such as currency and securities are other important physical safeguard.

(e) **Independent checks on performance.**

This is the last category of control procedures and involves the careful and continuous review of the other control activities. The need for independent checks arises because an internal control structure tends to change over time unless there is a mechanism for frequent review. Personnel are likely to forget or intentionally fail to follow procedures, or becomes careless unless someone observes and evaluates their performance. In addition, both fraudulent and unintentional mistatements are possible regardless of the quality of the controls.

An essential characteristic of the persons performing internal verification procedures is independence from the individuals originally responsible for preparing the data.

The least expensive means of internal verification is the separation of duties. For instance, when the bank reconciliation is performed by a person independent of the accounting records and handling of cash, there is an opportunity for verification without incurring significant additional costs.

2.6.5 Monitoring

Monitoring activities deal with ongoing or periodic assessment of the effectiveness of the design and operation of an internal control structure by management to determine that it is operating as intended and that it is modified as operating as intended and that it is appropriate for changes in conditions. Information for assessment and modification comes from a variety of sources including studies of existing internal control structures, internal auditor reports, exception reporting on control activities, reports by regulators feedback from operating personnel and complaints from customers about billing charges.

CHAPTER THREE : RESEARCH METHODOLOGY

This chapter describes the research design of the study and is divided into the following sections: the population of the study, the sample of the study, the data collection method and the data analysis methods.

3.1 Population of the Study

The population of the study consisted of the companies that are currently active in the Nairobi Stock Exchange (NSE) and their external auditors. The rationale behind the choice of these companies is that they are fairly large and consequently likely to have well established systems of internal controls as well as internal audit departments. Since a wider public have an interest in them, quoted companies are also prone to statutory audits. Further, quoted companies represent various industries in the economy.

3.2 Sample of the Study

The sample of the study comprised of the whole population. The reason for studying the entire population was that the it was not very large and a sample could have reduced the number of external auditors to be subjected to this study.

3.3 Data Description and Collection Method

This study purely relied on primary data. This was collected by use of a structured questionnaire with closed end questions developed taking into consideration relevant published literature. Though a 'drop and pick' method was preferred in administering the questionnaires, some companies opted to mail them back. All the questionnaires were addressed to the audit managers of both quoted companies and audit firms.

3.4 Data Analysis Method

The data collected from the survey were analyzed by use of descriptive statistics such as mean score, tables, standard deviation and percentages to represent both the response rate and information on other variables. Chi-square was used to test for association while t-test and z-test were used to test for significant differences in strength of audit departments and extent of reliance on internal controls respectively.

CHAPTER FOUR: DATA ANALYSIS AND FINDINGS

4.0 Introduction

A total of 54 questionnaires were distributed to the companies quoted as at 31st May 2000 as per list obtained from the Nairobi Stock Exchange (see Appendix 1). Of these firms, 36 responded by completing the questionnaires, representing a response rate of 63%. A list of auditors was extracted from the latest audited financial statements of the quoted companies and distributed to the auditors in bulk. Most auditors were unwilling to fill the questionnaires in relation to their quoted companies as some had upto 17 companies. For such, they accepted only a maximum of 8 questionnaires thus only 32 questionnaires was distributed among audit firms (Appendix 4). Only 27 questionnaires were received representing 81.25% response rate. For those firms, which did not complete the questionnaires, some gave reasons such as company policy or lack of time. One of the quoted firms indicated that it has outsourced its internal audit function.

Of the completed questionnaires from quoted companies, three were found unusable since the respondents had no audit department and thus were substantially unfilled.

4.1 Responses from Quoted Companies

4.1.1 General Characteristics of Quoted Companies

The general characteristics of the 33 firms that participated in this study are presented in table 1 in terms of company ownership/control and industry classification.

Table 1: The Industry and Control/Ownership of Companies

Control/ownership	Agricultural	Commercial & Services	Finance & Investment	Industrial & Allied	Total	Percentage
Foreign	3	3	1	7	14	42.42
Local	3	6	6	4	19	57.58
Total	6	9	7	11	33	
Percentage	18.18	27.27	21.22	33.33		100

Source: Research Data

From the table, 42.42% of the companies surveyed had foreign ownership or control in excess of 50%. Of these companies, 50% came from the industrial and allied sector, while 7.14% were from the finance and investment sector while the other two sectors shared equally the remaining 42.86% of the companies in the foreign category.

Of the local companies, both commercial and services and finance and investment sectors formed the bulk with each taking 31.2% of the local companies. Industrywise, most of the companies that responded came from industrial and allied sector and the companies in the agricultural sector formed the least (18.18%) in this study. However, this industry had the highest response rate considering there are only 9 companies in this sector.

Discussion

From the table most of the companies in the industrial and allied sector are foreign controlled unlike in other sectors. This therefore tempted the researcher to ask the question "Does company control affect a company's industrial classification?". This question will help understand whether foreign or local investors prefer investing in companies in certain industries.

In testing the independence of company ownership/control and their industry classification, chi-square was used to test the hypotheses,

H_o: Company industry is independent of company ownership/control

H_i: Company industry is not independent of company ownership/control

Applying the formulae from Appendix 2 to table 1, the computed χ^2= 4.74 and critical χ^2 at 5%, 3 d.f is 7.815. Thus the null hypothesis fails to be rejected and thus industry is independent of ownership/control of a company.

4.1.2 Establishing the Strength of the Internal Audit Department

The major qualities considered to make an audit department strong includes independence (organizational status and objectivity), professional proficiency (staffing, knowledge, skills and disciplines, supervision, human relations and communications, continuing education), scope and performance of audit work.

(a) **Staffing**

From table 2, there are 163 employees, 58.28% of whom are in the locally controlled companies while 41.72% are in the foreign controlled companies.

Table 2: Staffing Pattern

	Agricultural	Commercial & Services	Finance & Investment	Industrial & Allied	Total
Number of employees in locally controlled companies	9	34	30	22	95
Number of employees in foreign controlled companies	9	9	30	20	68
Total	18	43	60	42	163
Number of companies	6	9	7	11	33
Mean	3	4.78	8.57	3.82	4.94

Source: Research Data

Finance and investment sector has the highest number of audit employees averaging 8.57 per company. Commercial and services before industrial and allied sector follow this. Least is the agricultural sector with an average of 3 per company. Strength scores have been awarded based on the average number of employees per company in each industry.

Discussion

As far as staffing is concerned, the most staffed sector is finance and investment while the least staffed is the agricultural sector. However, the high staffing in finance and investment sector was more exaggerated by one bank that reported a staff number of 30, which constitute 50% of all the employees in this sector. Without this company, this sector could have ranked third. However, though this was the only bank that responded it implies that the staffing levels in the banking industry remains reasonably high. In most banks there is an audit department in every branch. It implies that internal controls is a major aspect in such firms due to the nature of business that such firms are engaged in. This sector therefore indicates some strength relative to the other sectors as the more staff the higher the chance that all aspects of auditing in the organization will be performed without excuses of lack of staff. Thus in relative terms, finance and investment sector is ranked strongest, followed by commercial and services, then industrial and allied and least staffed is agricultural sector. However, the shortcoming to this is that the number of employees engaged is generally influenced by the size of the organization.

(b) **Staff Qualifications**

From the table below, agricultural sector has the highest score (59.4) in relation to staff qualification followed by finance and investment (5.92), commercial and services (5.63) and least is the industrial and allied sector (5.31). From Appendix 1b(i) to 1b(iv), the following table (3) was extracted. The scores awarded were based on the number of employees in each qualification category multiplied by a score arrived at by adding weights 1,2,3 given to the columns and 5,4,3,2,1 given to the rows respectively. Strength scores are awarded based on the average score of each employee in each industry.

Table 3: Staff Qualification

	Agricultural	Commercial & Services	Finance & Investment	Industrial & Allied	Total
Scores from appendix	107	242	355	223	927
Number of employees	18	43	60	42	163
Mean	5.94	5.63	5.92	5.31	5.69

Source: Research Data

Discussion

The number of employees in an organization is not a true measure of strength of the audit department. A company with fewer audit employees may have a stronger audit department if most of its staff are highly qualified. Thus a company with many unqualified employees may still be rated as relatively weak. Highly qualified employees scored higher strength scores for their companies and respective industrial classifications.

(c) **Staff Experience**

The scores used for each experience category ranges from 1 to 6. A score of 1 means least experienced while a score of 6 means highly experienced. Mean score of each employee in each industry was used in determining the strength of the internal audit department.

Table 4: Staff Experience Pattern

		Industry				
Experience		Agricultural	Commercial & Services	Finance & Investment	Industrial & Allied	Total
≤ 1 year	Frequency	-	-	-	-	-
	Scores	-	-	-	-	-
>1 year ≤ 2 years	Frequency	-	6	6	6	18
	Scores	-	12	12	12	36
> 2 years ≤ 3 years	Frequency	1	5	9	1	16
	Scores	3	15	27	3	48
> 3 years ≤ 4 years	Frequency	3	5	8	10	26
	Scores	12	20	32	40	104
> 4 years ≤ 5 years	Frequency	6	6	7	11	30
	Scores	30	30	35	55	150

> 5 years	Frequency	8	21	30	14	73
	Scores	48	126	180	84	438
Total	Frequency	18	43	60	42	163
	Scores	53	203	286	194	736
Mean score per employee		2.94	4.72	4.77	4.62	4.52

Source: Research Data

From the table, there was no employee with an experience of less than one year in all sectors. Most of the employees (63.2 percent) had an experience of over 4 years while the rest between 2-4 years.

Discussion

The quality of audit is also influenced by the number of years that the employee has been in the audit function. The researcher therefore felt it necessary to test the experience levels of these employees as they are distributed across various experience categories. As far as staff experience is concerned, finance and investment led with an average score of 4.77 while the agricultural sector ranked least. The second position was taken by commercial and services (4.72) and third was industrial and allied (4.62).

(d) **Organizational status**

To determine the organizational status of the various audit departments in their respective companies, the respondents were required to state whether or not the overall organizational structure permits the department to accomplish its audit objectives. A 'yes' scored 1 mark while a 'no' scored nil. The strength scores awarded were based on the average score per company in each industry.

