

**THE EFFECTS OF CORPORATE TAX PLANNING ON FIRM VALUE FOR  
COMPANIES LISTED AT THE NAIROBI SECURITIES EXCHANGE**

**BY**

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## **DECLARATION**

This research project is my original work and has not been submitted for examination in any other University.

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## **DEDICATION**

To my parents and my siblings.

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## **ABBREVIATIONS**

|     |                             |
|-----|-----------------------------|
| BTD | Book Tax Differences        |
| CMA | Capital Markets Authority   |
| ETR | Effective Tax Rates         |
| IV  | Independent Variable        |
| KRA | Kenya Revenue Authority     |
| NSE | Nairobi Securities Exchange |
| NT  | National Treasury           |
| OLS | Ordinary Least Squares      |
| PwC | PriceWaterhouseCoopers      |
| RBV | Resource Based View         |
| ROE | Return on Equity            |
| SME | Small and Medium Enterprise |
| US  | United States               |



## **ABSTRACT**

Many studies suggest that the financial directors of most quoted firms consider the reduction of their firm's effective tax rate as the main objective of their tax department. Apparently, these firms believe that reducing the effective tax rate creates value for their shareholders. Recent interviews with investors and financial analysts, however, suggest they pay little attention to after tax earnings when valuing a firm. These investors and analysts do not believe that a company can sustainably outperform the firm's statutory tax rate. They also think that tax information in the public accounts is so unclear that it is unusable for their valuations. Given this background, the study sought to examine the effect of corporate tax planning on the value of firms listed at the Nairobi Securities Exchange.

This study was designed as a causal predictive research design. Given that the purpose of this study was to examine the effect of tax avoidance on financial performance, this was the most appropriate design for the study. The population of this study was all the companies listed on the Nairobi Securities Exchange. Secondary data was sourced from the CMA, respective company websites, and The African Financials website on the variables of interest for the five year period beginning 2009 to 2013 for 20 companies with complete data. A descriptive analysis was used to describe the data in terms of mean scores and standard deviations among other descriptive statistics. In order to examine the effect of tax planning on firm value, regression analysis was carried out. Since the data collected was panel data, the analysis was performed using panel data regression techniques with the aid of Eviews 7 analysis software.

The descriptive results showed that the mean firm value was 0.4551 while effective tax rates averaged 23%. The major finding was that tax planning had a negative and

significant impact on the value of the firm ( $\beta = -0.05, p = 0.04$ ). The study also showed that board ownership had a positive but insignificant effect on firm value ( $\beta = 0.0006, p = 0.547$ ). The results further showed that age of the firm had a negative and significant effect on firm value ( $\beta = -0.01, p = 0.001$ ). The study found that size of the firm had a positive and significant effect on firm value ( $\beta = 0.002, p = 0.000$ ). The study revealed that leverage had a negative and significant effect on firm value ( $\beta = -0.585, p = 0.002$ ). The results further showed a negative but insignificant relationship between asset tangibility and firm value ( $\beta = -0.01, p = 0.542$ ). The results showed that the  $F$ -statistic was 41.16 and significant,  $p < .001$ , thus suggesting that the model was fit to explain the relationship between tax planning and firm value. From the  $R^2$  value, the model explained 95.7% of the variance in firm value. The study concludes that tax planning influences the value of listed firms in Kenya. The study recommends the need for firms to institute more robust tax planning practices that will help reduce their effective tax liabilities and therefore improve their overall value. Firms that engage in better tax planning practices are likely to get higher firm value

## **CHAPTER ONE:INTRODUCTION**

### **1.1 Background of the Study**

A number of studies have documented and explained variations in tax burdens or Effective Tax Rates (ETRs) in terms of firm level characteristics (Zimmerman, 1983; Gupta and Newberry, 1997; and Holland, 1998) but it is only recently that attention has turned to understanding the underlying motivation for these variations and any potential equity valuation consequences.

Traditionally, tax planning is seen as leading to increase after tax earnings and therefore to be in the interest of shareholders; this is the view typically taken in valuation models. In recognising shareholders' need to control managers' tax decision making, Slemrod (2004) suggests linking managers' compensation to "desirable outcomes" such as ETR. This implied valuation effect is consistent with anecdotal evidence of a negative association between ETR and share price (Swenson 1999).

#### **1.1.1 Tax Planning**

In the literature of taxation, tax planning and tax avoidance are used interchangeably. According to Hanlon and Heitzman (2010), there is no universally accepted definition or construct for the term corporate tax planning. Studies proposing a new perspective on the matter are recent, starting with Slemrod (2004), Chen and Chu (2005) and Crocker and Slemrod (2005), pioneers in treating the theme of corporate tax planning with the agency theory developed by Jensen and Meckling in 1976. Tax planning is defined as all activities designed to produce a tax benefit (Wahab and Holland, 2012).

Although reducing tax can lead to higher after tax profits there are actual and potential costs that inhibit firms from maximising after tax profits through tax planning. In addition to direct paid costs in the form of salaries and fees, indirect paid costs can arise, for example, when corporate restructuring is a necessary condition for obtaining

the desired tax benefit. Potential costs can exist to the extent that tax planning can be challenged by a tax administration which can also then lead to reputational costs. Empirical evidence from the US that suggests tax planning costs act as a significant constraint on corporate tax planning activity may explain what Weisbach (2002) describes as the “under-sheltering puzzle” i.e. why firms do not appear to minimise tax liabilities.

Tax planning by firms is of wider public interest since it can affect the level of provision of public goods which can then contribute to social issues (Slemrod, 2004). Non-Governmental Groups such as Oxfam (2009), Christian Aid (2009) and Trade Union Congress (2009) have all examined the issue from a social justice perspective. A similar line was taken by The Guardian (2009) in a series of newspaper articles.

Tax planning can be measured as the difference between a firm’s current tax provision as disclosed in its annual financial statements and the (notional) level of tax that would be payable if its profit before tax was subject to tax at the statutory rate (Wahab and Holland, 2012). Desai and Dharmapala (2009a) measured tax planning as the total book-tax differences (BTD) controlled for total accruals.

### **1.1.2 Firm Value**

In most of empirical studies in tax planning, firm value has been measured using Tobin’s q. For instance, Desai and Dharmapala (2009a) used Tobin’s q as proxy for firm value. Tobin’s q is the ratio between the market value of the firm and the replacement cost of its assets. The reason why it can be used as proxy for firm value is that it can be viewed as the amount of value existent, in monetary units, per one monetary unit invested in firm.

Obtaining the exact replacement cost of all assets of many companies is not feasible. Chung and Pruitt (1994) suggested a simplified form of calculation that provides an approximation to  $q$  instead, and then demonstrated the soundness of their proposal by comparing the approximate  $q$  with the real  $q$ . In this simplified form, the replacement cost of the assets is replaced by the book value of the assets. The suitability of using the approximate  $q$  depends on how distant do book values and replacement values generally depart from each other, especially for long-term assets. The main causes of distancing are depreciation and inflation. Depreciation is not a considerable problem, as long as it follows, on average, economic depreciation (Santana and Rezende, 2014).

### **1.1.3 Tax Planning and Firm Value**

Hanlon and Heitzman (2010) identified in the literature two alternative perspectives on the motivations for tax avoidance and its consequences. In the mainstream one, its ultimate objective is simply to transfer wealth from the state to the shareholders. That would be accomplished every time the firm successfully avoids paying some amount of taxes that would be otherwise due. Shareholders, then, would be keen on the idea of encouraging their representatives to incur in that practice. Armstrong, Blouin and Larcker (2012), for instance, find that the compensation of tax directors is negatively related to the firm's effective tax rate, which suggests that there exist incentives for them to seek after lower rates.

The alternative view, introduced jointly by Desai, Dyck and Zingales (2007) and Desai and Dharmapala (2006), takes into consideration a more comprehensive set of agency costs derived from the conflicts of interests between managers and shareholders. In this perspective, self-interested managers would be willing to engage in tax avoidance activities only to take advantage of enlarged discretion and thus to

divert rent for their own benefit. Shareholders, in turn, would accept the obscurity of the managers' tax-related actions in order not to call attention of tax authorities. This would be much more worrying in firms with inferior levels of corporate governance. Investors, sensitive to these possibilities, would express their concerns by discounting the stock prices of these companies by the related risk.

