EFFECT OF CORPORATE GOVERNANCE ON TAX AGGRESSIVENESS AMONG FIRMS LISTED IN THE NAIROBI SECURITIES EXCHANGE

BY

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DECLARATION

This project is my original work and has not been presented for the award of degree in any other University.

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This Research Project has been submitted for presentation with the endorsement of the university supervisor.

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I appreciate Allah for giving me grace to complete this project. I am grateful to my supervisor, Dr. Winnie Nyamute for her guidance and advice that enabled me to clear this project.

DEDICATION

To my mother Warsame and sister Najma, I am grateful for your support.

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ABBREVIATIONS AND ACRONYMS

BVI   British Virgin Islands

CBK   Central Bank of Kenya

CEO   Chief Executive Officer

CG   Corporate Governance

CMA   Capital Markets Authority

CPI   Consumer Price Index

EAC   East African Countries

ETR   Effective Tax Rate

KAM   Kenya Association of Manufacturers

KRA   Kenya Revenue Authority

ABSTRACT

Corporate governance and tax aggressiveness among Kenya's listed entities was explored in this study. Both descriptive and correlational research design were appropriate for this study where 64 listed firms were targeted. Census was used thus all the firms were covered in the study. Information was obtained from secondary sources covering the period 2016 all through 2020. The analysis was supported by descriptive and inferential statistics. It was observed that board size (β=.279, p<0.05) had the largest and significant effect on tax aggressiveness followed by board meetings (β=.221, p<0.0), CEO duality (β=.166, p<0.05) and lastly board composition (β=.157, p<0.05). With regard to the control variables, profitability (β=.966, p<0.05) had the greatest significant effect followed by size (β=.449, p<0.05) and lastly leverage (r=.160, p<0.05). The study concludes the corporate governance significantly predicts tax aggressiveness as controlled by profitability, firm size and leverage. It was recommended that board of directors of the listed firms should effectively discharge their oversight role on behalf of the shareholders to avoid conflict of interests while maximizing tax aggressiveness. Shareholders of the listed firms should ensure that the existing boards are of optimal size. Regular board meetings should be organized by company secretaries of the listed firm to deliberate on strategic issues that may have an implication on these firms. The shareholders of the listed firms should ensure that the board is properly constituted with members having relevant experience and knowledge. The policy makers at the Capital Market Authority should stipulate and enforce strict regulations governing the corporate governance of all the listed firms.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Tax liabilities as well as effect of corporate decisions on total tax obligation is one of the major decisions that confronts decision making at the top organs of decision making in firms and in organizations. Firms always do what they can to ensure that their tax liabilities have been lowered while avoid possible cases of evasion. There is no universally accepted definition of tax aggressiveness as a concept. Chen et al. (2010) relates tax aggressiveness to the ability to plan for tax matters. Frischmann et al. (2008) view tax aggressiveness as the need take part in tax positions. Lisowsky et al. (2010) consider tax aggressiveness as the need to engage in tax avoidance by careful planning of the tax related matters. The decisions that managers in an entity make have an implication on tax aggressiveness. As such, a direct link is predicted between the structures of corporate governance and the ability to engage in tax aggressiveness (Wang, 2012).

Th agency theory was proposed through the inspiration of the agency relationship, where one party (principal) contracts another party (agent) to act on his behalf in order to achieve their main objectives. The relationship exists, though through a number of challenges as sometimes the objectives of the principal may sometimes be different from the objectives of the agent (Jensen & Meckling, 1976). The managers in an organization are thereby tasked to deliver management services of an organization on behalf of the owners. The resource dependency theory on the other hand posits that directors creates a link between the organization as well as other factors in the organization by co-opting the funds as well as the assets required by the organization (Siswato & Fuad, 2017). Stewardship theory on the other hand was proposed by Donaldson and Davis (1991).

The theory suggests that agents contracted to undertake management of an organization are always looking for the best of the organization. They are therefore true stewards to ensure that the vision and the objectives of the organization are met. The theory is opposed to the proposition by the agency theory that agents may have self-seeking ambitions that would deviate or would contradict the visions and objectives of the organization. These theories therefore seek to provide a narrative that would be used to predict or explain how corporate governance structure would undertake certain decisions in regard to tax aggressiveness.

1.1.1 Corporate Governance Practices

Corporate governance is a term that describes processes, practices as well as structures through which a company is able to manage its business as well as its business activities in order to meet its financial, operational as well as strategic objectives. It is also referred to as the system of rules, practices and processes that a firm adopts with the intention of directing and controlling the firm towards the achievement of its short term and long-term objectives. It involves the act of ensuring that the interests of different stakeholders, that include shareholders, suppliers, government, community among others, are well met and well balanced. It therefore involves all the spheres of management; from action plans, internal controls, performance measurement to corporate disclosure (Adams & Mehran, 2003).

The best corporate governance practices ensure that there exists a conducive environment for business operations. OECD (2015) responds to corporate governance practices as associations between management of an organization, shareholders as well as other stakeholders. It can also be expressed as a tool which helps various stakeholders to oversee the management and thereby safeguard their interests in the organization (Adams & Mehran, 2003). Odiero (2018) used board gender diversity, board size, and size of audit committee to determine corporate governance

practices. This study used a similar description of corporate governance practices, where it will be determined by the use of board composition, board size, frequency of board meetings, as well as CEO duality.

1.1.2 Tax Aggressiveness

Tax aggressiveness is the effort made by an entity to minimize the paid tax in a way that is legal (Hanlon & Heizman, 2010). This is an equivalent term with the need to plan, manage or avoid tax in as much the same can be validated by the existing laws. However, it is the judgment from experts that inform tax planning. Thus, firms which are more tax aggressive will set aside adequate resources to lower the expenses incurred in paying taxes. Tax aggressiveness is shaped by different factors for instance the specific attributes of the entity and the means of corporate governance. There are benefits as well as costs that are linked with tax aggressiveness. One of such benefits is the rise in the after tax value of the entity. This sends positive signals in the mind of the investors of the entity.

Furthermore, through opaqueness and complexity of the activities of tax aggressiveness, the management is provided with an opportunity ensure that their rent extraction activities have been masked (Desai & Dharmapala, 2006). The costs linked with tax aggressiveness could include the penalties that the tax authority imposes (Chen et al., 2010). Furthermore, some costs are incurred by the firm that strive to be tax aggressive for instance the need to take part in complicated activities like transfer pricing as well as the need to hire experts in tax matters. Tax aggressiveness is largely determined through effective tax rate (ETR) (Stickney & McGee, 1982). In this inquiry, the amount paid as a tax expense expressed as a ratio of pretax income will be used to gauge tax aggressiveness.

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1.1.3 Corporate Governance Practices and Tax Aggressiveness

The impact of corporate governance issues is critical in firms of developing economies due to the infant financial infrastructure, weaker capital markets as well as poor performance of stock returns from the capital market. The stakeholders are therefore critical as well as observant of strategies and policies that would be adopted by the board of such firms in order to ensure that their interests are well catered for. The main objective of most firms listed at the NSE is wealth maximization; shareholders therefore expect that management will always undertake decisions that would drive towards enhancing their wealth (Odiero, 2018).

Paying of taxes is among the critical expenses incurred by an entity that directly imparts on wealth of the owners. Owners of the entity have strong preference of tax planning so as to ensure that the firm value has been optimized. As such, tax aggressiveness is so instrumental to the shareholders of the entity (Tijjani, 2019). The aggressive perspective of tax avoid as a practice is tax aggressiveness. Thus, carrying out tax aggressiveness is the best way to optimize the returns that would accrue to the owners of the entity.

1.1.4 Firms Listed at Nairobi Securities Exchange

It was in 1954 when the Nairobi Securities Exchange (NSE) was formed as an entity to support brokerage activities. The platform has undergone different transformations to emerge as one of the biggest security market in Africa. NSE allows investors to buy shares that cultivating an investment behavior. The borrowers and lenders can easily meet through the NSE platform at a cost that is manageable (K'obonyo & Ongore 2011).

It was in 2014 that NSE was approved to float its share and enlist itself to the existing bourses. Presently, a total of 64 firms are listed on NSE and they exist in different bourses. The specific

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activities of each of these firms are overridden by their capital structure. Furthermore, all listed

and prudence at the management level is guided the accounting procedures. This inquiry focused

on all the listed firms with regard to their corporate governance structures.