Table 5: Organizational Status

	Agricultural	Commercial & Services	Finance & Investment	Industrial & Allied	Total
Number of companies	6	9	7	11	33
Total scores	6	7	6	9	29
Average score	1	0.77	0.86	0.82	0.88

Source: Research Data

Discussion

For an audit department to be considered strong (sufficient), its organizational status in the overall organizational structure should be sufficient to permit the accomplishment of its audit objectives. From the table, the agricultural sector's internal audit department's status permits it most to accomplish its audit objectives and least is the commercial and services sector implying the most and least discretion granted by management respectively. The audit department whose management is given greater discretion in performing their audits is deemed to be strong.

(e) **Quality of Audit Work**

Two questions were intended to capture the test on the quality of audit work. In both questions, a 'yes' was given a score and a 'no' a nil score. The respondents were required to state whether audit programmes are used or not and whether or not work performed is checked.

Table 6: Quality of Audit Work

	Agricultural	Commercial & Services	Finance & Investment	Industrial & Allied	Total
Scores: Checking of work Performed	2	8	4	7	21
Use of audit programmes	6	7	6	7	26
Total scores	8	15	10	14	47
Number of companies	6	9	7	11	33
Average scores	1.33	1.67	1.43	1.27	1.42

Source: Research Data

Discussion

From the table, commercial and services has the highest score (1.67), followed by finance and investment (1.43), then agricultural sector (1.33) and least (1.27) is the industrial and allied sector. The quality of audit is therefore expected to rank in that order.

(f) **Staff Relations**

Two questions were paused to capture the level of staff relations in the audit department.

Table 7: **Staff Relations**

	Agricultural	Commercial & Services	Finance & Investment	Industrial & Allied	Total
Form of communication among staff (scores)	14	17	14	23	68
Form of communication with boss(scores)	14	22	16	29	66
Total scores	28	39	30	52	134
Number of companies	6	9	7	11	163
Mean score	4.67	4.33	4.28	4.73	4.06

Source: Research Data

From the table, industrial and allied sector has the best (4.73) staff relations followed by agricultural sector (4.67), then commercial and services (4.33), and ranked last is finance and investment sector with a score of 4.28. Strength scores are awarded based on the average score per company.

Discussion

The internal audit department should posses positive staff relations so as to enable it achieve its audit objectives. This is attributed by the fact that this department should be independent of other departments. Poor staff relations may prejudice this. Thus audit departments with good staff relation should yield reliable audit objectives.

(g) **Professional Proficiency**

From the table, agricultural sector has the highest score (2.22) as far as professional proficiency is concerned. Ranked second is industrial and allied (1.55), then commercial and services (1.33) and least is finance and investment (1.30). Strength scores are awarded according to the average score per employee.

Table 8: **Professional Proficiency**

	Agricultural	Commercial & Services	Finance & Investment	Industrial & Allied	Mean
Familiarity with professional code of conduct	20	30	23	36	14.92
Participation in continuous professional education	6	9	8	8	7.75
Attendance of seminars in auditing	14	18	15	21	17
Total scores	40	57	46	65	52
Number of employees	18	43	60	42	
Mean score per employee	2.22	1.33	0.77	1.55	

Source: Research Data

From the table, agricultural sector has the highest score (2.22) as far as professional proficiency is concerned. Ranked second is industrial and allied (1.55), then commercial and services (1.33) and least is finance and investment (0.77). Strength scores are awarded according to the average score per employee.

Discussion

Internal audits should be performed with proficiency and due professional care. To achieve this, the auditor should have the knowledge, skills and disciplines and participate in the continuing professional education (CPE). The familiarity of staff with the professional code of conduct, attendance of seminars and participation of continuous professional education enhances professionalism in the department. Thus there is more proficiency and due professional care in firms having higher scores than those with lower scores.

(h) **Scope of Audit Work**

There are two parts in testing the scope of audit work.

Part (i). In various questions, the respondents were required to state the extent of internal audit tests, whether management allows them to make a follow up of recommendations to ensure compliance and whether all aspects of the organization are reviewed. The responses in two cases were either a 'yes' (strong) or 'no' (weak), and extent measures such as very extensive (VE), somehow extensive (SE), extensive (E) and not extensive (NE) were used in the other response.

<u>Table 9:</u> **<u>Extent of Audit Tests</u>**

		VE	E	SE	NE	Total	Mean
Agricultural	Frequency	2	4	-	-	6	
	Score	8	12	-	-	20	3.33
Commercial &	Frequency	2	5	1	1	9	
Services	Score	8	15	2	1	26	2.89
Finance &	Frequency	3	3	1	-	7	
Investment	Score	12	9	2	-	23	3.29
Industrial & Allied	Frequency	1	6	4	-	11	
	Score	4	18	8	-	30	2.73

Source: Research Data

From the table, agricultural sector has the highest (3.33) mean score while industrial and allied has the least (2.73) mean score after finance and investment (3.29) and commercial and services (2.89). Most of the companies (54.54 percent) do extensive audits while only 24.24 percent do very extensive audit tests. Strenght scores are awarded according to the average score per company in their respective industries.

Some firms cited a limitation of scope in relation to management audits, computer audits, new software development, new business process re-engineering process and technical areas.

Table 10: Follow up of recommendations and review of organization aspects

	Agricultural	Commercial & Services	Finance & Investment	Industrial & Allied	Tot
Follow up of recommendations to ensure compliance	6	8	7	9	30
Whether all aspects of organization are reviewed	4	8	6	9	27
Total score	10	16	13	18	57
Number of companies	6	9	7	11	33
Mean score	1.67	1.78	1.86	1.64	1.7

Source: Research Data

From the table, internal audit departments of firms in the finance and investment sector are given a greater (1.86) discretion to make a follow up of their recommendations to ensure compliance as well as being given a wider scope to evaluate all aspects of the organization with the least (1.64) discretion in industrial and allied sector. Second position is commercial and services (1.78), then agricultural sector (1.67).

Part (ii). Question 18 of the questionnaire required the respondent to indicate the person who performs various functions in the organization. While the respondent was required to choose the most appropriate person expected to perform a given function, most respondents ticked more than one.

Scores were awarded only to responses in box (d), (g), (l), (m), (q), (w) and (y) of the questionnaire. Strength scores have been awarded based on the average score per employee.

Table 11: **Performance of Expected Responsibilities**

	Agricultural	Commercial & Services	Finance & Investment	Industrial & Allied
a) Establishes the system of internal control	2	7	2	6
b) Reviews the system of internal control	6	5	6	8
c) Verifies the reliability and accuracy of records & accounts	5	4	6	9
d) Ensures compliance with policies, laws & procedures	4	8	5	10
e) Safeguards assets	5	5	4	7
f) Determines what to internally audit	6	7	6	9
g) Ensures economical use of resources	4	6	4	8
Total scores	32	42	33	57
Number of employees	18	43	60	42
Average score	1.78	0.98	0.55	1.36

Source: Research Data

From the table, the agricultural sector has the highest score (1.78) followed by industrial and allied (1.36), then commercial and services (0.98). Least (0.55) are those in finance and investment sector.

Discussion

The implication from the table is that internal audit departments of firms in the agricultural sector do perform most of the work that is expected of such a department. Thus firms in this industry are expected to have more reliable systems of internal controls relative to those in other industries as far as performance of responsibilities are concerned.

Table 12: Summary of Strength scores of Internal Audit Departments

	Agricultural	Commercial & Services	Finance & Investment	Industrial & Allied	Std. Dev.
Average number of staff per company	3.00	4.78	8.57	3.82	2.46
Average staff qualification	5.94	5.63	5.92	5.31	0.30
Average staff experience	2.94	4.72	4.77	4.62	0.88
Average organizational status	1.00	0.77	0.86	0.82	0.10
Average quality of audit work	1.33	1.67	1.43	1.27	0.12
Average staff relations	4.67	4.33	4.28	4.73	0.23
Average staff professional proficiency	2.22	1.33	0.77	1.55	0.43
Extent of audit tests	3.33	2.89	3.29	2.73	0.30
Average scope of work	1.67	1.78	1.86	1.64	0.10
Average overall knowledgeability of responsibilities	1.78	0.98	0.55	1.36	0.53
Total scores	27.88	28.88	32.3	27.85	2.37
Std. dev.	1.55	1.83	2.60	1.69	

Source: Research Data

Discussion

From the table it is imperative that the strongest audit departments come from firms in the finance and investment. The least strong audit departments are those in the agricultural sector. This implies therefore that the systems of internal controls are more liable the former than they are in the latter in relative terms.

The high standard deviation in the finance and investment sector implies that certain strength indicators considered are far much stronger than others are. For instance, though this industry has more staff, it lags behind in terms of professional proficiency and performance of responsibilities as defined. This therefore means that should the auditor consider only a few strength indicators then the possibility of him concluding that the internal controls are weak or strong is very high. There is therefore the risk of relying on a weak internal control system just because the auditor by chance evaluated variables that indicated strength rather than those indicating weakness.

Further the high standard deviation indicates that the industry has both strong and weak firms as far as internal controls are concerned. In relation to the other industries having lower standard deviations it means that such firms have averaged out their strength indicators thus reducing the probability of their internal controls being judged strong by the external auditor when they are weak. In such industries there is no firm whose internal audit department is significantly stronger than in the other firms in the same industry.

In relation to the strength indicators the highest score is in average staff qualification while the least is in average organizational status. This implies that though on average staff qualification is strong across industries, the position occupied by the internal audit departments is not sufficient enough to allow it perform its audit objectives. This is supported by the low standard deviation, which means that no firm can claim to be significantly stronger than the others as far as organizational status is concerned.

Average staff experience has the highest standard deviation implying that staff experience is diverse ranging from less than two years to over five years. Some industries therefore have more experienced staff than other industries.

Association between industrial classification and strength indicators of internal audit departments

To achieve this, chi-square was used to test the hypothesis:

Ho: The strength of internal audit departments is independent of industrial classification.

H_A: The strength of internal audit departments is not independent of industrial classification.

