

**THE EFFECT OF TAX AVOIDANCE ON THE FINANCIAL PERFORMANCE  
OF LISTED COMPANIES AT THE NAIROBI SECURITIES EXCHANGE**

**BY**

**MOSOTA, JOASH RATEMO**

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## DECLARATION

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

Signature: .....

Date: .....

**MOSOTA JOASH RATEMO**

**D61/61581/2013**

This research project has been submitted for examination with my approval as a university supervisor.

Signature: .....

Date: .....

**HERICK ONDIGO**

**LECTURER,**

**DEPARTMENT OF FINANCE AND ACCOUNTING**

**SCHOOL OF BUSINESS**

**UNIVERSITY OF NAIROBI**

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## **DEDICATION**

I dedicate this study to my late Father, Mr. Paul Mosota. To my mother, Mrs. Priscah Mosota, your unconditional love, support and encouragement has been guaranteed throughout the entire period of study. I also dedicate the project to my colleague and friend Beryl Otieno who we started this journey together. Lastly, I salute all my brothers, sisters and all my friends who have supported to the end.

## **ABSTRACT**

The revenue authorities world over have continued to show keen interest in firms listed at the stock exchanges due to the complexity of their operations and the tendency for them to come up with complex tax avoidance mechanisms. This has also been complicated by the transfer pricing models adopted by multinational companies. Tax avoidance may be motivated by a number of factors but the consequences of such actions can either be positive or negative. This study is therefore motivated by the importance to not only understand the tax avoidance strategies but to also link tax avoidance to the financial performance of these companies. The objective of the study was to establish the effect of tax avoidance on financial performance of firms listed at the Nairobi Securities Exchange (NSE). Descriptive research design was used in the study. The population of interest in the study consisted of all the 61 listed at the NSE. The data comprised of the size, institutional shareholding government shareholding, age, and intangible assets of the firms. The results show that tax avoidance positively impacts on the financial performance of the companies. Further, Size of the company has a positively contribute to company's profitability, Leverage ratio has a negative impact on the financial performance of the companies, Age of the firm has a positive influence on the performance and there exists a positive relationship between intangible assets and the financial performance of companies. Though tax avoidance has positive impact on the financial performance of the companies, it is not always in the best interest of both the companies and the statutory authority. Companies which fail to remit tax face the risk of tax penalty and even receivership. Central government loses revenue through tax avoidance and this negatively impact on the economic growth of the country. Therefore companies should be aggressive in improving their financial performance. In the event that companies are reporting financial losses which are largely attributed to tax burden, they should negotiate with the tax authority to be offered tax incentives. While this study focuses on the companies listed at the NSE, the study suggests that similar studies should be done on other firms/companies that are not listed in the NSE. This might help the tax authority in increasing the revenue collection to the central government.

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## LIST OF ABBREVIATIONS

BTD	Book Tax Differences
CMA	Capital Markets Authority
ETR	Effective Tax Rate
ITA	Income Tax Act
IV	Independent Variable
KAM	Kenya Association of Manufacturers
KRA	Kenya Revenue Authority
NSE	Nairobi Securities Exchange
NT	National Treasury
OLS	Ordinary Least Squares
PwC	PricewaterhouseCoopers
US	United States
VAT	Value added Tax
TAV	Tax Avoidance
TE	Tax Evasion
TP	Transfer Pricing



# **CHAPTER ONE**

## **INTRODUCTION**

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

While tax consequences are a motivating factor in many corporate decisions, managerial actions designed solely to minimize corporate tax obligations are thought to be an increasingly important feature of corporate activity. Tax avoidance may be motivated by a number of factors but the consequences of such actions can either be positive or negative (Desai & Dharmapala, 2009a). It is therefore important to examine how the financial performance of firms is influenced by tax avoidance levels in Kenya.

Kenya has a number of firms operating in various industries listed at the NSE. Currently, the firms listed on the NSE are 61 and are in 11 sectors. Given the range of services and products these firms provide, it is interesting to understand the extent to which they take advantage of tax avoidance and how that affects their financial performance.

#### **1.1.1 Tax Avoidance**

Following Hanlon and Heitzman (2009), tax avoidance can be defined as the reduction of explicit taxes per dollar of pre-tax accounting earnings. However, there is no universally accepted definition of tax avoidance in the accounting literature. Under this broad definition, tax avoidance represents a continuum of tax planning strategies, encompassing activities that are perfectly legal (for instance, bond investments, capital allowances, use of debt financing) and more aggressive transactions that fall into the grey area (for instance, abusive tax shelters, transfer pricing (TP), treaty shopping among others).