1.2. Research Problem

The main goal of a firm is to enhance wealth maximization. This entails that management and

board members of a firm are under obligation to ensure that they maximize shareholders' value in

the firm. The relationship that envisages between shareholders and management is an agency

relationship where the management should work to serve the interest of the shareholders (Frank,

et al. 2009). However, the agency relationship is sometimes affected by selfish ambitions from the

management who seeks to achieve their own interests which might be different from the interests

of the shareholders. The agency conflict that ensues between the management and the shareholder

is one of the major elements where there would be a variation on tax aggressiveness in one firm

over the other (Tijjani, 2019). Every firm is expected to ensure that they maximize profits of the

firm; however, this might not always be the case since the management is expected to balance the

needs of all shareholders of the firm. The special attributes that are possessed by the board

members, therefore determines the quality of decisions they make in regard to their level of tax

aggressiveness, as they seek to balance between conflicting needs of the shareholders, government,

members of the community as well as suppliers of the firm (Pratama, 2017).

The NSE has 61 firms which may be classified into 11 broad economic sectors. These firms are

owned by the government, foreigners, corporate entities, individuals as well as diverse ownership

(K'obonyo & Ongore, 2011). The needs of the shareholders in these firms are therefore varied as

some shareholders are interested with speculative capital growth of shares, others are interested

with the growth of company to guarantee significant future returns while others are interested with increased current returns. The diverse economic sectors of the industry imply that these firms are under different regulations and therefore different taxation measures are followed. The government may sometimes issue tax relief to companies in certain economic sectors, such as agricultural sectors, to enhance increased investment in the sector (Odiero, 2018). It therefore follows that tax aggressiveness among these firms would vary from one firm to the other depending on the economic sector of the firm. Tax aggressiveness of these firms would also be dependent on the corporate governance practices that affect decisions that are undertaken by the firm in regard to tax avoidance as well as well as tax evasion measures. The fact that there exist internal pressures that push management to undertake earnings management, imply that similar pressures would influence decisions in regard to tax aggressiveness measures to be adopted by the firm (Kamau, 2018).

Abdikadir et al. (2018) used Nigeria as a case and paid emphasis on attributes of the entities and their connection with tax aggressiveness where a direct link was identified. Boussaidi and Hamed (2015) used Tunisia as a case exploring the mechanisms of corporate governance and their connection with tax aggressiveness where direct link was registered. Carrer and Slavov (2021) were keen to link tax aggressiveness and the overconfidence on the side of the CEOs where no significant link was documented.

Local studies include Ratemo (2014) who conducted a study on effect of tax avoidance on financial performance of listed companies at the NSE, where a positive relationship between the variables was envisaged. The study however did not focus on effect of corporate governance practices tax aggressiveness. Nyachae (2014) on the other hand focused in the effects of firm performance on corporate governance practices and did not study on tax aggressiveness. These variables were also

studied by Odiero (2018). Kamau and Ndinda (2012) studied on tax avoidance and evasion as a factor that influenced creative accounting practice, but did not focus on how such tax avoidance and evasion was connected to corporate governance practices. Kigo et al. (2020) on the other hand sought to establish the relationship between corporate governance practices and disclosure of corporate tax for firms listed at NSE. They found that ownership structure, board size and board independence had positive and significant impact on tax disclosure. The study however, failed to consider CEO duality, frequency of board meetings in the determination of corporate governance practices. Similarly, the study did not focus on tax aggressiveness but focused on tax disclosure which is quite distinct and different. This study therefore aimed to address these study gaps by answering the research question: what is the effect of corporate governance practices on tax aggressiveness among firms listed at NSE?

1.3. Research Objective

The research objective of the study was to determine the effect of corporate governance on tax aggressiveness among firms listed at the NSE.

1.4. Value of the study

The study on the effect of corporate governance and tax aggressiveness is expected to be of value to a number of parties. For instance, it is hoped that the study will provoke policy makers to give more attention to tax aggressiveness given its contribution to performance as well as on returns on investments expected from tax aggressiveness. These interested parties would 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 aggressiveness as well as the relationship of good corporate governance practices on enhancing tax aggressiveness. The management of companies listed at NSE will therefore find the study of great value as it will direct on the issue of corporate governance practices and how these factors would impact shareholder's value through tax aggressiveness.

Future researchers and academicians who seek to explore the relationship between corporate governance and tax aggressiveness will find this study important. This is due to the fact that these researchers would use the contributions in this study to develop their literature review and identify research gaps that will shape their researches on bringing new knowledge. The study will also help to highlight on the existing theories as the findings would either support the propositions of various theories or else will form a basis for critiquing the propositions of the theory.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter captures the theoretical review that explains the theories related to the study. It also contains a description of the factors that forms corporate governance practices. The chapter then discusses empirical literature where local and international studies are assessed. Conceptual framework is then discussed and drawn and a summary of literature review concludes the chapter.

2.2 Theoretical Review

In this section, theories that are relevant to the study are explained where the originator of the theory is identified, the key propositions of the theory are thereby explained as well as the criticism for each theory. The relevance of the theory is then discussed as the expected relationship between the variables is spelt out as predicted by the theory. The agency theory, resource dependence theory as well as stewardship theory.

2.2.1 The Agency Theory

Jensen and Meckling (1976) came up with this theory. The theory spelt out the relationship that exist when a party known as principal contracts another party called the agent to act on his/her behalf, in undertaking a task that the principal is not in position to perform, or is hindered to undertake such tasks due to factors such as lack of necessary skills, legal requirements among others. The principal therefore delegates his authority to the agent in order to facilitate representation. However, the agent may sometime, act contrary to the expectations of the shareholders which may place the two parties in conflict. This is regarded as agency conflict, and

it occurs when the agent fails to pursue the interests of the principal but instead pursues his own interests. The principal on the other hand may place measures that would prevent the agent to pursue his/her own interests by incurring extra costs that are known as agency costs.

The theory is relevant to the study as the study brings out the various decisions that are undertaken by the management in form of corporate governance practices in order to a achieve a certain level of tax aggressiveness. It is not always that the board members would make decisions that would maximize the wealth of the company. The board members seek to balance between the needs of various stakeholders and therefore fail to adopt the decisions that would best maximize shareholder's wealth, forcing the board members to be at conflict with the shareholders and therefore agency conflict arises.

2.2.2 Resource Dependence Theory

The resource dependence theory was proposed by Pfeffer (1973) who emphasized on the role of corporate governance in the process of acquiring resources for the company and the manner of utilizing these resources. The company directors therefore should focus on the decisions they make in order to utilize the existent company resources in order to achieve their goals and objectives. Resources appear in different forms; in form of raw materials, employees, financing activities among others. The acquisition of these resources requires the fervent decision-making skills of strategic and tactical management for the business. This theory is therefore based on the fact that resources are critical to any organization and as such the access and control of such resources is the key determinant of the success that an organization is likely to have as well as the foundation for power. Pfeffer and Salancik (1978) in the resource dependence principle discussed that

management uses the organizational power that is derived from the control they get over these external resources in order to manage the organization (Janse, 2020).

The theory therefore draws its relevance from the fact that the board members are in charge of undertaking critical company decisions in regard to utilizing company resources. The board members will therefore decide on the manner in which they would utilize the resources at the disposal of the company in order to achieve their goals. It is therefore ideal for any board to possess ideal governance structure that will form the basis for decision making. Any board that fails short in its structure would undertake compromised decisions that would have an adverse effect on tax aggressiveness of the company (Madi et al., 2014). The corporate governance practices that are adopted by each company therefore influences the quality of decisions that is undertaken by the board members in regard to utilization of company resources. The larger the board size, implies that different opinions are discussed and there is a very likelihood of ending up with a good final decision. Similarly, a more experienced board will probably provide critical and variety of practices to be undertaken in tax aggressiveness. The theory is however criticized by the element that the dependence on the critical and important resources for an organization, means that competitors are able to predict the course of actions for the organization with high accuracy, given that the competitors are aware of the critical resources of the organization (Gurusamy, 2017).

2.2.3 Stewardship Theory

Stewardship theory was first proposed by Donaldson and Davis (1989) where they suggested that agents work solely for the benefit of both the shareholders and the organization as a whole. The theory brings out difference from the agency theory that brings out agents as being self-seeking that they pursue their own interests on behalf of the organizational interests or the interests of the

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shareholders. The theory therefore suggests that stewards always undertake their obligations with the interests of the shareholders as well as the good of the organization in mind (Moses, 2019). The theory therefore proposes elimination of the board as executive managers always seek to perform their objectives in a manner that would be best suited for the organization and the shareholders without opportunist mentality. They are therefore the best stewards of the assets of the organization since they are accountable.

The fact that the stewardship theory brings out stewards as capable of combining as well as achieving the interests of all stakeholders in the organization may not be feasible. This is because there sometimes exist contradicting interests where different stakeholders desire the opposite outcome of a certain event. In the issue of tax aggressiveness, the government may desire the organization to pay increased taxes to help improve their revenue collection. On the other hand, the shareholders would wish that the company pays the least amount of taxes to the government and therefore maximizing the profit the company reports. In such situation where a decision would have an adverse effect on a stakeholder, would mean that the stewards of the company would be compromised and support one stakeholder over the other (Siswanto & Fuad, 2017). The presumption that a steward is able to pursue all the interests of all the stakeholders and perform his duties diligently is far-fetched.

