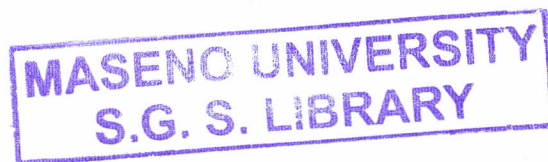


**MODERATING EFFECT OF BUSINESS RISKS ON THE RELATIONSHIP
BETWEEN AUDIT EFFORT AND AUDIT FEES AMONG AUDIT FIRMS IN
WESTERN KENYA**

BY



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ABSTRACT

Auditing is an important aspect of financial management oversight and is mandatory for public companies. Despite this critical role, audit firms have been criticized for failure to embrace business risk auditing approach to forestall the collapse of major clients during the period 2001-2012. Previous studies reveal that 88% of auditing client firms in western Kenya lack effective internal controls, exposing auditors to audit risk and possible litigation by client firms for professional negligence in failure to detect and report business risks. Studies further indicate that the audit firms are resource constrained, casting doubt on their ability to incorporate business risk audit, an approach that while mitigating exposure to litigation by clients would nonetheless call for greater audit effort and lead to charging commensurate audit fees. However, no study has been undertaken in western Kenya to determine the extent to which the audit firms perform business risk auditing. The purpose of this study was to examine the moderating effect of business risks on the relationship between audit effort and audit fees among audit firms in western Kenya. Specifically, the study sought to; establish the extent to which firms assess business risks, determine the relationship between audit effort and audit fees and to determine the moderating impact of business risks on the relationship between audit effort and audit fees. Cross-sectional survey design was used to collect data from 48 audit seniors or audit managers of each audit firm in western Kenya. Primary data was collected using questionnaires and secondary data from published accounts of client firms and analyzed by regression analysis. The study found that auditors assess business risks to a modest extent in the study area, mean = 3.367 (scale of 1- 5). Audit effort had a significant R^2 of .501 ($p < 0.01$) indicating that 50.1% of variance in audit fees is explained by audit effort. The R^2 after incorporating business risks was .708 ($p < 0.01$); $\Delta R^2 = .155$ ($p < 0.01$) implying business risks significantly moderates the relationship. Conclusions are that among the firms, business risk auditing is practiced to a moderate extent; audit effort predicts audit fees, incorporation of business risks significantly enhances its predictive power. The study recommends audit to focus on assessment of business risks so as to better utilize audit effort and accurately predict commensurate audit fees thus enhancing performance. Contrary to prior research, this study has shown that audit effort and business risks interacting together, affect audit fees.

CHAPTER ONE: INTRODUCTION

This chapter presents the background of the study by reviewing the importance of auditing and audit assurance, a review of various audit methodologies and the emergence of business risk auditing globally and in Kenyan context. This section culminates in the statement of the problem, objectives, hypotheses building, justification and conceptual framework.

1.1. Background of the Study

1.1.1. Importance of Auditing

Auditing remains an important function of oversight in financial management (Wamai, 2013). The auditing discipline draws its legitimacy from its potential to inspire confidence in the financial statements of an entity by its intended users (Gray & Manson, 2008; Serban & Vilsanoi, 2010). Auditing is based on the agency theory in which the auditor seeks to enhance reliability of financial statements which are prepared by management acting as agents of its owners (Wamai, 2013; Gray & Manson, 2008; Humphrey *et al.*, 2010). In agency theory, audit fee is the price the owners of the firm have to pay in order to counter the conflict of interest arising from separation of ownership and management (Schroeder *et al.*, 2011). The American Accounting Association (AAA)'s committee on basic Auditing concepts identified four conditions which drive the need for independent audit of accounting data: First, is the need to bridge the potential conflict of interest between the users and the preparers of the financial statements, second, the need to enhance the credibility of the financial information for decision making, the complexity of financial information necessitating a third person to examine its quality and finally the need to enhance reliability of financial information (Schroeder *et al.*, 2011). Early auditing approaches were geared towards verifying the honesty of the persons charged with fiscal rather than managerial responsibilities (Humphrey *et al.*, 2010). However, the external audit has since evolved in line with changes in the auditor's role, the auditing environment and the auditing technology (Lemon *et al.*, 2000).

According to Wamai (2005), increase in the complexity of businesses resulting from internal growth, mergers acquisition and other forms of combinations and increased

separation of ownership from management has increased the need of assurance services. The auditing profession is now moving from traditional audit scope to assurance (Eilifsen *et al.*, 2001). Eilifsen (*ibid*) argues that assurance is an engagement where a professional accountant evaluates, measures subject matter that is the responsibility of another party against identified suitable criteria, and expresses conclusion in order to provide some degree of confidence to those who rely on the financial information. According to Eilifsen *et al.*, (2001), current trends in auditing are creating new challenges for the profession, leading to development of new methods and ideas.

1.1.2. Trends in Auditing Profession and Audit Approaches

Audit procedures have evolved over the recent years (Eilifsen *et al.*, 2001). This evolution has been attributed to the unprecedented market pressures in the auditing profession, increased volume of transactions thereby increasing cost of training and carrying out audit, development in technology and litigations (Vilsanoui & Serban, 2010; Abdullah & Al-Araj, 2011; Robson *et al.*, 2007). Consequently, many audit firms around the globe reckon that audit process needs new skills, techniques, shifting costs and value addition to the audit. The pressure to reconsider audit methodologies was also precipitated by much criticisms addressed to the audit profession especially after the failure of Enron, World-com and other international companies that resulted in social economic losses which happened this the auditors not reporting any reservations on their financial statements (Abdullah & Al-Araj, 2011).

Traditional audits focus primarily on compliance with rules and procedures, and their recommendations may not give management enough information about the organizational risks (Mozammal, 2005). Business risk auditing involves high-level risk profiling of the audit portfolio over time; thus it facilitates strategic use of scarce audit resources, aligns audit efforts with management objectives, facilitates institutional development and reduces risk exposures by focusing attention on areas of weaknesses (Mozammal, 2005). The proliferation of forward-looking and other judgment-laden financial reporting requirements in the 1990s, coupled with more dynamic client business environments and significant audit fees pressure, prompted

the largest public accounting firms to develop new audit approaches to improve both audit effectiveness and efficiency (Bell *et al.*, 2007). There is increasing concern over the methodologies that are used to conduct audits and identify risks for their clients have been an important issue for decades. Over several decades, the popularity of different methodologies has changed as companies in terms of how audits are conducted and the information that is sought when conducting audits (Kitum, 2010). Despite business risk auditing being fronted as a positive move towards increasing effectiveness of auditing, there is little literature in developing countries regarding the adoption of the methodology. Consequently little is known concerning the status of business risk auditing in many developing countries including Kenya.

1.1.3. Business Risks and Business Risk Auditing Approach

The literature equivocal on the definition of business risks (Rene,` 2008). This arises from the fact that risks is perceived in different ways under different contexts (Rene,` 2008). Some authors (such as Bolau & Knechel, 2002; Marshall, 2001) conceived business risk as aggregate of all risks. In the context of economic capital frameworks, Rene' (2008) defines business risks as the risk of financial loss due to changes in the competitive environment or the extent to which the organization could timely adapt to these changes. In the context of auditing, business risk is defined as risk resulting from significant conditions, events, circumstances, actions or inactions that could adversely affect an entity's ability to achieve its objectives and execute its strategies, or from the setting of inappropriate objectives and strategies (Abdulah & Al-Araj, 2011). Studies indicate that the scope of business risk is wider than that of the audit risk. Bell *et al.*, (1997) argues that business risk audit goes beyond financial statements as it also involves understanding the internal as well as the external relationships and the entire realm of relationships and dealings of the concern. The current study adopts the wider scope of business risks as defined by ISA 315 which defines business risks as the risks resulting from significant conditions, events, circumstances, actions or inactions that could adversely affect an entity's ability to achieve its objectives and execute its strategies, or from the setting of inappropriate objectives and strategies and has three components; operational risk, financial risks and compliance risks. None of the previous studies have focused on the three specific

components of business risks and as a results, little is known as to the extent to which these components are applied among audit firms nor how business risks in general affects prediction of audit fees.

Many studies relating to the application of business risk auditing arrived at divergent findings. Many of these studies were based in developed countries (Humphrey *et al.*, 2010; Kitum, 2010; Niemi, 2014 and Kim & Fukukawa, 2013) found out that large audit firms have adopted business risk auditing methodology to a large extent. On the other hand, Abdulla & Al-Araj, (2011) found out that traditional audit approaches were still prevalent in Jordan. All these studies focused on big audit firms. However, Kitum (2010) found out that non-big audit firms in US, UK and Canada had adopted business risk auditing to a great extent. It is therefore evident that majority of empirical studies in the extant literature either concentrate on large audit firms or are based in developed countries such as United States of America and Europe (Abdullah & Al-Araj, 2011; Lovaas, 2009; Vilsanoiu & Serban, 2010). Despite calls by Salehi & Khatiri (2011) that auditors in developing countries need to welcome business risk auditing in developing countries including, there is no study conducted western Kenya to establish the extent of application of business risk auditing. Therefore, the status of business risk auditing among audit firms in western Kenya is not known.

1.1.4. Audit Efforts and Audit Fees

Studies indicate that audit fee, which is the main professional income in the auditing practice, has been declining over time with some studies indicating evidence of clients switching auditors in pursuit of lower audit fees (Schotz & Chan, 2007). In the last three decades, auditing profession has been dominated by few big audit firms in many nations: developing and developed (Bell *et al.*, 2008; Simunic & Stein, 1996; Ferguson *et al.*, 2003; Kitum, 2010). Today, the auditing profession is patronized by the so-called Big-4 audit firms: Price Water house Coopers (PwC), KPMG, Deloitte & Touche and Ernest & Young in many developing and developed nations (Prisloo, 2008; Abdulah & Al-Araj, 2011; Naser, 2013). Evidently, small firms are finding it difficult to penetrate the market and push the number of big audit firms downwards. Trends indicate the number of big audit firms has been shrinking over time with some of them being compelled to exit the profession (Cunningham, 2006). Since growth in

any profession depends on client and revenue base, the concerns of dwindling audit fees and fall of major audit firms has attracted many researchers to study the audit fees model in order to establish the key predictors of audit fees. In a competitive audit market, despite the potential of audit fees boosting growth of the firm, they also help to recover the auditor's costs plus a normal profit (Bell *et al.*, 2008). Audit fees has also been linked to the marginal cost of auditing plus expected losses from litigation, where higher effort increases the cost of performing audits but decreases the expected litigation and insurance cost. The predictors of audit fee have been widely studied in developing countries. However, these studies have focused mainly on large audit firms and using the perennial determinants of audit fee such as size of the client, size of the audit firm and clients complexity. None of the studies have incorporated the components of business risks: operating risk, financial risk and compliance in the study. Therefore, little is known about the predictor of audit fee with inclusion of business risks in developing countries.

Despite the numerous studies on the components of audit effort which constitute determinants of audit fees, there is no unanimity on these variables with scholars arriving at diverse findings. Early studies (Simunic, 1980; Jubb, *et al.*, 1996; Francis, 1984; Chan *et al.*, 1993; Francis & Simon, 1987; Chan *et al.*, 1993; Gerrard *et al.*, 1994; Firth, 1997; Craswell & Francis, 1999; Carey *et al.*, 2000) and some subsequent researchers (Ferguson *et al.*, 2003; Casterella *et al.*, 2004 among others) predicted that the principal determinants of audit fees are factors relating to audit effort indicated by client's size, complexity and risk of the client firm and the type of audit opinion issued, size of the audit firm. However, some researchers such as Naser (2013) found no significant influence of company's size, risk, and size of audit firm on the audit fees. Majority of these studies conducted survey of client firms thereby missing out the auditor-related variables. Prior studies classified audit firms into big or non-big. However, there is a continuum of firm sizes between big and non-big categories. Using a coarse scale in measuring predictor variables has statistical limitations (Field, 2000; Hair *et al.*, 1998). Further, different measures have been used to measure the size of audit firm. For instance Naser, (2008) used the size of audit office while others such as Younasa, (2014) used the assets value (Simunic, 1980), risk (Stice, 1991).

Other studies such as Hassan & Naser (2013) omitted audit duration which was found to be significant (Bell et al., 2008; Jubb et al., 1996, Kitum, 2010). Some of the studies relied on secondary data (Joshi & Al-Bastali 2000; Sungren & Svanstron, 2013). As a result mixed results were adduced with low predictive power of the audit effort variables. This has been exacerbated by the omission or misspecification of business risks in the audit fees literature. None of prior studies with exception of Jubb *et al.* (1996) captured the plural nature of risks. What is more, most of the audit fees studies are the concentration on developed countries and focus on big audit firms. As a result, little is known concerning the predictors of audit fees, and the role of business risks in particular in emerging economies. The association between various variables of audit effort and audit fees focusing on small and medium scale audit firms is not known in Kenya.

1.1.5. Relationship Between Business Risks, Audit Efforts and Audit Fees

Several studies (such as Simunic, & Stein 1996; Jubb *et al.*, 1996; Bell *et al.*, 2001) incorporated risk in the audit fees model. However, the definition of risk used differed from study to study. Simunic & Stein (1996) used the litigation risk while Jubb *et al.* (1996) incorporated the pluralism nature of risks. One of the more recent studies which utilized business risks in the model is Abdullah & Al-Araj (2011). However, in all these studies, risks, regardless of their operationalization, was treated as independent variable. With the exception of Bell *et al.* (2001), prior empirical research has not clearly distinguished between increased risk premium and increased auditor business risks fee determination. Since the International Auditing Standards Board (IASB) issued the ISA 315 which deals with business risk assessment in 2009, the role of business risks, its interaction with audit effort and audit fees has not been studied. It is not clear whether the hitherto tenuous relationship between audit effort and audit fees can be enhanced by business risks or whether there exist any kind of interaction at all.

According to Abdullah & Al-Araj, (2011), the massive failures of firms in the advent of 21st century involving giant international firms including Enron, World-com and other international companies that resulted to great distrust on the auditing profession. Another setback on the failure of firms boiling down to the role of auditors is the

global economic crisis of 2008 triggered by Lehmann Brothers Bank and the related insurance company, the American International Group (AIG). The collapse of Enron in 2001 and the subsequent discovery that its auditor, Arthur Andersen, had shredded audit documents after notification of a Securities and Exchange Commission (SEC) investigation of Enron sent shock waves through the financial markets. These revelations therefore brought the accounting profession under the scrutiny of Congress. The scrutiny increased after apparent audit failures were reported at WorldCom, Adelphia, Xerox, and Global Crossing (Tackett *et al.*, 2004). Similar encounters were reported in Kenya around the same time with failure of several local and multinational firms such as CMC Motors, Capital Markets Authority (CMA), Kenya Planters Co-operative Union (KPCU), East African Packaging, Bauman & Company, Regent Undervalued Assets Ltd., Pearl Dry cleaners, Theta group, Hutchins Biemer, Pan Paper Mills and a host of many others (Maina & Sakwa, 2010). All this happened despite the auditors not indicating any reservations on their financial statements. Failure by auditors to focus on business risks in their auditing but was blamed for the business failures (Abdullah & Al-Araj, 2011). Business risk auditing involves extra procedures and may therefore require additional fees. Only a limited number of studies have considered the role of business risk in the audit fee model but focusing on operational and financial business risk and not the total business risks (Stanley, 2007; Groux, 2008 and Bentley *et al.*, (2011). None of the previous studies incorporated the three components of business risks risk, financial risk and compliance in the model. Therefore the role of business risks in the audit fee prediction is not known.

1.1.6. Auditing Profession in Kenya

The auditing profession in Kenya is regulated by the Accountants Act Cap 531 which established a three-pronged structure for regulating the Accounting profession. On July 1, 1977, the Accountants Act, Chapter 531, Laws of Kenya, established three bodies: Institute of Certified Public Accountants of Kenya (ICPAK); Registration of Accountants Board (RAB) and Kenya Accountants and Secretaries National Examinations Board (KASNEB) which administers examinations for persons intending to qualify for registration as accountants and company secretaries. The RAB

is empowered to register those who have attained the specified qualifications after passing the relevant examinations administered by KASNEB. Persons holding designated foreign accountancy qualifications are allowed to be registered with the RAB after passing the examinations in company law and taxation administered by KASNEB. Upon completion of examination requirements, when a person obtains Certified Public Accountants (CPA) registration with the RAB, is allowed to be a member of the ICPAK (World Bank, 2001).

The Auditing profession in Kenya is dominated by the four largest international accounting firms; Price Water house Coopers, Earnest & Young, Deloitte & Touche and KPMG. These four firms are the auditors of all the publicly listed companies in Kenya; about 54 companies are listed on the Nairobi Stock Exchange. The partners of these firms, both local and expatriate, actively participate in various committees of the professional body. Of the two other major firms in the country, one is the associate of a Big 5 international accounting firm and the other is a Kenya-based regional accounting firm (World Bank, 2001). There are more than 100 local firms with clientele concentrated mainly among the small and medium enterprises. Professionals working in small accounting firms find it difficult to keep up to date with new developments in accounting and auditing. According to a report on observance of Standards and codes in Kenya by World Bank, because of the downturn in the economy during the past several years, small audit firms are constantly struggling to earn enough to stay afloat, and they cannot afford to spend money and time on training programs (World Bank, 2001). The small and medium-size practitioners in Kenya are also handicapped by their lack of access to appropriate literature on the application of established accounting and auditing standards. It is against this background that a study on emerging trends in auditing profession focusing on small audit firms comes in handy. This study was based on the Western Region, Kenya as defined by ICPAK (2011) where all the audit firms in the study area will participate in the study. All the audit firms in western Kenya region are small and medium sized audit firms (ICPAK, 2011). A number of scholars (such as Abdullah & Al-Araj, 2011; Lovaas, 2009; Vilsanoiu & Serban, 2010) have called for more empirical studies among small and mid-sized audit firms in developing countries.

The focus on Kenya in this study is informed by the fact that application of business risk audit approach is not well documented and researched in Kenya. It was not until 2005 when the business risk auditing was piloted in the public sector. According to (Mozamal, 2005), Kenya was chosen for the pilot because of its unique operating environment for public financial management. Despite the results of this pilot indicating a bright future for the new audit approach, there is no literature supporting the development of business risk auditing in the audit profession in Kenya in the post pilot period. Therefore, extent of application of business risk auditing in among private firms in western Kenya is not known.

Studies in western Kenya indicate potential business risks among clients. For instance, Nyakundi *et al.*, (2014) established that majority (57%) of small and medium firms western Kenya are owned by sole proprietors and that 91% of the firms does not have financial procedure manuals. The majority (88%) of firms in the study area especially do not have an internal audit department and the few that have, the departments are ill-equipped with inadequately trained personnel as well as inadequate financial resources. Lack of controls make it difficult to identify business risks inherent in the firm (Wamai, 2005), thus exposing the auditor to potential audit risks. Even among large firms in the study area, the auditor's reports failed to predict failure of firms such as Webuye Pan Paper Mills (Maina & Sakwa, 2010). Omweng'a *et al.*, (2010) found out that there is deteriorating trust on audit profession among corporative societies in Kisii, which is part of the study area. Western Kenya economy depends on agriculture to a large extent and most firms in this study area are agriculture based (Dupas & Robinson, 2013; Mireri 2009 and Odek, 2003). However, most of these firms are experiencing unsatisfactory performance coupled with financial difficulties which limit their capacity to meet the firm's objectives (Mireri, 2009). Therefore there are inherent risks in the operating environment by firms in western Kenya thus providing an ideal setting for the study.

1.2. Statement of the Problem

Auditing is an important aspect of financial management oversight globally and is mandatory for public companies. The performance of audit firms has deteriorated following the fall of major clients in during the period 2001-2012. All the 48 audit firms in western Kenya constitute of small and mid-sized and are facing poor performance. Previous studies attributed failure of clients to failure of audit firms to focus on business risk. Despite studies indicating that majority (88%) of clients in the area are vulnerable to risks due to lack of effective internal controls, there is no study conducted in the study area to determine the extent to which the audit firms perform business risk auditing. Previous studies have focused on how audit effort variables impact on audit fees. No known study has been carried on the role of business risks. The only study in Kenya focusing on business risk auditing focused on public sector. There is also a concern that auditors in the study area are not able to accurately cost the audit services leading low audit fee revenues. Most of the previous studies focused on developed countries and targeted the large international firms. None of the studies incorporated the components of business risks in the prediction of audit fees. As a result, little is known concerning the predictors of audit fees and the role of business risks in particular in emerging economies including Kenya. The purpose of this study therefore, was to examine the moderating effect of business risks on the relationship between audit effort and audit fees among audit firms in western, Kenya. Specifically, the study sought to investigate the extent to which audit firms in the study area conduct business risk assessment, to determine the association between audit effort and audit fees and to analyze the moderating effect of business risks on the relationship between audit effort and audit fees.