#### **1.1.4 Listed Firms at the Nairobi Securities Exchange**

The Nairobi Securities Exchange (NSE) currently has 61 firms listed on it in 11 sectors (see Appendix 1). These sectors are agricultural (7 companies), commercial and services (9 companies), telecommunication and technology (1 company), automobiles and accessories (4 companies), banking (11 companies), insurance (6 companies), investment (3 companies), manufacturing and allied (9 companies), construction and allied (5 companies), energy and petroleum (5 companies), and growth enterprise market segment (1). The other two sectors are fixed income securities market segment which lists preference shares and bonds (NSE, 2014).

The listed firms perform differently in terms of their profitability as well as share values. In terms of their tax management practices, some pay larger taxes than others and this calls for an examination of their tax management practices. These varied share performance and tax payments calls for an examination of how these two are related.

These companies have varied ownership structures. Some are foreign owned while others are purely domestic. Others have a mixture of both. There are some that are state owned with the Government of Kenya having majority shares. These include Kenya Commercial Bank, Kenya Electricity Generating Company, National Bank of Kenya, Kenya Airways, Mumias Sugar Company, among others.

## **1.2 Research Problem**

Many studies suggest that the financial directors of most quoted firms consider the reduction of their firm's effective tax rate (ETR) as the main objective of their tax department. Apparently, these firms believe that reducing ETR creates value for their shareholders. Recent interviews with investors and financial analysts, however, suggest they pay little attention to after tax earnings when valuing a firm. These investors and analysts do not believe that a company can sustainably outperform the firm's statutory tax rate. They also think that tax information in the public accounts is so unclear that it is unusable for their valuations (Hafkenscheid and Janssen, 2009).

The Kenya Revenue Authority notes that firms in Kenya, especially multinationals, are using tax management initiatives to avoid paying some taxes. This hinders the authority from meeting its revenue targets. Listed firms in Kenya are among the highest payers of corporate taxes and Safaricom has been one of the leading taxpayers in Kenya. These firms differ in the amounts they pay as taxes and especially their effective tax rates. Some of the firms have maintained high profitability over the years due to their efficient tax planning schemes (PwC, 2013). It is therefore important to not only understand the tax planning strategies but to also link tax planning to the value of the firms. Studies have shown that the tax benefits can be translated to their financial performance in terms of increased profitability or firm value (Desai & Dharmapala, 2009a).

According to Hanlon and Heitzman (2010), few studies have assessed the consequences of tax avoidance in relation to measures of company performance, whether achieved by lawful tax planning practices or abusive evasion. Wilson (2009) and Desai and Dharmapala (2009) found significant evidence that the practice of tax avoidance together with good corporate governance brings higher abnormal returns

and value to firms, respectively. In turn, Ayers, Laplante and Mcguire (2010) found evidence of a significant relation between positive or negative variations in book-tax difference (BTD) and a tendency for worsening credit risk. These variations, according to the authors, evidence deterioration in the quality of the firm's earnings.

A search on any study on the effect of tax planning on the value of firms in Kenya did not yield any result. Further there has been no research specifically focusing on listed manufacturing firms in Kenya. However, Levin and Widell (2007) compared the tax evasion in Kenya and Tanzania while Kamau, Mutiso, and Ngui (2012) described tax avoidance and evasion as one of the major factors influencing creative accounting practice in Kenya. This leads to the conclusion that this concept has not received the attention it requires from scholars in Kenya. Given the importance of this concept of tax planning for corporate organizations in Kenya, the mixed results from other studies outside Kenya and the absence of such a study in Kenya, there is a gap that the present study seeks to bridge by seeking an answer to the following research question: how does tax planning affect the value of listed firms in Kenya?

### **1.3 Research Objectives**

The objective of this study was to examine the effects of corporate tax planning on the value of firms listed at the Nairobi Securities Exchange.

### **1.4 Value of the Study**

The study of the effect of tax planning on the performance of listed firms in Kenya is expected to be beneficial to a number of parties such as policy makers, listed firms, and academicians.



It is hoped that the study will provoke policy makers to give more attention to the tax planning given its contribution to the performance of firms. Examples of interested policy makers include the National Treasury (NT), the CMA, NSE and the KRA.

This study will help listed companies in Kenya in appreciating the value of tax planning and the nexus between tax planning and performance of firms.

The study will contribute to the body of knowledge and hence will be of interest to both researchers and academicians who seek to explore the relationship between tax planning and firm value

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

In this chapter, the researcher will explore literature related to the effect of tax planning on firm value. It will also consider the theoretical and empirical evidence on this subject. Finally, this chapter will provide an exposition of the research gap and the summary of the chapter in general.

### **2.2 Theoretical Review**

Under this section, the researcher will analyse three major theories relevant to tax planning, namely, the resource based theory, the agency theory, and the political power theory.

#### **2.2.1 Resource Based View**

Resource Based View (RBV) holds that firms can earn sustainable super-normal returns if and only if they have superior tangible resources that are protected by some form of isolating mechanism preventing their diffusion throughout industry. According to Wernerfelt (1984) & Rumelt (1984), the fundamental principle of the RBV is that the basis for a competitive advantage of a firm lies primarily in the application of the bundle of valuable resources at the firm's disposal. To transform a short-run competitive advantage into a sustained competitive advantage requires that these resources are heterogeneous in nature and not perfectly mobile (Barney, 1991; Peteraf, 1993).

Essentially, these valuable resources become a source of sustained competitive advantage when they are neither perfectly imitable nor substitutable without great effort (Barney, 1991). In a nutshell therefore, to achieve these sustainable above average returns, the firm's bundle of resources must be valuable, rare, imperfectly

imitable and non-substitutable (Barney, 1991). The extent to which external and internal factors affect managerial discretion will depend on, among other factors, the manager's locus of control, perception of discretion and the amount of power that people perceive the manager to possess.

Foreign shareholders are endowed with good monitoring capabilities, but their financial focus and emphasis on liquidity results in them unwilling to commit to a long-term relationship with the firm and to engage in a process of restructuring in case of poor performance. These shareholders prefer strategies of exit rather than voice to monitor management (Aguilera & Jackson, 2003). Consequently, foreign shareholders are postulated to have a moderate impact on firm performance. Domestic shareholders possess characteristics that represent the worst of both worlds. Their financial focus leads to short-term behaviour and a preference for liquid stocks while their domestic affiliation often results in a complex web of business relationship with the firm and other domestic shareholders (Claessens et al., 2000; Dharwadkar et al., 2000). Therefore, these shareholders are expected to have a negative influence on firm performance. Thus, tax avoidance behaviour of some firms may be explained by the RBV theory as studies have shown that large firms may avoid more tax than small firms especially in non-state owned firms.

### **2.2.2 The Agency View of Tax Avoidance**

Tax avoidance incorporates more dimensions of the agency tension between managers and investors. According to agency perspective of tax, the problem that needs to be solved by investors is simply managerial shirking. Avoidance also considers another form of the agency problem: managerial opportunism or resource diversion (Desai and Dharmapala, 2009b). Desai and Dharmapala (2006) argue that complex tax avoidance transactions can provide management with the tools, masks, and

justifications for opportunistic managerial behaviours, such as earnings manipulations, related party transactions, and other resource-diverting activities. In other words, tax avoidance and managerial diversion can be complementary.

Using a case analysis, Desai (2005) provides detailed evidence on how these opportunistic managerial behaviours can be facilitated by tax avoidance. This agency view of tax avoidance is attracting increasing attention in the literature (Hanlon and Heitzman, 2009). For example, Desai and Dharmapala (2006) show that strengthened equity incentives actually decrease tax avoidance for firms with weaker governance, consistent with the view that tax avoidance facilitates managerial diversion. Chen et al. (2010) find that family firms are less tax aggressive than their non-family counterparts. The authors conclude that family owners appear to forgo tax benefits to avoid the non-tax cost of a potential price discount arising from minority shareholders' concern about family rent seeking masked by tax avoidance activities.