From appendix 5, the computed chi-square (4.73) is less than the critical chi-square at 27 d.f and 5% significance level and thus the null hypothesis fails to be rejected. The conclusion, thus, the strength of internal audit departments is independent of its industrial classification. Therefore any company regardless of its industrial classification can equally have a weak or strong internal audit department.

Testing for significant differences in the strength of internal audit departments across industries.

From table 12 the following summary was prepared.

	Agricultural	Commercial & services	Finance & investment	Industrial & allied
Mean	2.788	2.89	3.23	2.785
Standard deviation	1.55	1.83	2.6	1.687

Z-test was used to test the following hypothesis across industries at 5% significance level:

H_o: There is no significant difference in the strength of internal audit departments across industries.

H_A: There is a significant difference in the strength of internal audit departments across industries.

Applying the formulae from appendix 2 on the above summary, the null hypothesis failed to be rejected in the six tests and thus there is no industry whose internal audit department is significantly stronger than the others. It therefore implies that the external auditors should equally rely on the system of internal controls if such controls are sensitive to the strength of internal audit department.

4.2 Responses from External Auditors

(a) Duration of Being Auditors

Table 13 shows that 46.15% and 53.85% of the audit firms have been auditors for quoted companies for 1-5 years and 6-10 years respectively. None has retained their clients for more than 10 years. This implies that auditor changes is minimal in the first five years as most auditors graduated to the between 6-10 years bracket. However, this is the period in which most auditors lose their clients.

Table 13: Duration of Being Auditors

	Agricultural	Commercial & Services	Finance & Investment	Industrial & Allied	Total	Percentage
1 - 5 years	1	2	5	4	12	46.15
6 - 10 years	3	4	4	3	14	53.85
11 – 15 years	-	-	-	-	-	
Over 15 years	-	-	-	-	-	
Total	4	6	9	7	26	100

Source: Research Data

Table 14 shows the distribution of industry classification of various clients that the external auditor's response related to.

Table 14: Industry Classification of companies responded on

	Responses	Responses from	Proportion

	from auditors	quoted companies	
Agricultural	4	6	0.67
Commercial & services	7	9	0.78
Finance & investment	9	7	1.29
Industrial & allied	7	11	0.64
Total	27	33	0.82

Source: Research Data

From the table, the external auditors responded more companies in finance and investment sector than the companies themselves responded. In other circumstances, more companies responded than their respective responses from their auditors.

4.2.2 Establishing the extent of reliance on systems of internal controls.

To test the extent to which external auditors relied on the system of internal control in obtaining audit evidence, five specific areas were addressed, namely; (1) Sales, Receivables and Receipt, (2) Purchases, Payables and Payments, (3) Wages and Salaries, (4) Cost records and inventory records and (5) Books of accounts general. Some parts of part (1) and (4) were left blank by auditors of financial and investment clients citing reasons as not being applicable to the industry.

4.2.2.1 Sales, Receivables and Receipts

From appendix (4), the following summary was prepared based on mean scores of the extent to which the external auditors relied on the systems of the internal control in relation to sales, receivables and receipts.

Table 15: Extent of reliance on internal controls in relation to sales, receivables and receipts

	TGE (4)		TME (3)		TLE (2)		NAA(1)		Mean	Std. dev.
	Freq	Score	Freq.	Score	Freq.	Score	Freq.	Score		
Agricultural	7	28	2	66	16	32	15	15	2.00	1.1387
Commercial & services	11	44	16	48	21	42	9	9	2.50	1.1208
Finance & investment	12	48	34	102	25	50	1	1	2.80	0.656
Industrial & allied	7	28	33	99	27	54	3	3	2.63	0.709
Total	37	148	84	252	89	178	28	28	2.50	3.6245

Source: Research Data

Key:TGE-To a great extent, TME- To a moderate extent, TLE- To a little extent, NAA-Not at all

From the table, it is only the agricultural sector whose mean (2.00) falls below the industry mean (2.50) on the extent to which external auditors relied on their systems of internal controls. This industry also has the highest (1.1387) standard deviation. The finance and investment sector has the highest mean score (2.80) as well as the lowest standard deviation (0.656). Third position is industrial and allied (2.63) with a standard deviation of 0.709.

Discussion

The high standard deviation in the agricultural sector implies that there is a wider diversity in strength of internal audit departments. Thus some firms in this industry may have strong internal controls but the probability of such firms being judged by the external auditors as strong is still remote as compared to those in other industries. This implies that external auditors may do substantive tests on clients whose internal controls are sufficient. This does not only increase the audit costs to the client but also to the auditors who will be confirming the obvious. The vice-versa is also true. Thus in both cases the risk of relying or not relying on the system of internal controls of these firms is high.

The low standard deviation in the finance and investment sector means that the extent to which reliance was placed on the internal controls was almost concentrated at one point on the likert scale. This means that there were no firms whose internal controls were superior to those in other firms in this industry.

(b) Purchases, Payables and Payments

From table 16 below, finance and investment sector still had the highest mean score (2.80), however, with the highest standard deviation (36.53). Second is commercial and services with a mean score of 2.62 and a standard deviation of 19.36.Third is industrial and allied (2.5) with a standard deviation of 33.96

Table 16: Extent of reliance on internal controls in relation to Purchases, Payables and Payments

	TGE (4)		TME (3)		TLE (2)		NAA(1)		Mean of scores	Std. dev. of scores
	Freq.	Score	Freq.	Score	Freq.	Score	Freq.	Score		
Agricultural	5	20	4	12	10	20	13	13	2.03	4.35
Commercial & services	9	36	15	45	21	42	3	3	2.62	19.36
Finance & investment	15	60	30	90	25	50	2	2	2.80	36.53
Industrial & allied	3	12	26	78	23	46	4	4	2.5	33.96

Source: Research Data

Key-same as in table 15

The above summary was prepared from appendix 4. The agricultural sector scored the lowest mean (2.03) as well as the lowest standard deviation (4.35) whereas finance and investment sector scored the highest mean (2.8) but with the highest standard deviation (36.53).

Discussion

The highest and lowest mean scores imply that the system of internal controls was relied most and least respectively relative to each other. The high standard deviation in the finance and investment sector implies that there was the widest spread of extent of reliance on the internal control system. This means that there were firms whose system of internal controls could not be relied upon as well as those whose controls were relied upon in certain aspects. There are therefore certain aspects whose reliance on the systems of internal controls is remote. This therefore implies that auditing such a sector is more risky as many tests have to be perfomed before the strength of internal controls can be well established.

4.2.2.3. Wages and Salaries

As far as wages and salaries is concerned, the highest mean score (2.7) as well as the highest standard deviation went to finance and investment while the lowest mean (1.75) as well as the

Table 17: **Extent of reliance on internal controls in relation to Wages and Salaries**

	TGE(4)		TME(3)		TLE(2)		NAA(1)		Mean	Std. dev.
	Freq.	Score	Freq.	Score	Freq.	Score	Freq.	Score		
Agricultural	2	8	-	-	3	6	7	7	1.75	3.59
Commercial & services	3	12	5	15	8	16	2	2	2.5	6.40
Finance & investment	8	24	11	33	8	16	-	-	2.7	14.01
Industrial & allied	-	-	8	24	12	24	1	1	2.3	13.57

Source: Research Data

Key-same as in table 16

lowest standard deviation went to the agricultural sector. Third and fourth positions were occupied by commercial and services and industrial and allied sectors with mean scores of 2.5 and 2.3 as well as standard deviations of 6.4 and 13.57 respectively. The higher standard deviation implies having to do more tests in establishing the strength of internal controls. Ignoring some of the factors greatly increases audit risk as an auditor may rely on a weak internal control system.

4.2.2.4 Cost Records and Inventory Records

The table shows that finance and investment sector has the highest (2.81) mean score and a standard deviation of 17.32. Second is industrial and allied with a mean of 2.59 and the highest standard deviation of 20.14 and is followed closely by commercial and services (2.58) with a standard deviation of 9.81. Least is agricultural sector with the lowest standard deviation (5.00).

Table 18: **Extent of reliance on internal controls in relation to Cost and Inventory Records**

	TGE(4)		TME(3)		TLE(2)		NAA(1)		Total		Mean	Std. dev.
	Freq.	Score	Freq.	Score	Freq.	Score	Freq.	Score	Freq.	Score		
Agricultural	2	8	-	-	6	12	6	6	14	26	1.86	5.00
Commercial & services	4	16	9	27	8	16	3	3	24	62	2.58	9.81
Finance & investment	4	16	14	42	9	18	-	-	27	76	2.81	17.32
Industrial & allied	1	4	15	45	10	20	1	1	27	70	2.59	20.14

Source: Research Data

Key-same as in table 17

The table shows that finance and investment sector has the highest (2.81) mean score and a standard deviation of 17.32. Second is industrial and allied with a mean of 2.59 and the highest standard deviation of 20.14 and is followed closely by commercial and services (2.58) with a standard deviation of 9.81. Least is agricultural sector with the lowest standard deviation (5.00).

Discussion

The table reveals that though the system of internal was relied most in the finance and investment sector relative to other sectors, it has the widest variation in the extent to which reliance was placed on them. As far as certain variables were concerned reliance was not placed on it while in evaluating other variables, internal control systems were relied on to a greater magnitude. Thus though strongest, it is the most risky sector, as more tests have to be done to establish the strength of controls in regards to certain variables.

4.2.2.6: Books of Account and General:

Table 19: **<u>Extent to which internal control system was relied upon in relation to Books of Account and General</u>**

	TGE(4)		TME(3)		TLE(2)		NAA(1)		Total		Mean	Std. Dev.
	Freq.	Score	Freq.	Score	Freq.	Score	Freq.	Score	Freq.	Score		
Agricultural	15	60	17	51	9	18	1	1	42	130	3.10	27.6
Commercial & services	23	92	25	75	18	36	-	-	66	203	3.07	41.1
Finance & investment	26	104	37	111	28	56	8	8	99	279	2.82	47.8
Industrial & allied	2	8	32	96	36	72	7	7	77	183	2.38	45.2

Source: Research Data

Key-same as in table 18

As far as books of account and general is concerned, the agricultural sector ranks first with the highest mean (3.10) with the lowest standard deviation (27.69) followed by commercial and services (3.07) with a standard deviation of 41.19, then finance and investment (2.82) with the highest standard deviation of 47.88 and least is industrial and allied (2.38) with a standard deviation of 45.24.