1.3. Objectives

The overall objective of the study was to establish the moderating effect of business risk on the relationship between audit effort on audit fees charged by audit firms in western Kenya.

1.3.1. Specific Objectives

Specifically, the study sought to;

1. Establish the extent of application of business risk auditing practices among audit firms in western Kenya.
2. Determine the relationship between audit effort and audit fees charged by audit firms in western Kenya.
3. Analyze the moderating influence of business risks on the relationship between audit effort and audit fees charged by audit firms in western Kenya

1.4. Hypotheses

The following hypotheses were tested during the study.

Hypothesis 1:

H1₀: Audit effort has no significant positive influence on audit fees charged by audit firms in western, Kenya.

H1_{a₀}: There is no significant positive relationship between audit duration and audit fees

H1_{b₀}: There is no significant positive relationship between size of the client and audit fees

H1_{c₀}: There is no significant positive relationship between size of the audit firm and audit fees

H1_{d₀}: There is no significant positive relationship between the client's complexity and audit fees

Hypothesis 2: The positive relationship between audit effort and audit fees charged by audit firms is not significantly moderated by business risks among audit firms in western Kenya.

H2_{a₀}: The relationship between audit duration and audit fees is not significantly positively moderated by business risk

- H2b₀:** The relationship between size of the client and audit fees is not significantly positively moderated by business risk
- H2c₀:** The relationship between the size of the audit firm and audit fees is significantly positively moderated by business risk
- H2d₀:** The relationship between the complexity of the client and audit fees is not significantly positively moderated by business risk

1.5. Scope of the Study

This study focused on the auditing practices among audit firms in western Kenya. The firms in the industry comprise a total of 48 firms which are spread in major towns in Western Region, Kenya region including Kisumu, Kisii, Nyamira, Migori, Siaya, Ugunja, Busia, Kakamega, Bungoma, Webuye, and Mumias. This is the region which has been designated as western, Kenya by the institute of public accounts of Kenya (ICPAK). Studies indicate that most firms in this study area are faced with potential business risks. The study also focuses on three audits conducted by the targeted audit firms during period 2012/2013.

1.6. Significance of the Study

This study was aimed at providing empirical results that would be beneficial in the adoption of risk based auditing procedures among audit firms in western Kenya and other regions especially in emerging economies. It is hoped that the study will further contribute in suggesting improvement on the framework for implementing an effective and efficient audit approach. A unique feature of this research lies in its focus on the auditing profession among small audit firms which is a departure from many previous studies which concentrated on large audit firms and conducted mainly in developed economies. The auditing profession in Kenya is likely to receive much needed feedback on how to respond to ever increasing turbulence and risks engulfing the business environment in which their clients operate so as to cushion themselves against ultimate audit risk which may impair their profession. The study advances the agency theory by establishing the moderating role business risk on the relationship between audit effort and audit fees, which was hitherto not known.

1.7. Conceptual Framework

The conceptual framework of this study is modified from Jubb *et al.* (1996). As with many other studies on audit fees modeling, the determinants of audit fees include, size of the client firm, size of the audit firm and complexity of the client. However, the contribution of assessed risks based on the three dimensions of business risks in this model is not clear. Previous studies (Jubb *et al.*, 1996; Simunic, 1980) among others have acknowledged the relevance of “risk” in determination of audit fees, although not clear in the distinction between audit risk and business risk. However, Jubb *et al.* (1996), found that risks are multi-dimensional. The modification of Jubb *et al.*'s model in this study lies in the operationalization of business risk. In this study business risk components are drawn from the ISA 315 which views risks from three dimensions: (1) Financial risks, associated with financial activities of the business, (2) operational risks associated with company operating activities and (3) compliance risks associated with compliance with business laws and regulations. This study proposes that the overall fit of the audit fees model can be enhanced by business risks. Under this model, the dependent variable is the audit fees charged to a client which is expected to be a function of audit effort measured by audit hours, size of client, size of audit firm and complexity of client. It is expected that audit fees which is the dependent variable is predicted by the audit effort applied by the auditor as a result of client and audit firm characteristics. This study proposed that the relationship between the audit fees and audit effort can be moderated by business risks measured by the level of financial risks, operational risks and compliance risks as assessed for each client. The interplay of variables is summarized in Figure 1.1.

Independent variables

Dependent variable

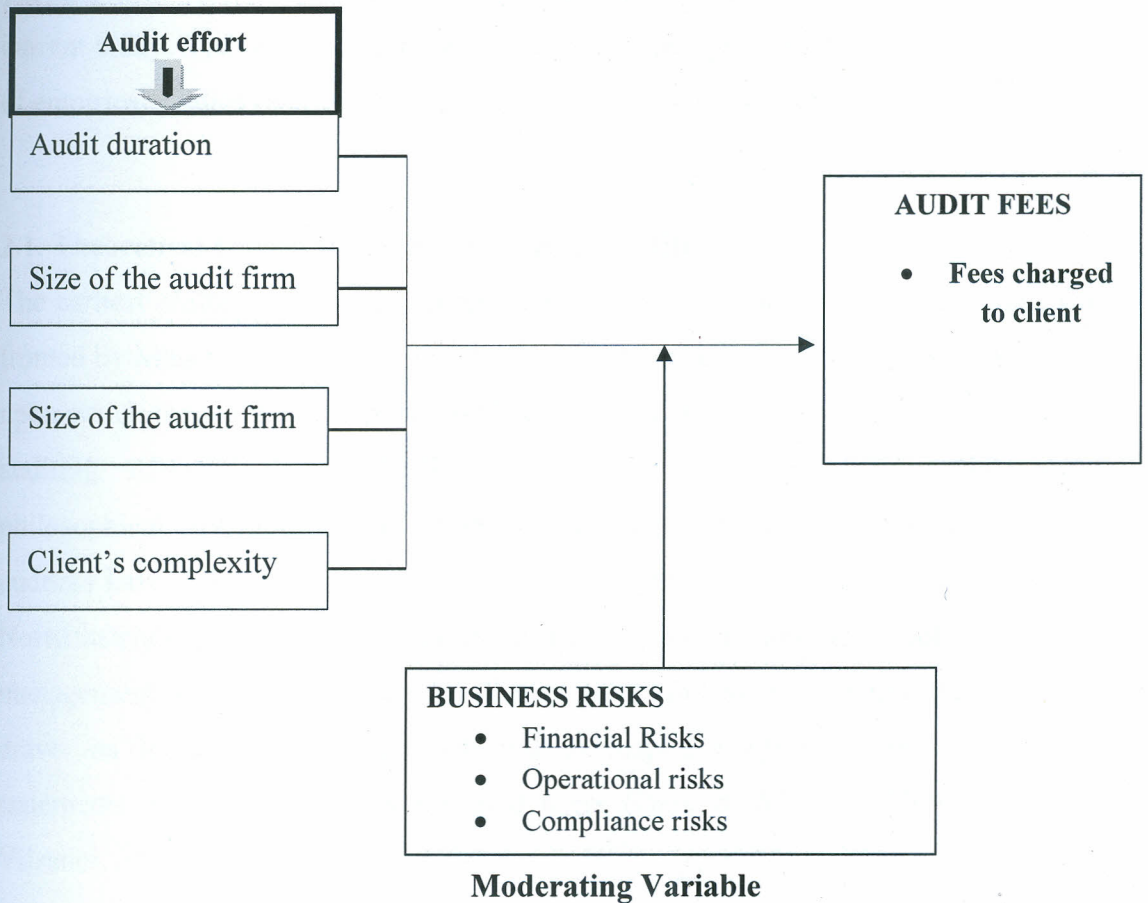


Fig 1.1. Conceptual framework on the moderating effect of business risks on the audit effort audit fees relationship

Source: Adapted from Jubb *et al.*, (1996)

CHAPTER TWO: LITERATURE REVIEW

1.0. Introduction

This chapter reviews both theoretical and empirical literature related to business risk auditing with view of establishing the knowledgebase so as to build a case for the current study. The review begins with theoretical perspectives followed by a review of empirical studies relating to the pertinent variables of the study.

2.1. Theoretical Literature on Business Risk Auditing

The earliest philosophical and theoretical need for justification of external audit was fronted by Mautz & Sharaf (1961). These scholars developed a conceptual foundation upon which the audit structure is based which has come to be known as postulates of auditing. Although Mautz & Sharaf's (1961) pioneering work provide sound philosophical and theoretical framework for external audit, practicing external auditors have failed to build upon it leading to audit failure (Flint, 1988; Lee, 1993). Notwithstanding this concern, auditing remains to be an important tool of financial management oversight. The auditing theory points out to the fact that the discipline draws its legitimacy from its potential to inspire confidence on the financial statements of an entity by its intended users (Gray & Manson, 2008; Serban & Vilsanoi, 2010).

The literature is however far from unanimous on the definition of business risk, especially because business risk is used in various contexts (Rene', 2008). Business risk is defined as aggregate of all risks (Bolau & Knechel, 2002; Marshall, 2001). In the context of economic capital frameworks, Rene' (2008) defines it as the risk of financial loss due to changes in the competitive environment or the extent to which the organization could timely adapt to these changes. In the context of auditing, audit risk is defined as risk resulting from significant conditions, events, circumstances, actions or inactions that could adversely affect an entity's ability to achieve its objectives and execute its strategies, or from the setting of inappropriate objectives and strategies (Abdulah & Al-Araj, 2011). Studies indicate that the scope of business risk is wider than that of the audit risk. Bell *et al.* (1997) argues that an auditor attempting to conduct a business risk audit of a client should not rely only on the

reported financial statements but should endeavor to understand the internal as well as the external relationships and the entire realm of relationships and dealings of the concern.

There is now substantial and growing literature concerned with the multivariate modeling of audit fees. Many of these studies contain common variables, including measures for size, complexity and risk. Several constructs and measures have been used to operationalize each of these variables. The study by Jubb *et al.*, (1996) captures the multi-dimensional measures of risks by identifying several components of risk. According to Jubb *et al.* (1996), understanding the operation of the audit market is of importance to both the consumers and providers of audit services, and those attempting to regulate that market. Properly specified models of the determinants of audit fees is one of the most powerful means by which this market can be analysed (Simunic, 1980). In the conceptual framework of audit fees model, Jubb, *et al.*, argues that the audit fees literature should recognize the theoretical auditing literature which considers "risk", in the audit context (not necessarily identical to the notion of risk often used in the finance literature). In the audit context, risk is composed of two distinct but related concepts; "audit risk" and "business risk". Their work presents the theoretical justification for a plural approach to dealing with "risk" in audit fees models. Business risk is related to the business related to the business environment while audit risk is the probability that an auditor will suffer loss or injury in his professional practice (*ibid*). Such loss or injury may arise through law suits against the auditor, sanctions imposed by external regulators, diminution of the auditor's professional reputation, possible loss of clients, time and costs incurred in defending the auditor's position and non-realization of audit fees (*ibid*). Other variables in the audit fees model perceived in this conceptual framework includes size of the client, measured by the book value of its assets, size of the audit firm measured by a dummy variable, big-4 or non big-4, complexity of the client measured by the number of subsidiaries and branches of the client.

In bid to reduce audit failure, auditors have over time re-engineered their audit undertakings so as to minimize the expectancy gap between the agency theory

postulates and the auditing profession (Wamai 2013). According to Wamai (2013), business risk auditing is an approach which attempts to address the factors that contribute to misstatement of financial statements and how audit can help the business in pursuing its objectives. The approach assumes that business risks contribute to material misstatement and thus start by identifying business risks back to financial statements. According to ISA 315 business risks refers to the risk resulting from significant conditions, events, circumstances, actions or inactions that could adversely affect an entity's ability to achieve its objectives and execute its strategies, or from the setting of inappropriate objectives and strategies IASB (2009). However, none of the previous studies have investigated business risks from this perspective.

2.2.0. Empirical Literature

2.2.1. Application of Business Risk Methodology

A study in United Kingdom (UK) which sought to explore the adoption of the business risk auditing was conducted by Humphrey *et al.* (2010). The main objectives of this study were to; establish the status and extent to which the methodology had been adopted, examine business risk audit as an institutional event through which to analyse and comment upon the audit industry and the accountancy profession in the UK. This study examined business risk auditing technique as a social and institutional practice that auditors have to establish and negotiate with their environment. The study argues that in order to embed business risk auditing technique, audit firms have to establish legitimacy and enroll allies in the institutional environment. The study adopted a cross sectional survey research design and data was collected through documentary analysis and material derived from a series of interviews held with audit partners from a number of large, mid-tier and small audit firms with offices in Manchester and/or London, England and a limited number of former-audit staff now working in business consulting or private equity. The major findings of this study were; that in the UK, the acceptance of business risk auditing has seen an adjustment of practices associated with the professional institutes and business risk auditing has been almost exclusively associated with the largest of the audit firms and that the professional associations in the UK have facilitated a wider acceptance of the business risk auditing methodology. A similar study by Kitum (2010) using cross-sectional

design revealed conflicting results with finding that non-big audit firms had adopted business risk auditing to a great extent in UK and US. There was however some methodological limitation in this study because it relied primarily on views of auditors based on interviews. Secondly, the study focused two major cities: London and Manchester. By focusing in major cities, there is a potential limitation of locking out small audit firms from the study. There are limited studies focusing on a wider geographical coverage and including smaller towns in order to bring on board all sizes of audit firms and use questionnaires to supplement the interviews in data collection. Therefore, little is known as to whether, the same findings can be elicited in different geographical location such as western Kenya.

Kitum (2010) conducted a study on business risk auditing in the United States of America (US) and United Kingdom (UK). The major objective of this study was to investigate the application of business risk auditing methodology and to explore the motives behind adoption of business risk auditing among non-big-4 audit firms in US, the UK and Canada. The study employed cross-sectional research design in which data was collected using structured interviews and questionnaire survey. The findings of the study revealed that the non-big-audit firms in the developed countries studied had adopted business risk auditing to a great extent. The study also revealed that the main motivation behind the use of this methodology was primarily to follow the standards in each country and to follow the trend in the industry. This study concludes that adoption of a new methodology in auditing is associated with the trends in the industry in the domicile nations. The findings of this study contradict that of Humphrey *et al.*, (2010) in UK and US and that of Abdullah & Al-Araj (2011) based in Jordan. As indicated by Kitum (2010) the conflicting results may be explained by the trends in domicile countries of the auditors and therefore geographical location and circumstances in different nations may be an important factor. It is not clear whether business risk auditing is a trend in emerging economies like Kenya. From the extant literature (such as Niemi 2014; Kitum 2010), the need to shift towards business risk auditing is well pronounced. Despite this recommendation, there is no study conducted in western Kenya on business risk audit, hence little is known about the extent of application of this audit methodology in the study area.

Abdullah & Al-Araj (2011) conducted a study which aimed at surveying the audit approaches currently being used by auditors in Jordan, define their weaknesses, and identified the benefits accruing from the adoption of the business risk audit approach as well as the challenges that face this adoption along with steps, procedures and prerequisites of adoption. Data was collected from 137 auditors and analyzed by descriptive statistics. The study found out that traditional audit approaches were commonly used in Jordan despite their suffering from certain weaknesses; the business risk audit approach is still not well-known or practiced in Jordan. Similar studies (such as Kim & Fukukawa 2013; Kitum, 2010 and Humphrey 2010) make a strong argument for link of application of application of business risk auditing with auditor size especially in terms of whether it is big-4 of big-3 or otherwise. Abdullah & Al-Araj's (2011) study does not report results among different groups of auditors. Although the findings of the study suggest geographical disparity in application business risk auditing, subsequent studies have not replicated this study in other developing countries with a view of establishing the status of business risk auditing in order to enable researchers form reasonable conclusions.

Niemi *et al.* (2014) conducted a study on the determinants of auditor effort in a changing auditing environment in Finland. In this study auditor effort were operationalized to be a function of audit hours and audit fees. This study investigated changes in the determinants and levels of auditor effort and fees in using a longitudinal research design where secondary data was collected concerning audits ranging from 81 to 140 in Finland between 1996 and 2010. This was a period of increased audit regulation and compliance inspections, with greater emphasis on the client's business risk and internal controls and responsibility to detect fraud. Using data on actual audit hours and fees for 140 clients of large audit firms, we examine how changes in the audit environment over the period have changed the conduct of audits. Results indicate that audit methodologies have been tilting towards business risk auditing over the period of study and that the variance of senior (junior) auditors' audit hours increased/(decreased) between 1996 and 2010. These results were attributed to increased standardization of the work of junior auditors and senior

auditors becoming more sensitive to idiosyncratic client risks. This study concluded that there were systematic changes in the audit process over time. However, in this study the methodology adopted infers the application of business risks from the changes in audit effort applied over time, a conclusion which may not always follow.

Kim & Fukukawa (2013) conducted a study on the status of business risks in Japan. The prime objective of the study was to examine whether and how the Big 3 audit firms in Japan respond to clients' business risk and to investigate whether their responses vary. This study hypothesized two possible approaches to response to clients' higher business risk are either; by increasing audit effort (such as increasing total audit hours or assigning more experienced staff to the audit team) or charging a risk premium to cover possible future losses without increasing audit effort. Although the auditing standards and audit fees determination guidelines issued by the Japanese audit profession apparently assume that an auditor chooses the first approach to respond to clients' high business risk, the approach adopted by each Big 3 firm was, according to these researchers, an empirical issue. Data was collected from audits conducted by the Big 3 Japanese firms and analyzed by using structural equation modeling (SEM) and ordinary least squares regression (OLS). The study concluded that Japanese large audit firms perform business risk auditing and respond to it in different ways. While this study makes a crucial contribution towards illuminating the status of business risk auditing in Japan, it focused only on big-audit firms in the analysis. Previous studies (Humphrey *et al.*, 2010 and Kitum, 2010) that adoption of business risk auditing may be synonymous with large audit firms. The status of application of business risk auditing across different sizes of audit firms is not clear. The operationalization of business risks in this study also fails to capture all the pertinent components.

A summary of review of studies relating to the application of business risk auditing reveals divergent findings. Many studies based in developed countries (Humphrey *et al.*, 2010; Kitum, 2010; Niemi, 2014 and Kim & Fukukawa, 2013) found out that large audit firms have adopted business risk auditing methodology to a large extent. Studies in developing countries such as Abdulla & Al-Araj, (2011) found out that traditional audit approaches were still prevalent in Jordan. However, Kitum (2010)

asserted that non-big audit firms in US, UK and Canada had adopted business risk auditing to a great extent. Despite suggestions by Salehi & Khatiri (2011) that auditors in developing countries need to welcome business risk auditing, no study has since responded to that call. There is very little evidence in the extant literature on the adoption of business risk auditing in developing countries. Furthermore most of the relevant studies focused on big audit firms. Despite studies indicating that majority (88%) of clients in the in western Kenya are vulnerable to risks due to lack of effective internal controls (Nyakundi *et al.*, (2014; Maina & Sakwa, 2010;. Omweng'a *et al.*, 2010), there is no study conducted in the study area to determine the extent to which the audit firms perform business risk auditing. Therefore, the extent of application of business risk auditing in developing countries including Kenya is not known.

2.2.2. Relationship Between Audit Effort and Audit Fees

Joshi & Al-Bastali (2000) conducted a study on determinants of audit fees in Bahrain. This study examined the audit fees structure in Bahrain for 38 companies listed on the Bahrain Stock Exchange (BSE). The study employed multiple regression analysis on a number of variables representing audit effort; size, risk, complexity and timing of audit, a model was developed of the relationship between audit effort and audit fees. The study found that audit fees are significantly associated with the size, risk and complexity of the client operations. A similar study conducted on the firms listed in the Abu Dhabi Stock Exchange (ADX) by Hassan and Nasser (2013) found client's size and complexity as the only significant predictors of audit fees. However, the focus of the Joshi and Al-Bastali's (2000) study was large audit firms listed in the Bahrain Stock Exchange. Both these studies focused on large audit firms. Therefore the little is known on application of business risk auditing by small clients. An integrated approach which seeks to collect data from audit engagements rather than from secondary data from the audit client's can be useful in complementing this study. The study also presents some missing links. Risk as a variable was not operationalized to encompass all components of business risks.