The literature has also begun examining the stock market consequences of tax avoidance activities under the agency perspective. Desai and Dharmapala (2009a) find no relation between tax avoidance and firm value; however, they do find a positive relation between the two for firms with high institutional ownership. Their finding suggests that tax avoidance has a net benefit in an environment in which monitoring and control effectively constrain managerial opportunism afforded by tax avoidance activities. Hanlon and Slemrod (2009) examine the market reaction to news about a firm's involvement in tax shelters. The authors find a negative market reaction to tax shelter disclosure, suggesting that investors are concerned about the possibility that tax shelters are intertwined with managerial diversion and performance manipulation. Furthermore, the authors find that the negative reaction is less

pronounced for firms with stronger governance; however, this result seems to be sensitive to how governance is empirically measured.

### **2.2.3 Political Power Theory**

From a political economy perspective, tax burden could be linked to company size. In some studies it was found that small businesses may suffer in terms of average cost of capital because they cannot benefit from economies of scale. On the other hand, large firms may have more political power to negotiate their tax burden, particularly through trade unions, because they are more mobile and have a greater impact on employment when moving or leaving a market. This theory of political power (Siegfried, 1972) predict that large companies face lower effective tax rate. On the other hand, political cost theory (Watts and Zimmerman, 1978) argue that because of the high visibility and control, large companies will end up paying a higher tax burden.

Ambiguous results have led to a number of empirical studies. Several authors have estimated directly the size of the Company's effective tax rate. Siegfried (1972) estimate such a relationship the U.S. and although the results seem to be influenced by a large presence of large companies in some sectors, finds a negative relationship between size (measured by assets) and effective taxation. His results are consistent with the theory of political power and a similar relationship is also found by Pocarino (1986). Such a negative relationship is however in contrast with the findings of Watts and Zimmerman (1978), using U.S. data for 1948-1981 and believes that in 1971, the largest fifty companies were faced with significantly higher rates of tax actual profit which confirms rather political cost theory. In other studies, Gupta and Newberry (1997) for the U.S. and Janseen and Buijink (2000) for the Netherlands found no strong evidence of a relationship, both using total assets to measure firm size.

## **2.3 Determinants of Firm Value**

The literature on firm value has shown that it is influenced by a number of factors. These include firm size, capital structure, ownership structure, age of the firm, and asset tangibility, among other factors. In this section, these factors are reviewed on how they influence firm value.

### **2.3.1 Size of the Firm**

The nature of the relationship between firm size and firm value has received considerable attention in the literature and has provoked vigorous debate. Several arguments favour larger firm sizes in attaining higher firm value. Existing empirical evidence has not been unambiguous, lending support to both a positive and a negative impact of firm size on performance. Yang and Chen (2009) compared the technical efficiency of SMEs with that of large firms and were inconclusive about the relationship when choosing different estimation methods. In a study on Portuguese companies Serrasqueiro and Nunes (2008) found that size is related positively to performance but only for the sample of SMEs and not for large firms. A similar finding by Diaz and Sanchez (2008) in the Spanish context suggested that SMEs were more efficient than large firms lending support to earlier studies that identified an inverse relationship between size and performance. These studies imply a relationship between firm size and performance that might not necessarily be linear, as illustrated in Barrett et al. (2010), Yoon (2004), and Risseuw (1997), which conclude that company growth beyond optimal level can deteriorate performance.

A positive relationship between firm size and profitability was found by Vijayakumar and Tamizhselvan (2010). In their study, which was based on a simple semi-logarithmic specification of the model, the authors used different measures of size (sales and total assets) and profitability (profit margin and profit on total assets) while

applying model on a sample of 15 companies operating in South India. Papadogonas (2007) conducted analysis on a sample of 3035 Greek manufacturing firms for the period 1995-1999. After dividing firms into four size classes he applied regression analysis which revealed that for all size classes, firms' profitability is positively influenced by firm size. Using a sample of 1020 Indian firms, Majumdar (1997) investigated the impact that firm size has on profitability and productivity of a firm. While controlling for other variables that can influence firm performance, he found evidence that larger firms are less productive but more profitable.

### **2.3.2 Capital Structure**

Jensen (1986) considers that the debt should require executives to retain only profitable projects to avoid bankruptcy of the company. Indeed, debt financing would encourage leaders to be more efficient and effective in the positions occupied. However, most studies that have examined the relationship debt, ownership structure and performance, were based on U.S. and French data. This limits their general geographic (McGahan and Porter, 1997).

In addition, in connection with this, Driffield et al. (2007) explores a possible interaction between debt and firm performance using a system of simultaneous equations. They propose two alternative hypotheses for this inverse relationship. The first hypothesis focuses on the most successful companies. In the latter case the most successful companies reduce their debt levels to protect shareholder wealth in the risk of bankruptcy (Latrous, 2007). In the same context, Abdennadher (2006) shows the negative and significant effect of debt on performance in the Tunisian context for the study of twenty listed companies over the period 1996-2000.

### **2.3.3 Ownership Structure**

Berle and Means (1932) warned that the growing dispersion of ownership of stocks was giving rise to a potentially value-reducing separation of ownership and control. As a consequence, they expected an inverse correlation between the diffuseness of shareholdings and corporate performance. This analytical framework is based upon the view that shareholder diffusion makes it difficult for them to act collectively and hence to influence management to any great extent. The inverse relationship between ownership diffuseness and firm performance was first challenged by Demsetz (1983), who supports the endogeneity of ownership structure.

Since Demsetz's (1983) work, numerous empirical studies investigating this issue have been published. In a seminal study, Morck et al. (1988) proposed a non-linear relationship between insider ownership and firm performance. By examining Future 500 firms for the year 1980 and using piecewise linear regression, they find a positive relationship between Tobin's Q and ownership structure for the 0 per cent to 5 per cent board ownership range, a negative relationship in the 5 per cent to 25 per cent range and a positive relationship for board ownership exceeding 25 per cent.

More recently, Villalonga and Amit (2004) examine the impact of family ownership, control and management on firm value. They conclude that family ownership creates value only when it is combined with certain forms of control and management. Finally, in a study of Taiwan's electronics industry, Sheu and Yang (2005) find that insider ownership (executives, board members and large shareholders) has no influence on total factor productivity.

### **2.3.4 Age of the Firm**

The relationship between firm age and survival has also been investigated by many researchers (Mata and Portugal, 2004; Bartelsman et al., 2005), but the results have



not been clear-cut. An early contribution coined the term liability of newness to describe how young organizations face higher risks of failure (Stinchcombe, 1965). Authors have referred to the liability of adolescence (Fichman and Levinthal, 1991) to explain why firms face an initial 'honeymoon' period in which they are buffered from sudden exit by their initial stock of resources. Still others have identified liabilities of senescence and obsolescence (Barron et al., 1994) according to which older firms are expected to face higher exit hazards once other influences (such as firm size) are controlled for.

More recently, researchers have begun to take more interest in the role age plays in the performance of surviving firms. Some authors have investigated age effects by focusing specifically on samples of young firms (Stam and Wennberg, 2009). Some researchers have focused on the functional form of the aggregate age distribution, showing that the empirical density is well approximated by an exponential distribution (Coad, 2010), while others have tracked the evolution of the FSD over time, for cohorts of ageing firms (Cirillo, 2010).

Other research has focused on differences in performance and behaviour across firms of different ages. For instance, it has been suggested that the age of a firm is positively related to its productivity levels (Haltiwanger et al., 1999). Brown and Medoff (2003) investigate whether older firms pay higher wages. Bartelsman et al. (2005) compare the post-entry growth rates of North American and European firms. Bellone et al. (2008) examine how pressures related to market selection (i.e. firm survival) change as firms age. Others have investigated how probability of innovation and productivity growth change across the firm age distribution (Huergo and Jaumandreu, 2004a, b). Autio et al. (2000) observe that young international firms – born global firms – experience faster growth in international sales than their older

counterparts. They interpret this finding as evidence that younger firms are better able to develop export capabilities because they are better able to learn how to succeed in uncertain environments.