The relevance of the theory to the study is the manner in which the theory brings out the purpose of the management as stewards and therefore wishes to ensure that they would undertake their responsibilities to meet the needs of all the stakeholders. The theory also cites the different non-financial benefits that accrues to the stewards and therefore capable of influencing their decision-making process. These benefits include achievement of their goals and objectives, recognition as

a result of undertaking good decisions for their organization, approval for good work done as well as recognition of their authority (Amer, 2016).

2.3 Determinants of Tax Aggressiveness

The tax aggressiveness of a company may be influenced by a number of factors. Different research that has been undertaken on tax aggressiveness and the various factors that determine or influence tax aggressiveness include; corporate governance practices, profitability of the firm, leverage of the firm, and size of the firm.

2.3.1 Corporate Governance Practices

The main objective of most firms listed at the NSE is wealth maximization, shareholders therefore expect that management will always undertake decisions that would drive towards enhancing their wealth. The decision-making organ in a company is executive management, whose decisions are supervised by the board members. The best corporate governance practices ensure that there exists a conducive environment for business operations. OECD (2015) responds to corporate governance practices as associations between management of an organization, shareholders as well as other stakeholders. It provides a structure within which the objectives of the firm are going to be achieved, while at the same time the manner in which performance will be monitored. It can also be expressed as a tool which helps various stakeholders to oversee the management and thereby safeguard their interests in the organization. The corporate governance practices that will be investigated in this study comprises of board composition, board size, frequency of board meetings, as well as CEO duality (Adams & Mehran, 2003).

2.3.2 Profitability of the Firm

The profitability is the difference between the revenue earned by a firm and the costs incurred by the firm to generate the revenue. This means that the profitability is the excess of revenue earned after deducting all the expenses that have been incurred while accumulating the revenue earned. In theory, companies that reports high profits are expected to pay more taxes, however, studies have indicated that companies with high profit, are engaged in tax aggressiveness, that they end up paying less taxes than their counterparts with low profitability (Yinka & Uchenna, 2018; Siswanto & Fuad, 2017). This therefore indicates that there is lack of uniformity on the relationship between profitability and tax aggressiveness. This has been brought out by the fact that previous studies have found that high profitability increases as well as decreases tax aggressiveness.

2.3.3 Leverage of the Firm

Leverage of the firm refers to use of debt in financing an asset of the firm rather than use of equity. It is therefore an investment strategy of using borrowed funds in order to enhance the potential of return on investment. Leverage therefore refers to the capital structure that is adopted by a firm in form of the total debt of the firm and the total equity of the firm. The choice between whether to use more or less of debt in financing companies' projects affects tax aggressiveness of a firm. However, companies with debt financing enjoy tax deductions on interest expenses incurred by the firm. However, previous studies indicate inconsistent findings between leverage and tax aggressiveness. Some studies indicated that there was positive effect of leverage on tax aggressiveness meaning that the higher the debt ratio of a firm, the higher the tax aggressiveness of the firm, while other studies indicated contrary findings (Jaffar, et al., 2021).

2.3.4 Size of the Firm

Most studies determine the size of the firm by the total assets owned by the firm, and which the firm uses to generate revenue for the firm. The burden of tax is likely to vary from one company to the other depending on the size of the company. The issue of company size and its effect on the tax burden has been investigated in a number of studies. Kraft (2014) found positive effect of size of the firm on the tax burden. This indicates that the larger the firm, the higher the tax burdens. However, conflicting findings have also been indicated by various studies, where they indicate that large firms are able to undertake serious tax aggressiveness that they end up having a low tax burden (Moreno et al., 2017).

2.4 Empirical Studies

This study will focus on both international and local studies that have been undertaken in regard to corporate governance practices and tax aggressiveness or similar research topics. The interest of the study would be the research topic undertaken, the methodology used by the research in providing answers to research questions, the findings of the research or the study are then stipulated, recommendations of the study and the research gap identified.

Abdikadir et al. (2018) investigated the impact of firm specific attributes on corporate tax aggressiveness from listed manufacturing firms in Nigeria. The firm attributes that were investigated in the study included firm size, profitability, capital intensity as well as leverage of the firm. Data was collected from 48 manufacturing firms listed at Nigeria Stock Exchange for the study period 2015-2019. Robust effect regression model was used where the study found that firm's leverage and capital intensity had positive effect on tax aggressiveness, while profitability

had negative influence on the dependent variable. The study although focused on tax aggressiveness, did not study on effect of corporate governance practices on tax aggressiveness.

Boussaidi and Hamed (2015) investigated impact of governance mechanisms on tax aggressiveness in Tunisia. The study was undertaken in the period 2006-2012 on a sample of Tunisian firms, where regression analysis was undertaken to investigate the relationship between the study variables. The study found that diversity in gender in board structure, managerial and concentration ownership had positive impact on tax aggressiveness activities. Board's diversity and managerial ownership had a positive effect on tax aggressiveness. Despite the fact that the study was undertaken in Tunisia, the variables that were investigated to represent corporate governance, did not feature CEO duality, frequency of board meetings as well as board size.

Carrer and Slavov (2021) on the other hand undertook a study on tax aggressiveness and CEO overconfidence in the stock market in Brazil. The study measured overconfidence by normalizing excess acquisitions as well as excess investments rated by the company's market value. Tax aggressiveness was determined by the use of tax burden on earnings. The model used in the analysis had data collected from financial statements of companies included in the sample, where multiple regression analysis was undertaken. Combined and fixed effects method was used to answer the research questions. The study did not find any significant association between CEO overconfidence and tax aggressiveness, however factors such as company size, profitability and education level of the CEO had positive impact. The study also did not focus on corporate governance practices but majored on firm characteristics and CEO qualities.

Jaffar et al (2021) on the other hand examined the level of aggressiveness in tax planning for firms that were listed in Bursa Malaysia Market, where a balanced pool sample of 105 firms was selected

and examined for the study period 2014-2018. They downloaded financial annual reports for these firms and multiple regression model was adopted to examine the relationship between the study variables for small firms in Malaysia (ACE-Access, Certainty, Efficiency) Market. The study findings indicated that profitability and financial distress had a significant relationship with tax planning aggressiveness. However, tax aggressiveness was not determined by size, capital intensity, inventory intensity, leverage and ethnicity. This study is not focused on small firms but in all the firms listed at the NSE, it further compares corporate governance practices and tax aggressiveness.

Ratemo (2014) who conducted a study on effect of tax avoidance on financial performance of listed companies at the NSE. The study employed a descriptive research design where all the 61 firms listed at the NSE were studied. the study variables included size of the company, age of the firm, leverage ratio as well as presence of institutional shareholders. Regression analysis was undertaken to determine the relationship between the study variables. The study findings indicated that a positive relationship between the variables was envisaged. The study however did not focus on effect of corporate governance practices tax aggressiveness.

 Apua (2019) on the other hand focused on the effects of tax avoidance on value of financial firms on the NSE. Descriptive research design was used by the study, where a census study of all 17 listed financial firms at NSE was undertaken. Tax avoidance was determined by the use of effective tax rate which was calculated by the ratio of tax expense and the gross profit. Secondary data was therefore collected for these firms for the study period 2014-2018. A regression analysis was then undertaken by the study where tax avoidance, dividend policy and leverage had insignificant effect on value of these firms. However, liquidity had significant effect on the value of these companies. The study therefore focused on tax avoidance and value of the firm and not on corporate

governance effect on tax aggressiveness which is the study gap that would be addressed by this study.

Kang'ara (2019) undertook a study on the influence of corporate governance practices on corporate tax planning for commercial and service firms listed at the NSE. A census study for all the 11 firms was undertaken where corporate governance was operationalized by the use of size of the board, independence, number of meetings and the control variables included profitability and managerial ownership. The study was undertaken for the period 2014-2018 where secondary data was collected and descriptive research design adopted by the study. The findings indicated that profitability had positive effect on tax planning, whereas size of the board, number of board meetings, as well as managerial ownership had negative and insignificant effect on tax planning. The study focused on commercial and service firms only while this study investigates all firms listed at NSE. The study also investigates additional factors of corporate governance practices such as effect of CEO duality as it believes it is a major factor that influences decision making process in an organization.

Kigo et al. (2020) on the other hand sought to establish the relationship between corporate governance practices and disclosure of corporate tax for firms listed at NSE. They found that ownership structure, board size and board independence had positive and significant impact on tax disclosure. The study however, failed to consider CEO duality, frequency of board meetings in the determination of corporate governance practices. Similarly, the study did not focus on tax aggressiveness but focused on tax disclosure which is quite distinct and different.