The Kenya Income Tax Act (ITA) and the Value Added Tax (VAT) Act define tax avoidance as deliberate attempts to reduce tax liability. These Acts attempt to outlaw or impose some stiff penalties for abusive tax avoidance practices or schemes. However, tax avoidance (TAV) can be distinguished from tax evasion (TE) this is because tax avoidance is usually legal and TE is an illegal approach of reducing tax liability.

Tax avoidance may therefore imply either managerial value-maximizing behaviour or a greater potential for agency conflicts between managers and shareholders (Wang, 2012). Over the past two decades, several studies provide interesting insights into why some firms avoid more tax than others. Early studies focus on firm characteristics as proxies for opportunities, incentives and resources for tax planning to explain why some firms avoid more tax than others (Rego, 2003). Recent studies extend this line of research by examining how agency conflicts may affect corporate tax avoidance behaviour.

According to various scholars, two methods have been used to measure tax avoidance.

The first method is the book-tax difference (BTD) which is defined as the difference between financial income and taxable income (Desai and Dharmapala, 2009a). The second method is effective tax rate (ETR) which is defined as the ratio of current income tax expense and income before tax (Bradshaw et al., 2013). The BTD measures both tax avoidance and earnings management while the ETR method only measures tax avoidance. In this study, the focus will be on ETR as a proxy for tax avoidance given its popularity, simplicity, and accuracy in measuring tax avoidance.

### **1.1.2 Financial Performance**

Performance comprises the actual output or results of an organization as measured against its intended outputs or goals and objectives. According to Richard et al., (2009) performance encompasses three specific areas of firm outcomes namely financial performance, product market performance and shareholder return. This study focuses on financial performance which refers to performance based on financial indicators. These include measures such as profits, return on assets, and return on equity, among others.

In the tax avoidance literature, financial performance has been measured in a number of ways. For instance, Wang (2012) measured financial performance of firms using firm value which was specifically measured as the market value of assets divided by the book value of total assets. Desai & Dharmapala (2009b) also measured financial performance as firm value using Tobin's Q. Katz, Khan and Schmidt (2013) on the other hand measure financial performance using profitability. More specifically, they measure profitability as the pre-tax return on equity and return on net operating assets. Other studies have used measures such as cost of equity (Goh, Lee, Lim & Shevlin, 2013) and cost of bank loans (Hasan, Hoi, Wu & Zhang, 2014).

### **1.1.3 Effects of Tax Avoidance on Financial Performance**

Tax avoidance activities are traditionally viewed as tax saving or planning devices that transfer resources from the state to shareholders and thus should increase after-tax firm value. An emerging literature in financial economics, however, emphasizes the agency

cost implications of tax avoidance and suggests that tax avoidance may not always enhance outside shareholder wealth. From the agency theory therefore, tax avoidance does not improve performance of an organisation because tax avoidance activities can facilitate managerial rent extraction in various forms. Since the combined costs, which include costs directly related to tax planning activities, additional compliance costs, and non-tax costs (e.g., agency costs in particular), may outweigh the tax benefits to shareholders, tax avoidance activities can potentially reduce after-tax firm value.

Consistent with the agency theory, Desai and Dharmapala (2006) find a negative association between the level of incentive compensation and the level of tax sheltering. This negative association is primarily driven by poorly governed firms. High power incentives, such as option-based compensation, better aligned managerial interests with those of shareholders should encourage managers to engage in tax avoidance to increase after-tax firm value and discourage managerial rent extraction. The negative association between high-powered incentives and tax avoidance suggests that for poorly governed firms, the tendency toward more tax aggressiveness is offset by the fact that reduced diversion is associated with reduced sheltering.

#### **1.1.4 The Nairobi Securities Exchange**

The NSE is regulated by the Capital Markets Authority (CMA) through a number of legislative frameworks. The CMA regulates the licensing, mergers and acquisitions, corporate governance, rating agencies, investment schemes, venture capital, asset-based securities, foreign investor relations and listings (NSE, 2014a). The rules regarding tax

avoidance are not explicitly provided for in the CMA guidelines but the corporate governance guidelines can be used to guide the conduct of listed firms regarding tax avoidance.

The NSE currently has 61 firms listed in 11 sectors (NSE, 2014b). These sectors are agriculture, commercial and services, telecommunication & technology, automobiles and accessories, banking, insurance, investment, manufacturing & allied, construction & allied, energy & petroleum, and the growth enterprise market segment.