### **2.3.5 Asset Tangibility**

Literature characterizes contracts that credibly commit investors to enforce firm liquidation or reorganization. Some of those contracts resemble debt (Hart and Moore, 1994), while others resemble equity (Myers, 2000). Although they vary in their design, the key element that makes those contracts enforceable has a common real-world counterpart: the tangibility of the firm's assets. Assets that are more tangible are valuable because they are easier to repossess and resell. The tangibility of a firm's assets can offset the importance of managerial human capital in contract renegotiations, lending credibility to investors' threat to take the firm to bankruptcy court and/or to dismiss its managers. According to the theory, it is the credible enforceability of outcomes that are detrimental to managerial self-interest – not accounting ratios – that affects incentives in firms.

Pouraghajan et al (2012) found that asset tangibility ratio had a positive relationship with financial performance. Thanh & Ha (2013) showed that asset tangibility structure has negative relationship with firm's return on equity (ROE), while assets have negative association with ROA. In another study, Saleem et al (2013) find that tangibility of assets had a positive relationship with leverage. These results clearly show that tangibility is a significant determinant of firm performance.

## **2.4 Empirical Review**

Levin and Widell (2007) examined tax evasion in Kenya and Tanzania. While Transparency International Corruption Perceptions Index shows that Kenya is more corrupt than Tanzania, the study found that that the coefficient on tax is higher in

Tanzania compared to Kenya implying that tax evasion on imported goods is higher in Tanzania compared to the Kenya. They introduced a third country into the analysis, the United Kingdom, and tax evasion seemed to be more severe in trade flows between Kenya and Tanzania compared to trade flows between the United Kingdom and Kenya/Tanzania. Finally the study found that the tax evasion coefficient was lower in the Kenya-United Kingdom case compared to the Tanzanian-United Kingdom case.

Desai & Dharmapala (2009a) examined whether corporate tax avoidance activities advance shareholder interests. The Ordinary Least Squares (OLS) estimates indicated that the average effect of tax avoidance on firm value is not significantly different from zero, but is positive for well-governed firms as predicted by an agency perspective on corporate tax avoidance. The independent variable (IV) estimates yield larger overall effects and reinforce the basic result that higher quality firm governance leads to a larger effect of tax avoidance on firm value. Taken together, the results suggest that the simple view of corporate tax avoidance as a transfer of resources from the state to shareholders is incomplete given the agency problems characterizing shareholder-manager relations.

Wang (2012) used a self-constructed opacity index and multiple measures of tax avoidance to examine how corporate transparency relates to tax avoidance. The study found that transparent firms, which potentially have less severe agency problems, avoid more tax relative to their opaque counterparts. This result suggests that managers engage in tax avoidance transactions mainly to enhance shareholder wealth. Further, the study found that investors place a value premium on tax avoidance, but the premium decreases with corporate opacity. This is consistent with the notion that corporate transparency facilitates the monitoring of managerial actions and thus

alleviates outside investors' concern about the hidden agency costs associated with tax avoidance.

Kamau, Mutiso, and Ngui (2012) describe tax avoidance and evasion as one of the major factors influencing creative accounting practice in Kenya. The researchers randomly collected and analysed data from thirty six accountants working for various companies in Kenya. The results of the study established that tax avoidance and evasion is indeed one of the major factors contributing to practice of creative accounting among companies in private sector in Kenya.

Katz et al. (2013) examined whether firm managers invest the savings from tax avoidance in positive net present value projects that enhance future profitability or divert them towards perquisite consumption, rent extraction, and value destroying projects. Consistent with the negative implications of tax avoidance (e.g. rent extraction) the study documented that, on average, the main components of current profitability: margins, utilization of assets and operating liability leverage, result in lower future profitability for tax aggressive firms as compared to firms that are not tax aggressive. Further, the negative effect of lower margins is more robust and persistent than the impact of inefficient asset utilization and operating liability leverage. These results persist in various contexts that mitigate or exacerbate rent extraction, such as the existence of foreign operations, better governance structure, more transparency, industry leadership position, and across corporate life cycle stages.

Goh et al. (2014) examined the relation between firm's cost of equity and corporate tax avoidance using three measures that capture less extreme forms of corporate tax avoidance: book-tax differences, permanent book-tax differences, and long-run cash effective tax rates. The study found that less aggressive forms of corporate tax

avoidance significantly reduces a firm's cost of equity. Further analyses reveal that this effect is stronger for (i) firms with better outside monitoring, (ii) firms that likely realize higher marginal benefits from tax savings, and (iii) firms with better information quality.

Lestari (2014) analysed the impact of tax planning on firm value with board diversity as moderating variable. The research was conducted for non-banking and financial firms in Indonesia Stock Exchange for 2010 to 2011. The study found evidence of positive relationship between tax planning and firm value. The study also found that board diversity could increase the positive influence of tax planning into firm value.

Hasan et al. (2014) examined the effect of corporate tax avoidance on the cost of bank loans. They found that firms with greater tax avoidance incur higher spreads when obtaining bank loans. Firms with greater tax avoidance also incurred more stringent non-price loan terms, incurred higher at-issue bond spreads, and preferred bank loans over public bonds when obtaining debt financing. Overall, these findings indicate that banks perceive tax avoidance as engendering significant risks.

## **2.5 Summary and Research Gap**

The theory argues that agency issues may motivate managers to avoid paying taxes thus pointing out the role of governance structures in tax avoidance. Studies on this theory dominate the tax avoidance literature and the results are mixed. Resource based theory has everything to do with the resource endowment of a firm as a determinant of dominance. Research on this theory has also provided mixed results. Lastly, political power shows the influence of politics (given as size of ownership type) as a determinant of firm dominance. These three theories provide an important avenue for examining which among them clearly explains the differences in tax planning practices and value of listed firms in Kenya.

A review on the determinants of firm value has revealed a number of factors which affect performance such as debt, ownership structure, and size of the firm. Studies on ownership structure, debt, and size of the firm have shown mixed results suggesting that there is an avenue for more studies to examine how these factors influence firm value. Thus, the present study will model these factors to control for their effects on firm value.

The empirical review on the effect of tax planning/avoidance on value of firms shows that there are mixed results on how these two concepts are related. Further, no study is available on the Kenyan environment that specifically focuses on how tax planning/avoidance affects firm value. This is a gap which the present study exploits. This is done by examining how tax planning influences the value of listed firms in Kenya.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter deals with the research design, population, sample, data collection and data analysis, which describes the firms and variables included in the study and applied statistical techniques in investigating the effect of tax planning on the value of listed at the NSE.

### **3.2 Research Design**

This was a causal predictive research design. Given that the purpose of this study was to examine the effect of tax avoidance on financial performance, this was the most appropriate design for the study. According to Cooper & Schindler (2014), a causal-predictive study attempts to predict an effect on one variable by manipulating another variable while holding all other variables constant.

### **3.3 Population**

The population of this study was the companies listed on the Nairobi Securities Exchange. Currently, there were 61 firms listed on the NSE in 11 different sectors as shown in Appendix 1 (NSE, 2014). Since the number of listed firms in Kenya was not so large and the present study sought to come up with a predictive model for how tax planning affects firm value, all the 61 firms formed the sample. Thus, this was a census study of all the listed firms in Kenya.

### **3.4 Data Collection**

This study used secondary data. The data was sourced from the CMA, respective company websites, and The African Financials website. The data was collected on the variables of interest for the five year period beginning 2009 to 2013. Since the study

intended to use a panel data, this period was preferred. Thus, the 5 years was appropriate enough to provide panel data that was used in the analysis.

### 3.5 Data Analysis

First, descriptive analysis was used to describe the data in terms of mean scores and standard deviations among other descriptive statistics. Secondly, to examine the level of tax planning among the firms, the mean and median values were used to interpret the results. In order to examine the effect of tax planning on firm value, regression analysis was carried out. Since the data collected was panel data, the analysis was performed using panel data regression techniques with the aid of Eviews 7 analysis software.