2.5 Summary of Literature Review

There exists quite significant literature that seeks to express the relationship between corporate governance practices and tax aggressiveness. The theoretical literature is composed of agency theory, resource dependent theory as well as stewardship theory. The anchor theory for the study is the agency theory that foresees that there exists some problem when board members seek their personal interests rather than fully seeking the interests of the shareholders. Shareholders are however placed in position where they should be able to meet the needs of all stakeholders. They may therefore not seek to always meet the objectives of the shareholders in their decisions if it would contradict to their own objectives or objectives of other stakeholders. This however has been contradicted by the stewardship theory that says that executive managers are stewards of the company who are always working for the interests of all the stakeholders. The contradiction in the theories suggest that the relationship between the study variables is not conclusive as different findings would relate to different theories.

Similarly, the empirical studies that have been undertaken indicates contradictory findings in regard to corporate governance practices and tax aggressiveness. There have been quite a number of international studies that have been undertaken in regard to corporate governance practices and tax aggressiveness. However, these studies fail to study all the effects of corporate governance on tax aggressiveness as factors such as CEO duality, number of board members meetings are not discussed in these studies (Carrer and Slavov, 2021; Boussaidi and Hamed, 2015). Similar research gaps are also found in local studies, while a number of these studies focus on part of firms listed at the NSE and not all the firms as listed at the NSE.

2.6 Conceptual Framework

Conceptual framework relates to the pictorial relationship of the study variables. It therefore relates the independent variables with the independent variable, indicating clearly how these variables interact with one another and expected relationships.

Figure 2.1: Conceptual Framework

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┌─────────────────────────────┐          ┌─────────────────────────────┐
│ Independent Variable        │          │ Dependent Variable          │
└─────────────────────────────┘          └─────────────────────────────┘

┌─────────────────────────────┐
│ Corporate Governance        │
│ practices                   │
│   • Board Composition       │
│   • Board Size              │          ┌─────────────────────────────┐
│   • No. of Board Meetings   │          │ Tax Aggressiveness          │
│   • CEO Duality             │          │                             │
└─────────────────────────────┘          │   • ETR (Tax expense to     │
                                         │     Pretax Income Ratio)    │
┌─────────────────────────────┐          └─────────────────────────────┘
│ Control    Variable   (Firm │
│ characteristics)            │
│   • Firm Size               │
│   • Leverage of the Firm    │
│   • Firm Profitability      │
└─────────────────────────────┘
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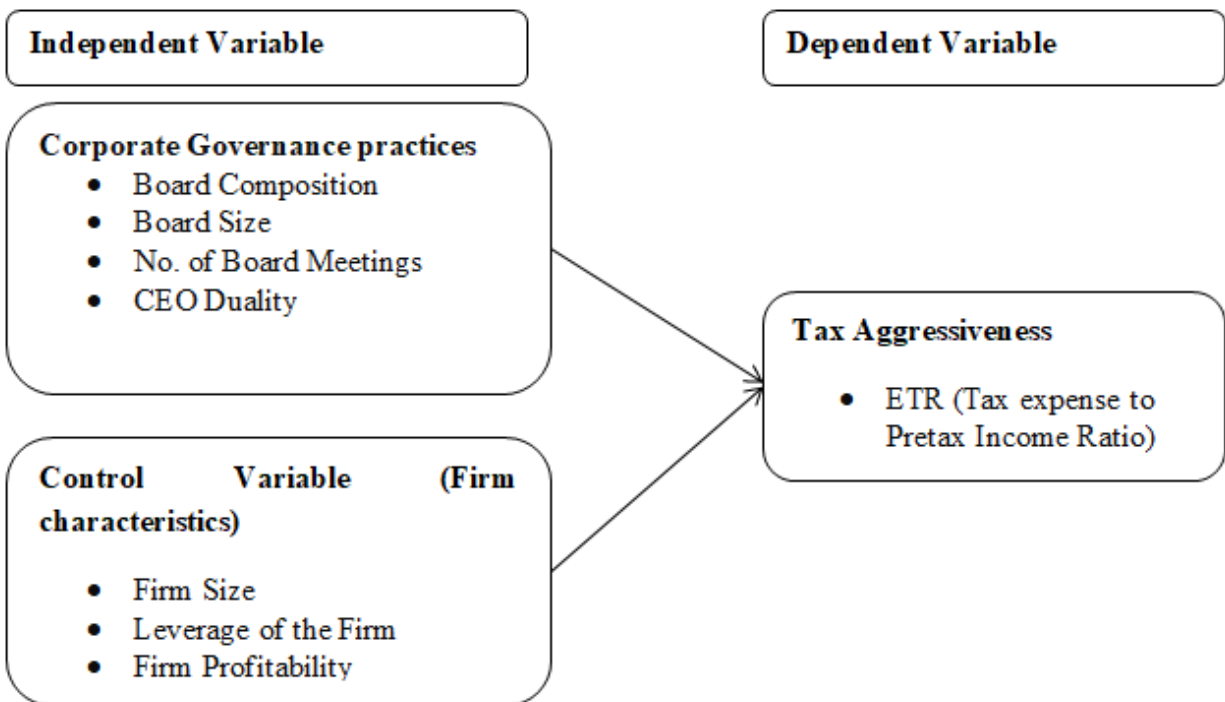
Source: Author (2021)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter details the design embraced, the targeted participants and how the views were gathered from them. The means used to process the gathered views and presented are also detailed.

3.2 Research Design

A mix research design was adopted by the study. This refers to the design where the study adopts more than one type of research design. Both descriptive and correlational research design were appropriate for this study. Descriptive research design describes the variables without explaining the why. The descriptive design explains the variables without interfering with them and only reports what already exists. The study also adopted correlational design since it correlated the study variables (Creswell, 2008).

3.3 Population of the Study

Population refers to all the number of items or objects that are eligible for investigation in a certain study. It therefore refers to all the items, people or objects that would be eligible to be investigated while undertaking a study. A total of 64 listed entities in Kenya were targeted and census was utilized.

3.4 Data Collection

Quantitative and secondary data was collected from published financial statements of these firms. Annual data was therefore collected from NSE website as well as from individual firm's website.

The study was interested with profitability of the firm, tax payments, board members, and their characteristics, capital structure as well as total assets of the firm.

3.5 Data Analysis

Data collected was checked for completeness and consistency. Data cleaning was then undertaken to ensure that only relevant and valid data is used in the study analysis. SPSS version 23 was employed in undertaking data analysis. Diagnostic tests were undertaken, before the analytical model is used to undertake the analysis.

3.5.1 Diagnostic Tests

The study undertook diagnostic tests that indicates assesses whether data complies with assumptions of the analysis being undertaken. This study used the gravity model to form regression equation that was the analytical model of the study. This implies that data needed to be suitable and comply with the assumptions made by regression analysis.

3.5.1.1 Normality Test

Normality test indicates whether data forms a bell-shaped distribution format which is called a normal curve. When data is large enough, it tends to take the shape of a normal curve and therefore the data may be used to undertake statistical assumptions. Normality test is undertaken by the use of Shapiro Wilk test. The null hypothesis states that the population from which the data is obtained is normally distributed. The null hypothesis is rejected if the significance (p-value) is below 0.05. Transformation of data is preferred when the null hypothesis is rejected.

3.5.1.2 Multi-collinearity Test

This is a test that shows whether the independent variable remain independent or they influence each other. Regression analysis assumes that independent variables remain independent and

therefore do not influence each other. Multi collinearity test is undertaken by the use of Variation inflation Factors (VIF) or tolerance levels to determine whether there exists multi-collinearity between variables or not. There exists a multi-collinearity when the VIF values are above 10. In this case the variable with multicollinearity is dropped from the model.

3.5.1.3 Autocorrelations Test

This was used to gauge whether the data was serially correlated. Durbin Watson value as a statistic was gauged and used to predict autocorrelation. The value close or equivalent to 2 was taken as a threshold when making the decision (Creswell, 2008).

3.5.2 Analytical Model

Data was analyzed by use of ordinary least squares method that were regressed to determine the relationship between the variables. The multiple regression model took the form;

$$Y = \alpha_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Where;

α_o and ε are regression constants

Y represents Tax Aggressiveness measured by ETR (Tax Expense/Pre-tax Income Ratio)

X_1 represents Board Composition (Ratio of Executive/Non-executive directors)

X_2 represents Board Size (Number of Board of directors)

X_3 represents Number of board Meetings

X_4 represents CEO Duality

X_5 represents Firm Characteristics (Size, Leverage, and Profitability)

$\beta_1, \beta_2, \beta_3, \beta_4,$ and β_5 are the coefficients of $X_1, X_2, X_3, X_4,$ and X_5 respectively.

CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION

4.1 Introduction

The specific contents of the chapter include a summary of descriptive statistics, the diagnostic tests, correlation as well as regression findings.

4.2 Descriptive Statistics

Table 4.1 provides a summary of the descriptive statistics on the study variables.