Naser (2008) conducted a study in Jordan on the structure of audit fees investigated the determinants of audit fees using cross sectional survey design. Using regression

method, the study found that corporate size, size of the audit firm, industry type, degree of corporate complexity and risk are the main determinants of audit fees. However, variables such as corporate profitability, corporate accounting year-end (YEND) and the audit report date appeared to be insignificant determinants of audit fees. This study yielded a smaller prediction of audit fees at $R^2 = .650$ compared, for instance to $R^2 = .680$ in (Bell et al., 2007) Naser's (2008) study omitted important variables such as audit duration. Despite, risk was not specified to capture all the components of business risk. It would be useful to incorporate this variable so as to explain the audit fees model as far as possible.

Hassan & Naser (2013) conducted a study which sought to examine factors influencing audit fees paid by non-financial companies listed on Abu Dhabi Stock Exchange (ADX). The study surveyed Emirati non-financial companies listed on ADX with a population of 65. Data were collected from the 2011 annual and corporate governance reports published by the Emirati non-financial companies listed on ADX. Backward regression analysis was employed to assess the association between audit fees and certain company's attributes. The study found a direct relationship between audit fees and each of corporate size, business complexity and audit report lag variables. The findings also revealed that audit fees are not significantly influenced by company's size, risk, and size of audit firm. The findings of this study contradicts that of Naser *et al.*, (2007) who found positive relationship between audit firm and audit fees to be significant. Furthermore, audit duration which has been found to have significant contribution to audit fees model (Bell et al., 2008; Jubb et al., 1996, Kitum, 2010) was omitted in the model. The risk as a variable did not capture all the components of business risks.

Prior studies (Simunic, 1980; Low *et al.*, 1990; Chan *et al.*, 1993; Carson *et al.*, 2004; Jubb *et al.*, 1996) among other studies conclude that client size is the most important factor that influences audit fees, it is usually measured by total assets, revenues, sales and number of employees of the client Firm. The size of client has a direct impact on the auditors' work, and the time spent in the auditing process. Palmrose, (1986) and Taylor, *et al.*, (2004) found that larger clients require more audit services than smaller clients, more time needed and that that these large clients pay

higher fees per dollar of size relative to smaller clients in the industry. It is therefore necessary for any audit fees and business risk studies to control for this variable in their model. Despite these findings, little evidence has been adduced from developing economies.

Another important variable in the audit fees model is complexity of the client. Studies (Simunic 1980, Jubb *et al.*, 1996) operationalize the complexity of the client by the number of branches and subsidiaries of the firm locally and internationally (subsidiaries in foreign countries). Naser *et al.*, (2007), investigated the determinants of audit fees in Jordan and found that the more complex the client firm is, the greater the number and the more diversified the subsidiaries and operations are hence more audit work; therefore, audit firms charge higher audit fees. This finding was consistent with the results of an earlier study by Sandra & Patrick (1996) whose results indicated that auditors of highly complex firms often charge high audit fees in examining and evaluating the firm's financial statements. According to Sandra & Patrick (1996), foreign subsidiaries have to abide by a variety of legislative and proficient requirements for disclosure, which necessitates further audit testing, requiring more time and additional manpower to complete the audit process. This implies that the companies have to bear additional charges for audit work, thus, client complexity has a positive correlation with the audit fees. A series of other previous works are in agreement (Simunic, 1980; Low *et al.*, 1990; Chan *et al.*, 1993; Firth, 1997; Butterworth & Houghton, 1995; Carson *et al.*, 2004). These findings justify the inclusion of this variable in the model.

Younasa *et al.*, (2014) investigated the firm-level factors effecting audit fees in China and Pakistan using a panel data of 160 firms of each country for the period 2005 to 2011. Results indicated that complexity of business transaction affects positively and significantly the audit pricing in both countries. Then, for comparative review, the researchers segregated the data of each country and run separate model. The results showed that, auditors in Pakistan mainly consider complexity of business transactions and client risk while pricing their engagement while in China the auditors consider the Big 4 audit firm effect as a reputational tool while pricing their audit activity. The auditors in China ignore the client risk and complexity of business transactions which

may be problematic for their auditing firm in future. The study concludes that audit pricing in Pakistan is more rational in comparison to China. The comparative analyses indicate that the predictors of audit fees vary across countries. No similar study in a different study area and using a different research design has been conducted to further evidence.

Some studies Naser *et al.*, (2007), Firth, (1985), Simon *et al.*, (1986) Chung & Lindsay, (1988), Low *et al.*, (1990), Dugar, Ramanan & Simon, (1995), and Waresul & Moizer, (1996) included the profitability of the client as a determinant of audit fees. Despite the agreement of the contribution of the variable in the audit fees determination, there are divergent views as to the operationalization of profitability. This is because there are many profitability ratios that can be used as a measure of the client profitability such as return on assets (ROA), return on equity (ROE), return on capital employed (ROCE), return on investment (ROI). Naser *et al.*, (2007) postulates that client's firm profitability is an important indicator of management performance and efficiency in allocating available resources and measures profitability by the profits attributable to the shareholders as per the financial statements of the Client. Companies reporting high levels of profits were subject to precise audit testing of their revenues and expenses and this will result in higher audit fees (Joshi & Al Bastaki, 2000). Studies focusing on small and medium scale firms will find this variable more relevant than size of the client. However, there is little research conducted on this category of firms. Therefore, there is little evidence as to the predictors of audit fees among a cross-section of small and medium audit firms.

A study by Nasser (2007) on determinants of audit fees indicated that besides the client characteristics, there are several audit firm related attributes that influence the audit fees pricing which need to be identified and controlled. The size of the audit firm has also been established by several scholars as an important variable affecting audit fees. There is no convergence on the one single accepted measure of auditor size. However, according to Nasser (2007) the auditor size may be measured based on the firm's assets, market share and the number of employees. Zang, *et al.*, (2010) investigated the relationship between office size, audit quality and audit pricing, and

determined that office size is positively associated with audit quality, and that large offices charge higher audit fees and provide higher quality audits. Similarly Francis & Stokes (1984) and Palmrose (1986) found out the strong relationship between auditor fees and size of the audit firm. The size of the audit firm creates the perception that some audit firms can provide higher quality auditing than others, which is one of the most important factors affecting the audit service pricing (e.g., Larcker & Richardson, 2004; Gonthier & Schatt, 2007). In Kenyan context, because of the downturn in the economy during the past several years, small audit firms are constantly struggling to earn enough to remain in business and can barely afford to spend money and time on training programs. The small and medium-size practitioners in Kenya are also handicapped by their lack of access to bigger audit markets (World Bank, 2001). However, studies linking auditor's size and audit fees have received little attention in Kenya. An examination of this variable in Kenyan setting would enrich the existing literature a great deal.

Simon *et al.*, (1992) found that the Big Eight or Big Five, now the Big Four (Ernst & Young, Deloitte and Touche, Price Water house Coopers (known as PwC) and KPMG) audit firms receive premium fees in many countries compared to non-Big Four. These findings are consistent to that of (Palmrose, 1986; Francis & Simon, 1987; Butterworth & Houghton, 1995). The Big Four are the biggest audit firms in the world and due to their financial strength and expertise that they have they are able to provide higher quality audit. A number of important studies comprising the United States of America market supported the proposition that big international auditing companies (Big-Four) made audits of higher quality than the other (Kitum, 2010; Humphrey *et al.* 2010). These studies have however been carried out in settings dominated by big audit firms. Therefore little is known concerning the role of business risks in predicting audit fee.

A more comprehensive study spanning across several nations was carried by Fafatas & Sun (2010) on the effect of size of the audit firm and audit fees. The objective of the study was to examine the relationship between Big Four audit firm country-level market shares and audit fees across a sample of nine emerging economies: Argentina,

Business risk auditing in Chile, Hong Kong, Israel, Korea, Mexico, South Africa, and Taiwan. The findings indicated that, after controlling for other factors related to audit pricing, Big Four auditors with dominant country-level market shares earn a fee premium of approximately 27% over competitor firms. These results suggest that individual Big Four firm reputations, are not homogeneous across countries. Rather, it appears the largest audit firms are associated with quality-differentiated services and thus earn higher fees. Although accounting research tends to classify large international accounting firms into a pool of the "Big Four," these findings indicate that it is important to consider each firm's market share in specific geographic locations when examining questions related to auditor reputation and pricing.

Sungren & Svanstron (2013) conducted a study on audit office size, audit quality and audit pricing focusing on small- and medium-sized enterprises. The study used Swedish data to investigate how audit quality and audit pricing vary with audit firm and office size. The study adopted the general audit fees model proposed by Simunic *et al.* (1980). The study found no significant differences in the likelihood of sanctions between Big 4 audit firms and the fifth and sixth largest audit firms in Sweden (Grant Thornton and BDO) in which the study referred to these collectively as 'Top 6'. Furthermore, the study found a strong negative association between the likelihood of sanctions and audit office size for non-Top 6 auditors. Audit fees follow a similar pattern and indicate that larger audit firms and offices put in more effort or have greater expertise. These results suggest that audit quality is differentiated in the private segment market. However, contrary to prior studies, the results of this study suggest that the important dimensions are Top 6 versus non-Top 6 and the office size of non-Top 6 audit firms. This study concludes that size of the audit firm is an important predictor of audit fees in Sweden. However, Like many prior studies, the methodology adopted in this study simply classify audit firms into big-6 and non big-6. However, as mentioned previously, among the non big firms are different sized firms. Using a coarse scale in measuring predictor variables has yields low predictive power (Field, 2000; Hair *et al.*, 1998). None of the previous studies measured size of the audit firm on a broader scale. It is therefore not clear how the results will be affected by use of more precise scale to measure size of audit firm.

Based on prior studies, the predictors of audit fees can be generally classified into two major categories: client attributes and auditor attributes. Many studies (Simon et al., 1992; Fastafas & Sun, 2010; Joshi & Bastaki, 2000; and Naser, 2008) found a positive association between the client size and audit fees. However, these studies classified audit firms into big or non-big. However, there is a continuum of firm sizes between big and non-big categories. Using a coarse scale in measuring predictor variables has statistical limitations (Field, 2000; Hair *et al.*, 1998). Further, different measures have been used to measure the size of audit firm. For instance Naser, (2008) used the size of audit office while others such as Younasa, (2014) used the assets value (Simunic, 1980), risk (Stice, 1991). Other studies such as Hassan & Naser (2013) omitted audit duration which was found to be significant (Bell et al., 2008; Jubb *et al.*, 1996, Kitum, 2010). Some of the studies relied on secondary data (Joshi & Al-Bastali 2000; Sungren & Svanstron, 2013). As a result mixed results were adduced with low predictive power of the audit effort variables. There is concern most of the audit firms in western Kenya find it difficult to keep up to date with new developments in accounting and auditing as they are constantly struggling to earn enough to stay afloat (World Bank, 2001). However, there is no study conducted in the study area to reveal the predictors of audit fees. Therefore, little is known concerning the effect of audit effort on audit fee using appropriate measures and incorporating all predictors of audit fee.

2.2.3. Moderating effect of business risks on audit effort and audit fees relationship

Kotchetova (2003) conducted a study which sought to put audit approaches into perspective and explore the business risk auditing. The study used a behavioral experiment to investigate whether auditors who perform Strategic Analysis (SA) make more accurate risk assessments and select more effective audit procedures than auditors who do not perform SA. The study found that analyses of strategy content and/or strategy process lead to higher accuracy in assessing the risk of material misstatement at both the entity and business process level. Analysis of strategy content results in smaller deviations from the expert panel for inherent risk assessments. When auditors focus on strategy process, their assessments of the strength of the control environment are more accurate. Finally, the proportion of

correctly selected audit procedures is significantly lower for the group that performed SA. The approach adopted by an audit firm to a specified audit assignment was a key factor in determining the outcome of the audit. If auditors fail to adopt the correct audit approach then the likelihood of audit failure increases, failure which could lead to a damaged reputation and potentially costly litigation against the firm (*ibid*). An important contribution of this study is the identification of potential areas to focus on while performing business risk auditing. However, this study does not show the interaction effect of business risk on the audit effort audit fees relationship. There is no research, building on Kotchetova's (2003) parameters of business risk that shows the contribution of business risks in the audit fees model.

Stanley (2007) investigated whether audit fees disclosures provide information about financially distressed clients' business risk. This study utilized the audit fees conceptual framework proposed by Simunic (1980) to investigate audit pricing. Drawing from prior research on the effect of client business risk on audit scope and pricing, the researcher hypothesized an inverse association between unexpected audit fees and distressed clients' future operating performance. In this study business risks were measured by variations in operating performance. The results of the study revealed a statistically significant association between unexpected audit fees and one-year-ahead return on assets. The study concludes that the relationship is attributable to unexpectedly high fees which is primarily concentrated in the small client sector of the audit market, and is robust to additional controls for client-size effects. In this study, the focus was on operating business risks which is one of the three components of business risks. Therefore there is lack of studies focusing on other components of business risks; compliance risks and financial risks, hence, their contribution in the audit fee model is not known.

Scholz & Chan (2007) studied the impact of accounting scandals and Sarbanes Oxley Act (SOX) of 2002 on audit fees changes. The study sought to establish the relationship between audit fees, and auditor dismissals in the period immediately subsequent to the passage of SOX. According to this study, the accounting scandals and SarbanesOxley Act (SOX) of 2002 resulted in large increases in required audit

work, and corresponding increases in audit fees for public companies. The study found that clients paying higher fees are more likely to dismiss their auditors and that dismissals are associated with smaller companies, companies with going concern reports, and companies that later reported material weaknesses in their internal controls. The study also found that dismissing clients, in particular clients hiring new non Big 4 auditors, experience smaller fee increases than non-switching clients in the following year. This study concluded that in the immediate post SOX period, some companies dismissed their auditors in expectation of lower fees from the succeeding auditor. This study makes important contribution towards the understanding indirectly, the impact, of business risks exposure in pre-SOX period on audit fees. However, this study is not hinged on the general audit fees model. Knowledge of role of business risks in the audit fees model is very scanty in the literature.

A study in African setting was conducted by Sahnoun & Zarai (2008). The purpose of that study was to investigate the impact of business risk, audit risk and auditor business risk evaluation on auditor client negotiation outcomes in terms of consensus on assertions in the financial statements. The study used experimental research design conducted on 200 Tunisian auditors. The study found a positive association between audit risk and client business risk and a significant effect on auditor client negotiation outcomes. Auditors were found to be less likely to accept a clients' aggressive reporting practice when the clients' business risks are high. This study emphasize on the significance of business risk on negotiation outcome. However, negotiation on reporting in the financial statements is not the only way of responding to business risk by an auditor (Bell et al., 2011). The auditor can reflect the potential audit risk arising from business risks in the audit fees pricing, an area which was not explored by this study.

Bentley, *et al.* (2011) carried on a study to determine whether clients' business strategies are a factor in determining levels of audit effort using the organizational strategy theory of Miles & Snow (1978) to develop a comprehensive measure of business strategy using secondary data. The major finding of their study was that business risks and business strategy are underlying determinants of audit effort levels

with incremental information content beyond the individual measures of client complexity or risk used in traditional audit fees models. The findings led to the conclusion that auditors exert different levels of audit effort depending on their clients' business strategies. Specifically, more audit effort is expended for clients following the inherently riskier and more complex Prospector strategy. Additional tests suggested that the measure is primarily associated with business risk, which is confirmed by an association between business strategy and financial reporting irregularities. The study contributes to the literature by constructing a replicable business strategy measure and identifying organizational business strategy as an important determinant of audit effort and an *ex ante* factor associated with financial reporting irregularities. Although this study investigated the interaction effect of business risks on the relationship between audit effort and audit fees, the study focused on one component of audit effort: duration. No previous research has been conducted focusing on the interaction effect of business risks on relationship between audit fees. Therefore, the interaction effect of business risks on the audit effort and audit fee is not known.

Giroux, (2008) sought to model municipal audit fees using an audit economics framework and to analyze this conceptual framework empirically using structured equation modeling. The sample consisted of 140 respondents from large cities using 1996 data. The theoretical model uses five constructs to explain audit fees: client size, complexity of client operations, financial risks including demographic characteristics, auditing factors, and governance structure. The study found that auditor size had positive but not significant relationship with audit fees, auditor complexity also had a positive but insignificant relationship with audit fees, however, size of the client was found to have significant positive relationship with audit fees. This study incorporated the financial risks in the analysis which was found to have insignificant relationship with audit fees. The limitation of this study lies in the use of one component of business risks, financial risk in the analysis as opposed to all the three components that constitute business risks. However, no study has been carried to establish such possibility that the low predictive power of the independent variables

could further be explained the combined effects of business risks and as such the interaction effect of business risks on the audit effort and audit fee is not known.

In a recent study in Lebanon, El-Gamal (2012) studied the views of 80 external auditors and client's representatives comprising of accountants, financial controllers and internal auditors on the determinants of audit fees with view of providing evidence whether these factors are related to audit firm characteristics or the client firm characteristics. Data was collected by self administered questionnaires and analyzed by descriptive statistics. The key finding of this study was that all the pre-suggested determinants of audit fees are extremely important or important. Both external auditors and client representatives groups agree that the most important determinant of audit fees is whether the audit firm is one of the big four or not and the least important factor is the size of the audit firm based on the number of its employees. The results also show that the degree of importance of each determinant of audit fees is homogenous among the two groups of respondents. The researcher points out that the outcome of the study provides a vital insight into the determinants of audit fees from a developing country like Lebanon. However, this study excluded business risks in the analysis. A similar study in another developing country with expanded variables could provide more evidence to this study.

The adoption of business risk audit (business risk auditing) approaches during the 1990s by several leading audit firms has been the subject of considerable scrutiny and commentary (Bell *et al.*, (2008). Using proprietary data for 165 audits conducted in 2002, Bell *et al.*, (2002) investigated three propositions about audit labor use under business risk auditing: First, relative to pre-business risk auditing benchmarks for the same auditor, the expectations that business risk auditing audits use a greater *proportion* of higher-ranked labour. Second, the expectation that engagements with high assessed auditor business risk, a summary risk assessment that reflects the business risk auditing auditor's rich understanding of the client, to be allocated more labor *and* more higher-ranked labor than pre-business risk auditing benchmarks. Third, at all ranks of labor, we expect a positive association between assessed business risks and levels of labor use. With respect to fees the study found that, at the

mean, business risk auditing audit fees (in constant 1989 dollars) were about 75% of pre-business risk auditing benchmarks. While audit fees are, for the most part, explained by actual labor usage, the study found that first year, clients with highly reliable internal controls, and clients that also obtain non-audit services from the auditor pay somewhat lower total and per-hour fees. Interestingly, the study also found that within the subsample of first year clients, higher assessed business risk is associated with higher total fees and fees per hour even after accounting for labor use on higher-business risk auditing engagements. The study revealed empirical evidence consistent with these propositions. The study also found that total labor use in our sample is only modestly lower than pre-business risk auditing norms. Analysis of fee data from these engagements suggested that audit fees in 2002 are substantially less than would be expected under pre-business risk auditing benchmarks. This study however does not demonstrate how business risks interact with other predictors to explain the variations in audit fee.

Othanas *et al.* (2007) in their study on risk-based in large projects' audit proposed a Risk based Auditing selection Methodology (RASM) for large scale projects in Greece. They argue that RASM is not static and as such can be used throughout the life of the project. Their model suggested different samples in different time periods, regarding project's progress and probability fluctuations. The study presented key components of risk based auditing: ascertainment of risk areas through ranking methodology and continuous evaluation of risks. Lovaas (2008) investigated some of the most commonly used audit and suggested a Comprehensive Risk Based Auditing framework (CRBA) considered innovative risk-based audit module that allows the board of directors and upper management to audit the most critical areas. The study also included testing of the model in three financial institutions. A set of questions were asked before and after the audit process to get some preliminary validation results. Lovaas' (*ibid*) study concentrated on the financial institutions therefore the applicability of these emerging models in other sectors and in developing countries is not clear.

In 2003, GOK enacted the Government Financial Management Act to improve accountability of government financial management practices. In 2004, a new Public Audit Act was enacted to strengthen the independence and operational capacity of the Controller and Auditor General, and an Internal Auditor General was appointed to improve internal audit functions in GOK ministries. In addition, Parliament passed the Anti-Corruption and Economic Crimes Bill, establishing an anticorruption commission, and the Public Officer Ethics Bill, requiring the declaration of wealth by public officers. The RBA pilot sparked wide interest and raised high expectations in Kenya among senior management and other key stakeholders across the government. To meet these expectations, it was necessary to increase the capacity of the internal audit staff. The Bank is providing continuing support for public financial management reform through a wider institutional reform and capacity-building program, and it is joining with the Institute of Internal Auditors, Inc. (USA) to support the Institute of Internal Auditors, Kenya Chapter, in strengthening training capacity and producing certified internal auditors in Kenya. It was expected that business risk auditing (BRA) would bring fundamental improvement in audit effectiveness in Kenya; if this expectation is realized, Kenya's BRA according to Mozammal, (2005), would serve as a model across the continent in the future. However, no subsequent study in Kenya has investigated how business risk auditing fit in the audit fee model to help auditors better utilize audit effort to determine commensurate audit fee.