#### 3.5.1 The Analytical Model

Based on other models that have been used to test the effect of tax planning on performance of firms, the present study adopted the following model:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6$$

**Table 3.1: Operationalization of Variables**

| Variable | Definition  |
|----------|---|
| $Y$      | Value of the firm measured as the sum of market value of equity and book value of liabilities at the end of the year, divided by the book value of total assets at the end of the year. |
| $X_1$    | Tax planning measured as current income tax expense divided by pre-tax income   |
| $X_2$    | Size of the firm measured as the natural logarithm of the book value of total assets at the end of the year   |
| $X_3$    | Leverage measured as the total liabilities divided by total assets at the end of the year   |
| $X_4$    | Board ownership measured as the percentage of shares owned by board members.  |
| $X_5$    | Age of the firm measured by difference between current year and the year of incorporation   |
| $X_6$    | Tangibles measured as the natural logarithm of value of tangible assets at the end of the year.   |



### **3.4.2 Test of Significance**

Correlation analysis was used to examine the inter-relationships between the independent variables in the study. This showed if there are any serial correlations within the independent variables before a regression analysis is carried out. A multiple regression analysis was then performed using the model above. The F-test was used to show the strength of the model. The coefficients were interpreted to show how each of the independent variables affect firm value as measured by Tobin q. The significance was tested at 5% level.

## **CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION**

### **4.1 Introduction**

This chapter presents the data analysis results and discussions of results. The chapter is organised as follows. First, the results are presented using descriptive, correlation and regression analysis. Then, a discussion of findings is carried out.

### **4.2 Results**

This section presents the results. The descriptive results are first presented followed by the correlation analysis results and finally the fixed effects regression results are presented.

#### **4.2.1 Descriptive Results**

Table 4.1 shows the descriptive analysis results for all the variables used in the study. The results are shown in terms of mean, median, standard deviation and the number of observations per variable.

**Table 4.1: Descriptive Results**

|              | <b>Value</b> | <b>Tax</b> | <b>Board</b> | <b>Age</b> | <b>Size</b> | <b>Lev</b> | <b>Tangible</b> |
|--------------|--------------|------------|--------------|------------|-------------|------------|-----------------|
| Mean         | 0.4551       | 0.2295     | 12.139       | 54.632     | 15.443      | 0.5448     | 10.2844         |
| Median       | 0.4894       | 0.2775     | 0.6973       | 46.000     | 16.019      | 0.5105     | 9.8671          |
| Std. Dev.    | 0.2320       | 0.1434     | 17.106       | 25.035     | 2.7295      | 0.2320     | 3.0334          |
| Observations | 87           | 87         | 87           | 87         | 87          | 87         | 87              |

**Source: Research Data (2014)**

As the results in Table 4.1 show, the mean firm value was 0.4551 with a standard deviation of 0.2320 and a median of 0.4894. Tax planning averaged 0.2295 with a standard deviation of 0.1434 and a median of 0.2775. The mean board shareholding was 12% with a standard deviation of 17% and a median of 0.7%. The average age of the firm was 15 years with a standard deviation of 2.7 years and the median age was 16 years. Leverage had a mean of 0.5448 with a standard deviation of 0.2330 and a

median leverage of 0.5105. The natural logarithm of tangibles had a mean of 10.28 with a median of 9.8671 and a standard deviation of 3.0334. In total, 87 observations were used in the study.

#### 4.2.2 Correlation Results

Table 4.2 presents the correlation analysis results for the all the variables in the study. The reason for this is to assess whether the independent variables are serially correlated and also to gauge from the onset how each of the variables affect firm value.

**Table 4.2: Correlation Matrix**

|        | 1      | 2      | 3      | 4     | 5      | 6     | 7     |
|--------|--------|--------|--------|-------|--------|-------|-------|
| VALUE  | 1.000  |        |        |       |        |       |       |
| TAX    | -0.032 | 1.000  |        |       |        |       |       |
| BOARD  | 0.156  | -0.453 | 1.000  |       |        |       |       |
| AGE    | -0.220 | 0.206  | -0.131 | 1.000 |        |       |       |
| SIZE   | 0.0472 | 0.037  | 0.178  | 0.281 | 1.000  |       |       |
| LEV    | -1.000 | 0.032  | -0.156 | 0.220 | -0.047 | 1.000 |       |
| LNTANG | -0.210 | 0.054  | -0.123 | 0.126 | 0.588  | 0.210 | 1.000 |

**Source: Research Data (2014)**

As shown in Table 4.2, none of the independent variables (2 – 7) were highly correlated and therefore no cross-sectional serial correlations were present. However, looking at how each of the variables affect firm value, leverage seems to have a perfect correlation. This shows that leverage may be troublesome in the multiple regression model and therefore it was transformed and used in the model at its first difference.

#### 4.2.3 Regression Results

Table 4.3 shows the regression results. The results are of the fixed effects model after the Hausmann test suggested that it was the best model to explain the relationship between tax planning and firm value.

The results in Table 4.3 show that the  $F$ -statistic was 41.16 and significant,  $p < .001$ . This suggests that the model was fit to explain the relationship between tax planning and firm value. From the  $R^2$  value, the model explained 95.7% of the variance in firm value while the adjusted  $R^2$  shows that the model accounted for 93.4% of the variance in firm value.

Table 4.3 also shows that tax planning had a negative relationship with firm value as given by the coefficient of -0.048. This relationship was significant at 5% level,  $p = 0.0407$ . The results also show that board ownership had a positive effect on firm value but the effect was not significant,  $p > .05$ . The results further show that age of the firm had a negative effect on firm value as shown by the coefficient of -0.0123. This effect was significant at 5% level,  $p = 0.0017$ . The study also found that size of the firm had a positive effect on firm value as shown by the coefficient of 0.0023. This effect was significant at 5% level,  $p = 0.0002$ . The study further revealed that leverage had a negative effect on firm value as shown by the coefficient of -0.5851 and this relationship was significant at 5% level,  $p = 0.0022$ . Finally, the results showed that tangibles had a negative relationship with firm value but this was not significant at 5% level,  $p = 0.5416$ .

**Table 4.3: Fixed Effects Regression Results**

| Variable           | Coefficient | Std. Error            | t-Statistic | Prob.     |
|--------------------|-------------|-----------------------|-------------|-----------|
| C                  | 1.206713    | 0.142299              | 8.480116    | 0.0000    |
| TAX                | -0.048048   | 0.022818              | -2.105648   | 0.0407    |
| BOARD              | 0.000624    | 0.001028              | 0.606626    | 0.5471    |
| AGE                | -0.012309   | 0.003689              | -3.336772   | 0.0017    |
| SIZE               | 0.002266    | 0.000565              | 4.011927    | 0.0002    |
| D(LEV)             | -0.585144   | 0.180721              | -3.237833   | 0.0022    |
| LNTANG             | -0.010016   | 0.016288              | -0.614908   | 0.5416    |
| R-squared          | 0.957214    | Mean dependent var    |             | 0.452093  |
| Adjusted R-squared | 0.933961    | S.D. dependent var    |             | 0.228288  |
| S.E. of regression | 0.058666    | Akaike info criterion |             | -2.559721 |
| Sum squared resid  | 0.158317    | Schwarz criterion     |             | -1.737591 |

|                   |          |                      |           |
|-------------------|----------|----------------------|-----------|
| Log likelihood    | 118.1500 | Hannan-Quinn criter. | -2.232429 |
| F-statistic       | 41.16469 | Durbin-Watson stat   | 1.096520  |
| Prob(F-statistic) | 0.000000 |                      |           |

**Source: Research Data (2014)**

### 4.3 Summary and Interpretation of Findings

The descriptive analysis showed that the average firm value was 0.4551, the average tax planning was 0.2295, the average board shareholding was 12%, the average age of the firm was 15 years, the average leverage was 0.5448 while the average tangibles was 10.28. These results show that the firms recorded a fairly high firm value and that on average, most of the firms paid taxes that were lower than the corporate tax rate by about 8% suggesting that the firms benefited from tax planning initiatives they put in place in the form of lower effective tax rates. The results also show that the board of directors in the firms held a fairly substantial shares in their firms on average thus had a significant ownership in their firms.

The study examined the effect of corporate tax planning on firm value for listed firms in Kenya. Tax planning was measured as the effective tax rate paid on the income of the firm. The study found that corporate tax planning has a significant negative effect on firm value. This means that better tax planning practices that lead to lower effective tax rates lead to higher firm values. Thus, a unit decrease in effective tax rate leads to a 0.048 increase in firm value. These results are consistent with prior research on the effect on corporate tax planning practices on firm value. More specifically, the study mirrors the results of Desai & Dharmapala (2009a) on how tax planning influence firm value.

The study also examined the effect of board shareholding on firm value. Board shareholding was measured as the percent of shares owned by the directors in a firm.