Table 4.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Dev
Tax Aggressiveness	295	.00	168.27	17.0034	28.38775
Board Composition	295	.20	1.00	.4201	.14677
Board Size	295	.48	1.28	1.0088	.10718
Board Meetings	295	.48	.70	.6264	.06054
CEO Duality	295	.00	1.00	.0169	.12930
Size	295	4.07	7.97	5.8252	.73290
Leverage	295	.00	.99	.0823	.14700
Profitability	295	.00	24.04	.1852	1.47782

Source: Research Data (2021)

Table 4.1 gives the average value of tax aggressiveness among listed firms as 17.0034, board composition was .4201, board size had 1.0088, board meetings had an average of .6264, CEO duality averaged at .0169, firm size averaged 5.8252, and leverage had .0823 while profitability had .1852. In terms of standard deviations, all the variables except tax aggressiveness and profitability had values less than 1, an indication that there was no significant variation.

4.3 Diagnostic Tests

Diagnostic tests were conducted to test the assumptions of regression analysis. The relevant tests that were performed are as specified in the subsequent sections.

4.3.1 Autocorrelation Test

Table 4.2 gives an overview of the findings.

Table 4.2: Autocorrelation Test

Model	Durbin-Watson
1	1.548[a]

Source: Research Data (2021)

The value of d from Table 4.2 is given approximately 2. This finding is echoed by Creswell, (2008) who observed that a value that is close to 2 indicates that there is less autocorrelation while values closer to either 0 or 4 indicates that there is either positive or negative autocorrelation respectively.

4.3.2 Multicollinearity Test

This is a test that shows whether the independent variable remains independent or they influence each other. Multi collinearity test is undertaken by the use of Variation inflation Factors (VIF) or tolerance levels to determine whether there exists multi-collinearity between variables or not. There exists a multi-collinearity when the VIF values are above 10. In this case the variable with multicollinearity is dropped from the model. Table 4.3 provides a summary of the findings.

Table 4.3: Multicollniearity Test

	Collinearity Statistics	
	Tolerance	VIF
Board Composition	.750	1.334
Board Size	.646	1.548
board Meetings	.753	1.329
CEO Duality	.888	1.126
Size	.960	1.041
Leverage	.660	1.515
Profitability	.689	1.451

Source: Research Data (2021)

From Table 4.3, the values of VIF for all the variables are within the range of 1-10. This is an indication of lack of multicollinearity which is desirable before conducting regression analysis.

4.3.3 Normality Test

Normality test indicates whether data forms a bell-shaped distribution format which is called a normal curve. When data is large enough, it tends to take the shape of a normal curve and therefore the data may be used to undertake statistical assumptions. Normality test is undertaken by the use of Shapiro Wilk test. The null hypothesis states that the population from which the data is obtained is normally distributed. The null hypothesis is rejected if the significance (p-value) is below 0.05. Transformation of data is preferred when the null hypothesis is rejected. Table 4.4 gives the findings.

Table 4.4: Normality Test

	Shapiro-Wilk		
	Statistic	**df**	**Sig.**
Tax aggressiveness	.825	43	.337
Board Composition	.649	25	.321
Board Size	.841	14	.417
board Meetings	.708	17	.522
CEO Duality	.868	14	.540
Size	.809	8	.336
Leverage	.947	9	.652
Profitability	.639	11	.604

Source: Research Data (2021)

The findings in Table 4.4 show respective p-values of the variables. From the results, all the variables had p>0.05, thus, the study fails to reject the null hypothesis and infer presence of normality in the data.

4.4 Correlation Matrix

Table 4.5 is the correlation matrix of the study.

Table 4.5: Correlation Matrix

		Tax Aggress iveness	Board Compo sition	Boar d Size	board Meetin gs	CEO Duali ty	Size	Levera ge	Profitabi lity
Tax Aggressi veness	Pearson Correlation	1							
Board Composit ion	Pearson Correlation	.727	1						
Board Size	Pearson Correlation	.496	.229	1					
board Meetings	Pearson Correlation	.120	.148	.102	1				
CEO Duality	Pearson Correlation	.051	.056	.038	-.325	1			
Size	Pearson Correlation	.676	.581	.095	-.006	.006	1		
Leverage	Pearson Correlation	.112	.163	.017	-.059	.025	.180	1	
Profitabil ity	Pearson Correlation	.086	.049	.056	.076	-.013	.076	.536	1

Source: Research Data (2021)

Table 4.5 shows that board composition (r=.727) and size (r=.676) have a strong and positive relationship with tax aggressiveness while board size r=.496) has a moderate relationship while board Meetings (r=.120), CEO duality (r=.051) and profitability (r=.086) all have weak but positive relationship.

4.5 Regression Results

This section details the regression results. Table 4.6 gives the model summary findings.

Table 4.6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.869[a]	.755	.749	14.22332

Source: Research Data (2021)

Table 4.6 gives an R squared value as 0.755, this means that 75.5% change in tax aggressiveness among listed firms in Kenya is explained by corporate governance. Table 4.7 gives an overview of the ANOVA findings.

Table 4.7: ANOVA

	Sum of Squares	df	Mean Square	F	Sig.
Regression	178863.264	7	25551.895	126.305	.000[b]
Residual	58060.938	287	202.303		
Total	**236924.201**	**294**			

Source: Research Data (2021)

From Table 4.7, the p-value is given as 0.000 (p<0.05), with F value given as 126.305. This shows that on overall, the study regression model was significant. Table 4.8 is the beta coefficient and significance.

Table 4.8: Beta coefficient and significance

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	6.618	1.165		5.68069	.000
Board Composition	.157	0.026	.409	6.03846	.000
Board Size	.279	0.103	.359	2.70874	.000
Board Meetings	.221	0.048	.026	4.60417	.011
CEO Duality	.166	0.083	.005	2.00000	.024
Size	.449	0.118	.412	3.80508	.000
Leverage	.160	0.051	-.063	3.13725	.017
Profitability	.966	0.173	.050	5.58382	.012

Source: Research Data (2021)

Table 4.8 shows that in terms of corporate governance with factoring in control variables, board size (β=.279, p<0.05) had the largest and significant effect on tax aggressiveness followed by board meetings (β=.221, p<0.0), CEO duality (β=.166, p<0.05) and lastly board composition (β=.157, p<0.05). With regard to the control variables, profitability (β=.966, p<0.05) had the greatest significant effect followed by size (β=.449, p<0.05) and lastly leverage (r=.160, p<0.05).

4.6 Discussion

The study established that corporate governance has a positive and significant relationship with tax aggressiveness. This implies that strengthening the corporate governance mechanisms in the

firm would improve tax aggressiveness. This finding is supported by OECD (2015) where it was observed that the best corporate governance practices ensure that there exists a conducive environment for business operations besides ensuring that there is a balance in power sharing among different stakeholders of the organization. Equally, Boussaidi and Hamed (2015) found that diversity in gender in board structure, managerial and concentration ownership had positive impact on tax aggressiveness activities.

The study demonstrated that board composition a strong and direction relationship with tax aggressiveness. On the other hand, board size had a moderate relationship with tax aggressiveness while board meetings, duality of the CEO as well as the composition of the board all had weak but positive relationship. The finding concur with Abdikadir et al. (2018) where the study found that firm's leverage and capital intensity had positive effect on tax aggressiveness, while profitability had negative influence on the dependent variable. Similarly, Carrer and Slavov (2021) noted that company size, profitability and education level of the CEO had positive impact on tax aggressiveness. Jaffar et al (2021) indicated that profitability and financial distress had a significant relationship with tax planning aggressiveness.

Regression results also supported the correlation results that corporate governance is an important predictor of tax aggressiveness in the firm. In particular, the ANOVA showed a p-within the accepted threshold of significance, signifying that corporate governance significantly predicts tax aggressiveness. The finding is consistent with Kigo et al. (2020) who found that ownership structure, board size and board independence had positive and significant impact on tax disclosure. Deeper insights from regression analysis further point out that board size has the largest and significant effect on tax aggressiveness followed by board meetings, CEO duality and lastly board composition. This means that the specific components of corporate governance have varied by

significant implication on tax aggressiveness of the firm. These findings contradict Kang'ara (2019) who established that size of the board, number of board meetings, as well as managerial ownership had negative and insignificant effect on tax planning.