An important study which attempts assess the link between audit effort and business risk auditing was conducted by Bell *et al.* (2007) in the United States. This study sought to investigate the role of business risks on the audit labour usage-audit fees relationship using a population of 165 audits conducted in 2002 by various audit firms. The key finding of this study was that there audit fees were significantly less under business risk auditing as compared to pre-business risk auditing benchmarks. This study further revealed that labour usage can substantially be reduced when business risk auditing approach is used. After controlling for labour usage, both total fees and fees per hour increased with business risks for first-year clients but not for continuing clients. With these results, the study provides evidence on the impact of business risk auditing regime. However, this study does not show the effectiveness of

business risk. This study also uses audit risk and business risk to mean the same thing. This skewed operationalization of risks leads to inconclusive results. Consequently, the role of business risk incorporating all components is not clear from this study.

A conclusion relating to the review of the role of risk in the audit fee model point out that risk is a major predictor of audit fees. However, the operationalization of risk is varied in the extant literature. Some studies use business risks and audit risks interchangeably (Naser *et al.*, 2007). Jubb *et al.*, (1996) however, empirically found out that the two types of risks though related are distinct. Gray & Manson (2008) argue that Business risks are wider in scope than business risks. According to Naser, (2007), Audit risk measures the odds of an auditor issuing an unqualified judgment on materially misstated financial statements. Sandra & Patrick (1996) used gearing (clients' debt ratio) and liquidity ratios to determine the client's risk. According to Naser, (2007), the audit risk can be measured by the one or more of the several proxies: current assets / total assets, treasury, long-term debt / total assets, income before tax / total assets (Carson *et al.*, 2004; Joshi & Al-Bastaki, 2000). The most preferred risk measure is the debt ratio (Francis & Simon, 1987, Craswell & Francis, 1999; Carson *et al.*, 2004; Naser, 2007). The indicators used to measure risks by the foregoing studies capture only financial risks. Divergent findings were obtained regarding the effect of business risks on audit fee with Girox (2008), Sahnoun & Zarai (2008) and Scholz & Chan, (2007) indicating no significant relationship between business risks and audit fees whereas studies (such as Kotchetova, 2003; Bently, *et al.*, 2011; Joshi & Al-Bastaki, 2000) finding significant positive relationship. According (World Bank, 2001), there are more than 100 local firms in Kenya with clientele concentrated mainly among the small and medium enterprises. All the 48 firms in western Kenya fall in this category. The World Bank report shows these firms find it difficult to keep up to date with new developments in accounting and auditing as they are constantly struggling to earn enough to stay afloat. None of the prior studies have considered the moderating effect of business risks on the relationship between audit effort and audit fees. Therefore the interaction effect of business risks in the relationship between audit effort and audit fee is not known.

2.3. Conclusion to Literature Review

In conclusion, the literature review indicates that business risk auditing is an emerging area both in practice and in research especially in developing countries such as Kenya. While literature indicates that Audit risk is increasing becoming an issue in modern practice especially after the failure of Enron, World-com and other international companies that resulted in severe and social harms and Global economic crisis of 2008, the response of audit firms to business risks in developing countries and Kenya specifically is not adequately researched and documented. Contention remains unresolved in the literature as to the significant predictors of audit fees model with a myriad of mixed results emerging from different scholars. Concerns have been raised on failure of some authors to incorporate business risks in the audit fees model, misspecification of business risks by omitting other components of risks and failure to study the potential moderating effect of business risks on the perennial predictors of audit fees. Being an emergent audit approach, the need to study the status of business risk auditing in developing nations cannot be overemphasized. Previous studies have failed to address the multivariate nature of risks especially from the dimensions of ISA 315 which implies a great rift between the audit practice and the academia. This study therefore seeks to investigate the status of business risk auditing, the relationship between business risks, audit effort and audit fees among audit firms in Western Region, Kenya.



CHAPTER THREE: METHODOLOGY

This chapter presents the methods and procedures that were used to address the research problem and actualize the objectives of the study. Specifically, it presents the research design, study area, target population, sampling techniques, data collection methodologies, data type and data analysis and presentation of findings.

3.1. Research Design

Literature identifies two extreme points of view in the research methodology; quantitative and qualitative (Burrell & Morgan, 1979). Quantitative approach is appropriate where there is a similarity between social and natural phenomena hence, similar methods can be used to study both phenomena. The positivistic quantitative methodology is preferred in social science research because it involves; the observation of real world facts or phenomena, the formulation of explanations for such facts or phenomena using inductive processes, the generation of predictions about real world phenomena using the previously formulated explanations and deductive processes and the attempted verification of these predictions through systematic, controlled experimentation or observation. In view of the philosophical orientation of positivist's view adopted for this study, the study employed cross-sectional survey research to obtain the empirical data to address the objectives of the study. A cross-sectional survey was deemed appropriate for the study because it enables the researcher to collect data and make inferences about a population of interest at one point in time. Furthermore, this research design is appropriate approach where the aim of the study is to determine the existence and extent of a problem (Nachmias & Nachmias 2008).

3.2. Study Area

The study was conducted in Western Region, Kenya. The geographical area of Western Region, Kenya covered in the study was obtained from the Western Region as defined by the Institute of certified Public Accountants of Kenya (ICPAK, 2011). This study area was chosen because of the existence of potential business risks in the study area. Further, previous studies on audit fees modeling have been focusing on large audit firms classifying audit firms into only two categories: big-4 and non-big-4.

This study seeks to expand the measures of size of the audit firm and also focus on small audit and medium sized audit firms. The study area chosen conveniently meets the requirements of the study. The map of the study area is annexed in Appendix 7.

3.3. Population

The population of the study comprised of all the 48 Audit firms in the Western Region. In social research, populations often tend to have a wide geographical spread. According to Mugenda (2008), in situations where the researcher is not interested with the universal population which is spread throughout the world, a target population can be used to reasonably generalize the findings. In this study therefore, the target population was audit firms in western region of Kenya. The distribution of audit firms in the study area is detailed in Table 3.1.

Table 3.1

Distribution of practicing firms in Western Region, Kenya business risk auditingnch

S/No.	Town	No of audit firms (population)	Sample size	Percentage
1	Bungoma	7	7	100%
2	Busia	2	2	100%
3	Kakamega	2	2	100%
4	Kisii	10	10	100%
5	Kisumu	20	20	100%
6	Mumias	1	1	100%
7	Siaya	1	1	100%
8	Suna Migori	1	1	100%
9	Ugunja	1	1	100%
10	Webuye	3	3	100%
	Total	48	48	100%

Source: ICPAK (2011)

As shown in Table 3.1, the audit firms which formed the population of the study were spread in western region of Kenya which covers the areas of Kisii, Kisumu, Kakamega, Suna Migori, Unguja, Siaya, Bungoma, Busia, Mumias and Webuye (ICPAK, 2011). The respondents comprised of audit senior or audit manager selected purposively from each of the audit firms participating in the study.

3.4. Sample size and sampling techniques

The sample size consisted of all the 48 audit firms in Western Region, Kenya. This sample size was selected using census sampling techniques. The respondents

comprised of 48 audit senior or audit managers selected purposively from each of the audit firms participating in the study. Census sampling technique was chosen because the units of study were not too many and the audit firms are concentrated in major towns in Western Kenya and, therefore, accessible, and not prohibitive in terms of cost, time and other resources (Saunders *et al.*, 2007). Furthermore, a census survey is suited to development of a broad industry-based understanding for studying the hitherto enigmatic problems of the Kenyan auditing industry. Table 3.1 presents the sampling frame for the study.

3.5. Data Type and Data Collection

The study mainly utilized the primary data supplemented by secondary data from the published accounts of audit clients. Primary data was collected by use of self administered questionnaires. This study aimed at collecting data relating to the last three audits conducted by each of the participating audit firms. In an effort to improve the content validity and improve response rate, the survey was formulated and implemented with guidelines adopted from Dillman (2000). The scales for the questionnaire and other quantitative measures were drawn from in-depth literature review from which indicators for business risk and determinants of audit fees with modifications to suit this study were selected. The pool of items in the questionnaire were subjected to evaluation of expert both practicing accountants and the academicians. The questionnaires were also supplemented by semi-structured interviews were structured in such a way as to provide the least amount of disruption to the participants while also eliciting the most valid and truthful data possible. The concern is that trying to get busy auditors to answer long questionnaires or sit for a long period of time in an interview would simply result in less reliable and valid data. According to Kitum (2010), it is better to obtain accurate data in a short amount of time than a large amount of data over a longer period of time that is not useful or relevant to the research.

3.6. Data Validation and Reliability

The questionnaire was pretested before the actual field survey. This was achieved by administering the questionnaire to audit staff of 3 audit firms in Kisumu County which was part of the study area. Since each respondent was required to give

information regarding three of their previous audits, a total of 9 audits were subjected to pretest analysis. Content validity was achieved by subjecting the pool of questions of the research instrument to academic expert's panel in the field of auditing who expressed their level of agreement/disagreement on use of various items in the questionnaire. Construct validity was established by use of factor analysis in which the information contained for the original variables were summarized with minimum loss of information on the original variables

3.6.1. Content Validity

The pool of items underlying dimensions of the business risk were given to an expert panel of five academics drawn from the fields of accounting professionals and non-practicing accountants. These experts expressed their degree of agreement/disagreement with the use of the different items on a Likert scale of five points. This process yielded 13 items to represent the business risk measures consistent with the dimensions of business risk indicators envisaged by ISA 315. The internal consistency of the constructs were tested by internal consistency method which using Cronbach's Alpha coefficient. The coefficient alpha is an internal consistency index designed for use with tests containing items that have no right answer. This is a very useful tool in social science research because instruments in these areas often ask respondents to rate the degree to which they agree or disagree with a statement on a particular scale. The Results of this tests indicated that Cronbach Alpha financial risk assessment was $\alpha = .754$, operating risk assessment was $\alpha = .963$ and $\alpha =$ for compliance risk assessment. Many authors recommend alpha threshold of $\alpha = 0.7$ (Field, 2005; Tavokol and Dennick, 2011 among others). If alpha is too high it may suggest that some items are redundant as they are testing the same question but in a different guise but a low alpha could be due low number of questions or poor interrelatedness of questions and might indicate that questions are measuring different constructs (Tavokol and Dennick, 2011). Therefore, the Cronbatch values for the three measures of business risks and their related questions lied within the required range that assures internal consistency.

The audit effort construct, which was operationalized by audit duration, size of the client, size of the audit firm and complexity of the client did not pose major challenges in determination of construct and content validity, because these variables were measured using the parameters consistent with those of the leading scholars (Jubb, *et al*, 1996; Elifsen, *et al.*, 2001; El Gamal, 2012; Simunic, 1980). Besides, these were standard quantitative measures which were not based on the respondent's perception but rather their knowledge of the phenomenon under investigation. Further, the measures were subjected to professional assessment. The results yielded a high degree of agreement on the predicted measures as per the literature. This process resulted to four items for each measuring the operationalized variables of audit effort.

An audit fee was measured by the amount of fee charged by the auditor on a particular client. All audit fees literature is unanimous on this measure and expert panel replicated the expectation. In summary, the process produced an instrument: 13 items for measuring Business risks; 4-item scale for measuring audit effort and 1 item for audit fees. In an iterative manner, the expert panel revised the questions and response-options until all evaluators concurred that each question and each response option fairly reflected accurately the requisite underlying dimension for each construct. Moreover, the pretest subjects indicated that the content of each construct was well represented by the measurement items employed.

3.6.2. Construct Validity

Construct validity was tested using factor analysis. In this study, Exploratory Factor Analysis (EFA) was performed using principle components analysis (PCA) to identify constructs. According to Hair *et al.* (2006), factor loadings greater than 0.30 are considered to meet the minimal level; loadings of 0.40 are considered more important; if the loadings are 0.50 or greater, then they are considered highly significant. A factor loading of 0.50 was used as the cut-off point in this study. In this study, the method of Principal Components Analysis (PCA) using SPSS Version 16 was applied to the same data used in the assessment of internal consistency reliability. The use of this technique also allowed for the factors to be treated as uncorrelated variables in order to satisfy multi-collinearity assumptions (Punj & Stewart, 1983). This technique

was only applied to the section of the questionnaire which required the respondent's perception. This was basically the measures of business risk assessment. The results of PCA and other reliability tests have been annexed in Appendix 3(b).

3.6.3. Testing for Assumptions of Linear Regression Analysis

This study employed linear regression analysis in the analysis of data. Therefore it was essential to establish that the assumptions of linear regression were not violated. The need to identify any violations of the underlying assumptions of linear is emphasized in research Hair *et. al.*, (1998). The assumptions which are considered necessary if conclusions can be drawn about a population on the basis of a regression analysis done on sample data includes, type of variables, homoskedasticity, linearity, normality of residuals and multicollinearity (Field, 2000). These assumptions are considered in the following subsection.

3.6.3.1. Type of Variables

As recommended by Field (2005), all predictor variables must be quantitative or categorical and the outcome variable must be quantitative, continuous or unbound. In this study, both the predictor variables and the outcome variable, audit fees were quantitative. This means that the type of variables did not violate the requirements of regression analysis in this regard.

3.6.3.2. Linearity and Homoscedasticity

For linearity condition to be met, the outcome variable for each increment of predictor(s) should lie along a straight line (Feld, 2000). Testing this assumption is important because modeling a non-linear relationship using a linear model limits the generalization of the data (Field, 2005). Homoscedasticity assumption is satisfied when at each level of the predictor variable(s) the variance of the residual terms are constant. If the assumption does not hold the accuracy of the r coefficient may be untenable. Assuming that distribution of data is homoscedastic when indeed is actuality heteroscedastic leads to a result which overestimates the goodness of fit as measured by the Pearson coefficient. A plot of standardized differences between the observed data and the values predicted by the regression model (ZRESID) against the standardized predicted values of the dependent variable (ZPRED) was used to assess

whether the assumption of random error and homoscedasticity had been satisfied. This was done for the audit fees, the dependent variable. The normal P-P plots and scatter plots, depicting satisfaction of linearity and homoscedasticity conditions, respectively is indicated in Figure 3.1 – 3.3

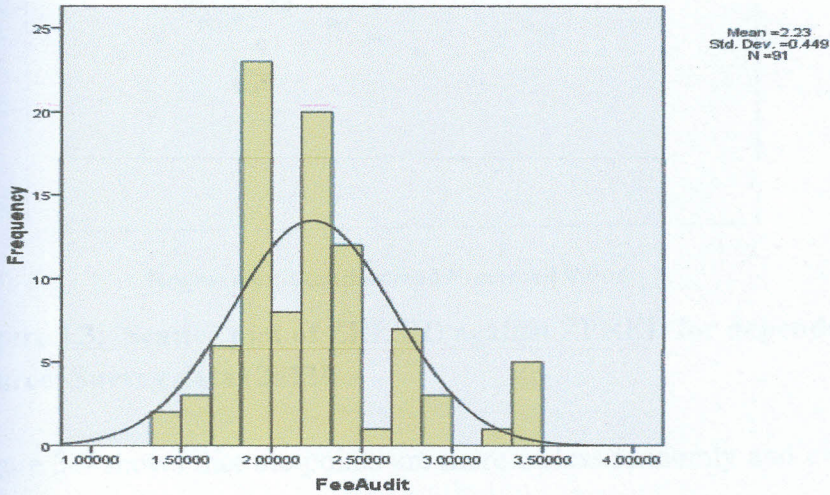


Figure 3.1: Histogram of regression standardized residuals for Audit fees

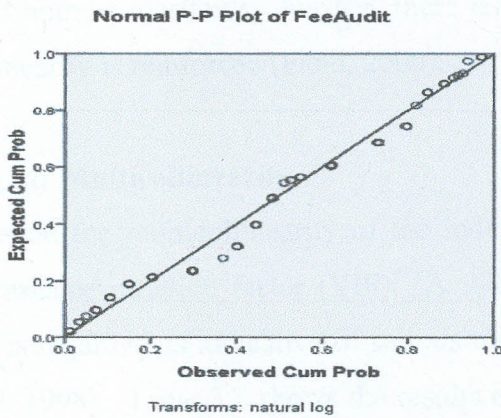


Figure 3.2: Normal P-P Plot of Regression Standardized Residuals for Dependent variable
Source: Survey data, (2013)

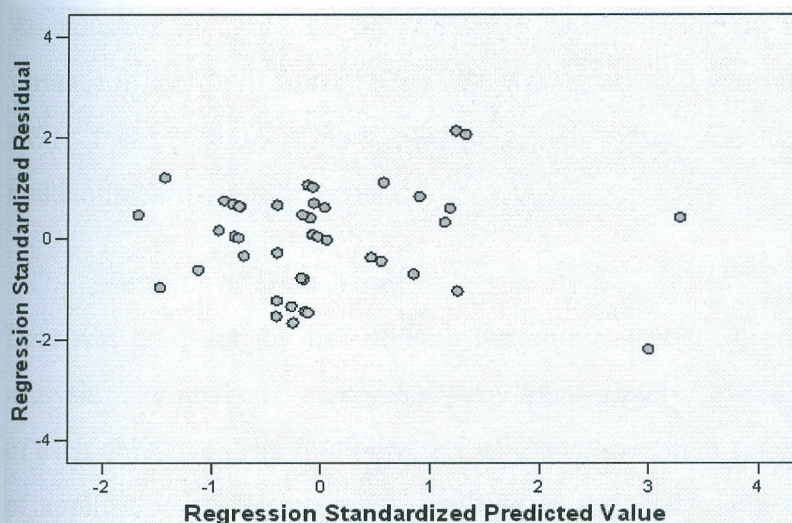


Figure 3.3: Scatter plot of ZRESID against ZPRED for dependent variable
Source: Survey data (2013)

Figure 3.3 shows that the points are more or less randomly and evenly spread in the scatter plot. In addition the shape of the normal scatter P-P plot of regression-standardized residuals satisfied the general requirements for rectangularity necessary for linearity and homoscedasticity. Further, there is no curvilinear pattern, and the assumption of linearity is reinforced (Field, 2000).

3.6.3.3. Testing for Multicollinearity

This study assessed the multicollinearity of the independent variables by means of tolerance and variance inflation factor (VIF). A tolerance of below 0.10 or a VIF greater than 10 is regarded as indicative of serious multicollinearity problems (Field, 2000, Hair *et al.* 1998). Table 3.2 shows the results of the multicollinearity statistics of the study variables.

Table 3.2
Collinearity Statistics

Independent variable	Collinearity Statistics	
	Tolerance	VIF
Audit Duration	0.429	2.331
Client's size	0.328	3.049
Audit firm size	0.209	4.785
Complexity of the client	0.279	3.584
Business Risks	0.292	3.425

Dependent variable= Audit fees

Source: Field pre-survey (2013)

As indicated in Table 3.2 the tolerance statistics were all well above 0.10 and the variance inflationary factor (VIF) values were all well below 10. (Mason & Perreault 1991; Field, 2000). It can, therefore, be safely concluded that there was no multicollinearity within the data.

3.7. Methods of Data Analysis

Data was analyzed by use of both descriptive statistics, correlation and regression analysis. The analysis techniques were appropriately chosen to suit the requirements of each objective. The first objective of the study which sought to establish the extent of application of business risk auditing in the study area was analyzed by use of descriptive statistics using frequencies, mean, standard deviation and percentages. The second objective was analyzed by means of correlation analysis as well as regression analysis using ordinary least squares (OLS) to determine the association between the main effects of the dependent variable: audit fees and the independent variables. To address the third objective, the study employed Moderated Regression Analysis (MRA). The moderated regression analysis involved a procedure where the first regression was run for dependent and independent variables; the dependent, independent variable and moderating variables and the cross-product interaction term of the dependent and potential moderating variable.

3.8. Model Specification

Audit fees models predict that the principal determinants of audit fees are factors relating to the size, complexity and risk of the client firm (Simunic, 1980; Jubb, *et al.*, 1996; Francis, 1984; Chan *et al.*, 1993). Studies have also found audit fees to be associated with size of the audit firm (Francis and Simon, 1987; Chan *et al.*, 1993; Gerrard *et al.*, 1994; Firth, 1997; Craswell and Francis, 1999; Carey *et al.*, 2000; Ferguson *et al.*, 2003; Casterella *et al.*, 2004). In this study these have collectively been referred to as audit effort. The study therefore included a range of variables to control for these factors. The first model (Model 1) contains array of variables that constitute audit effort as generally agreed in many audit fees modeling studies.