The results also showed that board ownership had a positive but insignificant effect on firm value. This suggests that firm value is not affected by the level of director shareholding in a firm. This is also consistent with some empirical studies. More specifically, the results are consistent with Sheu and Yang (2005) who found that insider ownership (executives, board members and large shareholders) has no influence on total factor productivity.

The study further assessed the effect of age of the firm on firm value. Age of the firm was measured as the number of years of the firm since founding in Kenya. The results further showed that age of the firm had a negative and significant effect on firm value. This means that firm value was influenced by the age of the firm. More specifically, a unit increase in age of the firm leads to a 0.0123 decrease in firm value. Thus, the more the firms' age, the less value they attract. This is consistent with the findings of Haltiwanger et al. (1999) who noted that the age of a firm is positively related to its productivity levels, and therefore related to firm value. This may be because as firms age, they become more experienced and therefore more efficient. This efficiency leads to higher performance through indices such as firm value.

The study examined the effect of firm size on firm value. Firm size was measured as the natural logarithm of total assets at the end of the year for each firm. The study found that size of the firm had a positive and significant effect on firm value. This means that firm value is influenced by firm size. Thus, a unit increase in size of the firm leads to a 0.0023 increase in firm value. These results are consistent with the study on Portuguese companies by Serrasqueiro and Nunes (2008) who found that size is related positively to performance. This could be attributed to the fact that as firms become large, they become more efficient as they invest their resources in

systems that enhance their efficiency. The improved efficiency means that the costs become lower and thereby improve on firm performance.

The study examined the effect of leverage on firm value. Leverage was measured as the ratio of total debt to total equity. The study revealed that leverage had a negative and significant effect on firm value. This means that firm value was influenced by leverage. Thus, a unit increase in leverage leads to a 0.5851 decline in firm value. This is consistent with Abdennadher (2006) who found a negative and significant effect of debt on performance in the Tunisian context for the study of twenty listed companies over the period 1996-2000. This is because lower leverages free firm cash flows and therefore allow for reinvestment in productive areas. This improves firm productivity and thus improve the overall performance of a firm.

Finally, the study examined the effect of tangible assets on the value of a firm. Tangibles were measured as the natural logarithm of total tangible assets. The results showed that tangibles had a negative but insignificant relationship with firm value. This suggests that firm value is not influenced by the tangibles. These results are inconsistent with those of Pouraghajan et al (2012), Thanh & Ha (2013), and Saleem et al (2013) who found that tangibility was a significant determinant of firm performance. This could be because the asset tangibility ratios for the firms were low and therefore the low ratios could not significantly impact firm value.

## **CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **5.1 Introduction**

This chapter presents the summary of findings, conclusions of the study, recommendations for policy and practice, limitations of the study, and suggestions for further research.

### **5.2 Summary**

The study set out to examine the effect of corporate tax management on the value of listed firms in Kenya. Thus, secondary data was collected on all the variables in the model from secondary sources. Data was analysed using descriptive analysis, correlation analysis and regression analysis. This was aided by the Eview analysis software.

The descriptive results showed that the mean firm value was 0.4551 with a standard deviation of 0.2320 and a median of 0.4894. Tax planning averaged 0.2295 with a standard deviation of 0.1434 and a median of 0.2775. The mean board shareholding was 12% with a standard deviation of 17% and a median of 0.7%. The average age of the firm was 15 years with a standard deviation of 2.7 years and the median age was 16 years. Leverage had a mean of 0.5448 with a standard deviation of 0.2330 and a median leverage of 0.5105. The natural logarithm of tangibles had a mean of 10.28 with a median of 9.8671 and a standard deviation of 3.0334.

The study's primary goal was to examine the effect of tax planning on firm value. The regression results showed that tax planning had a negative and significant impact on the value of the firm. The study also showed that board ownership had a positive but insignificant effect on firm value. The results further showed that age of the firm had



a negative and significant effect on firm value. The study found that size of the firm had a positive and significant effect on firm value. The study revealed that leverage had a negative and significant effect on firm value.

The results showed that the  $F$ -statistic was 41.16 and significant,  $p < .001$ . This suggests that the model was fit to explain the relationship between tax planning and firm value. From the  $R^2$  value, the model explained 95.7% of the variance in firm value while the adjusted  $R^2$  shows that the model accounted for 93.4% of the variance in firm value.

### **5.3 Conclusion**

The study examined the effect of corporate tax planning on firm value. The results showed that there was a negative relationship between corporate tax planning and firm value for the listed firms in Kenya. The study concludes that tax planning affects the value of a firm. More tax planning practices that lead to payment of lower effective taxes help improve value of firms and vice versa.

The study examined the effect of board ownership on the firm value. It was revealed that board ownership did not have a significant effect on firm value. The study thus concludes that board ownership does not influence firm value. The level of ownership by the board members does not therefore affect the value of a firm.

The study examined the effect of age of the firm on the value of firms listed on the NSE. The results showed that there was a significant positive relationship between firm value and age of the firm. The results lead to the conclusion that firm value is

influenced by the age of the firm. Older firms tend to have lower firm values as opposed to younger firms.

The study examined the effect of firm size on the value of the firm. The study found that there was a positive relationship between firm size and the value of the firm. From the results, it can also be concluded that the size of the firm influences firm value. As the results showed, larger firms tend to exhibit higher values than the smaller firms.

The study examined the effect of leverage on the value of firms. The results showed that leverage had a negative relationship with the value of firms. The study concludes that leverage influence firm value. From the results, higher leverage ratios signalled lower firm values. The study also concludes that firm value is not influenced by the level of firm tangibility.

#### **5.4 Recommendations**

The study makes a number of recommendations. First, the study recommends the need for firms to institute more robust tax planning practices that will help reduce their effective tax liabilities and therefore improve their overall value. Firms that engage in better tax planning practices are likely to get higher firm value

The study also recommends that the Kenya Revenue Authority should help firms plan their tax liabilities as this helps to encourage more firms to pay taxes rather than evade or avoid taxes. This way, the national coffers are filled up through more revenue collections as more firms register as tax payers and comply while firms also feel less burdened by the tax liabilities.

The study further recommends that other firms that wish to improve their firm values should seek to use the ingredients in this study. These include better tax planning measures that help reduce their tax liabilities, striving to expand and be large in terms of their asset base, and having lower leverage ratios by having less debt.

### **5.5 Limitations of the Study**

The study could not cover all the 62 listed firm as most of them did not report some of the variables in their annual reports. The major variable that was missing in most of the reports was board shareholding for the five year period which was the focus of the study. Thus, only 34% of the listed firms reported board shareholdings for the entire period. This may limit the applicability of results to the larger population.

The study also focused solely on the listed firms in Kenya. There are many unquoted firms that also pay taxes and may be engaged in tax planning practices but were not subject to this study. Therefore, this study may not be applicable to unquoted firms in Kenya but it is the hope of the study that the results here may also suit them.

The study also relied on secondary data from various sources. While this is a reliable source of data, it is quantitative in nature and therefore it was not possible to fully interrogate the effect of corporate tax planning on firm value as may have been the case if interviews were conducted. To improve this, it will be important to used mixed methods in data collection.

The time span for the data collected in this study was 5 years. This is a fairly long period that can help provide robust results for applicability by the listed firms. However, given the time series nature of the data, a longer period would have been

preferred but most of the data was not ready available. A longer period would help reduce this limitation.

## **5.6 Suggestions for Further Research**

This study needs to be replicated for unquoted firms in Kenya in order to examine whether the results found in the present study still hold for the unquoted firms. This will be important for purposes of policy recommendations for companies in Kenya.

The study also suggests the need for more studies in this area to focus on the determinants of tax planning practices in organisations. This will help in understanding why some firms are better at tax planning than others and therefore inform those that cant plan better on what issues they can work on to improve their tax planning.

The study also suggests that more studies be done using a different methodology to examine how corporate tax planning in Kenya influence firm value. The use of secondary together with a survey would suffice to give more in-depth results for the study which can be more reliable rather than relying on one source.

Studies also need to be conducted with more observations. This can be done using a longer period of time extending over ten years as more data points will provide better and more reliable results than the current five year data.