The relationship between corporate governance and tax aggressiveness is controlled by profitability, size and leverage. This implies that profitable firms may have more tax aggressiveness compared to the less profitable business. These views are echoed by Yinka and Uchenna (2018) and Siswanto and Fuad (2017) who observed that in theory, companies that reports high profits are expected to pay more taxes, however, studies have indicated that companies with high profit, are engaged in tax aggressiveness that they end up paying less taxes than their counterparts with low profitability. It also implies that smaller firms would be less tax aggressive as compared to the larger ones. This finding is supported by Kraft (2014) who found positive effect of size of the firm on the tax burden which indicates that the larger the firm, the higher the tax burdens. The implication of leverage as a control variable is that levered firms would be more tax aggressive as this may enable them to enjoy the tax shield benefits. This would in turn maximize the wealth of the shareholders which is among the top objective of the firm. This finding is supported by Jaffar, et al., (2021) who shared that companies with debt financing enjoy tax deductions on interest expenses incurred by the firm.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

An overview of the processed data is provided in this section. Conclusion and recommendations are also raised based the areas that demand further studies.

5.2 Summary

The study established that corporate governance has a positive and significant relationship with tax aggressiveness. This implies that strengthening the corporate governance mechanisms in the firm would improve tax aggressiveness. The study demonstrated that board composition a strong and direction relationship with tax aggressiveness. On the other hand, board size had a moderate relationship with tax aggressiveness while board meetings, duality of the CEO as well as the composition of the board all had weak but positive relationship.

Regression results also supported the correlation results that corporate governance is an important predictor of tax aggressiveness in the firm. In particular, the ANOVA showed a p-within the accepted threshold of significance, signifying that corporate governance significantly predicts tax aggressiveness. Deep insights from regression analysis further point out that board size has the largest and significant effect on tax aggressiveness followed by board meetings, CEO duality and lastly board composition. This means that the specific components of corporate governance have varied by significant implication on tax aggressiveness of the firm.

The relationship between corporate governance and tax aggressiveness is controlled by profitability, size and leverage. This implies that profitable firms may have more tax aggressiveness compared to the less profitable business. It also implies that smaller firms would

be less tax aggressive as compared to the larger ones. The implication of leverage as a control variable is that levered firms would be more tax aggressive as this may enable them to enjoy the tax shield benefits. This would in turn maximize the wealth of the shareholders which is among the top objective of the firm.

5.3 Conclusion

Corporate governance is very instrumental when it comes to tax aggressiveness among listed firms in Kenya. Strengthening corporate governance mechanisms is one way of enhancing tax aggressiveness of the firm. This implies that in order to be more tax aggressive, listed firms should work to enhance on their corporate governance. The agency theory and the stewardship theory provides insights on how best an organization can enhance on corporate governance mechanisms. In light of the agency theory, the board should effectively play its oversight role so as to avoid possible conflicts of interests between the managers and the owners. In light of the stewardship theory, the management is assumed to be motivated to meet the goals of the firm as this gives them satisfaction.

The most important aspect of corporate governance that significantly contributes towards tax aggressiveness of the listed firms is board size followed by board meetings, CEO duality and lastly board composition. This means that an improvement in tax aggressiveness require listed firms to establish optimal boards, conduct regular board meetings, clearly establish the roles of the CEO and the chairman to these boards and ensure that boards are properly constituted. All these are controlled by profitability, size and leverage. Thus, besides strengthening the existing corporate governance, listed firms should invest in profitable projects and balance the debts and equities in their capital structures through leverage even as they strive to remain tax aggressive.

5.4 Recommendations

This study recommends that the board of directors of the listed firms should effectively discharge their oversight role on behalf of the shareholders to avoid conflict of interests while maximizing tax aggressiveness. Shareholders of the listed firms should ensure that the existing boards are of optimal size. Regular board meetings should be organized by company secretaries of the listed firm to deliberate on strategic issues that may have an implication on these firms. The shareholders of the listed firms should ensure that the board is properly constituted with members having relevant experience and knowledge.

The policy makers at the Capital Market Authority should stipulate and enforce strict regulations governing the corporate governance of all the listed firms. Relevant checks and balances should be instituted by CMA to ensure that the stipulated regulations on corporate governance are strictly implemented and adhered to by these listed firms. Other relevant policy makers like the Central Bank of Kenya, Kenya Association of Manufacturers and Insurance Regulatory Authority (IRA) among other relevant bodies should equally come up with relevant regulations with regard to corporate governance that should be adhered to by the member firms.

5.5 Suggestions for Further Research

Future studies can be conducted by focusing on firms within a specific bourse at the exchange market for instance the banking, insurance or manufacturing sections. Future studies can be conducted relating corporate governance with other constructs like profitability or operational performance. The public sector and institutions of higher learning are among key sectors that are facing concerns and can be good researchable contexts by future studies.

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APPENDICES

Appendix I: Data Collection Form

Period	Number of Board Members	No. of NEDS	Board Meetings (No)	CEO Duality	Tax Paid	Pre-Tax Income	Total Assets	Total Equity	Total Debt

Appendix II: Listed Firms

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
8. Car and General (K) Ltd
9. Absa Bank Kenya PLC
10. Stanbic Holdings Plc.
11. I&M Holdings Ltd
12. Diamond Trust Bank Kenya Ltd
13. HF Group Ltd
14. KCB Group Ltd
15. National Bank of Kenya Ltd
16. NCBA Group PLC
17. Standard Chartered Bank Ltd
18. Equity Group Holdings
19. The Co-operative Bank of Kenya Ltd
20. BK Group PLC
21. Express Ltd
22. Sameer Africa PLC

23. Kenya Airways Ltd

24. Nation Media Group

25. Standard Group Ltd

26. TPS Eastern Africa (Serena) Ltd

27. Scangroup Ltd

28. Uchumi Supermarket Ltd

29. Longhorn Publishers Ltd

30. Deacons (East Africa) Plc

31. Nairobi Business Ventures Ltd

32. Athi River Mining

33. Bamburi Cement Ltd

34. Crown Paints Kenya PLC.

35. E.A.Cables Ltd

36. E.A.Portland Cement Ltd

37. Total Kenya Ltd

38. KenGen Ltd

39. Kenya Power & Lighting Co Ltd

40. Umeme Ltd

41. Jubilee Holdings Ltd

42. Sanlam Kenya PLC

43. Kenya Re-Insurance Corporation Ltd

44. Liberty Kenya Holdings Ltd

45. Britam Holdings Ltd

46. CIC Insurance Group Ltd

47. Olympia Capital Holdings ltd

48. Centum Investment Co Ltd

49. Trans-Century Ltd

50. Home Afrika Ltd

51. Kurwitu Ventures

52. Nairobi Securities Exchange Ltd

53. B.O.C Kenya Ltd

54. British American Tobacco Kenya Ltd

55. Carbacid Investments Ltd

56. East African Breweries Plc

57. Mumias Sugar Co. Ltd

58. Unga Group Ltd

59. Eveready East Africa Ltd

60. Kenya Orchards Ltd

61. Flame Tree Group Holdings Ltd

62. Safaricom PLC

63. Stanlib Fahari I-REIT

64. New Gold Issuer (RP) Ltd

Source: NSE (2021)

Appendix III: Raw Data

Firm	Year	Tax Aggressiveness	Board Composition	Board Size	board Meetings	CEO Duality	Size	Leverage	Profitability
Eaagads Ltd	2016	32.583	1.000	0.477	0.602	0.000	7.054	0.550	0.269
Kapchorua Tea Co. Ltd	2016	40.000	0.571	0.845	0.477	0.000	6.157	0.096	0.038
Kakuzi	2016	28.446	0.455	1.041	0.602	0.000	5.607	0.003	0.001
Limuru Tea Co. Ltd	2016	5.903	0.286	0.845	0.602	0.000	5.630	0.003	0.001
Rea Vipingo Plantations Ltd	2016	1.405	0.200	0.699	0.477	0.000	6.502	0.435	0.350
Sasini Ltd	2016	13.898	0.316	1.279	0.699	0.000	6.012	0.040	0.047
Williamson Tea Kenya Ltd	2016	36.106	0.500	0.903	0.602	0.000	6.928	0.002	0.000
Car and General (K) Ltd	2016	9.320	0.500	0.903	0.477	1.000	5.955	0.000	0.000
Absa Bank Kenya PLC	2016	20.149	0.714	0.845	0.602	0.000	5.967	0.112	0.046
Stanbic Holdings Plc.	2016	12.553	0.300	1.000	0.602	0.000	6.492	0.019	0.006
I&M Holdings Ltd	2016	9.748	0.200	1.000	0.602	0.000	5.727	0.187	0.050
Diamond Trust Bank Kenya Ltd	2016	7.820	0.250	1.079	0.602	0.000	6.316	0.007	0.002
HF Group Ltd	2016	8.246	0.333	1.079	0.602	0.000	6.419	0.103	0.276
KCB Group Ltd	2016	2.514	0.500	1.000	0.602	0.000	5.894	0.017	0.052
National Bank of Kenya Ltd	2016	2.539	0.333	1.079	0.602	0.000	6.909	0.003	0.012
NCBA Group PLC	2016	6.039	0.333	1.079	0.602	0.000	7.637	0.032	0.102