Table 20: **Summary of the Extent to which External Auditor relied on their Clients System of Internal Control**

	Agricultural	Commercial & services	Finance & investment	Industrial & allied	Mean	Std. dev
Sales, Receivables & Receipts	2.00	2.50	2.80	2.63	2.48	0.344
Purchases, Payables, Payments	2.03	2.62	2.80	2.50	2.49	0.329
Wages & Salaries	1.75	2.5	2.70	2.30	2.31	0.409
Cost & Inventory Records	1.86	2.58	2.81	2.59	2.46	0.414
Books of Account & General	3.10	3.07	2.82	2.38	2.84	0.333
Mean	2.15	2.65	2.79	2.48	2.52	1.380
Std. dev.	0.54	0.24	0.05	0.14		

Source: Research Data

From the table, the systems of internal controls in relation to books of account and general were rated highest (2.84) with a standard deviation of 0.333. Second position was taken by controls on purchases, payables, and payments with a mean of 2.49 with the lowest standard deviation of 0.329. Closely following were controls on sales receivables and receipts with a mean and standard deviation of 2.48 and 0.344 respectively. Fourth position were controls on cost and inventory records with a mean score of 2.46 and a standard deviation 0.414. Least relied on were controls on salaries and wages with a mean and standard deviation of 2.31 and 0.409 respectively.

Industrywise, the systems of internal controls of finance and investment were rated strongest (2.79) with the least (0.05) standard deviation followed by those of commercial and services (2.65), then industrial and allied (2.48) and lagging behind is agricultural sector (2.15) with standard deviations of 0.24, 0.14, 0.54 respectively.

Testing whether industrial classification affects the extent to which external auditors relied on the internal control systems.

To achieve this chi-square was used to test the hypotheses:

Ho: The extent of reliance on the system of internal control is independent of industrial classification.

H_A: The extent of reliance on the internal control system is dependent on industrial classification.

From Appendix (7), the computed $\chi^2 = 0.395$ and $\chi^2_{0.05,12} = 21.026$. The null hypothesis therefore fails to be rejected and thus industrial classifications do not affect the extent of reliance on the system of internal controls. This therefore implies that depending on how the external auditor evaluates the system of internal controls, reliance will be placed upon it to varying degrees notwithstanding the industry that such a client is drawn from.

Testing whether there is a significant difference in the extent to which internal auditors relied on the systems of internal controls across industries.

From table 20 the following summary was prepared.

	Agricultural	Commercial and Services	Finance and Investment	Industrial and Allied
Mean	2.148	2.654	2.786	2.48
Standard deviation	0.544	0.238	0.049	0.139

T – test was used to test the following hypothesis across industries

H_o: There is no significant difference in the extent to which internal auditors relied on the systems of internal controls of companies across industries.

H_A: There is a significant difference in the extent to which external auditors relied on the systems of internal controls of companies across industries.

Applying the formular on appendix 2 on this summary, there were two instances in which the null hypothesis was rejected implying significant differences in extent of reliance. These were between finance and investment sector and industrial and allied and agricultural sectors.

Testing the relationship between strength of internal audit department and extent of reliance on their internal controls.

This test was aimed at testing the hypotheses,

Ho: There is no relationship between strength of internal audit departments and extent of reliance on internal controls.

Ha: There is a relationship between strength of internal audit departments and extent of reliance on internal controls.

From tables 12 and 20, the following summary was obtained.

	Agricultural	Commercial and Services	Finance and Investment	Industrial and Allied	Total
Strength (observed)	2.788	2.876	3.283	2.785	11.732
(expected)	2.656	2.976	3.266	2.833	
Reliance (observed)	2.148	2.654	2.786	2.48	10.068
(expected)	2.280	2.554	2.803	2.432	
Total	4.936	5.53	6.069	5.265	21.8

Applying the formular on appendix 2, the computed chi-square is 0.0328 and at 5% significance level and 3d.f, critical chi exceeds this and thus the null hypothesis fails to be rejected.

Since the test failed to reject the null hypothesis, then it is conclusive that there is no relationship between the strength of internal audit departments and the extent to which external auditors relied on the system of internal controls.

4.4 Relative importance of risk indicators

Table 20 Relative importance of audit risk indicators:

		Mean	Rank	Stdev.
a)	Internal control environment	3.945	(1)	0.11
b)	Nature of the business	3.308	(2)	0.223
c)	Nature of the products	2.632	(9)	0.738
d)	Management structures	3.198	(5)	0.417
e)	Changes in the business	2.402	(11)	0.260
f)	Results of previous audits	3.018	(7)	0.389
g)	Client's motivation	2.438	(10)	0.573
h)	Integrity of management	3.265	(3)	0.623
i)	Non-routine transactions	2.885	(8)	0.585
j)	Transactions with needed parties	3.18	(6)	0.424
k)	Likelihood of financial failure	3.238	(4)	0.459

From this table the auditors have considered the internal control environment as a very important risk indicator in obtaining audit evidence. This is supported by the low standard deviation (0.11). Placed second is nature of the business and the least important factor is changes in business. Though the integrity of management has been placed 3rd, it has a higher standard deviation.

The factor that received a wider diversity across industries on its importance is nature of products. Some industries have a higher score for this factor than others.

From this, therefore, though the system of internal control is an important factor, other factors influences the risk assessment process of auditors and varies from one industry to another. It means that once the external auditor has established the strength of internal controls, other risk indicators associated with a given industry are considered.

Industrywise, appendix (6) reveals that there is a greater diversity in risk indicators among firms in the Finance and Investment sector. Thus ignoring a certain risk indicator that may affect the gathering of audit evidence is more risky in this sector than in other sectors. Industrial and allied sector has its firms almost equally affected by the same risk indicators.

CHAPTER FIVE: SUMMARY AND CONCLUSION

Summary of Findings

This study's general focus was on strength of internal audit departments of quoted companies in various industries and the extent to which external auditors place reliance on systems of internal control emanating from these companies. Data was collected, using questionnaires, from 33 quoted companies and 7 audit firms, analyzed and findings related to the objectives made.

The study found that though the audit departments of firms in Finance and Investment sector was ranked relatively strongest than the others, it has the greatest standard deviation among the strength indicators. It therefore means that on its own, this industry has both weak and strong indicators of strength. Though agricultural sector was ranked least strong, it has averaged out all its strength indicators as shown by the low standard deviation.

Among the strength indicators on average all firms exhibited the highest score being in staff qualification which did not greatly vary from one industry to another as revealed by the standard deviation (0.296). This implies that as far as staff qualification is concerned, all industries are almost at par.

Second is staffing pattern in which Finance and Investment sector had the highest score. The standard deviation (2.46) reveals that in some industries, there are far much more fewer employees than there are in other sectors.

The least varied strength indicator was organizational status implying that on average almost all audit departments across industries are not given enough discretion in executing their duties.

In overall thus, the tests on significance reveals that though, in relative, terms, there are differences in the strength of the various internal audit departments there is no significant difference in the same. This therefore implies that if the strength of internal audit departments affects the strength of internal controls, then the external audits should rely equally on all these departments.

A test on the extent of reliance on the system of internal control by external auditors reveals that in relative terms those from Finance and Investment sector were relied most with a mean of 2.786. It also has the least standard deviation among various aspects of the internal controls. This therefore implies that this sector has averaged out its internal controls across all control aspects in the organization. Least is the agricultural sector with a mean score of 0.544.

A test of significance was done to establish whether there is a significant difference in the extent of reliance. Two situations arose in which there was a significant difference in the extent to which the system of internal control was relied upon between Finance and Investment and Agricultural sectors and that between industrial and allied and Finance and Investment Sector. This implies therefore that the relative strengths across this industries were not captured in their systems of internal controls.

An association test between the strength of internal and audit department and extent of reliance revealed no associations. This therefore implies that the extent of reliance by auditors on the internal control systems is not a function of strength of internal audit department. This therefore leads to the conclusion that with or without an audit department, the systems of internal control remains either strong or weak as perceived by the external auditor notwithstanding the strength of such departments. The strength of the internal audit department therefore does not greatly influence the external auditors extent of reliance on the system of internal controls.

It can therefore be concluded that even though the extent of reliance on internal controls is not sensitive to the strength of internal audit departments, companies should not do away with it. This is because as a management tool, it should assist management in its day-to-day operations and not necessarily of any relevance to the external auditors. This may be attributed to the fact that the external auditor may have specific considerations which may be beyond the strength of internal controls. However, though the system of internal control was ranked as the most important factor in obtaining audit evidence other indicators followed. It therefore implies that once the auditor establishes the strength of the audit department, other risk indicators come into play not with standing the strength of internal control system.

5.2 Limitation of the Study

i) The outcome of the study may not be conclusive as there is a possibility that some quoted companies who responded were not necessarily the ones whom the external auditors reported on and/or vice versa.

ii) Though the quoted companies that formed part of the analysis all had internal audit departments there were three excluded due to lack of audit departments. Auditors may therefore have reported on such companies while the study was not intended to capture such companies.

iii) The study carries over some of the weaknesses inherent in using questionnaires for data collection purpose. Apart from the possibility of misinterpretation of items and definitions by respondents, answers to the questions may reflect an ideal situation rather than what exactly happens in the companies.

5.3 Suggestions for further research

This study which was exploratory in nature opens up a wide range of areas in auditing which can be addressed. The following are some of the areas suggested for further research.

i) One of the questions which is unanswered in this study is whether internal control systems originating from companies not having internal audit departments are any different from those having such departments. This will therefore need a closer match of responses from companies and their auditors. Such a study can restrict itself to fewer companies to facilitate a detailed analysis.

ii) A survey study can be carried out to establish the fee structure among audit firms for the quoted companies and linking it to the presence and absence of internal audit departments.

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APPENDIX 1

C/O MBA OFFICE,
FACULTY OF COMMERCE,
UNIVERSITY OF NAIROBI,
P.O BOX 30197,,
NAIROBI.

…………………………………

…………………………………

…………………………………

…………………………………

Dear Sir/Madam,

RE: REQUEST FOR RESEARCH DATA.