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## APPENDICES

### **Appendix 1: Companies listed at the NSE as at 1<sup>st</sup> August 2014**

#### **Sector 1: Agricultural**

1. Eaagads Ltd
2. Kapchorua Tea Co. Ltd
3. Kakuzi
4. Limuru Tea Co. Ltd
5. Rea Vipingo Plantations Ltd
6. Sasini Ltd
7. Williamson Tea Kenya Ltd

#### **Sector 2: Commercial and Services**

8. Express Ltd
9. Kenya Airways Ltd
10. Nation Media Group
11. Standard Group Ltd
12. TPS Eastern Africa (Serena) Ltd
13. Scangroup Ltd
14. Uchumi Supermarket Ltd
15. Hutchings Biemer Ltd
16. Longhorn Kenya Ltd

#### **Sector 3: Telecommunication and Technology**

17. Safaricom

#### **Sector 4: Automobiles and Accessories**

18. Car and General (K) Ltd
19. CMC Holdings Ltd
20. Sameer Africa Ltd
21. Marshalls (E.A.) Ltd

#### **Sector 5: Banking**

22. Barclays Bank Ltd
23. CFC Stanbic Holdings Ltd

24. I&M Holdings Ltd
25. Diamond Trust Bank Kenya Ltd
26. Housing Finance Co Ltd
27. Kenya Commercial Bank Ltd
28. National Bank of Kenya Ltd
29. NIC Bank Ltd
30. Standard Chartered Bank Ltd
31. Equity Bank Ltd
32. The Co-operative Bank of Kenya Ltd

**Sector 6: Insurance**

33. Jubilee Holdings Ltd
34. Pan Africa Insurance Holdings Ltd
35. Kenya Re-Insurance Corporation Ltd
36. Liberty Kenya Holdings Ltd
37. British-American Investments Company ( Kenya) Ltd
38. CIC Insurance Group Ltd

**Sector 7: Investment**

39. Olympia Capital Holdings Ltd
40. Centum Investment Co Ltd
41. Trans-Century Ltd

**Sector 8: Manufacturing and Allied**

42. B.O.C Kenya Ltd
43. British American Tobacco Kenya Ltd
44. Carbacid Investments Ltd
45. East African Breweries Ltd
46. Mumias Sugar Co. Ltd
47. Unga Group Ltd
48. Eveready East Africa Ltd
49. Kenya Orchards Ltd
50. A.Baumann CO Ltd

**Sector 9: Construction and Allied**

51. Athi River Mining

52. Bamburi Cement Ltd

53. Crown Berger Ltd

54. E.A.Cables Ltd

55. E.A.Portland Cement Ltd

**Sector 10: Energy and Petroleum**

56. KenolKobil Ltd

57. Total Kenya Ltd

58. KenGen Ltd

59. Kenya Power & Lighting Co Ltd

60. Umeme Ltd

**Sector 11: Growth Enterprise Market Segment**

61. Home Afrika Ltd

*Source: Nairobi Securities Exchange Website (August, 2014).*

## Appendix 2: Research Data

| Company         | Board Ownership | Age | Size      | Leverage  | Tangibility | Firm Value | Effective Tax |
|-----------------|-----------------|-----|-----------|-----------|-------------|------------|---------------|
| Sasini          | 0.051           | 61  | 16.018758 | 0.2950461 | 9.37        | 0.7049539  | 42.12         |
| Sasini          | 0.051           | 60  | 16.004141 | 0.2797471 | 9.90        | 0.7202529  | - 45.63       |
| Sasini          | 0.070           | 59  | 16.062797 | 0.2853358 | 10.30       | 0.7146642  | 55.59         |
| Sasini          | 0.065           | 58  | 16.019386 | 0.2836716 | 10.59       | 0.7163284  | 28.11         |
| Sasini          | 0.058           | 57  | 15.894731 | 0.2921159 | 6.58        | 0.7078841  | 29.84         |
| KQ              | 29.803          | 36  | 11.717253 | 0.7455857 | 7.62        | 0.2544143  | -             |
| KQ              | 23.006          | 35  | 11.257155 | 0.7026681 | 7.26        | 0.2973319  | 22.65         |
| KQ              | 23.006          | 34  | 11.273945 | 0.7060945 | 6.94        | 0.2939055  | 29.27         |
| KQ              | 23.005          | 33  | 11.201811 | 0.7273794 | 6.80        | 0.2726206  | 23.81         |
| KQ              | 23.004          | 32  | 11.238212 | 0.7739375 | 6.31        | 0.2260625  | - 27.91       |
| NMG             | 0.007           | 53  | 9.3452383 | 0.2796875 | 5.79        | 0.7203125  | 29.38         |
| NMG             | 0.031           | 52  | 9.2758846 | 0.314112  | 5.77        | 0.685888   | 28.37         |
| NMG             | 0.030           | 51  | 9.0843576 | 0.305559  | 5.66        | 0.694441   | 28.59         |
| NMG             | -               | 50  | 8.984092  | 0.3201299 | 5.77        | 0.6798701  | 28.33         |
| NMG             | -               | 49  | 8.7906648 | 0.2828257 | 5.85        | 0.7171743  | 27.41         |
| TPS Serena      | 0.006           | 43  | 16.602426 | 0.3202908 | 14.09       | 0.6797092  | 31.31         |
| TPS Serena      | 0.008           | 42  | 16.41702  | 0.3932539 | 13.87       | 0.6067461  | 31.59         |
| TPS Serena      | 0.004           | 41  | 16.39055  | 0.387228  | 13.87       | 0.612772   | 27.81         |
| TPS Serena      | 0.004           | 40  | 16.293991 | 0.3712741 | 13.87       | 0.6287259  | 25.48         |
| TPS Serena      | 0.017           | 39  | 15.760877 | 0.4190572 | 13.89       | 0.5809428  | 26.79         |
| Safaricom       | 0.013           | 16  | 18.674207 | 0.3770951 | 14.31       | 0.6229049  | 31.08         |
| Safaricom       | 0.011           | 15  | 18.618709 | 0.4086802 | 14.65       | 0.5913198  | 27.30         |
| Safaricom       | 0.011           | 14  | 18.550434 | 0.4075426 | 14.89       | 0.5924574  | 28.33         |
| Safaricom       | 0.016           | 13  | 18.461063 | 0.4017037 | 14.93       | 0.5982963  | 27.75         |
| Safaricom       | 0.016           | 12  | 18.33384  | 0.4421271 | 15.00       | 0.5578729  | 31.15         |
| Car and General | 0.025           | 77  | 15.747239 | 0.6371509 | 8.73        | 0.3628491  | 31.20         |
| Car and General | 0.025           | 76  | 15.556924 | 0.6243639 | 7.94        | 0.3756361  | 24.81         |