## **1.2 Research problem**

Despite the significant tax savings generated by tax avoidance activities (Robinson, and Schmidt, 2012), there is mixed evidence on the implications of tax avoidance for firm financial performance (Koester, 2011), especially since these effects vary in the cross-section. For example, the increase in the after-tax performance of the firm maybe offset with the increased opportunities of rent extraction associated with tax avoidance.

The Kenya Revenue Authority (KRA) has recently shown a lot of interest in firms listed at the NSE due to the complexity of their operations and the tendency for them to come up with complex tax avoidance mechanisms. This has also been complicated by the transfer pricing models adopted when dealing with companies with set ups in Kenya and other countries in the world. Some of the big multinational companies have maintained high profitability over the years due to their efficient tax avoidance schemes (PwC, 2013). It is therefore important to not only understand the tax avoidance strategies but to

also link tax avoidance to the financial performance of these companies. The firms listed on the NSE can therefore benefit from better tax avoidance strategies. These benefits can be translated to their financial performance in terms of increased profitability or firm value (Desai & Dharmapala, 2009a). Every company always tries to manage their taxes by engaging in better planning of taxes and therefore such tax savings should translate to better financial performance. This concept is therefore significant for firms listed on the NSE who may seek to improve on all their savings.

On the numerous studies performed to examine the effect of tax avoidance on financial performance of firms, the results have been mixed. For instance, Desai & Dharmapala (2009a) found that tax avoidance did not significantly affect firm value. Wang (2012) on the other hand found that tax avoidance enhances firm value. Further, the study by Katz et al., (2013) found a negative link between tax avoidance and future profitability. A search on any study on the effect of tax avoidance on the financial performance of firms in Kenya or locally did not yield any result. Further there has been no research specifically focusing on listed firms 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 avoidance 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 avoidance affect the financial performance of listed firms in Kenya?

### **1.3 Research Objective**

To determine the effect of tax avoidance on the financial performance of listed firms in Kenya.

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

The study of the effect of tax avoidance on the financial performance of firms listed in Kenya is expected to be beneficial to a number of parties. Firstly, it is hoped that the study will provoke policy makers to give more attention to the tax avoidance given its contribution to the financial performance of firms. Examples of interested policy makers include the National Treasury (NT), the CMA, NSE, KRA and relevant associations such as the Kenya Association of Manufacturers (KAM).

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

Further, 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 avoidance and financial performance of firms.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

In this chapter, the researcher explored literature related to the effect of tax avoidance on financial performance. The researcher also considered 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 has analysed two major theories relevant to tax avoidance, namely, the political power theory and the agency theory. While one of the theories explains the effect of political economy on tax avoidance, the other theory explains the role of the agency tension between managers and investors in influencing tax avoidance.

##### **2.2.1 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 is premised on the



prediction that large companies face lower effective tax rate (Siegfried, 1972). 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.

### **2.2.2 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.

## **2.3 Determinants of Financial Performance**

There are many determinants of financial performance. In the section below, we cover the major ones;

### **2.3.1 Size**

The nature of the relationship between firm size and economic performance has received considerable attention in the literature and has provoked vigorous debate. Several arguments favour larger firm sizes in attaining higher performance. Large firms are more likely to exploit economies of scale and enjoy higher negotiation power over their clients and suppliers (Serrasqueiro and Nunes, 2008). In addition, they face less difficulty in getting access to credit for investment, have broader pools of qualified human capital, and may achieve greater strategic diversification (Yang and Chen, 2009). On the other hand, small firms exhibit certain characteristics which can counterbalance the handicaps attributed to their smallness. They suffer less from the agency problem and are characterised by more flexible non-hierarchical structures, which may be the appropriate organisational forms in changing business environments (Yang and Chen 2009).

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 Risseeuw (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**

In addition, the study of the relationship between debt and performance, 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**

It is not easy to find specific theoretical predictions for how firm age affects firm performance, because many theoretical models take firm size and firm age as representing the same fundamental concept. For example, Greiner (1972) presents his stages of growth model of organizational change in growing firms, in which size is linearly related to age. Other scholars have nonetheless made specific predictions about how firm performance changes with age.

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). More recently, however, 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**

Recent theoretical studies recognize the difficulty of enforcing termination outcomes when contracts are renegotiable. That 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 firms 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 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**

There is various international and local empirical evidence that is important to consider in the area of tax avoidance and financial performance of companies. We set out below the key evidence.

### **2.4.1 International evidence**

Desai & Dharmapala (2009a) examined whether corporate tax avoidance activities advance shareholder interests. The 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 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.

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.

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.

#### **2.4.2 Local evidence**

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.