I am a postgraduate student at the University of Nairobi pursuing a course leading to a Masters degree in Business Administration (MBA). In partial fulfillment of the requirements of this course, I am conducting a study entitled **"The Internal Audit Control Function and its implication for Risk Assessment by the External Auditor: A case of Quoted companies".** This study will therefore concentrate on both Internal and External Auditors of quoted companies.

Your firm has been selected to form part of this study. I therefore kindly request you to assist by completing the attached questionnaire to the best of your knowledge. The information requested is purely for academic purpose and will be treated with strict confidentiality. A copy of the findings of this study will be made available to you upon your request.

If you have additional information or comment, please write it at the back of the last page.

Thank you for your co-operation.

…………………	…………………
KEITANY L.J	**SIMIYU N.T.T (B.Com, MBA, CPA(K))**
(MBA II CANDIDATE)	**(Lecturer Department of Accounting)**
	SUPERVISOR.

APPENDIX 2

QUESTIONNAIRE

The questionnaire below is in two parts. Part A is aimed at giving a general background of your organization. Part B is concerned with the operating procedures in your department.

PART A

1. Ownership (please tick the appropriate)

   [ ] Foreign
   [ ] Local (including jointly owned with government)
   [ ] Partly local (.....% ordinary shareholding) & partly foreign (.......%ordinary shareholding)
   [ ] Government owned

2. What is the industry classification of your company?(Please tick one)

   [ ] Agricultural
   [ ] Commercial and services
   [ ] Finance and investment
   [ ] Industrial and Allied.

3. For how long has your firm been operating in Kenya? (Please tick one)

   [ ] 1-5 years
   [ ] 6-10 years
   [ ] 11-15 years
   [ ] over 15 years

4. Do you have an internal audit department? (Please tick one)

   [ ] Yes
   [ ] No

PART B

5. What is the title of the person in charge of the internal audit department? ....

6. To which position in the organization does the above in charge report ? ....

7. What was the total number of internal audit employees as at 31.12. 99 ? ....

8. What is the qualification of your audit staff in numbers. The column shows academic qualifications and rows shows the professionals. If 10 employees are CPA (K) and have a first degree. Then put 10 where the two intersect.

Qualifications	O Level	A level	First Degree	Second Degree	
CPA (K)	a	b	c	d	
CPA 2	E	f	g	h	
CPA 1	I	j	k	l	
KATC	M	n	o	p	
Others (specify)	Q	r	s	t	

9. Does the position occupied by your department in the overall organizational structure permit the Department to accomplish its audit responsibilities? (please tick one)

[ ] Yes
[ ] No

10. Is the work performed checked by other people? (please tick one)

[ ] Yes
[ ] No

11. State the number of staff in your department falling within the following experience categories ?

0 -1 years a___________
Over 1 year below 2 years b___________
Over 2 years below 3 years c___________
Over 3 years below 4 years d___________
Over 4 years below 5 years e___________
Over 5 years f___________

Total ____________

12. How would you rate on average the familiarity of your staff with the professional code of conduct. (please tick one)

[ ] Very familiar
[ ] Familiar
[ ] Somehow familiar
[ ] Not familiar

13. Which of the methods below do your staff use in communicating with each other (please tick one)

[ ] Mostly memos
[ ] Memos and personal discussion
[ ] Mostly personal discussions

14. How frequently do your staff including yourself participate in CPE (Continuous Professional Education). (please tick one)

[ ] All CPE programmes
[ ] Some
[ ] None

15. How would you rank the extent of internal audit tests carried out in the firm by your department (please tick one)

[ ] Very extensive
[ ] Extensive
[ ] Somehow extensive
[ ] Not extensive

16. How frequently do you and your staff attend seminars on auditing? (please tick one)

[ ] Frequently
[ ] Occasionally
[ ] Infrequently

17. Who in your firm performs the following functions (please tick in each category as appropriate)

	Both internal auditor & dept. heads	External auditor only	Internal auditor only	Only dept. Heads
a. Establishes the system of internal control	a	b	c	d
b. Reviews the system of internal control	e	f	g	h
c. Verifies the reliability & accuracy of records & accounts	I	j	k	l
d. Ensures compliance with policies, laws and procedures	m	n	o	p
e. Safeguards assets	q	r	s	t
f. Determines what to audit	U	v	w	x
g. Ensures economic use of resources	Y	z	aa	bb

18. Do you use audit programmes in performing your audits? (please tick one)

[ ] Yes
[ ] No

19. In what form is your work communicated to your boss? (please tick one)

[ ] Written report
[ ] Verbally during meetings
[ ] Both oral and written

20. Where you have made recommendations do management allow you to follow up to ensure compliance? (please tick one)

[ ] Yes
[ ] No

21. How do your external auditors perform their audit work ? (please tick one)

[ ] They have their own approach
[ ] They always take my word
[ ] They take my word in some cases only
[ ] I do some work for them

22. Do you review all aspects of the organization. (please tick one)

[ ] Yes
[ ] No

23. If no state the areas that you do not audit.

____

____

____

____

THANK YOU FOR YOUR CO-OPERATION

APPENDIX 3

PART C

This part of the questionnaire is to be filled in respect of a specific client and in relation to the latest audited accounts.

24. What is the industry classification of your client ? (Please tick one)

[ ] Agricultural
[ ] Commercial and services
[ ] Finance and investment
[ ] Industrial and Allied.

25. For how long have you been auditors for this client (Please tick one)

[ ] 1-5 years
[ ] 6-10 years
[ ] 11-15 years
[ ] over 15 years

26. Kindly rate the extent to which the system of internal control was relied upon in obtaining audit evidence in the following areas:

KEY:

To a great extent (TGE)

To a moderate extent (TME)

To a little extent (TLE)

Not at all (NAA)

1.	SALES, RECEIVABLES AND RECEIPT	TGE	TME	TLE	NAA
(a)	Whether goods were dispatched without being invoiced	( )	( )	( )	( )
(b)	Whether goods were shipped to a bad credit risk customer	( )	( )	( )	( )
(c)	Whether invoiced sales went unrecorded in the accounts	( )	( )	( )	( )
(d)	Whether receivables were improperly credited	( )	( )	( )	( )
(e)	Whether payments were received and not deposited	( )	( )	( )	( )
(f)	Whether overdue accounts escaped attention	( )	( )	( )	( )

(g)	Whether sales were invoiced but not costed	( )	( )	( )	( )
(h)	Whether invoicing errors occurred	( )	( )	( )	( )
(i)	Whether cash sales proceeds were misappropriated	( )	( )	( )	( )
(j)	Whether miscellaneous receipts were missed	( )	( )	( )	( )
(2)	PURCHASES, PAYABLES, PAYMENTS				
(a)	Whether unauthorized goods were purchased	( )	( )	( )	( )
(b)	Whether payables were created without receipt of goods	( )	( )	( )	( )
(c)	Whether payments were made without proper support	( )	( )	( )	( )
(d)	Whether payments for non-routine purchases were made without proper authorization or support	( )	( )	( )	( )
(e)	Whether liabilities were incurred without being recorded	( )	( )	( )	( )
(f)	Whether charges were distributed to improper accounts	( )	( )	( )	( )
(g)	Whether petty cash was misappropriated	( )	( )	( )	( )
(h)	Whether fixed assets were acquired or disposed off without proper authorization or recording	( )	( )	( )	( )
3.	WAGES AND SALARIES				
(a)	Whether payroll was inflated in any way	( )	( )	( )	( )
(b)	Whether employees were paid for work they had not done	( )	( )	( )	( )
(c)	Whether other errors occurred in the payroll calculations	( )	( )	( )	( )
4.	COST RECORDS AND INVENTORY RECORDS				
(a)	Whether inventory items were lost or pilfered	( )	( )	( )	( )
(b)	Whether inventory in production was consumed or wasted without being recorded	( )	( )	( )	( )
(c)	Whether work in process was charged with items and never relieved	( )	( )	( )	( )
(d)	Whether information produced by the cost system was inadequate for proper control	( )	( )	( )	( )
5.	BOOKS OF ACCOUNT AND GENERAL	TGE	TME	TLE	NAA
(a)	Whether posting or casting errors occurred in ledgers	( )	( )	( )	( )
(b)	Whether incorrect Journal entries were made	( )	( )	( )	( )
(c)	Whether there was lack of accounting or administrative controls	( )	( )	( )	( )
(d)	Whether procedural changes during peak periods, slack periods, vacations or illness resulted in any				

significant changes in internal controls ( ) ( ) ( ) ( )

(e) Whether there were any areas where lack of competence on the part of any employee affected significantly the system of internal controls ( ) ( ) ( ) ( )

(f) Whether recorded transactions existed ( ) ( ) ( ) ( )

(g) Whether recorded transactions were stated at the correct amounts ( ) ( ) ( ) ( )

(h) Whether transactions were properly classified ( ) ( ) ( ) ( )

(i). Whether transactions were properly recorded in the correct dates ( ) ( ) ( ) ( )

(j) Whether transactions were properly included in the master files and correctly summarised ( ) ( ) ( ) ( )

(k) Whether transactions that existed were recorded ( ) ( ) ( ) ( )

27. State the relative importance of the following factors in your risk assessment process in respect of this client (please tick one in each category)
KEY: Very important (VI) Important (I) Relatively important (RI) Not important (NI)

	VI	I	RI	NI
(a) Internal control environment				
(b) Nature of the business				
(c) Nature of the products				
(d) Management structure				
(e) Changes in the business				
(f) Results of previous audits				
(g) Clients' motivation e.g receipt of bonus based on profits				
(h) Integrity of management				
(I) Non routine transactions				
(j) Transactions with related parties				
(k) Likelihood of financial failure				

THANK YOU FOR YOUR CO-OPERATION

Appendix 4

QUOTED COMPANIES BY INDUSTRIAL GROUPINGS AS AT 30th APRIL, 2000

A. AGRICULTURAL
1. Brooke Bond Kenya LTD
2. Eaagads
3. Rea Vipingo Plantations
4. Theta Group Ltd
5. George Williamson Kenya LTD
6. Kakuzi LTD
7. Kapchorua Tea co. LTD
8. Limuru Tea
9. Sasini Tea and Coffee LTD

B. COMMERCIAL & SERVICES

10. African Lakes corp
11. Car & General
12. Express Kenya Ltd
13. Hutching Biemer Ltd
14. A. Baumann & Co. Ltd
15. African Tours & Hotels Ltd
16. CMC Holdings
17. Kenya Airways LTD
18. Lonrho Motors
19. Marshalls (E.A) LTD
20. Nation Media Group
21. Pearl Dry Cleaners
22. Standard Newspapers
23. Uchumi Supermarket
24. TPS (Serena) LTD

INDUSTRIAL & ALLIED

25. Athi River Mining
26. BAT Kenya Limited
27. Bamburi Cement LTD
28. BOC Kenya LTD
29. Carbacid Investments Ltd
30. Crown Berger (K) LTD
31. E.A. Cables
32. E.A. Packaging Industries
33. E.A Portland
34. East African Breweries LTD
35. Firestone E.A (1969) Ltd
36. Unga Group
37. Kenya National Mills
38. Kenya Oil Company Ltd
39. Kenya Power & Lighting Co.