Standard Chartered Bank Ltd	2016	0.538	0.300	1.000	0.602	0.000	6.662	0.001	0.004
Equity Group Holdings	2016	7.035	0.300	1.000	0.699	0.000	4.995	0.055	0.150
The Co-operative Bank of Kenya Ltd	2016	3.065	0.300	1.000	0.602	0.000	7.291	0.009	0.058
Express Ltd	2016	1.667	0.400	1.000	0.602	0.000	7.618	0.004	0.011
Sameer Africa PLC	2016	4.567	0.200	1.000	0.699	0.000	6.871	0.011	0.037
Kenya Airways Ltd	2016	9.426	0.250	1.079	0.602	0.000	7.371	0.004	0.007
Nation Media Group	2016	5.090	0.300	1.000	0.602	0.000	7.647	0.016	0.014
Standard Group Ltd	2016	9.543	0.300	1.000	0.602	0.000	6.234	0.042	0.021
TPS Eastern Africa (Serena) Ltd	2016	7.361	0.250	1.079	0.602	0.000	6.649	0.048	0.007
Scangroup Ltd	2016	35.859	0.333	1.079	0.602	0.000	6.262	0.080	0.006
Longhorn Publishers Ltd	2016	22.797	0.333	1.079	0.699	0.000	4.989	0.020	0.002
Deacons (East Africa) Plc	2016	28.094	0.400	1.000	0.699	0.000	5.876	0.032	0.006
Nairobi Business Ventures Ltd	2016	41.405	0.400	1.000	0.602	0.000	6.743	0.247	0.035
Athi River Mining	2016	4.967	0.400	1.000	0.699	0.000	6.350	0.075	0.014
Bamburi Cement Ltd	2016	23.989	0.500	1.000	0.699	0.000	4.905	0.030	0.006
Crown Paints Kenya PLC.	2016	31.221	0.417	1.079	0.699	0.000	5.688	0.993	24.040
E.A.Cables Ltd	2016	31.163	0.500	1.000	0.699	0.000	5.551	0.220	0.047
E.A.Portland Cement Ltd	2016	25.883	0.333	1.079	0.602	0.000	5.676	0.264	0.074

Total Kenya Ltd	2016	15.538	0.500	1.000	0.602	0.000	5.008	0.263	0.151
KenGen Ltd	2016	15.112	0.417	1.079	0.602	0.000	5.899	0.024	0.013
Kenya Power & Lighting Co Ltd	2016	0.062	0.500	1.000	0.699	0.000	4.903	0.001	0.003
Umeme Ltd	2016	0.712	0.417	1.079	0.699	0.000	7.793	0.073	0.074
Jubilee Holdings Ltd	2016	1.344	0.600	1.000	0.699	0.000	5.282	0.198	0.654
Sanlam Kenya PLC	2016	1.105	0.417	1.079	0.699	0.000	7.209	0.083	0.144
Kenya Re-Insurance Corporation Ltd	2016	0.475	0.500	1.000	0.602	0.000	5.016	0.102	0.296
Liberty Kenya Holdings Ltd	2016	0.501	0.417	1.079	0.602	0.000	7.069	0.311	0.356
Britam Holdings Ltd	2016	0.743	0.333	1.079	0.699	0.000	7.280	0.130	0.231
CIC Insurance Group Ltd	2016	0.759	0.300	1.000	0.602	0.000	5.709	0.188	0.231
Olympia Capital Holdings ltd	2016	0.732	0.417	1.079	0.699	0.000	4.903	0.399	0.994
Centum Investment Co Ltd	2016	0.688	0.500	1.000	0.699	0.000	4.903	0.163	0.168
Trans-Century Ltd	2016	1.770	0.364	1.041	0.699	0.000	5.123	0.317	0.665
Home Afrika Ltd	2016	1.405	0.417	1.079	0.602	0.000	7.722	0.074	0.042
Kurwitu Ventures	2016	1.298	0.500	1.000	0.602	0.000	6.020	0.112	0.028
Nairobi Securities Exchange Ltd	2016	1.685	0.417	1.079	0.602	0.000	7.528	0.315	0.457

Company	Year								
B.O.C Kenya Ltd	2016	1.749	0.600	1.000	0.602	0.000	5.818	0.592	0.770
British American Tobacco Kenya Ltd	2016	1.962	0.417	1.079	0.699	0.000	6.843	0.875	7.106
Carbacid Investments Ltd	2016	2.468	0.455	1.041	0.699	0.000	6.926	0.105	0.039
East African Breweries Plc	2016	1.573	0.500	0.903	0.602	0.000	5.740	0.262	0.299
Unga Group Ltd	2016	1.762	0.455	1.041	0.602	0.000	5.487	0.444	0.334
Eveready East Africa Ltd	2016	1.345	0.417	1.079	0.699	0.000	5.439	0.293	0.331
Kenya Orchards Ltd	2016	2.229	0.600	1.000	0.602	0.000	6.443	0.120	0.062
Flame Tree Group Holdings Ltd	2016	5.301	0.417	1.079	0.477	0.000	7.149	0.018	0.003
Safaricom PLC	2016	2.507	0.900	1.000	0.602	0.000	5.204	0.060	0.014
Eaagads Ltd	2017	1.182	1.000	0.477	0.602	0.000	5.980	0.544	0.350
Kapchorua Tea Co. Ltd	2017	0.370	0.571	0.845	0.477	0.000	6.036	0.047	0.007
Kakuzi	2017	0.098	0.455	1.041	0.602	0.000	6.255	0.010	0.003
Limuru Tea Co. Ltd	2017	0.676	0.286	0.845	0.602	0.000	7.574	0.957	3.488
Rea Vipingo Plantations Ltd	2017	0.179	0.200	0.699	0.477	0.000	6.861	0.023	0.005
Sasini Ltd	2017	0.314	0.316	1.279	0.699	0.000	5.088	0.015	0.022
Williamson Tea Kenya Ltd	2017	0.349	0.500	0.903	0.602	0.000	5.005	0.002	0.000
Car and General (K) Ltd	2017	0.463	0.500	0.903	0.477	1.000	4.313	0.216	0.121

Absa Bank Kenya PLC	2017	0.157	0.714	0.845	0.602	0.000	5.671	0.021	0.009
Stanbic Holdings Plc.	2017	0.325	0.300	1.000	0.602	0.000	6.346	0.071	0.081
I&M Holdings Ltd	2017	0.434	0.200	1.000	0.602	0.000	5.715	0.008	0.014
Diamond Trust Bank Kenya Ltd	2017	1.397	0.250	1.079	0.602	0.000	5.499	0.048	0.024
HF Group Ltd	2017	5.599	0.333	1.079	0.602	0.000	5.505	0.118	0.026
KCB Group Ltd	2017	0.361	0.500	1.000	0.602	0.000	6.071	0.026	0.184
National Bank of Kenya Ltd	2017	0.691	0.333	1.079	0.602	0.000	5.313	0.028	0.187
NCBA Group PLC	2017	0.002	0.333	1.079	0.602	0.000	5.226	0.001	0.007
Standard Chartered Bank Ltd	2017	0.219	0.300	1.000	0.602	0.000	5.204	0.011	0.072
Equity Group Holdings	2017	0.353	0.300	1.000	0.699	0.000	5.410	0.008	0.064
The Co-operative Bank of Kenya Ltd	2017	0.799	0.300	1.000	0.602	0.000	5.017	0.014	0.104
Express Ltd	2017	0.133	0.400	1.000	0.602	0.000	5.762	0.002	0.009
Sameer Africa PLC	2017	0.870	0.200	1.000	0.699	0.000	6.057	0.002	0.008
Kenya Airways Ltd	2017	0.007	0.250	1.079	0.602	0.000	5.911	0.001	0.009
Nation Media Group	2017	0.154	0.300	1.000	0.602	0.000	6.255	0.000	0.007
Standard Group Ltd	2017	0.399	0.300	1.000	0.602	0.000	5.803	0.005	0.025
TPS Eastern Africa (Serena) Ltd	2017	0.265	0.250	1.079	0.602	0.000	5.217	0.014	0.065
Scangroup Ltd	2017	5.905	0.333	1.079	0.602	0.000	5.721	0.002	0.001