|                 |        |     |           |           |       |           |       |
|-----------------|--------|-----|-----------|-----------|-------|-----------|-------|
| Car and General | 0.025  | 75  | 15.531511 | 0.6547574 | 8.16  | 0.3452426 | 32.53 |
| Car and General | 0.025  | 74  | 15.17136  | 0.598999  | 8.09  | 0.401001  | 27.63 |
| Car and General | 0.029  | 73  | 14.981937 | 0.5926482 | 8.15  | 0.4073518 | 29.14 |
| Barclays        | 0.015  | 60  | 19.146958 | 0.8434199 | 7.96  | 0.1565801 | 31.40 |
| Barclays        | 0.019  | 59  | 19.034925 | 0.8399388 | 8.15  | 0.1600612 | 31.48 |
| Barclays        | 0.016  | 58  | 12.025923 | 0.8250424 | 8.12  | 0.1749576 | 32.79 |
| Barclays        | 0.002  | 57  | 12.05766  | 0.8175043 | 8.15  | 0.1824957 | 21.80 |
| Barclays        | 0.002  | 56  | 12.012943 | 0.8531676 | 6.53  | 0.1468324 | 32.34 |
| KCB             | 17.551 | 117 | 19.783838 | 0.8379053 | 14.15 | 0.1620947 | 28.73 |
| KCB             | 17.634 | 116 | 19.723645 | 0.8524666 | 13.98 | 0.1475334 | 29.08 |
| KCB             | 20.108 | 115 | 19.616613 | 0.8654621 | 14.23 | 0.1345379 | 27.42 |
| KCB             | 20.219 | 114 | 19.342382 | 0.8443254 | 14.13 | 0.1556746 | 26.74 |
| KCB             | 25.962 | 113 | 19.088569 | 0.8830637 | 14.12 | 0.1169363 | 35.18 |
| Equity          | 4.165  | 29  | 12.534401 | 0.8143694 | 7.63  | 0.1856306 | 30.13 |
| Equity          | 4.377  | 28  | 12.401516 | 0.8235144 | 7.25  | 0.1764856 | 30.65 |
| Equity          | 4.422  | 27  | 12.187369 | 0.8253385 | 7.21  | 0.1746615 | 19.55 |
| Equity          | -      | 26  | 11.870726 | 0.8097862 | 6.95  | 0.1902138 | 21.15 |
| Equity          | -      | 25  | 11.521013 | 0.7727651 | 6.78  | 0.2272349 | 19.78 |
| Cooperative     | 3.115  | 48  | 12.351103 | 0.8433536 | 14.42 | 0.1566464 | 16.23 |
| Cooperative     | 2.926  | 47  | 12.209008 | 0.8535954 | 14.58 | 0.1464046 | 22.64 |
| Cooperative     | 3.011  | 46  | 12.033575 | 0.8755228 | 13.33 | 0.1244772 | 15.71 |
| Cooperative     | 3.913  | 45  | 11.946907 | 0.8705447 | 13.28 | 0.1294553 | 20.64 |
| Cooperative     | 3.986  | 44  | 11.61438  | 0.8527982 | 13.20 | 0.1472018 | 20.56 |
| Pan Africa      | 20.069 | 66  | 16.867505 | 0.84221   | 11.72 | 0.15779   | 17.54 |
| Pan Africa      | 20.205 | 65  | 16.617265 | 0.8559346 | 11.55 | 0.1440654 | 28.08 |
| Pan Africa      | 20.087 | 64  | 16.259062 | 0.8156447 | 10.69 | 0.1843553 | 19.74 |
| Pan Africa      | -      | 63  | 16.183099 | 0.8282809 | 10.05 | 0.1717191 | 11.42 |
| Pan Africa      | 17.964 | 62  | 15.854198 | 0.8275034 | 8.71  | 0.1724966 | 20.00 |
| Kenya Re        | 60.030 | 43  | 17.155633 | 0.3649632 | 11.08 | 0.6350368 | 8.21  |

|          |        |    |           |           |       |           |         |
|----------|--------|----|-----------|-----------|-------|-----------|---------|
| Kenya Re | 60.028 | 42 | 16.98469  | 0.3826449 | 7.86  | 0.6173551 | 4.85    |
| Kenya Re | 60.009 | 41 | 16.765013 | 0.39493   | 9.26  | 0.60507   | 6.00    |
| Kenya Re | 60.009 | 40 | 16.662797 | 0.3867209 | 9.87  | 0.6132791 | 7.15    |
| Kenya Re | 60.013 | 39 | 16.523585 | 0.3933531 | 10.24 | 0.6066469 | 9.22    |
| Britam   | 24.827 | 48 | 17.663583 | 0.6389368 | 11.81 | 0.3610632 | 16.97   |
| Britam   | 24.827 | 47 | 17.394022 | 0.6518072 | 11.64 | 0.3481928 | 11.58   |
| Britam   | 29.089 | 46 | 17.049048 | 0.6626842 | 11.65 | 0.3373158 | - 13.53 |
| Britam   | -      | 45 | 17.048759 | 0.5832342 | 11.43 | 0.4167658 | 5.56    |
| Britam   | -      | 44 | 16.607645 | 0.6808556 | 11.15 | 0.3191444 | 19.94   |
| CIC      | 0.697  | 45 | 16.650829 | 0.6074799 | 11.37 | 0.3925201 | 15.87   |
| CIC      | 0.704  | 44 | 16.459524 | 0.6111489 | 10.94 | 0.3888511 | 15.85   |
| CIC      | -      | 43 | 16.224327 | 0.6138638 | 10.98 | 0.3861362 | 25.79   |
| CIC      | -      | 42 | 15.829841 | 0.6519146 | 10.49 | 0.3480854 | 19.63   |
| CIC      | -      | 41 | 15.065554 | 0.7163417 | 10.27 | 0.2836583 | 14.99   |
| Olympia  | 12.727 | 45 | 14.455997 | 0.4337727 | 7.16  | 0.5662273 | 27.34   |
| Olympia  | 23.947 | 44 | 14.298526 | 0.3416048 | 7.52  | 0.6583952 | 28.98   |
| Olympia  | -      | 43 | 13.88712  | 0.3974704 | 14.21 | 0.6025296 | -       |
| Olympia  | -      | 42 | 13.78929  | 0.5143853 | 14.30 | 0.4856147 | 74.57   |
| Olympia  | -      | 41 | 13.185879 | 1.5176749 | 11.55 | 0.8734318 | 18.20   |
| Centum   | 41.568 | 46 | 16.757924 | 0.280505  | 8.58  | 0.719495  | 22.74   |
| Centum   | 40.957 | 45 | 16.263727 | 0.1319587 | 7.56  | 0.8680413 | 12.97   |
| Centum   | 40.822 | 44 | 16.325238 | 0.2229144 | 8.59  | 0.7770856 | 0.09    |
| Centum   | 41.153 | 43 | 15.926447 | 0.048426  | 6.40  | 0.951574  | - 1.20  |
| Centum   | 40.214 | 42 | 15.698015 | 0.0386466 | 6.10  | 0.9613534 | 34.16   |
| EABL     | 0.001  | 91 | 17.885495 | 0.8559638 | 15.33 | 0.1440362 | 37.52   |
| EABL     | 0.001  | 90 | 17.815257 | 0.8403226 | 15.27 | 0.1596774 | 26.66   |
| EABL     | 0.185  | 89 | 17.72176  | 0.4591234 | 15.32 | 0.5408766 | 26.41   |
| EABL     | 0.190  | 88 | 17.464107 | 0.3765696 | 13.98 | 0.6234304 | 29.68   |
| EABL     | 0.196  | 87 | 17.394363 | 0.3478458 | 13.43 | 0.6521542 | 28.19   |



|           |        |     |           |           |       |           |       |
|-----------|--------|-----|-----------|-----------|-------|-----------|-------|
| Mumias    | 20.004 | 42  | 17.116828 | 0.5105062 | 12.66 | 0.4894938 | -     |
| Mumias    | 20.077 | 41  | 17.126058 | 0.4261452 | 12.22 | 0.5738548 | -     |
| Mumias    | 20.079 | 40  | 16.95865  | 0.3754019 | 11.96 | 0.6245981 | 26.95 |
| Mumias    | 20.100 | 39  | 16.724274 | 0.4000335 | 11.87 | 0.5999665 | 27.87 |
| Mumias    | 20.121 | 38  | 16.676323 | 0.4255188 | 10.82 | 0.5744812 | 34.93 |
| Unga      | -      | 113 | 15.933803 | 0.458464  | 9.08  | 0.541536  | 23.29 |
| Unga      | 0.018  | 112 | 15.503808 | 0.2626567 | 8.64  | 0.7373433 | 32.07 |
| Unga      | 0.018  | 111 | 15.557536 | 0.344015  | 8.77  | 0.655985  | 30.11 |
| Unga      | 0.018  | 110 | 15.43775  | 0.3356193 | 6.63  | 0.6643807 | 29.52 |
| Unga      | -      | 109 | 15.532105 | 0.4346665 | 7.41  | 0.5653335 | 28.89 |
| EA Cables | 0.653  | 47  | 15.733795 | 0.5496521 | 7.64  | 0.4503479 | 31.98 |
| EA Cables | 0.547  | 46  | 15.647875 | 0.5318936 | 8.31  | 0.4681064 | 30.69 |
| EA Cables | 0.045  | 45  | 15.423554 | 0.544599  | 8.47  | 0.455401  | 32.28 |
| EA Cables | 0.056  | 44  | 15.323679 | 0.5028583 | 8.72  | 0.4971417 | 28.92 |
| EA Cables | 0.056  | 43  | 15.080592 | 0.531301  | 8.99  | 0.468699  | 43.77 |