Data analysis involved correlation and regression analysis. Pearson correlation and regression analysis was conducted to determine the direction, strength, and

significance of the relationship between audit effort and audit fees. Moderated regression analysis was used to determine the moderating Impact of business risk. Researchers have posited that moderated regression analysis is the most general and conservative method for testing contingency hypothesis in which interaction exists (Aguinis, 2004; Cohen & Cohen, 1983; Dowling & Mc Gee, 1994). This procedure involves the regression of the dependent variable on the independent variable (audit effort), the potential moderating variable, and the cross- product interaction term of the independent variable and the potential moderating variable. If the cross-product interaction term produces a significant change in the R-square value (that is, significantly increases the amount of variance accounted for in the criterion variable), then the moderating variable is identified as having a significant effect on the nature of the relationship between audit fees and the criterion variable.

Most of the audit fees literature including Jubb *et al.* (1996) which has been adapted for this study use a log transformed model in which the dependent variable (audit fees) is log transformed. Logarithmically transforming variables in a regression model is a very common way to handle situations where a non-linear relationship may exist between the independent and dependent variables. Although the non-linear relationship was not foreseen in the model, logarithmic transformations was used because it is convenient means of transforming a highly skewed variable into one that is more approximately normal (Benoit, 2011). Therefore logarithmic transformations used in this model ensured that the assumption of linearity between variables and normality was tenable. According to Simonoff (2011), use of logarithmic transformations is very appropriate for money data because money tends to operate multiplicatively rather than additively. Therefore, the audit fees and size of the client which were both measured by money terms were logarithmically transformed. However, appropriate care was taken when interpreting the results to ensure the coefficients were interpreted as proportions or elasticity as the case may of the variables after converting back to non-log transformed version using the properties of logarithmic functions.

The moderated regression analysis used to test data is mathematically presented below:

Model 1 is a regression of the dependent variables and the independent variables.

Model 1

$$(LnF)_i = \beta_0 + \beta_1 X_{i1} + \dots + \beta_4 X_{i4} + \mu_i \dots \quad [3.1]$$

Where:

LnF = Audit fees charged to Client i (log)

β_0 = Constant

β_1 = Coefficients for X_i

X_i = "Audit Effort" measured by ($X_1, X_2, X_3,$ and X_4) in which;

X_1 = Audit Duration

X_2 = Size of client i 's auditor (measured by number of employees)

X_3 = Size of client i measured by book value of Client's total assets

X_4 = Complexity of Client i (measured by number of subsidiaries, branches and associated entities of the client)

μ_i = Error term (assumed to have a normal distribution and constant variance).

Model 2

Model 2, introduces the business risk in order to establish their contribution in the general audit fees model 1.

$$(LnF)_i = \beta_0 + \beta_1 X_{i1} + \beta_2 X_{i2} + \beta_3 X_{i3} + \beta_4 X_{i4} + \beta_5 Z_i + \mu_i \dots \quad [3.2]$$

Where:

LnF_i, X_i, μ = as defined in model 1 above Equation 3.1

Z_i = Business Risks

Model 3

Model 3 encompasses the dependent independent variables, the potential moderating variable and the cross-product interaction term of the dependent and potential moderating variable.

$$(LnF)_i = \beta_0 + \beta_1 X_{i1} + \dots + \beta_4 X_{i4} + \beta_5 X_{i4} + \alpha_2 Z_i + \gamma_1 X_{i1} Z_i + \dots + \gamma_4 X_{i4} Z_i + \mu_3 \dots [3.3]$$

Four distinct MRA procedures were conducted for each of the audit effort variables; audit duration, size of the client, size and client complexity in order to the existence of moderating effect of business risks in any or each of the variables as per the

hypotheses. As depicted in the regression equations, the interaction term, X_iZ , is entered last to ensure that the coefficient is not confounded with variance arising from the main effects of the variables. Ideally, there are two equivalent ways to evaluate the existence of moderation effect; either whether the coefficient of the interaction term β_3 differs significantly from zero or whether the change in squared regression coefficient β_3 (ΔR^2) is significantly greater than zero (Field, 2000). Therefore, Z can be considered as a moderator variable only if the change in R^2 for equation (3) compared to equation (2) is statistically significant.

Moderated regression analyses (MRA) include multiplicative terms that might be highly correlated with their constituents, a situation that is prone to problems of multicollinearity in the estimation of regression coefficients (Cohen & Cohen, 1983). To alleviate this problem, mean centering of all the variables was done before calculating interaction terms, a procedure that has been demonstrated to reduce such multicollinearity in multiplicative regression models (Cohen & Cohen, 1983; Howell, 2007). As Yi (1989) posits, mean centering “yields the same R^2 as the current practice, while producing such desirable properties as scale independence, low multicollinearity, and a clear interpretation of main effects.

3.9. Research Ethics

This study required the participation of human respondents and as such the research process observed ethical issues in order to ensure privacy and safety of respondents. This involved explaining the aim and purpose of the study together with envisaged contribution to the industry. Once permission was obtained, the targeted respondents were assured that participation was voluntary. Further, the details of the study and its benefits to the management of the industry were explained. The assurance was given that no disclosure of name was required to ensure confidentiality for the information given in the questionnaires. The respondents were further assured that only requisite details that assisted in shedding light on the research questions were included.

CHAPTER FOUR: RESULTS AND DISCUSSIONS

4.0. Introduction

This chapter presents the results of the study followed by the discussion of findings in light of the research objectives. The body of results is divided into two main sections. The first section deals with the background characteristics of the sample while the second section presents the findings and discussions according to the study objectives. The first objective of the study was to establish the extent of application on Business risk auditing in the study area. This objective was analyzed by means of descriptive statistics. The second objective of the study sought to determine the relationship between audit effort and audit fees using correlation and regression analysis. The last objective was to determine the moderating effect of business risks on the relationship between audit effort and audit fees among audit firms in Western Region, Kenya. The findings systematically present the findings of each of the specific objectives.

4.1. Characteristics of the Sample

Primary data was collected by means of self-administered questionnaires. The questionnaires were distributed in the month of June/July 2013. Responses were received from 37 audit firms out of the target population of 48 firms. This represented 77% of the targeted population. The respondents were required to give responses regarding their own audit firm and how they conducted their audit as well as responses regarding three of their clients recently audited. Under this research strategy, each audit firm was to supply data for three audits hence a total of 144 audits were anticipated. However, some of the audit firms supplied information for less than three clients. The final number of questionnaires received from the 37 audit firms which responded were 91 representing the audits conducted by the respondent's firms.

Table 4.1 shows the response rate achieved in the study from the target audit firms. Majority of the audit firms that participated in this study were from Kisumu County. Out of the total 48 firms in the study area, 20 were based in Kisumu from whom 90% responses were received, while 10 were based in Kisii County where 60% of the responses were received. Bungoma had a population of 7 audit firms from whom 5(71%) responded. Webuye had two registered audit firms while Kakamega had two

audit firms both of whom responded. The remaining towns in the study area: Mumias, Siaya, Suna Migori and Ugunja had one registered audit firm each all of whom responded in this study bringing the response rate in these areas to 100%.

Although there is no universally agreed threshold for response rate, poor response rate is particularly troublesome for descriptive studies because their usefulness lies in their capacity to generalize the findings to a population with high confidence. Such low response rates may jeopardize any attempt to generalize findings in an adequate way and can also lead to low power and inaccurate effect size estimation. However, for many social science studies, a threshold of at least 60% is considered adequate to generalize the sample and population without threatening the external validity and statistical conclusion validity of inferences made in research using questionnaires (Johnson & Owen, 1962). For regression analysis, the number of cases must at least be thirty (30) but may also depend on the number of variables involved in the study (Field, 2000). As a rule of thumb, the number of observations (N) should be equal to $50+4k$ where k is the number of predictor variables in the regression model. This study consisted of 5 predictor variables including the potential moderator variable. Therefore the response rate attained which produced N= 91 observation was adequate to carry out the analysis effectively and capable of producing generalizable results.

Table 4.1
Response rate

Town	Population (Audit firms)	Sample	Responses received (from audit firms)	No of audits†
Bungoma	7	7	5	8
Busia	2	2	1	3
Kakamega	2	2	2	6
Kisii	10	10	6	18
Kisumu	20	20	18	42
Mumias	1	1	0	0
Siaya	1	1	1	3
Suna Migori	1	1	1	3
Ugunja	1	1	1	2
Webuye	3	3	2	6
Total	48	48	37	91

Note: Each respondent was required to respond for three audits conducted by their firm, therefore 3 questionnaires were expected from each audit firm.

Source: Survey data, 2013

The first section of the research instrument sought to capture the general information about the respondents including the respondent's gender, qualification, experience, age and designation. The findings of these characteristics are presented in turn. Figure 4.1 presents the distribution of respondents by gender. The majority (68%) of the respondents were male compared to 32% female. This preliminary indication suggests that the auditing profession in the study area is male dominated.

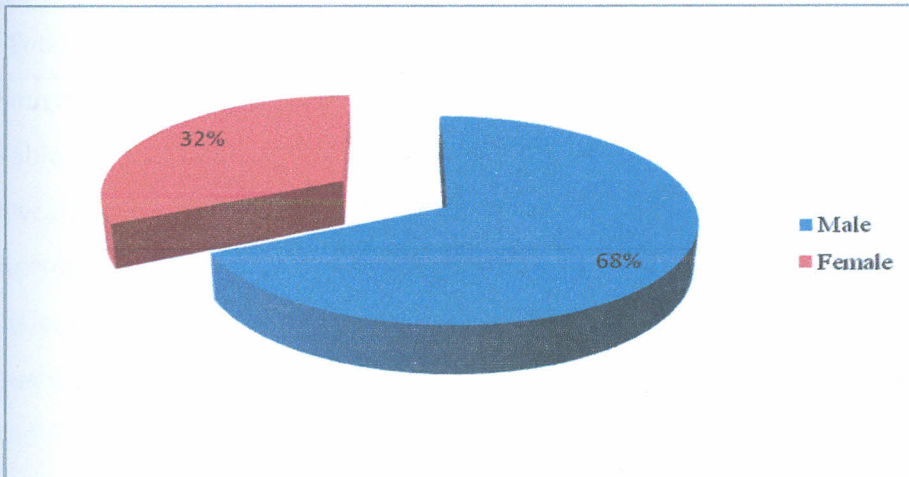


Figure 4.1: Distribution of respondents by Gender,
Source: Survey data, 2013

The age profiles revealed that most (72.97%) of the respondents were aged 40 years and below with 43.24% of the respondents falling in the 21- 30 year business risk auditingcket. On the other hand, 24.32% of the respondents fell between 41-50 years of age. Only 3.2% of the respondents were aged over 50 years. Table 4.2 summarizes the distribution of the respondents by age. Since the majority of the respondents were employees of audit firms participating in the study, this finding therefore, indicates that most audit firms in the study area employ young professionals or have been in operation for a shorter period. This implies that the audit profession among small and audit firms is dominated by young professionals. It further tends to suggest that as professionals gain more experience, they move either to non-practicing accountancy or they join big established audit firms.

Table 4.2
Distribution of Respondents by Age

	Frequency	Percent (%)	Cumulative Percent
21-30 years	16	43.24%	43.24%
31-40 years	11	29.73%	72.97%
41-50 years	9	24.32%	97.30%
51-60 years	1	2.70%	100.00%
Total	37	100	

Source: Survey data, 2013

Table 4.3 profiles the respondents as per their academic qualification. The findings revealed that most of the respondents had attained undergraduate and Certified Public Accountants (CPA) qualification with 43% of the respondents saying they hold both undergraduate and CPA qualification and 13% being holders of CPA/ACCA qualification without a degree while 16% of the respondents had masters qualification and CPA. Only 11% of the respondents held a PhD qualifications and CPA/ACCA a. Table 4.3 summarizes the qualification of the respondents.

Table 4.3
Distribution of Respondents by Qualification

	Frequency	Percent	Cumulative %
CPA/ACCA	5	13%	13%
Undergraduate	6	16%	30%
Undergraduate and CPA	16	43%	73%
Masters and CPA/ACCA	6	16%	89%
PhD and CPA/ACCA	4	11%	100
Total	37	100	

Source: Survey data, 2013

This study sought to collect data from audit partners or audit managing partners of the participating firms. However, due to the unavailability of these personnel in some cases during the audit, audit staffs from the rank of auditor onwards were allowed to respond. Nonetheless, most of the responses collected were received from audit managers as anticipated. Table 4.4 shows the summary of respondents by their designation. Of the five major categories of designation of respondents, the majority was consisted of audit managers (38%), while 27% were received from audit seniors,

19% of the responses were received from partners and 5% were received from managing partners. The low response from the managing partners and partners was attributable to the fact that these partners operated branches registered in other towns. In these situations the operations of the audit firm were largely managed by audit managers who were also qualified auditors. Therefore, the integrity of the responses was not jeopardized.

Table 4.4
Distribution of the respondents by their designation

	Frequency	Percent	Cumulative %
Auditor	4	11%	16%
Audit Senior	10	27%	43%
Audit Manager	14	38%	76%
Partner	7	19%	95%
Managing Partner	2	5%	100%
Total	37	100%	

Source: Survey data, 2013

After looking at the characteristics of the respondents, the next subsection presents the findings of each of the research objectives.

4.2. Extent of Application of Business Risk Auditing

The first objective of the study sought to establish the extent of application of business risk auditing among audit firms in the study area. To address this objective, respondents were required to indicate the extent to which they carry out business risk assessment on a scale 1 to 5. The questions focused on the three thematic areas of business risks as per ISA 315; financial risk assessment, operational risk assessment and compliance risk assessment. Table 4.5 summarizes the findings for the first objective of the study.

The study revealed that business risk auditing is practiced to a moderate extent in western region, Kenya. On a scale of five, the average score of business risk auditing was 3.367 (standard deviation 0.086). Further analysis of the specific components of business risks indicate that compliance risk assessment (Mean 3.968 standard deviation 0.007) is most prevalently practiced compared to financial risk assessment

(mean 2.935 standard deviation 0.108) and operational risk assessment.(Mean 2.742 standard deviation, 0.122)

This result indicates that save for compliance risk assessment; business risk assessment is not practiced in western region Kenya. Auditors are keen on the assessment of compliance risks such as compliance with legal requirements. Little attention is put on the operating and financial risk assessment. Table 4.5 also presents the overall score of application of business risk auditing in which the average of the various components of Business Risk Assessment have been factored in.

Table 4.5
Application of business risk auditing by auditors in Western region

Type of risk audit		Score					Total	Mean	SDev
		1	2	3	4	5			
Financial risk	N	3	9	14	10	1	37	2.935	0.108
	(%)	(8%)	(24%)	(38%)	(27%)	(3%)	(100%)		
Operating risk	N	5	8	17	6	1	37	2.742	0.122
	(%)	(14%)	(22%)	(46%)	(16%)	(3%)	(100)		
Compliance risk	N	1	2	5	17	12	37	3.968	0.007
	(%)	(3%)	(5%)	(14%)	(46%)	(32%)	(100)		
Overall score for business risk auditing							37	3.367	0.086

1= To no extent; 5 = to greatest extent;

Source: Survey data, 2013

Further analysis of the interview results seem to be consistent with the results of the questionnaire. Figure 4.3 shows the results of the interview schedule regarding application of business risk auditing approach. The majority of the respondents interviewed have been changing their audit approaches over the last ten year with 89% of the interviewees consented to that effect. On the familiarity of the business risk auditing, 76% of the respondents said they were conversant out of whom 59% of them were applying it. Results of the interview also revealed that a similar percentage

recommend the use of the methodology. This result means that all the respondents who already adopted business risk auditing are contented with the methodology. Therefore, this leads to the non-application of the methodology can be attributed to the promotion and awareness creation. This result is consistent with the findings of Abdullah & Al-Araj (2011) who found out that the business risk audit approach is still not well-known or practiced in Jordan despite its many benefits and that the business risk audit approach faces many challenges yet these could be overcome by some recommended steps and measures specified in the recommendations. The findings of this study and that of Addullah & Al-Araj (2011) seems to suggest that adoption of business risk auditing among developing countries is low and that this low adoption is attributable to lack of awareness.

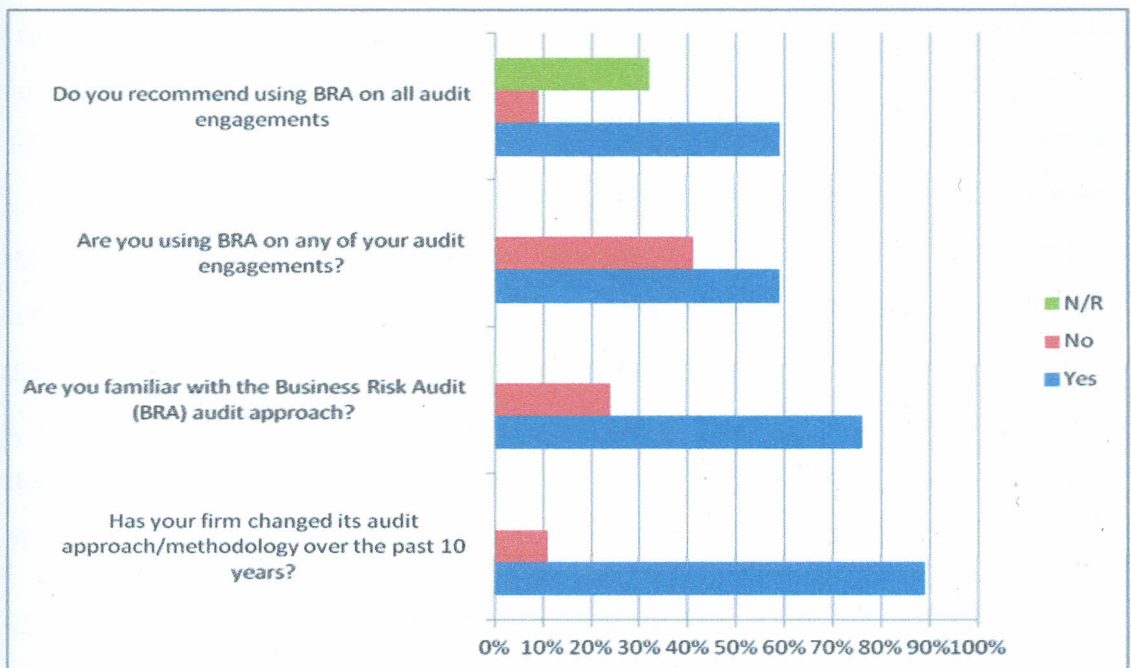


Fig. 4.2 Application of business risk auditing approach

Source: Research data, 2013

The findings regarding to the first objective of the study therefore leads to the conclusion that that apart from compliance risk assessment; other components of business risk assessment are practiced to a low extent in western region Kenya. Auditors are keen on the assessment of compliance risks such as compliance with legal requirements. Little attention is put on the operating and financial risk assessment. For instance Humphrey *et al.* (2010) in a similar study in UK found that

business risk auditing methodology was highly embraced among big audit firms. By focusing on audit firms in western region, Kenya, where the audit firms were all non-big 4 audit firms, the current study brings to surface the status of business risk auditing in a hitherto unfocused group. It indicates that application of business risk auditing among small and medium sized audit firms is low compared to big-4 audit firms as established by previous studies including Humphrey *et al.* (2010). This finding contrasts the findings of similar studies in developed countries. A study by Kitum (2010) which investigated the application of business risk auditing methodology within non-big-4 audit firms in United States, the United Kingdom and Canada, which revealed that the non-big-audit firms in the developed countries studied had adopted business risk auditing to a greater extent in order to follow the standards in their countries and to follow the trend in the industry. However, the study failed to analyse business risks into its components. This means that there is difference in application of this methodology in developing and emerging economies. Similar study by Niemi *et al.* (2014) audit methodologies from 1996 have gradually shifted towards being more responsive to business risks and control as a result of compliance requirement by the professional bodies. Similarly, this study did not incorporate all the components of business risks. None of the previous studies synthesized business risk into its specific components. Therefore the findings of this study provide further evidence not adduced by previous studies on the application business risk auditing by focusing on specific components of business risks.

4.3. Relationship Between Audit effort and Audit Fees Among Audit Firms

The second objective of the study was to determine the relationship between Audit effort and audit fees charged by audit firms in western, Kenya. The audit effort was measured by several parameters consistent with those used by leading researchers in the audit fees model studies; audit duration, client size, audit size and client complexity. To actualize this objective, correlation analysis was conducted. The results of the correlation analysis are summarized in Table 4.6.