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.

Ngingi (2012) carried out a study to assess the effect of financial innovation on commercial bank's financial performance. Kenya's financial sector has undergone significant transformation in the last few years. The population of study was all the 43 commercial banks in Kenya as at 30th June 2012. The study used secondary data from published central banks' annual reports. Study results indicated that financial innovation indeed contributes to and is positively correlated to profitability in the banking sector particularly that of commercial banks.

Ongore (2013) attempted to establish the determinants of financial performance of commercial banks in Kenya. Linear multiple regression model and generalized Least Square on panel data was used to estimate the parameters. The findings showed that bank specific factors significantly affect the performance of commercial banks in Kenya, except for liquidity variable. However, the overall effect of macroeconomic variables was inconclusive at 5% significance level. The moderating role of ownership identity on the financial performance of commercial banks was insignificant. Thus, the conclusion was that the financial performance of commercial banks in Kenya is driven mainly by board and management decisions, while macroeconomic factors have insignificant contribution.

Ochieng (2014) examined the effect of privatization on the financial performance of the Kenyan aviation industry, with specific reference to the Kenya Airways Limited. The

study explored literature on the financial performance of Kenya Airways before and after it was privatized by analyzing financial statements throughout the period. The target populations were financial experts, senior and middle-level management staff at Kenya Airways. The study used a sample of 37 staff, chosen using the stratified random sampling technique. The results showed that to a larger extent, privatization has had a positive impact on the financial performance of the aviation industry.

## **2.5 Summary of Literature Review**

One major theory, the agency theory, can be used to explain the tax avoidance behaviour among large corporations. This is the main theory that has been reviewed in this study. 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. This offers a research gap which the present study can exploit.

Another theory reviewed is the political power theory. Both theories are important in the present study as they examine why firms choose to avoid tax and why others avoid more taxes than others. In the case of political power theory, size of the firm is a major determinant of tax avoidance. The theory notes that large firms may take advantage of their size to avoid paying tax by either lobbying through the state agencies or better tax planning. However, empirical results that have tested this theory have found mixed results on the role of size on tax avoidance as well as well on performance. There is therefore a gap as concerns how size affects firm performance.

A review on the determinants of financial performance 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 performance. Thus, the present study will model these factors to control for their effects on performance.

The empirical review on the effect of tax avoidance on performance 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 avoidance affects performance of firms. This is a gap which the present study exploits. This is done by examining how tax avoidance influenced the financial performance 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 avoidance on financial performance of firms listed at the NSE.

#### **3.2. Research Design**

Under this study, a descriptive research design has been adopted. A descriptive research is defined as a research that describes the characteristics of a population or phenomena (Zikmund, 2003). Such studies aim at answering who, what, when, and where questions (Coldwell and Herbst, 2014). Since this study seeks to describe the effect of tax avoidance on performance, a descriptive design is the most appropriate one for the study.

#### **3.3. Target Population**

According to Cooper and Schindler (2000), a population is the total collection of elements about which we wish to make inferences. All the 61 companies listed at the NSE (see appendix 1) were selected as the test population for this study. The aforesaid companies were sampled as the number is not large. This assisted in coming up with a predictive model for the effect of tax avoidance on financial performance of listed at the NSE. As such, this was a census study of all the listed firms in Kenya.



### **3.4. Data Collection**

This study uses secondary data obtained from the NSE Secretariat and the respective company websites. Information on financial performance was obtained from the financial statements. Specifically, net profit after tax and the total assets was collected from the financial statements to help in measuring the return on asset (ROA).

Current tax and pre-tax income was collected to calculate the tax avoidance measure. The data was collected on the variables of interest for the 5 year period beginning 2008 to 2013 which was sufficient period to provide reliable data for this purpose.

### **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 avoidance among the firms, the mean and median values was used to interpret the results. In order to examine the effect of tax avoidance on performance, regression analysis was carried out. The analysis was performed using Ordinary Least Squares (OLS) regression models techniques with the aid of Statistical Package for Social Scientists (SPSS) analysis software.

### **3.5.1. Analytical Model**

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

$$FP = \alpha + \beta_1 TAV + \beta_2 SZ + \beta_3 LV + \beta_4 INS + \beta_5 GOV + \beta_6 AGE + \beta_7 INTANG$$

This model therefore stems directly from the literature review on the determinants of financial performance where these determinants are used in the model as a control variable and is modified from Goh et al., (2013). Under this model, the dependent variable is financial performance (FP) which is measured using the profitability index of return on assets (*ROA*). The independent variable is tax avoidance (*TAV*) measured as the effective tax rate. The control variables are size of the firm (*SZ*) which is used to control for the size of the firm, leverage (*LV*) used to control for capital structure decisions of a firm, institutional shareholding (*INS*) used to control ownership structure, government shareholding (*GOV*) used to control the ownership structure, age of the firm (*AGE*) used to control for the differences in age of the firms, and intangible assets (*INTANG*) which is used to control for the differences in asset composition of firms. These variables are defined in Table 3.1.