40. Total Kenya Ltd
41. Kenya Orchards Ltd
42. Dunlop Kenya Ltd

C. FINANCE & INVESTMENT

43. CFC Bank
44. Housing Finance Company of Kenya Ltd
45. I.C.D.C. Investments Co. LTD
46. Jubilee Insurance
47. Kenya Commercial Bank
48. National Bank of Kenya
49. Pan Africa Insurance
50. **City Trust Ltd**
51. Barclays Bank of Kenya
52. Diamond Trust Bank (K) Ltd
53. NIC Bank Ltd
54. Standard Chartered Bank (K) Ltd

AUDITORS

(1) Price water house Coopers
(2) Delloitte and Touche
(3) KPMG Peatmarwick
(4) Ernst and Young
(5) Bellhouse Mwangi
(6) Gill and Johnson

APPENDIX 5: FORMULAE

$$\chi^2 = \sum_{i=1}^{k} \frac{(0_i - E_i)^2}{E_i} \text{ or } \chi^2 = \sum\sum_{ij} \frac{(O_{ij} - E_{ij})^2}{E_{ij}}$$

Where O_i is observed number of cases categorized in the ith category
E_i is expected number of cases in the ith category under H_O
K = the number of categories

Decision: Reject null hypothesis if computed χ^2 exceeds critical χ^2

ii) $$Z = \frac{x_1 - x_2) - (u_1 - u_2)_0}{\sqrt{\frac{S^2_1}{n_1} + \frac{S^2_2}{n_1}}}$$

Where $(u_1 - u_2)$ is the difference between the population means

x_1 – sample mean of first sample
x_2 – sample mean of second sample

S_1^2 and S^1_2 – Respective standard deviations

n_1 and n_2 – size of samples

Decision: Reject null hypothesis if computed Z exceeds critical Z

iii) $$T = \frac{(x_1 - x_2) - u_1 - u_2)_o}{\frac{\sqrt{(n_1-1)(S_1^2) + (n_2-1)S_2^2}}{n_1 + n_2 - 2}}$$

Decision : Reject null hypothesis if computed t exceeds critical t.

APPENDIX 6

Agricultural

	1	2	3	4	5	6
1	F	L	F	L	F	L
2	A	A	A	A	A	A
3	>15	>15	>15	>15	>15	>15
4	y	y	y	y	y	y
5	AM	CIA	ICM	AM	IAM	CIA
6	MD	FD	MD	MD	/ID&B	FD
7	3	3	4	3	2	3
9a	1	1	2	1	1	1
9b		1	1	1	1	1
c						
d	1		1	1		1
e		1				
f						
g	1					
h						
I						
j						
k						
l						
m						
n						
o						
10	y	y	y	y	y	y
11	n	n	n	y	n	y
12a						
b						
c			1			
d		2	1			
e		1	1	2		2
f	3		1	1	2	1
13	f	vf	f	f	vf	f
14	d	d	b	b	b	b
15	n	s	s	s	a	s
16	e	ve	e	e	e	ve
17	l	f	f	o	f	o
18a	x		x	x		x
b						
c						
d		x			x	
e						
f	x				x	x
g	x	x	x	x	x	x
h						
i		x	x	x	x	x
j	x			x	x	x
k	x					x
l						
m		x		x	x	x
n	x					
o	x					
p			x			
q	x	x	x		x	x
r						
s						
t				x		
u						
v		x	x	x	x	x
w	x	x	x	x	x	x
x						
y		x	x	x	x	
z						
aa						
bb	x					x
19	y	y	y	y	y	y
20	w	w	b	w	w	b
21	y	y	y	y	y	y
22	d	a	d	a	a	a
23	n	y	y	y	y	n
24						

Finance and Investment

	1	2	3	4	5	6	7
1	L	L	L	F	L	L	L
2	FI	FI	FI	FI	FI	FI	FI
3	>15	>15	>15	>15	>15	>15	>15
4	y	y	y	y	y	y	y
5	siam	am	ca	a/ea	iam	iam	icm
6	ce&b	bac	emd	ia/uk	md	ce	msd/m
7	4	5	8	30	6	3	4
9a			4	13	1		2
9b	2	1	1	8	2	1	
c		2	1	2			
d		1	1	3		1	2
e	1			4			
f							
g		1	1				
h					3		
I							
j							
k							
l							
m						1	
n	1						
o							
10	y	n	y	y	y	y	y
11	n	y	n	n	y	y	y
12a							
b				3	3		
c	3		3	2			1
d	1	1	2	3	1		
e			2	4		1	
f		4	1	18	2	2	3
13	vf	f	f	f	f	f	vf
14	b	b	m	b	d	b	b
15	a	s	s	s	s	s	s
16	e	se	ve	e	ve	e	ve
17	o	o	f	o	o	o	o
18a	x	x			x	x	x
b							x
c							
d			x	x			
e		x					
f						x	x
g	x		x	x	x	x	x
h				x			
i		x	x	x	x	x	x
j				x		x	x
k	x						
l							x
m		x	x	x	x	x	
n			x	x		x	x
o	x						
p							x
q	x	x		x		x	
r				x			
s							
t			x		x		x
u		x					
v			x	x			x
w	x		x	x	x	x	x
x							
y	x		x		x	x	
z							
aa							
bb		x		x			x
19	y	y	y	y	y	y	n
20	b	w	w	w	w	w	b
21	y	y	y	y	y	y	y
22	a	a	a	a	a	a	a
23	y	n	y	y	y	y	y
24							

APPENDIX 6 Contd

Industrial and Allied

	1	2	3	4	5	6	7	8	9	10	11
1	L	F	F	F	F	F	F	F	L	L	L
2	IA	IA	IA	IA	IA	IA	IA	IA	IA	IA	IA
3	>15	>15	>15	>15	>15	>11	>11	>15	>15	>15	>15
4	y	y	y	y	y	y	y	y	y	y	y
5	am	cia	icm	am	a	am	gm	ca	cia	cia	icm
6	d	ce	md	fd	nd&B	fd	md	d	md	md	emd
7	4	2	4	3	4	2	2	3	4	8	6
9a	1	1	2	1	1	1	1	1	1	2	4
9b			1							2	2
c											
d		1	1	1	2	1	1	2	2		
e										2	
f											
g	1				1					1	
h											
I											
j	2									1	
k											
l											
m				1					1		
n											
o											
10	y	y	y	n	n	y	y	y	y	y	y
11	y	n	y	y	n	y	n	y	y	y	n
12a											
b				1	2					2	1
c										1	
d			1	1		1	2	1		2	2
e	1	1	2	1	1			1	2	1	1
f	3	1	1		1	1		1	2	2	2
13	f	f	vf	f	f	f	f	vf	f	f	vf
14	d	b	b	d	d	d	b	m	m	b	m
15	n	s	s	n	n	s	s	s	s	s	s
16	se	e	e	se	e	se	se	e	e	ve	e
17	l	o	o	l	o	o	o	o	o	o	f
18a	x	x		x		x		x			
b											
c											
d			x		x		x		x	x	x
e	x			x			x				
f								x	x		
g		x	x		x	x		x	x	x	x
h											
i	x	x		x	x	x		x	x	x	x
j	x	x	x	x		x	x	x			
k			x				x				
l											
m	x	x	x	x	x	x		x	x	x	x
n	x			x				x		x	
o							x				
p							x				
q	x		x	x	x			x	x		
r	x			x							
s											
t		x								x	x
u	x			x							
v		x	x		x	x	x	x	x	x	x
w		x	x		x	x	x	x	x	x	x
x											
y	x	x	x	x	x	x		x			x
z											
aa											
bb							x			x	
19	y	y	y	n	n	n	n	y	y	y	y
20	b	b	b	v	b	b	b	b	w	b	w
21	y	y	y	n	y	y	y	n	y	y	y
22	a	a	d	a	a	d	a	a	a	a	d
23	y	y	y	n	y	n	y	y	y	y	y
24											

Commercial and Services

	1	2	3	4	5	6	7	8	9
1	F	L	F	L	L	L	L	F	L
2	CS	CS	CS	CS	CS	CS	CS	CS	CS
3	>15	>15	>15	>15	>15	>15	>15	>15	>15
4	y	y	y	y	y	y	y	y	y
5	icm	ria	ia	gia	gfa	am	am	am	am
6	fd	ac	fd	gfd	gmd	md	md	ac	fd
7	2	6	3	10	3	7	3	4	5
9a		1		1	1	1	1	2	2
9b	1	3	1		2	3		2	1
c									
d	1	1	2	1					2
e						3			
f									
g		1		8			2		
h									
I									
j									
k									
l									
m									
n									
o									
10	y	y	n	y	y	y	y	y	n
11	y	y	n	y	y	y	y	y	n
12a									
b		3	1				2		
c		3	1			1			
d	1		1	1		1	1		
e				3		2			1
f	1			6	3	3		4	4
13	f	f	f	f	vf	vf	f	vf	f
14	b	b	m	b	b	m	b	d	b
15	s	s	s	s	s	s	s	s	s
16	e	e	se	e	ve	e	e	ve	ne
17	o	o	l	f	f	f	o	l	l
18a	x	x			x				
b									
c									
d		x	x	x		x	x	x	x
e		x		x	x			x	
f		x				x			
g	x		x			x	x		x
h									
i			x		x	x			x
j			x	x	x	x		x	x
k	x	x		x	x			x	
l					x				
m	x	x	x		x	x	x	x	x
n		x	x	x					
o		x	x						
p					x				x
q	x	x		x	x			x	
r									
s									
t		x	x			x	x		x
u	x				x				
v			x	x		x	x		
w		x	x	x		x	x	x	x
x									
y	x	x	x		x		x		x
z									
aa		x							x
bb				x		x		x	
19	y	y	n	y	y	y	n	y	y
20	w	b	w	w	b	b	w	b	b
21	y	y	n	y	y	y	y	y	y
22	a	a	d	a	a	a	a	d	a
23	y	n	y	y	y	y	y	y	y