The findings of the study reveal that all the independent variables have a significant positive correlation with the dependent variable. Audit fees is positively related with audit fees with a Pearson correlation coefficient of $r=0.441$ and there is less than 0.01

chance that the correlation coefficient occurred by chance in a sample of 91 audits. Usually social scientists accept any probability below 0.05 as indicative of genuine effect (Field, 2005). The results also indicate that audit fees is positively related to the size of the client, with a coefficient of $r = 0.349$ which is also significant at $p < 0.01$. Similarly, audit fees is also significantly and positively related to the size of the auditor, with a coefficient of $r = 0.514$ ($p < 0.01$). Finally, Audit fees is also appears to be positively related to client's complexity ($r = 0.390$, $p < 0.01$). An examination of the correlation matrix also indicates that a small but significant interrelationship exists between audit duration and client's size ($r = 0.130$, $p < 0.05$).

Table 4.6
Correlation results

		1	2	3	4	5	Mean	Stdev
1	Audit fees	1.000**					2.23	0.45
2	Duration	.441**	1.000				1.49	0.50
3	Client size	.349**	.130*	1.000			4.02	0.99
4	Size of audit firm	.514**	.063	.130	1.000		20.63	16.82
5	Client's complexity	.390**	.366*	.204	.247**	1.000	1.24	0.43

Note ** $p < 0.0$ level (2-tailed) * $p < 0.05$ level (2-tailed); $N = 91$

Dependent variable: Audit fees

Source: Survey data, 2013

In terms audit fees determination, the results in Table 4.6 means that as audit hours spend by the auditor increases, the average audit fees charged increases. What is more, as the audit client size increases, the amount of audit fees charged also increases. Any variation in the size of the auditor will cause a similar variation in the amount of audit fees charged. The more complex the client becomes in terms of diversification of business, establishment of subsidiaries and branches, the more is the audit fees charged. Finally, the positive correlation between size of the client and the audit duration implies that as the client's size expands, the audit hours required also increases.

However, there is need to exercise caution when interpreting correlation results because of its inherent limitations. First, there is the limitation of third variable problem or the *tertium quid* and secondly is the difficulty in determination of causality (Noruis, 2002 and Field, 2005). Due to the third variable problem, any bivariate correlation causality between two variables cannot be assumed because there could be other measured or unmeasured variables affecting the results. Furthermore, correlation coefficients say nothing about which variable causes the other to change. Therefore to surmount these setbacks, in order to test each of the hypotheses for the second objective of the study, regression analysis was run since the coefficient of determination, R^2 is a superior measure compared to correlation coefficient (r) as it indicates the amount of variability in one variable that is explained by the other. Further, since the dependent and independent variables are specified in the regression model, the problem of difficulty in determination of casualty is thwarted.

A regression model was therefore run to determine the relationship between audit effort and audit fee. The results of the multiple regression analysis are presented in Table 4.7 The results indicate that R^2 for the model is .501; $p < 0.01$ (Adjusted $R^2 = .478$; R^2 change = .501; $F(4,85) = 21.7$; $p < 0.01$) which implies that audit effort variables accounts for 50.1% of the variability of audit fees. Each of the predictor variables: duration, size of the client, size of the audit firm and clients complexity had a significant positive relationship with audit fees as shown by $b = .316$ ($p < 0.01$), $b = .012$ ($p < .05$) and $b = .407$ respectively. Previous study by Hassan and Nasser, (2013) found that client's size and size of audit firm did not have significant relationship with audit fee. However Hassan & Nasser, *et al.*'s (2013) study used dummy variables to measure size. By using finer scale to measure size, this study reveals that client size, size of the audit firm and clients complexity significantly predict audit fees.



Table 4.7***Relationship between audit effort and audit fees***

	Model 1				
	<i>B</i>	<i>SEb</i>	B	T	Sig.
Constant	.962	.175		5.506	
<i>Audit effort</i>					
Duration	.316	.075	.352	4.203	.000
Client's size	.012	.002	.441	5.511	.000
Size of the audit firm	.105	.036	.231	2.914	.005
Clients complexity	.407	.102	.390	4.901	.000
R					.708**
R-Square					.501**
Adjusted R –Square					.478**
Change in R Square					.501**
F- Change (ANOVA)					4,85
F-Value of model					21.17
F-Sig					.000

*Dependent Variable: Audit fees; N=91; Significance levels *p<0.05; **p<0.01)*

Source: Survey data, 2013

The contribution of each variable in the audit fee model was analyzed using bi-variate regression analysis.

4.3.1. Audit Duration and Audit Fees

In order to test H1a₀, regarding the effect of audit duration on audit fees, linear regression analysis was carried out. The regression results are summarized in Table 4.8. The results indicate that the total variance explained by the model as a whole was 19.4% ($R^2 = 0.194$, Adjusted $R^2 = 0.185$, $F(1,89) = 21.481$, $p < 0.01$). In support of H1a₀, audit duration was positively and significantly related to audit fees ($B = 0.394$, $p < 0.01$). For the data used in the study, R has a value of 0.441 and because there is only one predictor, this value represents the simple correlation between audit duration and audit fees. The value of $R^2 = 0.194$ ($p < 0.01$) which indicates that 19.4% of the variation in audit fees can be explained by audit duration. The adjusted R^2 for this model was 0.185. The value of adjusted R^2 is indicative of the amount of loss of

predictive power of the model if the model would have been derived from the population rather than the sample. Therefore the findings indicate the loss of predictive power of only 0.009. According to Field (2000), shrinkage of less than 0.075 in adjusted R^2 shows that the model is very good in generalizing the population. The Y-intercept b_0 for this model is 1.638, this means that when no time is spend on auditing (duration = 0), the model predicts that the value of \ln Fee will be 1.638 (i.e Kshs. 5,145 because the unit of measurement of audit fees was \ln Fees in Kshs thousands).

The unstandardized coefficient of audit duration b_1 is 0.394 which represents the slope of the regression line and indicates that a unit change in audit duration will result to increase in audit fees by Ksh.1,483. This is because the audit fees were log transformed and measured in Ksh “000”. (\ln Fee=0.394 therefore audit feese ^{b_1} =1.483). The t-values for these coefficients were significant at $p < 0.01$) and it can therefore be concluded that audit duration makes a significant contribution to predicting the audit fees.

Table 4.8
Effect of Audit Duration on Audit fees

	<i>B</i>	<i>SE_b</i>	B	T
Constant	1.638	0.134	--	
<i>Main Effects</i>				
Audit duration	0.394**	0.085	0.441**	
R				.441**
R Square				0.194**
Adjusted R Square				0.185**
R Square Change				0.194**
Model F Change				21.48
Model Summary df				1,89
Sig. F Change				0.000
Durbin Watson				1.829

Note: Dependent variable, Audit fees: N=91

*The significance levels * $p < 0.05$; ** $p < 0.01$*

Source: Survey data, 2013.

These results mean that audit duration in a significant predictor of the independent variable, the audit fees. This result provides further evidence in support of leading

study on the impact of audit duration on audit fees by Bell, *et al.* (2008), in which audit hours was found to have significant relationship with audit fees. The contextual setting of Bell, *et al.*'s (2008) study was different from this study but consistent results were elicited notwithstanding. Previous study had focused on developing countries. The implication of this finding to academia is that audit duration as a predictor of audit fees is also applicable in developing countries. In accounting practice, the tasks to be performed in the audit with the estimated labour hours and resources required should be the prime basis for fee quotations.

4.3.2. Size of the Client and Audit Fees

The second hypothesis (H1b₀.) regarding the effect of audit effort on audit fees stated that there is no significant positive relationship between size of the client and audit fees. To test this hypothesis, the main effect of size of the client and audit fees, a bivariate regression analysis was conducted. The results of this analysis are shown in Table 4.9. The results indicate that there is a significant positive relationship between audit fees and size of the client. As shown in Table 4.9, the unstandardized coefficient of client's size $b=0.658$; Standard Error, $SEb=0.153$; $r=0.349$; $t=4.306$ ($p<0.01$). This indicates that as the size of audit firm increases by one unit, audit fees increases by 0.658 units. Since both variables were log transformed, this results mean that a 1% increase in size of the audit firm will cause a 1.9% ($e^b/100$) increase in audit fees. The t-value $T=4.306$, $p<0.01$) indicates that this percentage change is significant.

Results of the model summarized in Table 4.9 also indicates that the total variance explained by the model as a whole is significant at $R^2= 0.172$, adjusted $R^2= 0.163$, $F = 18.54$, $p< 0.01$. This means that 17.2% of the variations in audit fees can be explained by size of the client. The difference between the R^2 and adjusted R^2 is only 0.009 implying that the predictive power of the independent variable would more or less be the same if the entire population was used and therefore it can safely be concluded that size of the client explains 17.2% of the variations in audit fees.

Table 4.9
Size of the client and audit fees

	<i>B</i>	<i>SE_b</i>	<i>B</i>	<i>t</i>	<i>Sig.</i>
Constant	1.424	0.191	-		
<i>Main effects</i>					
Client's Size	0.658	0.153	0.349**	4.306**	.000
R					0.349**
R Square					0.172**
Adjusted R Square					0.163**
R Square Change					0.172**
F Change					18.544**
Model Summary df					1,89
Sig. F Change					0.000
Durbin Watson					1.797

Dependent variable, Audit fees

*The significance levels *p<0.05; p**< 0.01*

Source: Survey data, 2013.

This finding rejects the null hypothesis H1b₀, which stated there is no significant positive relationship between client's size and audit fees. This finding is consistent with many leading studies (Bell *et al.*, 2006, Giroux 2008, Niemi 2005, El-Gammal, 2012). Giroux (2010) using a sample of 140 audits found a significant positive relationship between size of the client and audit fees (B=0.588; p<0.1). Niemi (2005) using a sample size of 81 found B=0.522 (p<0.1). El-Gamal (2012) using a sample of 80 audits concluded that the major predictor of audit fees is the size of the audit firm. Similar results were elicited from a study in Middle East by Joshi and Al-Bastaki, (2000) in which size of the client was found to have a significant predictive power on audit fees. Several explanations for this result can be adduced from the literature. Taylor, *et al.*, (2004) who also established a significant positive relationship between client's size and audit fees attributes it to the fact that client's size has a direct impact on the auditors' work, and the time spent in the auditing process. Taylor, *et al.*, (2004) also suggested that larger clients require more audit services than smaller clients, more time needed and that these large clients pay higher fees per dollar of size relative to smaller clients in the industry. Therefore, the findings for this variable are comparable and are not affected by the difference in nature of economies involved. Audit firms can therefore enhance their revenue base by putting up structures that would make them compete for large clients.

4.3.3. Size of the Audit Firm and Audit Fees

The study hypothesized a significant positive relationship between the size of the audit firm and audit fees. In order to test H1c₀, the main effect size of the audit firm on audit fees, regression analysis was conducted. The results of this analysis are shown in Table 4.10. The coefficient of determination for the model $R^2 = 0.256$ ($p < 0.01$). This indicates that the total variance explained by the model as a whole is 26.4 %. The adjusted $R^2 = 0.256$, which means that the model generalizes the population well. The F-statistics, $F(1, 89) = 31.95$ ($p < 0.01$) also indicate that the model is a significant fit of the data. The unstandardized coefficient which represents the regression slope, $B = 0.014$ means that a unit change in size of the audit firm will cause increase in audit fees by 1.014 units (This is because the audit fees was log transformed: $\ln \text{Fee} = 0.014$ therefore audit fees, $e^{b1} = 1.014$) and since audit fees was measured in Kenya Shillings thousands, it implies a unit change in size of the audit firm will increase audit fees by Ksh. 1,014. The coefficient was significant at $p < 0.01$) and it can therefore be concluded that size of the audit firm makes a significant contribution to predicting the audit fees. Collectively, these results indicate that H2c₁, was supported as the size of audit firm was positively and significantly related to audit fees ($B = 0.014$, $\beta = 0.514$; $p < 0.01$). The results indicate that 26.4 % of the variance in audit fees was explained by the model. According to Cohen (1988), this is a moderate effect.

Table 4.10
Size of the Audit firm and Audit fees

	<i>B</i>	<i>SE_b</i>	<i>B</i>
Constant	1.944	0.064	
<i>Main effects</i>			
Size of the audit firm	0.014	0.002	0.349**
R			0.514**
R ²			0.264**
Adjusted R ²			0.256**
R ² Change			0.264**
F Change			31.952**
Model Summary df			1,89
Sig. F Change			0.000
Durbin Watson			1.809

Dependent variable, Audit fees

*The significance levels * $p < 0.05$; ** $p < 0.01$*

Source: Survey data, 2013

This finding is at variant with the findings of early researches (such as Simunic, 1980 and Palmrose 1986) who found the auditor size to have inverse relationship with audit fees. Consistent with the current study, these studies hypothesized that big-8 audit firms charge higher audit fees because they function as a cartel. The conjecture which was however supported is that large audit firms charge low audit fees than non big audit firms as a result of economies of scale enjoyed they enjoy. Some insights can be drawn from the findings of Fafatas & Sun (2010) who found a positive relationship between auditor size and audit fees. The implications of these findings suggest that individual Big Four firm reputations, as measured by fee premiums, are not homogeneous across countries. Rather, it appears that the largest audit firms are associated with quality-differentiated services and thus earn higher fees.

There is indication of mixed results from other prior studies concerning this variable. Besides the client characteristics, the size of the audit firm was also established to be an important variable in the audit fees determination for instance, Francis & Stokes (1984) found out a strong relationship between auditor fees and audit company size. Consistently, other prior studies concluded that the experience of the audit firm is considered as an important attribute that influence determining the amount of audit fees (Simon *et al.*, 1992). They also found that the Big Eight or Big Five, now the Big Four (Ernst & Young, Deloitte & Touche, PricewaterhouseCoopers (known as PwC) and KPMG) audit firms receive premium fees in many countries compared to non-Big Four (Palmrose, 1986; Francis & Simon, 1987; Butterworth & Houghton, 1995). The Big Four are the biggest audit firms in the world and due to their financial strength and expertise that they have they are able to provide higher quality audit. An inherent limitation of most literature linking size of the audit firm to audit fees is the tendency to classify large international accounting firms into a pool of the "Big Four". Fafatas & Sun (2010) suggests that it is important to consider each firm's market share in specific geographic locations, and size without regard of whether or not they belong in Big-4 or not. In the current study the size of audit firm was measured using a continuous scale. According to Russel (1992), use of a coarse scale to measure variables may cause information loss which greatly reduces probability of detecting true interaction effects. Therefore the use of continuous scale for measuring size of

audit firm rather than grouping audit firms into a two-scale measure may account for the inconsistency in results of inconsistent extant studies.

4.3.4. Client's Complexity and Audit Fees

The study also hypothesized a significant positive relationship between the client's complexity and audit fees. In order to test this hypothesis, regression analysis was run. The results of the regression analysis are found in Table 4.11. As shown in Table 4.11, there is a positive relationship between client's complexity and audit fees ($B = 0.401$; $\beta = 0.390$). This relationship is significant at $p < 0.01$. The unstandardized coefficient of $B = 0.401$ implies that every unit change in the predictor variable, client's complexity causes changes in $LnFee$ by 0.401 units. The amount of change in terms of audit fees can be obtained by transforming back the log transformed units of audit fees to normal units by using e^{b1} ($LnFee = 0.401$ therefore audit fees, $e^{b1} = 1.489$ and since audit fees was measured in Kshs. "000", this result means that a unit change in client's complexity will increase audit fees by Kshs.1,489.

The variations in audit fees is explained by variations by clients complexity is shown by $R^2 = 0.152$ which implies that clients complexity accounts for 15.2 % of audit fees variations. The Adjusted $R^2 = 0.143$, is so close to R^2 (difference of only 0.009) implying that the loss of predictive power of clients complexity was not compromised by use of lesser observations than the entire population. This finding was significant as shown by $F(1,89) = 15.989$, $p < 0.01$. In support of H1d₁₀, client's complexity was therefore positively and significantly related to audit fees. Table 4.11 indicates that another important variable in the audit fees model is complexity of the client.

Table 4.11
Client's complexity and audit fees

	<i>B</i>	<i>SE_b</i>	<i>B</i>	
Constant	1.721	0.134		
<i>Main effects</i>				
Client's complexity	0.407	0.102	0.390**	
R				.390**
R Square				0.152**
Adjusted R Square				0.143**
R Square Change				0.152**
F Change				15.99**
Model Summary df				1,89
Sig. F Change				0.000
Durbin Watson				1.939

Dependent variable, Audit fees

*The significance levels *p<0.05; p**< 0.01; N=91*

Source: Survey data, 2013.

The finding that there is significant positive relationship between the complexity of the client and audit fees is consistent with the findings of leading scholars. Simunic (1980) and Jubb *et al.*, (1996) operationalized the complexity of the Client by the number of branches and subsidiaries of the firm locally and internationally (subsidiaries in foreign countries) which was adopted for this study. Naser *et al.*, (2007) also concluded that the greater the number and the more diversified the subsidiaries and operations of the clients are, the more audit work is required and therefore, audit firms charge higher audit fees. This finding was consistent with the results of an earlier study by Sandra & Patrick (1996) whose results indicated that auditors of highly complex firms often charge high audit fees in examining and evaluating the firm's financial statements. According to Sandra & Patrick (1996), foreign subsidiaries have to abide by a variety of legislative and proficient requirements for disclosure, which necessitates further audit testing, requiring more time and additional manpower to complete the audit process. This implies that the companies have to bear additional charges for audit work.

Previous studies investigating the association between audit effort and audit fees generally classified audit effort into two major categories: client attributes and auditor

attributes. Many studies (Simon et al., 1992; Fastafas & Sun, 2010; Joshi & Bastaki, 2000; and Naser, 2008) found a positive association between the client size and audit fees. These studies classified audit firms into big or non-big. However, there is a continuum of firm sizes between big and non-big categories. Using a coarse scale in measuring predictor variables has statistical limitations (Field, 2000; Hair *et al.*, 1998). Further, different measures were used by different studies to measure the size of audit firm. For instance Naser, (2008) used the size of audit office while others such as Younasa, (2014) used the assets value (Simunic, 1980), risk (Stice, 1991). Other studies such as Hassan & Naser (2013) omitted audit duration which was found to be significant in other studies (Bell et al., 2008; Jubb *et al.*, 1996, Kitum, 2010). Some of the studies relied on secondary data (Joshi & Al-Bastali 2000; Sungren & Svanstron, 2013). As a result mixed results were adduced with low predictive power of the audit effort variables. Contrary to prior research, this study reveals that audit duration, size of the client, size of audit firm, client's complexity and business risks interacting together, predict audit fees

4.4. Moderating Effect Of Business Risks on the Relationship Between Audit Effort and Audit Fees

The last specific objective of the study was to analyze the moderating impact of business risks on the relationship between audit effort and audit fees by audit firms in Western Region, Kenya. To actualize this objective, a moderated regression analysis was conducted in a three-step models in which model 1 involved the dependent variables, the second model introduced a the potential moderator variable, business risks and finally, model 3 introduced the interaction term between the moderator and the independent variable. The result of the overall moderated regression model is presented in Table 4.12.

The four predictors, audit duration, size of the client, size of the audit firm and client's complexity were entered in model 1. All the correlation coefficients are significant at 95% significant levels. The R for the model was 0.708, R- Square = .501; adjusted R-Square = .475; R^2 change = .501; F – change 21.17; F-Sig.= .000. This result indicated that 49.9% of the variation in audit fees was caused by audit duration, size of the client, size of the audit firm and client's complexity. When the potential

moderator variable is included in model 2, the $R=.553$ ($p<0.01$), adjusted $R^2=.515$; R^2 change = .054; F – change 14.52; F -Sig. = .000. The third model incorporating the predictors, moderator and cross-interaction term results indicates $R^2 = .708$; adjusted R-Square = .645; R^2 change = .155; F – change 11.09; F -Sig.= .000. Therefore the predictive power of audit effort on audit fee can be enhanced by 15.5%. This result indicates that the moderating effect of business risks which enhances the relationship between audit effort and audit fees is significantly evident.