### **3.5.2. Tests of Significance**

Correlation analysis was used to examine the inter-relationships between the variables in the study. This showed if there were any serial correlations within the independent variables before a regression analysis was carried out. A multiple regression analysis was

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 performance as measured by ROA. The significance was tested at 5% level.

**Table 3.1: Operationalization of Variables**

<b>Variable</b>	<b>Description</b>	<b>Measurement Scale</b>
<i>TAV</i>	Tax avoidance measured as current income tax expense divided by pre-tax income	Ratio
<i>GOV</i>	Government shareholding determined by an indicator variable equal to one if a firm is controlled by the state, and zero otherwise.	Ratio
<i>INS</i>	Ownership of the institution or firm measured by percentage shares owned by institutional shareholders among the top 10 shareholders	Ratio
<i>SZ</i>	Natural logarithm of the book value of total assets at the end of the year	Ratio
<i>LV</i>	Total liabilities divided by total assets at the end of the year	Ratio
<i>FP</i>	This is the financial performance measured by the Return on Assets (ROA). ROA is calculated as the Net income divided by the total assets	Ratio
<i>AGE</i>	Age of the firm measured by difference between current year and the year of incorporation in years.	Ratio
<i>INTANG</i>	Natural Logarithm of the value of intangible assets at the end of the year.	Ratio

**Source: Researcher (2014)**

## **CHAPTER FOUR**

### **DATA ANALYSIS, RESULTS AND DISCUSSION**

#### **4.1. Introduction**

The main objective of the study was to investigate the effect of tax avoidance on the financial performance of listed firms in Kenya. The study targeted all the 61 companies listed at the NSE. The study used descriptive and inferential analytical techniques to analyze the data obtained. The study used Ordinary Least Squares (OLS) regression models. However, before running the regressions, descriptive statistics and correlation analysis were calculated. Correlation analysis shows the relationships between the different variables considered in the study. The correlation matrix presented simple bivariate correlations not taking into account other variables that may influence the results.

#### **4.2. Findings**

Under this section, the results of the study have been discussed as follows. The descriptive results are shown in section 4.2.1 while section 4.2.2 provides the results correlation analysis.

##### **4.2.1. Descriptive Statistics**

Table 4.1 presents the descriptive statistics and the distribution of the variables considered in this research: tax avoidance, government shareholding, ownership of institutions, leverage, financial performance, age and intangible assets. The descriptive statistics considered were minimum, maximum, mean, standard deviation, skewness and kurtosis.

**Table 4.1: Descriptive Statistics**

	Min	Max	Mean	Std. Deviation	Skewness		Kurtosis	
					Statistic	Std. Error	Statistic	Std. Error
FP	0.05	0.53	0.205	0.1434	0.8	0.329	0.749	0.57
TAV	0.25	0.48	0.2924	0.20114	-1.28	0.278	2.005	0.57
Size	ln2.02	ln10.05	0.251	0.482	0.203	10.109	0.599	0.57
Leverage	0.125	0.434	0.2611	0.65285	1.451	0.289	3.779	0.57
INS	0.15	0.401	0.0346	0.55042	0.366	0.289	-0.565	0.57
GVS	10	61	40.7328	2.68438	1.529	0.289	5.615	0.57
AGE	6	65	40	20.361	2.52	0.304	10.109	0.57
INTANG	ln5.2	Ln12.01	0.28	0.73683	0.378	0.249	1.755	0.57

Source: Research Findings

Table 4.1 shows that financial performance had a mean of 0.2050 and standard deviation of 0.1434. That is financial performance of the 61 listed companies during the study period registered an average of 20.5% return on assets. However, the value went as high as 53% and as low as 5%. Tax avoidance was on average 29.24% with maximum tax avoidance reaching 48% high for 61 listed companies during the study period.

Mean value of leverage ratio was 0.261 which implies 26.1% of total liabilities divided by total assets during the study period. All the 61 listed companies averagely had been in operation for 61 as at the time of the study.