AGRICULTURAL SECTOR

	1	2	3	4	sum	mean	stdev
25	a	a	a	a			
26	<10	<10	<10	<5			
271							
a	2	4	1	1	8	2	1.414
b	2	2	2	1	7	1.8	0.5
c	1	4	2	2	9	2.3	1.258
d	2	2	2	1	7	1.8	0.5
e	2	4	1	1	8	2	1.414
f	2	4	1	1	8	2	1.414
g	2	3	1	1	7	1.8	0.957
h	2	4	1	1	8	2	1.414
I	2	4	2	1	9	2.3	1.258
j	2	4	2	1	9	2.3	1.258
	19	35	15	11	80	20	10.52
272							
a	3	4	1	1	9	2.3	1.5
b	3	4	2	1	10	2.5	1.291
c	1	4	2	2	9	2.3	1.258
d	1	4	1	2	8	2	1.414
e	1	3	1	2	7	1.8	0.957
f	1	3	2	2	8	2	0.816
g	2	4	1	1	8	2	1.414
h	2	2	1	1	6	1.5	0.577
	14	28	11	12	65	16	7.932
273							
a	1	4	2	1	8	2	1.414
b	1	4	1	1	7	1.8	1.5
c	1	2	2	1	6	1.5	0.577
	3	10	5	3	21	5.3	3.304
274							
a	2	4	2	1	9	2.3	1.258
b	2	4	2	1	9	2.3	1.258
c	2	0	1	0	3	0.8	0.957
d	1	2	1	1	5	1.3	0.5
	7	10	6	3	26	6.5	2.887
275							
a	2	4	4	2	12	3	1.155
b	2	3	2	2	9	2.3	0.5
c	1	3	2	2	8	2	0.816
d	2	4	3	n	9	2.3	1
e	3	4	4	3	14	3.5	0.577
f	3	4	3	n	10	2.5	0.577
g	4	3	3	4	14	3.5	0.577
h	3	3	3	4	13	3.3	0.5
I	3	3	2	4	12	3	0.816
j	4	4	3	4	15	3.8	0.5
k	3	3	4	4	14	3.5	0.577
	30	38	33	29	130	33	4.041
28							
a	4	4	4	4	16	4	0
b	4	3	3	4	14	3.5	0.577
c	3	3	4	3	13	3.3	0.5
d	3	4	4	4	15	3.8	0.5
e	3	1	3	3	10	2.5	1
f	2	3	3	2	10	2.5	0.577
g	2	1	2	3	8	2	0.816
h	3	4	3	4	14	3.5	0.577
I	4	1	4	4	13	3.3	1.5
j	4	4	2	4	14	3.5	1
k	3	3	2	4	12	3	0.816
	35	31	34	39	139	35	3.304

COMMERCIAL & SERVICES

	1	2	3	4	5	6	7	sum	mean	stdev
25	cs	cs	cs	cs	cs	cs	cs			
26	<10	<10	<10	<5	<5	<10	<5			
271										
a	2	3	4	2	2	0	4	17	2.43	1.4
b	3	3	4	2	2	0	4	18	2.57	1.4
c	4	3	4	2	2	1	4	20	2.86	1.21
d	3	4	3	2	2	2	3	19	2.71	0.76
e	3	4	3	2	2	2	3	19	2.71	0.76
f	3	3	3	2	1	2	3	17	2.43	0.79
g	3	3	4	2	1	1	4	18	2.57	1.27
h	4	4	4	2	2	1	4	21	3	1.29
I	4	3	3	2	1	2	3	18	2.57	0.98
j	3	1	4	2	1	1	3	15	2.14	1.21
	32	31	36	20	16	12	35	182	26	9.78
272										
a	3	4	3	2	2	2	4	20	2.86	0.9
b	3	4	3	2	1	2	4	19	2.71	1.11
c	4	4	3	2	2	2	3	20	2.86	0.9
d	4	3	3	2	2	2	4	20	2.86	0.9
e	4	3	3	2	2	2	3	19	2.71	0.76
f	3	3	3	2	1	2	4	18	2.57	0.98
g	4	3	3	2	1	2	3	18	2.57	0.98
h	4	4	3	2	2	2	4	21	3	1
	29	28	24	16	13	16	29	155	22.1	6.96
273										
a	3	4	3	2	2	1	4	19	2.71	1.11
b	4	4	3	2	2	1	3	19	2.71	1.11
c	2	3	3	2	2	2	3	17	2.43	0.53
	9	11	9	6	6	4	10	55	7.86	2.54
274										
a	3	4	3	2	1	2	4	19	2.71	1.11
b	4	4	3	2	2	3	n	18	2.57	0.89
c	4	3	3	2	1	2	n	15	2.14	1.05
d	3	3	3	2	1	2	4	18	2.57	0.98
	14	14	12	8	5	9	8	70	10	3.42
275										
a	4	4	3	2	2	2	4	21	3	1
b	4	3	3	2	2	2	4	20	2.86	0.9
c	3	3	3	2	2	2	4	19	2.71	0.76
d	3	4	3	2	3	2	3	20	2.86	0.69
e	3	4	3	2	4	3	4	23	3.29	0.76
f	4	4	4	2	3	3	4	24	3.43	0.79
g	4	3	4	2	3	4	3	23	3.29	0.76
h	4	3	4	2	3	4	4	24	3.43	0.79
I	3	3	4	2	4	3	3	22	3.14	0.69
j	3	3	4	2	4	4	3	23	3.29	0.76
k	3	4	4	2	4	3	4	24	3.43	0.79
	38	38	39	22	34	32	40	243	34.7	6.29
28										
a	4	4	4	4	4	4	4	28	4	0
b	2	3	2	4	4	4	4	23	3.29	0.95
c	3	3	2	3	3	3	3	20	2.86	0.38
d	4	3	4	3	2	3	4	23	3.29	0.76
e	2	4	3	4	2	3	1	19	2.71	1.11
f	3	4	4	4	3	2	4	24	3.43	0.79
g	3	3	4	3	2	3	3	21	3	0.58
h	4	4	4	4	4	4	4	28	4	0
I	3	2	2	3	3	3	3	19	2.71	0.49
j	4	4	2	3	4	3	4	24	3.43	0.79
k	3	4	3	4	4	3	4	25	3.57	0.53
	35	38	34	39	35	35	38	254	36.3	1.98

Appendix 8

INDUSTRIAL & ALLIED

	1	2	3	4	5	6	7			
25	ia	ia	ia	ia	ia	ia	ia			
26	<10	<5	<5	<10	<5	<10	<5			
271								sum	mear	stdev
a	3	2	2	2	3	2	1	15	2.1	0.69
b	4	3	2	2	3	4	2	20	2.9	0.9
c	4	3	3	2	4	3	2	21	3	0.816
d	2	2	3	2	3	3	2	17	2.4	0.535
e	2	2	3	3	2	3	3	18	2.6	0.535
f	3	2	3	3	1	2	3	17	2.4	0.787
g	3	3	2	3	2	2	1	16	2.3	0.756
h	3	3	2	3	4	2	3	20	2.9	0.69
I	3	3	3	3	4	2	2	20	2.9	0.69
j	2	3	2	3	3	3	4	20	2.9	0.69
	29	26	25	26	29	26	23	184	26	2.138
272										
a	3	2	3	3	2	1	2	16	2.3	0.756
b	3	2	3	2	1	1	2	14	2	0.816
c	3	3	3	2	4	2	3	20	2.9	0.69
d	3	3	2	3	4	3	2	20	2.9	0.69
e	3	2	2	3	2	3	4	19	2.7	0.756
f	3	3	2	3	2	3	2	18	2.6	0.535
g	3	3	2	2	3	3	2	18	2.6	0.535
h	3	2	2	2	1	2	3	15	2.1	0.69
	24	20	19	20	19	18	20	140	20	1.915
273										
a	2	2	2	3	2	3	2	16	2.3	0.488
b	2	3	3	3	2	2	2	17	2.4	0.535
c	2	2	3	3	3	1	2	16	2.3	0.756
	6	7	8	9	7	6	6	49	7	1.155
274										
a	3	3	3	3	4	2	3	21	3	0.577
b	3	2	3	2	2	2	1	15	2.1	0.69
c	3	2	2	3	3	2	3	18	2.6	0.535
d	3	3	2	3	4	3	2	20	2.9	0.69
	12	10	10	11	13	9	9	74	11	1.512
275										
a	2	3	3	3	2	1	3	17	2.4	0.787
b	2	3	3	3	4	3	2	20	2.9	0.69
c	2	2	3	2	1	3	3	16	2.3	0.756
d	2	2	2	2	3	3	3	17	2.4	0.535
e	2	3	2	2	3	2	3	17	2.4	0.535
f	2	3	2	3	3	3	2	18	2.6	0.535
g	2	3	3	2	2	3	2	17	2.4	0.535
h	2	2	2	3	1	1	2	13	1.9	0.69
I	2	2	2	2	1	3	1	13	1.9	0.69
j	2	3	3	3	1	2	2	16	2.3	0.756
k	2	3	3	3	2	3	2	18	2.6	0.535
	22	29	28	28	23	27	25	182	26	2.708
28										
a	4	4	4	4	4	4	4	28	4	0
b	3	3	3	3	2	3	4	21	3	0.577
c	3	2	4	3	3	2	3	20	2.9	0.69
d	3	3	3	3	2	3	3	20	2.9	0.378
e	2	2	2	2	3	2	3	16	2.3	0.488
f	3	3	3	3	2	4	4	22	3.1	0.69
g	3	2	3	3	2	4	3	20	2.9	0.69
h	3	4	3	3	2	3	3	21	3	0.577
I	2	3	2	2	2	2	2	15	2.1	0.378
j	2	3	3	3	2	2	3	18	2.6	0.535
k	3	3	2	3	3	3	2	19	2.7	0.488
	31	32	32	32	27	32	34	220	31	2.149