Table 4.12

Moderating effect of business risks on the relationship between audit effort and audit fees

	Model 1					Model 2					Model 3				
	B	SEb	B	T	Sig.	B	SEb	B	T	Sig.	B	SEb	B	t	Sig.
Constant	.962	.175		5.506		.548	.221		2.476	.015	2.375	.481		4.936	.000
Audit effort															
Duration	.316	.075	.352	4.203	.000	.267	.077	.298	3.465	.001	-1.064	.426	-1.185	-2.501	.015
Client's size	.012	.002	.441	5.511	.000	.01	.002	.356	4.336	.000	-.005	.023	-.178	-.209	.835
Size of the audit firm	.105	.036	.231	2.914	.005	.103	.035	.226	2.933	.004	-.081	.109	-.178	-.746	.458
Clients complexity	.407	.102	.390	4.901	.000	.404	.103	.388	4.102	.000	-.060	.487	-.016	-.446	.382
Step 2															
Business Risks															
Step 3															
Audit effort * BR															
R					.708**					.744**					.842**
R-Square					.501**					.553**					.708**
Adjusted R -Square					.475					.515					.647
Change in R Square					.501**					.052**					.155**
F- Change (ANOVA)					4,85					5,85					9,73
F-Value of model					21.17					14.52					11.09
F-Sig					.000					.000					.000

Note: Br = Business Risks; Durbin Watson for the models = 2.164; N=91; Significance levels: *p<0.05; **p<0.01

Research Data, 2013



Compared to previous studies, the overall R^2 achieved by the inclusion of the moderator variable is relatively stronger. Naser *et al.* (2007) found $R^2 = .650$ while Bell *et al.*, (2007) found $R^2 = .598$ while Stanley (2007) found an adjusted R^2 for the overall regression model to be .651. The current study has revealed that the predictive power of audit effort can be significantly enhanced by business risks, the moderator variable. Therefore, contrary to prior research, this study showed that audit duration, size of the client, size of audit firm, client's complexity and business risks interacting together, affect audit fees. It has also revealed that business risk is a moderator in the relationship thereby advancing theory.

Although the focus of the study was the analysis of the sum total business risks, analysis of moderating effects of various components of business risks on the relationship between the dimensions of audit effort and audit fees was done, before focusing on the moderating effect of the overall measure of business risks on the relationship between various components of audit effort and audit fees. The results of this analysis are presented in Table 4.13 – Table 4.16. Table 4.12 shows the moderating effect of financial business risks (Br1), operating business risks (Br2) and compliance business risks (Br3) on the relationship between audit duration and audit fees. For each of the composite moderator variable, model 1 encompasses the independent variable only (audit duration), model 2 introduces the composite moderator variable (Br1, Br2 and Br3) respectively. The potential moderator variable is entered in step two in the regression model. Finally, the interaction term, which is the product of the potential moderator variable, is entered in step 3 to generate model 3. This procedure was done for all the variables.

Results in Table 4.13 indicate that the moderating effect of financial business risks on the relationship between audit duration and audit fees is significant. Model 1 which takes in only the independent variable, audit duration accounts for only 19.4% of the variation in audit fees ($R^2 = 0.194; p < 0.01$) compared to the final model which encompasses the potential moderator variable which accounts for 25.7% of the variation in audit fees as indicated by $R^2 = 0.257$ ($p < 0.01$). The R^2 change is also significant 0.042 ($p < 0.01$). However, the moderating effect of both operating (Br2)

and compliance (Br3) business risks on the relationship between audit duration and audit fees was not significant. Although inclusion of the potential Br2 and the interaction term in step 2 and 3 respectively enhances the predictive power of the independent variable from ($R^2 = 0.194$; $p < 0.01$) to ($R^2 = 0.216$; $p > 0.05$) the R^2 change is insignificant as shown by R^2 change 0.017 ; $p > 0.05$). Similar results were elicited by Br3 in which the expanded model which includes the independent variable, the potential moderator variable Br3 and the product of independent variable and moderator variable (Duration*Br3) indicates that $R^2 = 0.216$; $p > 0.05$; the R^2 change 0.017 ; $p > 0.05$). This shows that the moderating effect of compliance business risk on the relationship between audit duration and audit fees is not statistically significant. The mixed results of the moderating effect of different components of business risks on the relationship between audit duration and audit fees indicates when business risks are not factored in their entirety, wrong conclusion may be drawn. The moderating effect of the overall business risks on the relationship between the audit duration and audit fees are dealt with in section 4.4.1.

Table 4.13

Moderating Effect of various components of business risks on the relationship between duration and audit fees

	Model 1			Model 2			Model 3		
	<i>B</i>	<i>SE_b</i>	<i>B</i>	<i>B</i>	<i>SE_b</i>	<i>B</i>	<i>B</i>	<i>SE_b</i>	<i>B</i>
Constant	1.638	0.134		1.859	0.184		2.936	0.552	
Duration	0.394	0.085	0.441**	0.465	0.093	0.52	-0.325	0.394	-0.364
Br1				-0.108	0.062	-0.182			
Duration*Br1							0.256	0.124	1.288*
R2			0.194**						0.257*
R2 Change			0.194**						0.042*
Constant	1.638	0.134		1.571	0.167		2.269	0.528	
Duration	0.394	0.085	0.441**	0.365	0.096	0.408	-0.087	0.338	-0.097
Br2				0.04	0.059	0.072			
Duration*Br2							0.167	0.12	0.857
R2			0.194**						0.216
R2 Change			0.194**						0.017
Constant	1.638	0.134		1.765	0.141		2.146	0.347	
Duration	0.394	0.085	0.441**	0.485	0.091	0.543	0.223	0.237	0.25
Br3				-0.094	0.039	-0.244			
Duration*Br3							0.094	0.079	0.578
R2			0.194**						0.256
R2 Change			0.194**						0.049*

Note: Br1=Financial business risks, Br2 = Operating business risks, Br3 = Compliance business risks

Dependent Variable, Audit fees

**p<0.05; **p<0.01*

Source: Research data, 2013

Table 4.14 shows the results regarding the analysis of the moderating effect of financial business risks (Br1), operating business risks (Br2) and compliance business risks (Br3) on the relationship between client's size and audit fees. For each of the composite moderator variable, model 1 encompasses the independent variable only (client's size), model 2 introduces the composite moderator variable (Br1, Br2 and Br3) respectively. The potential moderator variable is entered in step two in the regression model. Finally, the interaction term, which is the product of the potential moderator variable, is entered in step 3 to generate model 3.

Results in Table 4.14 indicates that the moderating effect of any of the composite variables of business risks (Br1, Br2 and Br3) on the relationship between the independent variable, (client size) and audit fees does not exist. The test for potential moderating effect of financial business risks (Br1), indicates that the full model that includes independent variable of client's size, the moderator variable (Br1) and the interaction effect is not significant at ($R^2 = 0.129$, R^2 change = 0.000, $p > 0.05$). Similarly the full model that includes independent variable of client's size, the moderator variable (Br2) and the interaction effect is not significant at ($R^2 = 0.172$, R^2 change = 0.000, $p > 0.05$). The same inference can be drawn for Br3 in which full model that includes independent variable of client's size, the moderator variable (Br3) and the interaction effect is not significant at ($R^2 = 0.124$, R^2 change = 0.01, $p > 0.05$). When compared to the reduced model which includes only the independent variable and the potential moderator variables, the moderating effect of all the three composite variables of business risks (Br1, Br2 and Br3) that improves the model's goodness of fit does not exist. This means that none of the components of business risks enhances the relationship between size of the audit firm and audit fees. The possible implication of this finding is that large clients are inherently risky in all respects, and business risks may be highly correlated to with the size of the auditor that its enhancing capacity is diminished. The moderating effect of the overall business risks on the relationship between the client's size and audit fees is presented and discussed in section 4.4.2.



Table 4.14

Moderating Effect of Br1, Br2, Br3 on the Relationship between Client's Size and Audit fees

	Model 1			Model 2			Model 3		
	B	SE _b	B	B	SE _b	B	B	SE _b	B
Constant	1.588	0.187		1.419	0.274		1.572	0.893	
Client's Size	0.159	0.045	0.349**	0.163	0.045	0.359**	0.124	0.222	0.272
Br1				0.05	0.06	0.085	0	0.29	-0.01
Client'sSize*Br1							0.013	0.073	0.117
R2				0.122*			0.129		0.129
R2 Change				0.122*			0.007		0.000
Constant	1.588	0.187		1.286	0.225		1.185	0.699	
Client's Size	0.159	0.045	0.349**	0.148	0.044	0.327*	0.176	0.186	0.387
Br2				0.123	0.054	0.224	0.16	0.245	0.291
Client'sSize*Br2							-0.01	0.064	-0.095
R2				0.122**			0.172*		0.172
R2 Change				0.122**			0.050*		0.000
Constant	1.588	0.187		1.542	0.232		1.365	0.542	
Client's Size	0.159	0.045	0.349**	0.161	0.046	0.354*	0.206	0.132	0.453
Br3				0.013	0.039	0.034	0.075	0.174	0.194
Client'sSize*Br3							-0.016	0.043	-0.179
R2				0.122**			0.123		0.124
R2 Change				0.122**			0.01		0.01

Note: Dependent Variable, Audit fees ; Br1=Financial business risks, Br2 = Operating business risks, Br3 = Compliance business risks

*p<0.05;**p<0.01

Source: Research data, 2013.

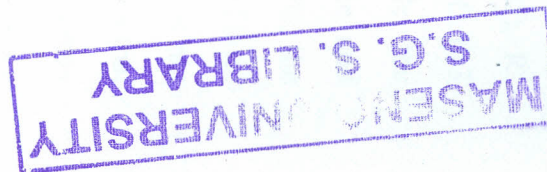


Table 4.14 shows the results of the analysis for the moderating effect of composite measures of business risks; financial business risks (Br1), operating business risks (Br2) and compliance business risks (Br3) on the relationship between size of the audit firm and audit fees. For each of the composite potential moderator variable, model 1 encompasses the independent variable only (size of the audit firm), model 2 introduces the composite moderator variables (Br1, Br2 and Br3) respectively. Finally, the interaction term, which is the product of the potential moderator variable, is entered in step 3 to generate model 3 for each of the composite moderator variables separately. Results in Table 4.15 indicate that the moderating effect of financial business risks (Br1) on the relationship between size of the audit firm and audit fees is significant. Model 1 which takes in only the independent variable, size of the audit firm accounts for only 26.4% of the variation in audit fees ($R^2 = 0.264; p < 0.01$) compared to the final model which encompasses the potential moderator variable which accounts for 33.5% of the variation in audit fees as indicated by $R^2 = 0.335; p < 0.01, R^2 \text{ change} = 0.067 (p < 0.01)$.

However, the moderating effect of both operating (Br2) and compliance (Br3) business risks on the relationship between size of the audit firm and audit fees was not significant. Inclusion of the potential Br2 and the interaction term in step 3 does not enhance the predictive power of the independent variable. ($R^2 = 0.293 (p > 0.05), R^2 \text{ change} = 0.000 (p > 0.05)$). Similarly results regarding the moderating effect of Br3 indicated that the expanded model which includes the independent variable, the potential moderator variable Br3 and the product of independent variable and moderator variable (size of the audit firm*Br3) shows that $R^2 = 0.270; p > 0.05$; the $R^2 \text{ change} = 0.006; p > 0.05$). This shows that the moderating effect of compliance business risk on the relationship between size of the audit firm and audit fees is not statistically significant. The finding of this analysis is important because it shows that although both operating business risks (Br2) and compliance business risks (Br3) may does not enhance the predictive power of size of the audit firm, financial risks has a significant moderating effect. Therefore, it is important for auditors to conduct all the three business risk assessment as existence of financial business risks would enable the firm charge enhanced audit fees.

Table 4.15

Moderating Effect of Br1, Br2, Br3 on the relationship between Auditor Size and audit fees

	Model 1			Model 2			Model 3		
	B	SE _b	B	B	SE _b	B	B	SE _b	B
Constant	1.944	0.064		2.048	0.17		1.993	0.164	
Auditor's Size	0.014	0.002	0.514**	0.014	0.002	0.527**	0.013	0.002	0.476**
Br1				-0.037	0.055	-0.062			
Auditor'sSize*Br1							0.04	0.013	0.351**
R2			0.264**				0.268		0.335**
R2 Change			0.264**				0.004		0.067**
Constant	1.944	0.064		1.697	0.145		1.742	0.339	
Auditor's Size	0.014	0.002	0.514	0.013	0.002	0.484**	0.011	0.016	0.399
Br2				0.095	0.05	0.172*	0.095	0.05	0.172*
Auditor'sSize*Br2							0.01	0.004	0.086
R2			0.264**				0.293*		0.293
R2 Change			0.264**				0.029		0.000
Constant	1.944	0.064		1.947	0.119		2.23	0.362	
Auditor's Size	0.014	0.002	0.514**	0.014	0.002	0.514**	0.01	0.015	0.039
Br3				-0.01	0.035	-0.003	-0.008	0.036	-0.021
Auditor'sSize*Br3							0.003	0.004	0.481
R2			0.264**				0.264		0.270
R2 Change			0.264**				0.000		0.006

Dependent Variable, Audit fees ; Br1=Financial business risks, Br2 = Operating business risks, Br3 = Compliance business risks

*p<0.05;**p<0.01

Source: Survey data 2013

Table 4.16 shows the results regarding the analysis of the moderating effect of financial business risks (Br1), operating business risks (Br2) and compliance business risks (Br3) on the relationship between client's complexity and audit fees. For each of the composite moderator variable, model 1 encompasses the independent variable only (client's complexity), model 2 introduces the composite moderator variable (Br1, Br2 and Br3) respectively. The potential moderator variable is entered in step two in the regression model. Finally, the interaction term, which is the product of the potential moderator variable, is entered in step 3 to generate model 3.

Results in Table 4.16 indicate that the moderating effect of financial business risks on the relationship between client's complexity and audit fees is significant. Model 1 which takes in only the independent variable, size of the audit firm accounts for only 15.2% of the variation in audit fees ($R^2 = 0.152$; $p < 0.01$) compared to the final model which encompasses the potential moderator variable which accounts for 23.3% of the variation in audit fees as indicated by $R^2 = 0.233$; $p < 0.01$, R^2 change = 0.080 ($p < 0.01$). Further, the moderating effect of both operating (Br2) and compliance (Br3) business risks on the relationship between size of the audit firm and audit fees was also significant. Inclusion of the potential Br2 and the interaction term in step 3 do enhance the predictive power of the independent variable. ($R^2 = 0.256$ ($p < 0.01$), R^2 change = 0.066 ($p < 0.01$). Similarly results regarding the moderating effect of Br3 indicated that the expanded model which includes the independent variable, the potential moderator variable Br3 and the product of independent variable and moderator variable (Client's complexity*Br3) shows that $R^2 = 0.183$; $p < 0.05$; the R^2 change 0.030; $p < 0.05$). This shows that the moderating effect of all the composite variables of business risk on the relationship between the client's complexity and audit fees is statistically significant. The moderating effect of the overall business risks on the relationship between the size of the client's complexity and audit fees are presented and discussed in section 4.4.4.

Table 4.16

Moderating Effect of BR1, BR2, BR3 on the relationship between Client's Complexity and audit fees

	Model 1			Model 2			Model 3		
	B	SE _b	B	B	SE _b	B	B	SE _b	B
Constant	1.721	0.134		1.72	0.212		3.327	0.569	
Client'sComplexity	0.407	0.102	0.390**	0.407	0.103	0.390*	-0.954	0.461	-0.914**
Br1				0	0.059	0.01*	-0.515	0.18	-0.866*
Client'sComplexity*Br1							0.433	0.143	1.672**
R2			0.152**				0.152		0.233**
R2 Change			0.152**				0.000		0.080**
Constant	1.721	0.134		1.461	0.183		2.778	0.506	
Client'sComplexity	0.407	0.102	0.390**	0.373	0.101	0.357**	-0.771	0.423	-0.739*
Br2				0.109	0.053	0.198*	-0.34	0.17	-0.619*
Client'sComplexity*Br2							0.385	0.139	1.494**
R2			0.152**				0.190*		0.256**
R2 Change			0.152**				0.038*		0.066**
Constant	1.721	0.134		1.746	0.17		2.336	0.387	
Client'sComplexity	0.407	0.102	0.390**	0.408	0.102	0.391*	-0.112	0.323	-0.107
Br3				-0.009	0.038	-0.023	-0.217	0.128	-0.565*
Client'sComplexity*Br3							0.183	0.108	0.760*
R2			0.152**				0.153*		0.183*
R2 Change			0.152**				0.01		0.030*

Dependent Variable, Audit fees *Br1*=Financial business risks, *Br2* = Operating business risks, *Br3* = Compliance business risks

*p<0.05;**p<0.01

Source: Survey data (2013)

The next section presents the findings and discussions of the results regarding the moderating role of each of the variables representing audit effort on the relationship between audit effort and audit fees.

4.4.1. Moderating Effect of Business Risk on The Audit Duration-Audit Fees Relationship

The study hypothesized that the relationship between audit duration and audit fees is moderated by business risk as assessed by the auditor. To test this hypothesis, a moderated regression analysis was run, a procedure which yielded results tabulated in Table 4.17. As shown in the table, the full model that includes the independent variable of audit duration, the moderator of business risks and the interaction effects is significant at ($R^2 = 0.303$, Adjusted $R^2 = 0.297$, $F = 21.48$, $F\text{-change} = 21.48$, $p < 0.05$). Compared with the reduced model, which only includes predictors and moderators (step 2), the addition of interaction terms in the full model significantly increases the R^2 (increase in $R^2 = 0.109$, $p < 0.05$). Therefore, the moderating effect of business risks that improves the model's goodness of fit is statistically evident. The hypothesized contingency model explains 30.3% of the variance in audit fees charged by auditors. The finding that the moderating effect of business risks that improves the model's goodness of fit is statistically evident, indicates that assessment of business risks of a client and the duration spend on an audit assignment determines the audit fees charged, the implication is that audit duration does not operate independently as a determinant of audit fees but rather, its predictive power can be enhanced by business risks. This finding can also imply that the longer the time spend in an audit assignment, the more the chances of identifying business risks and the higher the audit fees charged. These results were consistent with the findings of Bently *et al.* (2011) who found that the relationship between audit effort and audit fees is significantly enhanced by existence of business risks. Bell *et al.* (2007) and Bell, Peecher, & Solomon (2005) found that business risk assessments influence the assignment of audit labor within and across engagements. The finding of this study provides further evidence by incorporating the three components.

Table 4.17

Moderating effect of business risks on the Audit duration-audit fees relationship

Variables	Model 1			Model 2			Model 3		
	<i>B</i>	<i>SE_b</i>	<i>B</i>	<i>B</i>	<i>SE_b</i>	<i>B</i>	<i>B</i>	<i>SE_b</i>	<i>B</i>
Constant	1.638	0.134	--	1.79	0.160	-	2.562	.468	2.562
Step 1									
Duration	0.394	0.085	0.441**	.470	0.096	0.529*	-.127	.354	-.142*
Step 2									
Business Risks				-0.553	0.413	-0.161	-2.371	1.068	-.705
Step 3									
Duration x Business risks							1.303	.743	1.042
R ²			0.194**			0.265			0.303*
Adjusted R ²			0.152			0.161			0.297*
Change in R ²			0.194**			0.071			0.109*
F change (ANOVA)			21.48**			7.323			7.614*
F value for model			21.48**			3.789			3.712*

Source: Survey data, 2013

*Note: The significance levels *p>0.05; **p<0.01;*

Dependent variable: Audit fees: N=91

Source: Survey data (2013)

4.4.2. Moderating Effect of Business Risk on The Relationship Between Client's Size and Audit Fees Relationship

The study hypothesized that the relationship between the client size and audit fees is moderated by business risk as assessed by the auditor. Table 4.17 summarizes the findings of the three – step moderated regression analysis with the dependent variable (client size) only in step one, the potential moderating variable (business risks) introduced in step 2 and eventually interaction effect in step 3.

As shown in the Table 4.18, the full model that includes the independent variable of client size, the moderator of business risks and the interaction effects is insignificant at ($R^2 = 0.359$, Adjusted $R^2 = 0.043$, $F = 0.486$, $F\text{-change} = 4.294$, $p > 0.05$). Compared with the reduced model, which only includes predictors and moderators (step 2), the addition of interaction terms in the full model slightly but insignificantly increases the R^2 (increase in $R^2 = 0.006$, $p > 0.05$). This implies that the moderating effect of business risks that improves the model's goodness of fit is statistically insignificant. The hypothesized contingency model explains only 35.9% of the variance in audit fees charged by auditors. The possible implication of this finding to the literature and auditing practice is that business risks are synonymous with large firms to an extent that the level of business risks does not modify the predictive power of the client's risk. Some insights can be drawn from the literature. Younasa *et al.*, (2014) concurs that by default, auditors spend more time and efforts to check and verify the quality of financial statements (financial business risk assessment) of their large sized clients, which are involved in a variety of business operations and also operate a large number of business assets.