## 4.2.2. Correlation Analysis

The study sought to establish the relationship between financial performance and the tax avoidance and the control variables. The correlation results are shown in table 4.2

**Table 4.2: Correlation Matrix**

	FP	TAV	SIZE	LV	INS	GVS	AGE	INTA
FP	1.0000							
TAV	0.1135	1.0000						
SIZE	0.2764	0.1442	1.0000					
LV	-0.3841	-0.2473	-0.1263	1.0000				
INS	0.0084	-0.3302	0.0692	0.3193	1.0000			
GVS	-0.0301	-0.2757	0.1830	0.3623	0.9093	1.0000		
AG	0.1633	0.4420	0.1489	-0.2158	-0.4313	-0.3989	1.0000	
INTA	0.5121	0.2145	0.501	0.564	0.258	0.657	0.1245	1.000

**Source: Research Findings**

\*\* . Correlation is significant at the 0.01 level (2-tailed); \* . Correlation is significant at the 0.05 level (2-tailed).

Pearson Correlation analysis was used to achieve this end at 99%, 95% and 90% confidence levels. The correlation analysis enabled the testing of study's hypothesis that tax avoidance has a significant effect on the financial performance of the companies. Table 4.2 illustrates significant, positive but low linear relationships between tax avoidance and companies financial performance period ( $R = -0.298$ ,  $p = .013$ ); accounts payable period ( $R = 0.1135$ ,  $p = .030$ ); size and financial performance ( $R = 0.2764$ ,  $p = .012$ ); and, leverage ratio and financial performance ( $R = -0.3841$ ,  $p = .016$ ).

The hypothesis tested the relationship between tax avoidance and financial performance of the 61 listed companies. The study established a positive coefficient significant at  $\alpha=5\%$ . Thus, the null hypothesis is accepted. This implies that increase in tax avoidance increases the financial performance of the listed companies.

### 4.3. Regression Models

The regression method used for this study was the least square method. This was used to determine the line of best fit for the model through minimizing the sum of squares of the distances from the points to the line of best fit. Through this method, the analysis assumed linearity between the dependent variable and the independent variables. Regression result was captured for the model summary, analysis of variance and regression coefficient.

#### 4.3.1. Analysis of Variance

Table 4.3 gives an analysis of variance. This is established if there is significance difference between the means of the variable and under study and also to examine the overall significance of the model. Overall significance of the model is important in establishing whether the model is fit to giving true estimate of the variables.

**Table 4.3 ANOVA Table**

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	.128	8	.026	3.662	.011
Residual	.210	53	.007		
Total	.338	61			

Source: Research Findings

Table 4.3 shows that F value (0.011) is below 0.05, it can be concluded that the regression model was significant in giving true estimate of the variables. It also implies that the means of the variable are not significantly related.

### 4.3.2. Model Summary

Table 4.4 summarises the regression results.

**Table 4.34 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.824 <sup>b</sup>	.679	.599	.13649	1.778

Source: Research Findings

From table 4.4 above, R-squared is 0.679 implying that 67.9% of the variation in financial performance of the 61 listed companies under study is attributed to the variation in the changes in the explanatory variables ( Size, leverage, age, intangible assets, shareholdings-institutions and government, tax avoidance). The study also used Durbin Watson (DW) test to check that the residuals of the models were not autocorrelated since independence of the residuals is one of the basic hypotheses of regression analysis. Being that the DW statistics were close to the prescribed value of 2.0 for residual independence, it can be concluded that there was no autocorrelation.

### 4.3.3. Regression Coefficients

The regression analysis was of the form:

$$FP = \alpha + \beta_1 TAV + \beta_2 SZ + \beta_3 LV + \beta_4 INS + \beta_4 GOV + \beta_6 AGE + \beta_7 INTANG$$

Table 4.5 presents the variables (Size, leverage, age, intangible assets, shareholdings-institutions and government, tax avoidance) coefficients.



**Table 4.5**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.269	.844		2.689	.012
TAV	.000	.000	.150	-.892	.079
Size	-.101	.040	.425	-2.547	.016
LV	.205	.066	-.509	3.112	.004
INS	.026	.025	.163	1.035	.309
GOV	.061	.029	.334	2.135	.041
AGE	.024	.0112	1.625	1.251	.023
INT	.1212	.015	0.281	2.011	.0805

Source: Research Findings

a. Independent variables: TAV, SZ, LV, INS, GOV, AGE, INTANG

b. Financial performance

From the regression coefficient result above, the estimated model becomes:

$$FP = 2.269 + 0.15TAV + 0.425SZ - 0.509LV + 0.163INS + 0.334GOV + 1.625AGE + 0.281INTA$$

#### 4.4. Interpretation of the Findings

The study intended to determine the effect of tax avoidance on financial performance of listed companies at the NSE. The results have shown that tax avoidance positively impacts on the financial performance of the companies listed at the NSE.