FINANCE & INVESTMENT

	1	2	3	4	5	6	7	8	9			
25	FI	FI	FI	FI	FI	FI	FI	FI	FI			
26	<10	<10	<5	<5	<5	<10	<5	<5	<10			
271										sum	mean	stdev
a	N	N	N	N	N	N	N	N	N	0	0	
b	N	3	3	N	4	N	N	2	2	14	1.56	0.83666
c	N	2	1	N	2	N	N	3	2	10	1.11	0.70711
d	2	4	3	2	4	2	4	3	3	27	3	0.86603
e	3	4	3	2	3	2	3	3	3	26	2.89	0.60093
f	3	4	2	2	3	3	4	3	4	28	3.11	0.78174
g	3	3	2	3	4	3	2	2	3	25	2.78	0.66667
h	2	3	3	2	4	2	3	2	2	23	2.56	0.72648
I	2	3	2	3	3	3	2	3	4	25	2.78	0.66667
j	3	3	4	4	3	2	3	3	2	27	3	0.70711
	18	29	23	18	30	17	21	24	25	205	22.8	4.73756
											0	
272											0	
a	3	3	2	2	3	4	4	3	2	26	2.89	0.78174
b	4	2	2	2	3	4	3	3	2	25	2.78	0.83333
c	3	3	3	2	3	4	4	4	3	29	3.22	0.66667
d	2	2	2	3	2	3	2	2	2	20	2.22	0.44096
e	3	3	4	4	3	2	3	3	3	28	3.11	0.60093
f	4	4	4	3	4	3	3	3	4	32	3.56	0.52705
g	3	4	3	3	2	2	2	3	2	24	2.67	0.70711
h	2	2	3	2	1	3	2	1	2	18	2	0.70711
	24	23	23	21	21	25	23	22	20	202	22.4	1.5899
											0	
273											0	
a	3	2	2	2	3	3	2	4	3	24	2.67	0.70711
b	4	4	4	3	3	4	4	4	3	33	3.67	0.5
c	3	3	3	4	2	2	2	2	3	24	2.67	0.70711
	10	9	9	9	8	9	8	10	9	81	9	0.70711
											0	
274											0	
a	4	4	2	3	3	2	2	3	3	26	2.89	0.78174
b	3	3	3	3	4	3	2	3	4	28	3.11	0.60093
c	N	N	N	N	N	N	N	N	N	0	0	
d	3	3	3	2	2	2	3	2	2	22	2.44	0.52705
	10	10	8	8	9	7	7	8	9	76	8.44	1.13039
											0	
275											0	
a	3	4	4	4	3	2	3	3	4	30	3.33	0.70711
b	2	3	2	1	1	2	1	2	2	16	1.78	0.66667
c	2	1	1	1	2	1	2	2	1	13	1.44	0.52705
d	4	3	3	4	4	4	2	3	4	31	3.44	0.72648
e	4	3	3	4	4	4	2	3	4	31	3.44	0.72648
f	4	4	3	3	3	4	2	2	3	28	3.11	0.78174
g	3	3	4	3	4	4	3	3	2	29	3.22	0.66667
h	2	3	2	3	2	2	3	3	2	22	2.44	0.52705
I	3	2	2	3	3	2	4	3	3	25	2.78	0.66667
j	4	4	3	3	2	3	2	2	3	26	2.89	0.78174
k	3	3	3	4	3	4	4	2	2	28	3.11	0.78174
	34	33	30	33	31	32	28	28	30	279	31	2.17945
											0	
28											0	
a	4	4	3	4	4	4	3	4	4	34	3.78	0.44096
b	3	4	4	3	3	3	4	4	3	31	3.44	0.52705
c	1	2	2	1	1	2	1	2	2	14	1.56	0.52705
d	3	3	2	2	4	3	3	4	2	26	2.89	0.78174
e	2	2	1	3	2	2	1	3	3	19	2.11	0.78174
f	4	4	2	3	3	2	4	2	3	27	3	0.86603
g	1	2	2	1	3	4	2	1	1	17	1.89	1.05409
h	3	2	2	2	3	4	3	2	2	23	2.56	0.72648
I	4	4	3	3	4	3	4	3	3	31	3.44	0.52705
j	3	4	4	3	3	2	4	3	3	29	3.22	0.66667
k	4	3	3	4	4	4	3	4	4	33	3.67	0.5
	32	34	28	29	34	33	32	32	30	284	31.6	2.12786

APPENDIX 10

Relative importance of various risk indicators

Risk indicator	Ag	C&S	I&A	F&I	mean	stdev
Internal control environment1	4	4	4	3.78	3.945	0.11
Nature of business	3.5	3.29	3	3.44	3.3075	0.223215
Nature of products	3.25	2.86	2.86	1.56	2.6325	0.738258
Management structure	3.75	3.29	2.86	2.89	3.1975	0.417243
Changes in business	2.5	2.71	2.29	2.11	2.4025	0.259663
Results of previous audits	2.5	3.43	3.14	3	3.0175	0.388705
Client's motivation	2	3	2.86	1.89	2.4375	0.573316
Integrity of management	3.5	4	3	2.56	3.265	0.622549
None-routine transactions	3.25	2.71	2.14	3.44	2.885	0.585064
Related party transactions	3.5	3.43	2.57	3.22	3.18	0.423714
Likelihood of financial failure	3	3.57	2.71	3.67	3.2375	0.459084
Mean	3.1590909	3.2990909	2.8572727	2.8690909	3.0461364	0.436437
Stdev	0.6049042	0.4546087	0.4865201	0.7488585	0.4454441	0.187924

APPENDIX 7

Testing if there is significant difference in strength of internal audit departments

		Ag	C&S	F&I	I&A	sum
average staff number		3	4.78	8.57	3.82	20.17
	b	4.7932117	4.9445039	5.6442303	4.788054	20.17
	c	0.6708672	0.0054731	1.5166157	0.1957222	2.3886781
average staff qualification		5.94	5.63	5.92	5.31	22.8
	b	5.4182066	5.589226	6.3801909	5.4123764	22.8
	c	0.0502506	0.0002974	0.0331927	0.0019365	0.0856773
average staff experience		2.94	4.72	4.77	4.62	17.05
	b	4.0517729	4.1796625	4.7711516	4.0474131	17.05
	c	0.3050613	0.0698536	2.779E-07	0.0810038	0.455919
average organizational status		1	0.77	0.86	0.82	3.45
	b	0.8198602	0.8457382	0.9654236	0.818978	3.45
	c	0.0395803	0.0067826	0.0115122	1.275E-06	0.0578764
average audit quality		1.33	1.55	1.43	1.27	5.58
	b	1.3260348	1.3678895	1.5614678	1.3246079	5.58
	c	1.186E-05	0.0242448	0.0110689	0.0022513	0.0375768
average staff relations		4.67	4.33	4.28	4.73	18.01
	b	4.2799079	4.4149983	5.0397912	4.2753026	18.01
	c	0.0355549	0.0016364	0.1145449	0.0483591	0.2000954
average professional proficiency		2.22	1.33	1.3	1.55	6.4
	b	1.5209001	1.5689056	1.7909308	1.5192636	6.4
	c	0.3213496	0.0363794	0.1345742	0.0006218	0.492925
extent of audit tests		3.33	2.89	3.29	2.73	12.24
	b	2.9087214	3.0005319	3.4251551	2.9055915	12.24
	c	0.061015	0.0040717	0.0053332	0.0106114	0.0810313
average scope of work		1.67	1.78	1.86	1.64	6.95
	b	1.6516025	1.7037334	1.9448389	1.6498253	6.95
	c	0.0002049	0.003414	0.0037009	5.851E-05	0.0073784
average knowledgeability		1.78	0.98	0.55	1.36	4.67
	b	1.1097818	1.1448108	1.3068198	1.1085876	4.67
	c	0.4047574	0.0237267	0.4382978	0.0570169	0.9237988
		27.88	28.76	32.83	27.85	117.32
		27.88	28.76	32.83	27.85	117.32
		1.8886532	0.1758798	2.2688407	0.3975827	4.7309564

APPENDIX 7

Testing if industrial classification affects extent of reliance on internal controls

	Ag	C&S	F&I	I&A	
Sales receipts and receivables	2	2.5	2.8	2.63	9.93
	2.1185578	2.6176222	2.7478129	2.4460072	9.93
	0.0066347	0.0052853	0.0009912	0.0138403	0.0267514
Purchases payables payments	2.03	2.62	2.8	2.5	9.95
	2.1228248	2.6228943	2.7533472	2.4509337	9.95
	0.004059	3.194E-06	0.0007905	0.0009823	0.0058349
Wages and salaries	1.75	2.5	2.7	2.3	9.25
	1.9734803	2.4383691	2.5596444	2.2785062	9.25
	0.0253073	0.0015577	0.0076963	0.0002028	0.0347641
Cost & inventory records	1.86	2.58	2.81	2.59	9.84
	2.0993564	2.5938975	2.7229082	2.4238379	9.84
	0.02729	7.446E-05	0.0027856	0.011391	0.0415411
Bks of a/c & general	3.1	3.07	2.82	2.38	11.37
	2.4257807	2.9972169	3.1462872	2.8007151	11.37
	0.1873919	0.0017674	0.0338378	0.0631986	0.2861957
	10.74	13.27	13.93	12.4	50.34
	10.74	13.27	13.93	12.4	50.34
	0.2506829	0.0086882	0.0461013	0.0896148	0.3950871