Results indicating that the relationship between client size and audit fees is not significantly moderated by business risks suggests that client size, as a variable operates independently as a predictor of audit fees and is not moderated by the business risks of the client. Prior studies have yielded consistent results regarding the role of client size in determination of audit fees with leading scholars such as Simunic, (1980), Low *et al.*, (1990), Chan *et al.*, (1993), Carson *et al.*, (2004), Jubb *et al.*, (1996) among other studies concluding that client's size is the most important

factor that influences audit fees directly. Younasa *et al.*, (2014) argues that auditors spend more time and efforts to check and verify the quality of financial statements of their large sized clients, which are involved in a variety of business operations and also operate a large number of business assets. Furthermore, a positive relation is expected between audit fees and client size because auditors conduct a detailed auditing procedure by applying substance testing and adequate amount of compliance to their large clients. Consistent with the current study, Younasa *et al.*, (2014) did not find any significant interaction effect of client's risk in the relationship. In fact, Younasa *et al.*, 's study did not find client's risk to have any significant role in predicting audit fees in Pakistan. However, Stanley (2007) found results associating business risks to small clients rather than large firms. The diversity in the findings of the present study and that of Stanley (2007) lies in the operationalization of business risks. While financial risk which was the focus of Stanley's study can be prone to small clients, the overall business risks can be associated with larger firms. This accentuates the need by scholars to capture the business risk components comprehensively in the analysis to arrive at concrete conclusions.

Table 4.18

Moderating effect of business risks on the client size-audit fees relationship

Variables	Model 1			Model 2			Model 3		
	<i>B</i>	<i>SE_b</i>	B	<i>B</i>	<i>SE_b</i>	B	<i>B</i>	<i>SE_b</i>	B
Constant	1.588	.187	-	1.463	.242	-	1.342	.737	-
Step 1									
Client Size	.159	.045	.349**	.192	.189	.422*	.192	.189	.422
Step 2									
Constant									
Client's Size									
Business Risk				.275	.335	.082	.546	1.603	.162
Step 3									
Clientsize X BR							-0.331	0.474	-0.479
R ²			0.172*				0.359*		0.359
Adjusted R ²			0.06				0.05		0.043
Change in R ²			0.172				0.003		0.006
F change (ANOVA)			12.36**				6.498		4.294
F value for model			12.36**				0.673		0.486

The significance levels shown are one-tailed for hypothesis testing

*p<0.05; **p<0.01

Source: Survey data (2013)

4.4.3. Moderating Effect on Business Risk on The Relationship Between Size of the Audit Firm and Audit Fees

The study hypothesized that the relationship between size of the audit firm and audit fees is moderated by business risk as assessed by the auditor. To test this hypothesis, a moderated regression analysis was run, a procedure which yielded results tabulated in Table 4.18. As shown in the table, the full model that includes the independent variable of size of audit firm, the moderator of business risks and the interaction effects is significant at ($R^2 = 0.231$, Adjusted $R^2 = 0.194$, $F = 5.533$, $F\text{-change} = 7.614$, $p < 0.05$). Compared with the reduced model, which only includes predictors and moderators (step 2), the addition of interaction terms in the full model significantly increases the R^2 (increase in $R^2 = 0.091$, $p < 0.01$). The moderating effect of business risks that improves the model's goodness of fit is statistically evident. The hypothesized contingency model now explains 35.5% of the variance in audit fees charged by auditors as compared to only 26.4% accounted for by size of the audit firm alone.

The results in Table 4.19 indicate that the relationship between the size of the audit firm and audit fees is significantly moderated by business risks. This implies that the audit firm size and audit fees relationship is enhanced by business risks. Leading prior studies has indicated consistent results as to the role of size of the audit firm and audit fees charges (Simunic, 1980; Low *et al.*, 1990; Chan *et al.*, 1993; Firth, 1997; Butterworth & Houghton, 1995; Carson *et al.*, 2004). The findings of this study therefore provide further insight to this relationship by locating the position of business risks as a moderating variable in the relationship. The finding also provide further evidence that big audit firms perform business risk assessment more than small audit firms and the outcome of the business risk assessment is incorporated as a risk premium in the audit fees negotiation.

Table 4.19

Moderating effect of business risks on the size of the audit firm-audit fees relationship

Variables	Model 1			Model 2			Model 3		
	<i>B</i>	<i>SE_b</i>	<i>B</i>	<i>B</i>	<i>SE_b</i>	<i>B</i>	<i>B</i>	<i>SE_b</i>	<i>B</i>
Constant	1.944	.064	-	1.897	.147	-	1.877	.141	-
Step 1									
Size	.014	.002	.514**	.014	.002	.512	.013	.002	.472
Step 2									
Business risks (BR)				.109	.308	.032*	.266	.088	.396**
Step 3									
Auditor's Size*BR							2.952	1.855	1.388
R ²			0.264			0.265			0.355**
Adjusted R ²			0.256			0.249			0.312*
Change in R ²			0.264			0.01			0.091**
F change (ANOVA)			31.95**			15.881*			14.623**
F value for model			31.95**			1.323*			9.161**

Note: *Br* = Business risks; Dependent variable: Audit fees; N=91; Significance levels: * $p < 0.05$; ** $p < 0.01$

Source: Survey data (2013)

4.4.4. Moderating Effect of Business Risk on the Relationship Between Client's Complexity and Audit Fees

Table 4.20 reveals the moderating effect of business risk on the relationship between client's complexity and audit fees. As shown in the Table 4.19, the hypothesis that the relationship between complexity of the audit client and the audit fees charged by the auditor is moderated by business risks was supported. The full model that includes the independent variable of Client complexity, the moderator of business risks and the interaction effects is significant at ($R^2 = 0.236$, Adjusted $R^2 = 0.209$, $F = 0.053$, $F\text{-change} = 8.940$, $p < 0.05$). Compared with the reduced model, which only includes predictors and moderators (step 2), the addition of interaction terms in the full model significantly increases the R^2 (increase in $R^2 = 8.3\%$, $p < 0.05$). This implies that the moderating effect of business risks that improves the model's goodness of fit does exist. The hypothesized contingency model explains 23.6% of the variance in audit fees charged by auditors.

Table 4.20

Moderating effect of business risks on the Client's complexity-audit fees relationship

Variables	Model 1			Model 2			Model 3		
	<i>B</i>	<i>SE_b</i>	<i>B</i>	<i>B</i>	<i>SE_b</i>	<i>B</i>	<i>B</i>	<i>SE_b</i>	<i>B</i>
Constant	1.721	.134	-	1.695	.187	-	3.305	.554	-
Step 1									
Client complexity	.407	.102	.390**	.404	.103	.388*	-1.060	.487	-1.016
Step 2									
BR				.068	.333	.020	-3.414	1.177	-1.016*
Step 3									
Client's complexity*BR							3.141	1.022	1.872*
R ²			0.152**			0.153			0.236*
Adjusted R ²			0.143			0.133			0.209
Change in R ²			0.152			0.01			0.083
F change (ANOVA)			15.898**			7.929*			8.940**
F value for model			8.49			0.070			0.053

Note: BR = Business risks; The significance levels shown are one-tailed for hypothesis testing: $p < 0.05$; $p < 0.01$; $N = 91$

Source: Survey data (2013)

The study findings from Table 4.19 indicate that the moderating effect of business risks on the relationship between client's complexity and audit fees is statistically significant, implying that business risks enhances the relationship between the two variables. Naser *et al.*, (2007), established that the more complex the client firm is, the greater the number and the more diversified the subsidiaries and operations are; which necessitate more audit work; therefore, audit firms charge higher audit fees. Since more audit work is necessitated by the results of business risk assessment, the findings of Naser *et al.*, (2007) seem to support the notion of moderating effect of business risk on the client's complexity-audit fees relationship. Researchers such as Sandra & Patrick (1996) have posited that auditors of highly complex firms often charge high audit fees in examining and evaluating the firm's financial statements citing that foreign subsidiaries have to abide by a variety of legislative and proficient requirements for disclosure, which necessitates further audit testing, requiring more time and additional manpower to complete the audit process. This implies that the companies have to bear additional charges for audit work. Existence of business risks calls for more audit work thereby driving audit fees upwards. However from prior studies, complexity of the client would by itself call for more rigorous audit work. This means that as a determinant of audit fees, client's complexity operates independent of and is not moderated by business risks.

CHAPTER FIVE: SUMMARY CONCLUSIONS AND RECOMMENATIONS

This chapter presents summary, conclusions and recommendations of the study. The problem of this study emanated from the exposure of auditors to audit risk and subsequent mistrust from users of financial information as a result of inherent limitations of audit methodology adopted by the auditors. This problem is also exacerbated by the growing decline in the performance of audit firms with the number of big audit firms shrinking gradually from Big-8 in 1980s to the current Big-4 position. To address these issues leading audit firms adopted business risk auditing approach as well as seek for alternative strategies to boost their performance in terms of enhanced revenues. The purpose of this chapter is to elucidate the summary, conclusions and recommendations of this study, as well as implications for theory, policy and practice. A discussion on the limitations of the study and suggestions for future research concludes the chapter.

5.1. Summary of Findings

The study found that business risk auditing is practiced to a moderate extent in western region, Kenya. Previous studies had concentrated on developing countries and big international audit firms. This study therefore sheds light on the application of business risk auditing in western Kenya which was hitherto not known.

The second objective of the study sought to determine the relationship between audit effort and audit fees. There was a concern that auditors in the study area were not able to accurately cost the audit services leading low audit fee revenues. Previous studies focused had focused on developed countries and targeted the large international firms and did not incorporate the components of business risks in the prediction of audit fees. Contrary to prior research, this study reveals that audit duration, size of the client, size of audit firm, client's complexity and business risks interacting together, predict audit fees.

The third objective sought to determine the moderating effect of business risks on the relationship between audit effort and audit fees. Contrary to prior research, this study showed that audit duration, size of the client, size of audit firm, client's complexity

and business risks interacting together, affect audit fees. It has also revealed that business risk is a moderator in the relationship thereby advancing theory.

5.2. Conclusions

Following the findings of this study, the following conclusions were made. Conclusions drawn from the findings of the study for each research objective are considered separately.

5.2.1. Research Objective 1

The first research objective was to establish the extent of application of business risk auditing approach among audit firms in western region, Kenya. The application of business risk auditing was considered from the three dimensions of business risks; financial risks, operating risks and compliance risks. The findings of this objective lead to conclusion that financial risk and operating risk assessment is practiced to a low extent in the study area and auditors are keen on the assessment of compliance risks such as compliance with legal requirements and that little attention is put on the operating and financial risk assessment.

5.2.2. Research Objective 2

The second research objective was to determine the direct relationship between audit effort and audit fees in which the study found that all the variables representing audit effort; audit duration, client size, client complexity and audit firm size had a significant relationship with audit fees charged. Further survey of the results indicates a significant correlation among key independent variables which is useful for research direction. However, on the overall, the findings of the main research objective 2 leads to the conclusion that the client size, client complexity and audit firm size are the major factors that influence audit fees in the study area.

5.2.3. Research Objective 3

The research objective three sought to determine the moderating effect of business risks on the relationship between audit effort and audit fees. The overall finding of this study was that the positive relationship between audit effort and audit fees was

moderated by business risks. The results of the moderating effect of business risks on the relationship between individual variables of audit effort and audit fees, however, slightly varied across the specific variables. Conclusions in respect of each individual component of audit effort are considered in turn in the next section.

The finding that the relationship between audit duration and audit fees is moderated by business risks is significantly evident leads to the conclusion that assessed business risks of a client and the duration spend on an audit assignment determines the audit fees charged and that audit duration does not operate independently as a predictor of audit fees. Therefore, audit duration as a variable explaining audit fees can be enhanced significantly by business risks. This conclusion is important as it provides explanation to the hitherto low predictive power of audit duration in the audit fees model.

The study also hypothesized that the relationship between size of the client and audit fees is moderated by business risks. This hypothesis was not supported as the moderating impact of business risks on the relationship was not statistically evident. This leads to the conclusion that client's size is an independent variable which operates independently as a driver of audit fees and is not moderated by the business risks of the client.

The conclusion that was construed from the finding that the relationship between the size of the audit firm and audit fees is significantly moderated by business risks is that like the audit duration, the relationship between the size of the audit firm and audit fees is enhanced by business risks. The implication of this finding is that audit firms who assess business risks of its clients prior to engagement would likely charge premium fees for risky clients in order to cushion themselves against possible audit risks.

Finally, following the finding that the moderating effect of business risks on the relationship between client complexity and audit fees is significant leads to the conclusion that the relationship between the client's complexity as determined by the diversity in terms of number of branches and subsidiaries and the audit fees charged

by the auditor can be enhanced by business risks. There major possible implication of this conclusion is that the predictive power of complexity of the client, which has been very low in previous studies, can be enhanced by business risks.

5.3. Recommendations

In view of the findings and conclusions of the study, the following recommendations were made.

5.3.1. Application of Business Risk Audit Approach

Regarding the first objective of the study which sought to establish the extent of application of business risk auditing, which was found to be practiced to a low extend, the study recommends that audit firms should focus on operating risk assessment in their audit assignments. There is need for training of audit personnel on the emerging audit methodologies and procedures. There is need for the accounting profession's regulation body, The Institute of Certified public Accountants of Kenya (ICPAK) to promote the adopted of business risk auditing through seminars, its publications and other forums. Implementation and adherence to ISA 315 should also be monitored. The institute should modify their audit model audit file to incorporate all the tests and assessments required by ISA 315.

Besides recommendations to auditing profession, there is also an important implication for researchers that can be drawn from this conclusion; the measurement of business risks should incorporate all its components. A study may obtain a misleading measure of business risk of a client if it considered only financial risks than if it considered all components of business. Therefore future researchers should focus on the entirety of the business risk measure rather than skewing the study towards only financial risk assessment which has been the focus for most of the previous studies.

5.3.2. Relationship Between Audit Effort and Audit Fees

A number of recommendations can be drawn from conclusion that all the variables representing audit effort; audit duration, client size, client complexity and audit firm

size had a significant relationship with audit fees charged. The general recommendation is that audit firms can enhance their revenues by focusing on the variables that determine audit fees charged. Some suggestions can also be extended to researchers interested in audit fees model concerning the pertinent variables to be included in the model. Recommendations regarding each of these variables are considered below.

The conclusion that audit duration has a significant positive impact on audit fees leads to recommendation that auditors should incorporate audit hours in the negotiation of audit fees. Spanning from this recommendation, audit clients can also reduce audit fees chargeable by instituting strong internal controls which will reduce audit hours required to undertake the audit. The conclusion that audit duration is related to client size and client complexity leads to recommendation that scholars of audit fees modeling should regard audit duration as a parameter for client size or complexity rather than as independent variable in audit fees model.

The study also revealed the existence of significant positive relationship between the client's size and audit fees leading to the conclusion that the size of the client is an importance explanatory variable for audit fees. Consistent with auditing theory, large clients have expansive scale of operations and thus require more audit resources to be dedicated. Therefore it is recommended that the size of the client should be factored in the determination of audit fees. Small audit firms should therefore embark on rigorous strategies to attract large clients.

The significant positive relationship between the audit firm size and audit fees implies that big audit firms have a competitive edge compared to small audit firms regarding audit pricing. Hence it is recommended that small firms should focus on expansion strategies including merger with other small firms. Apart from the potential of large audit firms charging premium fees, they are able to attract bigger clients which will further enhance their revenue since the study suggests a significant positive relationship with audit fees.

Following the finding and conclusion that there is a significant positive relationship between client's complexity and audit fees, it is recommended that audit firms should focus on clients with several subsidiaries and branches as this will have positive impact on the audit fees revenue. Auditors should charge premium audit fees to more complex clients because diversity and incomparability of clients' businesses increases the chances of inaccuracy of audit report

5.3.3. Moderating Effect of Business Risks on the Relationship Between Audit Effort and Audit Fees

The third objective of the study sought to determine the moderating effect of business risks on the relationship between audit effort and audit fees. Based on the findings, the study concluded that the relationship between audit duration, size of the audit firm and complexity of the client and audit fees are all significantly moderated by business risks. The study also concluded that the relationship between size of the client and audit fees is not significantly moderated by business risks. These conclusions front several suggestions which are considered in turns for the moderating effect of business risk for each variable of audit effort.

Firstly, following the conclusion that the relationship between audit duration and audit fees is significantly moderated by business risks, it is recommended that, audit firms should enhance their audit fees revenue by conducting business risk auditing. The detailed analysis of audit plan should be comprehensive enough in terms of covering all areas of business risks and should be used in determination of audit fees. Existence of business risks in the risk assessment stage will enable the firm put more resources on more risky areas and guide them on the appropriate fee to be invoiced.

Secondly, as to the conclusion that the relationship between the size of the client and audit fees is not moderated by business risks and that client size, is a predictor variable which operates independently as a driver of audit fees and is not moderated by the business risks of the client, it is recommended that large clients should be charged higher audit fees regardless of risk assessment results. The implication of this finding further supports the preposition that business risks are synonymous with large clients and therefore auditors should seek ways of minimizing litigation costs due to

potential audit risks inherent in risky clients. These measures would include performance of additional tests and thereby charging premium audit fees.

Thirdly, the conclusion that the relationship between the size of the audit firm and audit fees is enhanced by business risks leads to the recommendation that audit firms should assess business risks of its clients prior to engagement as this would likely enable them to charge premium fees for risky clients thus cushioning themselves against possible audit risks. Researchers can also enhance the predictive power of size of the audit firm by incorporating the moderator variable, business risks.

Finally, following the finding and conclusion that the relationship between the client's complexity as determined by the diversity in terms of number of branches and subsidiaries and the audit fees charged by the auditor can be enhanced by business risks, is recommended that scholars should use business risk as a moderating variable in the audit fees model. The existence of significant intervention effect of business risks on the relationship between clients' complexity and audit fees implies that auditors should consider both the clients complexity and business risks in the audit fees negotiation process. Audit firms should also seek to gain more complex clientele so as to boost their audit fees revenues.

5.4. Limitations of the Study

Notwithstanding the findings of this study and despite the important contributions this research makes to the body of knowledge on business risk auditing and audit fees modeling, it is necessary to evaluate the results in the context of some caveats. It is generally acknowledged that methodological choice has profound effect on most social research studies, Nachmias and Nachmias, (2008) and audit fees model in particular Niemi, (2005).

First, scholars have expressed concerns regarding survey designs and associated measurement problems (Ittner & Larcker, 2001; Abernethy *et al.*, 2007). Surveys and their cross-sectional nature of data as opposed to longitudinal data mean that conclusions could be limited to those of association as opposed to having conclusions

that illuminate causal relationships between the variables of interest (Thoren & Brown, 2004). However, given the research objectives and the importance of shedding light on the relationship between audit effort, business risks and audit fees, it was necessary to collect data from individuals within firms thus justifying the use of cross-sectional survey design.

The second limitation, relates to the use of self-report measures for the study variables. This study reflects the perceptions of the respondents who comprised the staffs of audit firms. Although this is a prevalent practice in contingency-based research, their objectivity has raised concern (Chenhall, 2003; Abernethy & Brownell, 1999). The perceptions were limited to the measures of business risks only as other aspects of the questionnaire dealt with continuous quantitative data which had nothing to do with perception. However the limitation relating to subjective measures was suppressed by the various validity tests. Further, the use of multiple respondents helped to limit measurement error relating to common method bias with due care taken in the administration of the questionnaire (Nachmias Nachmias (2008). The questionnaire was self-administered and psychometric properties were tested to ensure reliability and validity.

The third limitation relates to the relatively small sample size and the resulting concern that the data may not fully capture the range of factors that interplay in the relationship between business risks and audit effort. A larger sample size would have supported a more robust statistical technique such as structural equation modeling (SEM), which is better predisposed to expose insignificant relationships otherwise masked in selective correlation regression analysis and multiple regression analysis, (Tucker *et al.*, 2008). Measures were taken to enhance response rate and improve the number of cases that were used in the final analysis. Further, the study focus was on small firms, therefore, the study objectives were not jeopardized by the selection of the study area and sample.

5.5. Suggestions for Further Research

Directions for future research are consequent to the study findings as well as from missed opportunities in using the selected rather than alternative research methodologies and techniques. Firstly, there is need for future studies to employ

longitudinal research design so as to bring out how the causal interrelationship of variables changes over time. In this way, the effects of political and social economic changes on the study variables would be ascertained (Niemi, 2005). Further, this study focused on four predictors of audit fees: duration, client's size, and auditor size and clients complexity. There is need for future scholars to incorporate predictors of audit fees and assess the moderating effect of business risks in each of the additional variable. The study population in this study comprised of firms in western Kenya. The selection of this study area resulted to selection of audit firms in Non-Big 4 audit firms because they have no offices in the study area. The intention was to focus on small and medium sized audit firms. Future studies should focus on larger populations which incorporates both small and big audit firms in geographical other areas. Future research is needed to evaluate generality of the results. For example a cross-county studies focusing on small Non Big-4 audit firms can be useful in establishing the capacity for which these findings can be generalized.

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