From the model summary of the regression analysis, R-squared was 0.679 implying that 67.9% of the variation in financial performance of the 61 listed companies under study is attributed to the variation in the changes in the explanatory variables (tax avoidance, size, leverage, age, intangible assets, shareholdings-institutions and government). This showed

that the model was good in analysing the effect of tax avoidance on financial performance.

From the correlation analysis, there was a significant, positive but low linear relationship between tax avoidance and companies' financial performance. At 5% level of significance, tax evasion, company size, leverage ratio, government shareholding, age of the company and the intangible assets are statistically significant in influencing the variation in the financial performance of the 61 listed companies. However, ownership of the institutions is not statistically significant in explaining the variation in the financial performance of the companies.

From the regression coefficients, a unit increase in tax evasion will lead to 0.15 increases in the financial performance of the 61 listed companies. A unit increase in companies' size will lead to 0.425 units increase in the financial performance of the companies. A unit increase in leverage ratio will lead to .509 decreases in the profitability of the listed companies. A unit increase in government shareholding will lead to 0.334 units increase in the profitability of the companies and a unit increase in the period of operation of companies will lead to 1.625 increases in the financial performance of the 61 listed companies.

Tax avoidance positively impacts on the financial performance of the companies and therefore decreases the companies' tax burden hence the unremitted tax forms part of the profit for the company.

Other factors investigated on how they affect financial performance were return on assets, size of the firm, leverage, age, intangible assets, shareholdings-institutions and government. The results found that size of the company also positively contribute to company's profitability. This is because large firms are more likely to exploit economies of scale and enjoy higher negotiation power over their clients and suppliers (Serrasqueiro and Nunes, 2008).

The results show that leverage ratio has a negative impact on the financial performance of the companies. The finding is consistent with Kartz et al., (2013) who found 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.

The results also revealed that age of the firm has a positive influence on the performance of the firm as indicated by the study finding. Further the results indicate positive relationship between intangible assets and the financial performance of companies.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSION AND RECOMMENDATION**

#### **5.1. Introduction**

This chapter presents discussions of the key findings presented in chapter four, conclusions drawn based on such findings and recommendations there-to. This chapter will thus be structured into conclusion, recommendations and areas for further research.

#### **5.2. Summary**

This study intends to establish whether there tax avoidance affects financial performance of listed companies at the NSE in Kenya. In order to do this, the research was designed as a descriptive study where relationships were tested. The population comprised of all the 61 companies listed at the NSE. All the 61 listed company formed the sample of the study. The return on assets (ROA) was used as a measure of financial performance while the effective tax rate (TAV) was used as a measure of tax avoidance. Other variables used were size of the firm, leverage, institutional shareholding, government shareholding, age of the firm and intangible assets. Secondary data was used in the study where data on net profit after tax and return on assets were obtained from the financial statements of the companies available at NSE Secretariat and the respective company websites. Data was analysed using correlation and regression analysis.

The study found that tax avoidance positively impacts on the financial performance of the companies. Size, age and intangible assets also has a positively contribute to company's profitability. However, leverage negatively impacts the financial performance of a

company. From the correlation analysis, there was a significant, positive but low linear relationship between tax avoidance and companies' financial performance.

### **5.3. Conclusion**

From the result in chapter four, tax avoidance positively impacts on the financial performance of the companies. The result is consistent with Desai and Dharmapala (2009a) who contends that tax avoidance has a net benefit in an environment in which monitoring and control effectively constrain managerial opportunism afforded by tax avoidance activities. Tax avoidance decreases the companies' tax burden hence the unremitted tax forms part of the profit for the company.

Size of the company has a positively contribute to company's profitability. This is because large firms are more likely to exploit economies of scale and enjoy higher negotiation power over their clients and suppliers (Serrasqueiro and Nunes, 2008). The result is also in line with (Yang and Chen, 2009) who contends that big companies face less difficulty in getting access to credit for investment, have broader pools of qualified human capital, and may achieve greater strategic diversification while small companies are handicapped by the small collateral assets which they can use as securities in securing credit for investments.

Leverage ratio has a negative impact on the financial performance of the companies. The finding is consistent with Kartz et al., (2013) who found 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.

Age of the firm has a positive influence on the performance of the firm as indicated by the study finding. Probability of innovation and productivity growth change across the firm age distribution (Huergo and Jaumandreu, 2004a,b). Older firms have the financial muscle in the form of a pool of resources that they can use for investments, diversification and they also they enjoy economies of scale. The result also indicates positive relationship between intangible assets and the financial performance of companies. Pouraghajan et al., (2012) found that asset tangibility ratio had a positive relationship with financial performance. Intangible assets do not involve high operation costs, efficiency is paramount and the company requires less human personnel to manage.

#### **5.4. Recommendations for Policy**

Though tax avoidance has positive impact on the financial performance of the companies, it is not always in the best interest of both the companies and the statutory authority. Companies which fail to remit tax face the risk of tax penalty and even receivership. Central government loses revenue through tax avoidance and this negatively impact on the economic growth of the country. Therefore companies should be aggressive in improving their financial performance. In the event that companies are reporting financial lose which is largely attributed to tax burden, they should negotiate with the tax authority to be offered tax incentive like tax abatement and tax subsidies.

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

The study faced a number of limitations. The first limitation is in the explanatory power of the model. The model explained between 20.5 percent and 48 percent of the variance. This suggests that there are a number of variables that were left out of the model which would improve the explanatory power of the model.

Secondly, the study focused only on the companies listed at the NSE. Other companies not listed at the NSE were not studied due to time constraints and unavailability of data. Companies listed at the NSE financial statements are readily available at the NSE secretariat and various companies' websites as opposed to non-listed companies.

This study covered a period of only five years. However, studies of this nature span for periods of several decades. This is because tax avoidance and financial performance cover a long period of time. Accordingly, the results may not be conclusive.

## **5.6. Areas for Further Research**

The study suggests that similar studies should be done on other firms/companies that are not listed in the NSE. This might help the tax authority in increasing the revenue collection to the central government. There is need for further studies to carry out similar tests for a longer time period of time. This will help in observing the companies and the relationship between tax avoidance and profitability.

Further, this study covered tax avoidance in general. With the rising cases of usage of transfer pricing in tax avoidance, perhaps further studies should be conducted to focus on

the effect of transfer pricing on the financial performance of multinational companies.



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## **APPENDICES**

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

## Appendix 2: Regression Results

### Correlation Matrix

	FP	TAV	SIZE	LV	INS	GVS	AGE	INTA
FP	1.0000							
TAV	0.1135	1.0000						
SIZE	0.2764	0.1442	1.0000					
LV	-0.3841	-0.2473	-0.1263	1.0000				
INS	0.0884	-0.3302	0.0692	0.3193	1.0000			
GVS	-0.0301	-0.2757	0.1830	0.3623	0.9093	1.0000		
AG	0.1633	0.4420	0.1489	-0.2158	-0.4313	-0.3989	1.0000	
INTA	0.5121	0.2145	0.501	0.564	0.258	0.657	0.1245	1.000

\*\* . Correlation is significant at the 0.01 level (2-tailed); \* . Correlation is significant at the 0.05 level (2-tailed).

### Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.824 <sup>b</sup>	.679	.599	.13649	1.778

### ANOVA Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.128	8	.026	3.662	.011
	Residual	.210	53	.007		
	Total	.338	61			

### Appendix 3: Regression coefficients

Regression coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.269	.844		2.689	.012
TAX	.000	.000	.150	-.892	.079
Size	-.101	.040	.425	-2.547	.016
LV	.205	.066	-.509	3.112	.004
INS	.026	.025	.163	1.035	.309
GOV	.061	.029	.334	2.135	.041
AGE	.024	.0112	1.625	1.251	.023
INT	.1212	.015	0.281	2.011	.0805

a. Independent variables: TAV,SZ,LV,INS,GOV,AGE,INTANG

b. Financial performance

Source: Research Findings

#### Appendix 4: Sample format of data collected

Co.	TOTAL ASSETS(BILLIONS)	PRE TAX	ITANG ASSETS(log)	GOV SHARES(bill)	INST SHARES(billi)	LIABILITIES	NET INCOME(LOG)
1.Eaagads Ltd	22.755	0.0523	1.494	85.49	82.65	0.785	2.43902
2.Kapchorua Tea Co. Ltd	21.6	0.0077	1.968	359.74	124.69	1.322	0.483271
3.Kakuzi	21.611	0.1547	0.406	313.87	123.86	0.809	0.497323
4.Limuru Tea Co. Ltd	20.88	-0.016	1.021	350.62	57.37	1.703	0.611906
5.Rea Vipingo Plantations Ltd	21.264	0.1937	1.222	156.57	80.22	1.373	0.733117

Source: Research Findings