Longhorn Publishers Ltd	2017	14.735	0.333	1.079	0.699	0.000	6.522	0.011	0.005
Deacons (East Africa) Plc	2017	43.963	0.400	1.000	0.699	0.000	5.204	0.001	0.000
Nairobi Business Ventures Ltd	2017	27.288	0.400	1.000	0.602	0.000	5.930	0.058	0.014
Athi River Mining	2017	52.309	0.400	1.000	0.699	0.000	5.703	0.001	0.000
Bamburi Cement Ltd	2017	86.704	0.500	1.000	0.699	0.000	5.133	0.016	0.017
Crown Paints Kenya PLC.	2017	72.397	0.417	1.079	0.699	0.000	5.437	0.000	0.000
E.A.Cables Ltd	2017	25.420	0.500	1.000	0.699	0.000	4.903	0.094	0.043
E.A.Portland Cement Ltd	2017	47.910	0.333	1.079	0.602	0.000	5.083	0.081	0.026
Total Kenya Ltd	2017	97.312	0.500	1.000	0.602	0.000	5.220	0.000	0.000
KenGen Ltd	2017	30.578	0.417	1.079	0.602	0.000	5.384	0.001	0.000
Kenya Power & Lighting Co Ltd	2017	63.332	0.500	1.000	0.699	0.000	5.215	0.001	0.000
Umeme Ltd	2017	4.251	0.417	1.079	0.699	0.000	5.588	0.016	0.019
Jubilee Holdings Ltd	2017	5.826	0.600	1.000	0.699	0.000	6.293	0.012	0.010
Sanlam Kenya PLC	2017	2.042	0.417	1.079	0.699	0.000	5.273	0.003	0.007
Kenya Re-Insurance Corporation Ltd	2017	4.840	0.500	1.000	0.602	0.000	4.927	0.059	0.050
Liberty Kenya Holdings Ltd	2017	3.488	0.417	1.079	0.602	0.000	5.604	0.038	0.093
Britam Holdings Ltd	2017	5.029	0.333	1.079	0.699	0.000	5.148	0.027	0.033
CIC Insurance Group Ltd	2017	6.379	0.300	1.000	0.602	0.000	5.602	0.005	0.004

Olympia Capital Holdings ltd	2017	6.787	0.417	1.079	0.699	0.000	5.336	0.000	0.000
Centum Investment Co Ltd	2017	4.431	0.500	1.000	0.699	0.000	5.824	0.235	0.047
Trans-Century Ltd	2017	4.770	0.364	1.041	0.699	0.000	6.732	0.026	0.003
Home Afrika Ltd	2017	6.107	0.417	1.079	0.602	0.000	6.081	0.191	0.031
Kurwitu Ventures	2017	4.870	0.500	1.000	0.602	0.000	6.105	0.427	0.108
Nairobi Securities Exchange Ltd	2017	27.243	0.417	1.079	0.602	0.000	5.605	0.019	0.002
B.O.C Kenya Ltd	2017	56.422	0.600	1.000	0.602	0.000	4.204	0.082	0.004
British American Tobacco Kenya Ltd	2017	41.845	0.417	1.079	0.699	0.000	5.768	0.154	0.009
Carbacid Investments Ltd	2017	61.877	0.455	1.041	0.699	0.000	4.958	0.001	0.000
East African Breweries Plc	2017	2.936	0.500	0.903	0.602	0.000	5.238	0.377	0.540
Unga Group Ltd	2017	63.085	0.455	1.041	0.602	0.000	5.933	0.105	0.004
Eveready East Africa Ltd	2017	58.356	0.417	1.079	0.699	0.000	5.117	0.118	0.005
Kenya Orchards Ltd	2017	83.119	0.600	1.000	0.602	0.000	5.760	0.019	0.004
Flame Tree Group Holdings Ltd	2017	26.290	0.417	1.079	0.477	0.000	5.863	0.444	0.332
Safaricom PLC	2017	33.401	0.900	1.000	0.602	0.000	5.439	0.018	0.004
Eaagads Ltd	2018	49.783	1.000	0.477	0.602	0.000	6.057	0.001	0.000
Kapchorua Tea Co. Ltd	2018	56.450	0.571	0.845	0.477	0.000	7.051	0.018	0.006
Kakuzi	2018	64.541	0.455	1.041	0.602	0.000	6.588	0.004	0.003

Limuru Tea Co. Ltd	2018	157.509	0.286	0.845	0.602	0.000	5.317	0.002	0.001
Rea Vipingo Plantations Ltd	2018	105.938	0.200	0.699	0.477	0.000	5.609	0.000	0.000
Sasini Ltd	2018	159.196	0.316	1.279	0.699	0.000	5.628	0.001	0.001
Williamson Tea Kenya Ltd	2018	93.340	0.500	0.903	0.602	0.000	4.971	0.000	0.000
Car and General (K) Ltd	2018	129.002	0.500	0.903	0.477	1.000	5.748	0.056	0.043
Absa Bank Kenya PLC	2018	109.905	0.714	0.845	0.602	0.000	5.937	0.049	0.051
Stanbic Holdings Plc.	2018	168.267	0.300	1.000	0.602	0.000	5.764	0.018	0.018
I&M Holdings Ltd	2018	94.620	0.200	1.000	0.602	0.000	5.051	0.003	0.003
Diamond Trust Bank Kenya Ltd	2018	137.308	0.250	1.079	0.602	0.000	5.685	0.005	0.003
HF Group Ltd	2018	84.699	0.333	1.079	0.602	0.000	5.221	0.000	0.000
KCB Group Ltd	2018	21.377	0.500	1.000	0.602	0.000	4.992	0.000	0.000
National Bank of Kenya Ltd	2018	1.892	0.333	1.079	0.602	0.000	6.005	0.000	0.000
NCBA Group PLC	2018	3.272	0.333	1.079	0.602	0.000	5.777	0.009	0.004
Standard Chartered Bank Ltd	2018	19.770	0.300	1.000	0.602	0.000	5.728	0.004	0.002
Equity Group Holdings	2018	2.641	0.300	1.000	0.699	0.000	6.623	0.005	0.004
The Co-operative Bank of Kenya Ltd	2018	3.580	0.300	1.000	0.602	0.000	4.993	0.000	0.000
Express Ltd	2018	9.089	0.400	1.000	0.602	0.000	4.945	0.002	0.000
Sameer Africa PLC	2018	2.152	0.200	1.000	0.699	0.000	5.455	0.002	0.001

Company	Year								
Kenya Airways Ltd	2018	1.305	0.250	1.079	0.602	0.000	5.659	0.134	0.128
Nation Media Group	2018	1.596	0.300	1.000	0.602	0.000	5.330	0.004	0.003
Standard Group Ltd	2018	2.227	0.300	1.000	0.602	0.000	5.310	0.022	0.009
TPS Eastern Africa (Serena) Ltd	2018	0.778	0.250	1.079	0.602	0.000	5.367	0.046	0.027
Scangroup Ltd	2018	2.441	0.333	1.079	0.602	0.000	5.460	0.000	0.000
Longhorn Publishers Ltd	2018	1.029	0.333	1.079	0.699	0.000	6.730	0.052	0.008
Deacons (East Africa) Plc	2018	6.473	0.400	1.000	0.699	0.000	5.207	0.000	0.000
Nairobi Business Ventures Ltd	2018	9.817	0.400	1.000	0.602	0.000	4.903	0.012	0.004
Athi River Mining	2018	3.983	0.400	1.000	0.699	0.000	6.057	0.004	0.001
Bamburi Cement Ltd	2018	0.121	0.500	1.000	0.699	0.000	5.504	0.012	0.030
Crown Paints Kenya PLC.	2018	0.184	0.417	1.079	0.699	0.000	5.204	0.001	0.002
E.A.Cables Ltd	2018	5.184	0.500	1.000	0.699	0.000	5.721	0.003	0.001
E.A.Portland Cement Ltd	2018	2.044	0.333	1.079	0.602	0.000	5.422	0.002	0.000
Total Kenya Ltd	2018	1.895	0.500	1.000	0.602	0.000	7.026	0.024	0.006
KenGen Ltd	2018	9.972	0.417	1.079	0.602	0.000	5.202	0.011	0.001
Kenya Power & Lighting Co Ltd	2018	7.968	0.500	1.000	0.699	0.000	6.198	0.042	0.005
Umeme Ltd	2018	3.302	0.417	1.079	0.699	0.000	5.505	0.001	0.000
Jubilee Holdings Ltd	2018	4.340	0.600	1.000	0.699	0.000	5.490	0.002	0.001
Sanlam Kenya PLC	2018	3.338	0.417	1.079	0.699	0.000	6.033	0.002	0.000
Kenya Re-Insurance	2018	10.332	0.500	1.000	0.602	0.000	5.156	0.038	0.011

Company	Year								
Corporation Ltd									
Liberty Kenya Holdings Ltd	2018	4.790	0.417	1.079	0.602	0.000	4.929	0.031	0.013
Britam Holdings Ltd	2018	4.152	0.333	1.079	0.699	0.000	5.892	0.044	0.012
CIC Insurance Group Ltd	2018	3.931	0.300	1.000	0.602	0.000	6.276	0.039	0.010
Olympia Capital Holdings ltd	2018	3.863	0.417	1.079	0.699	0.000	5.799	0.077	0.017
Centum Investment Co Ltd	2018	2.853	0.500	1.000	0.699	0.000	5.620	0.393	0.169
Trans-Century Ltd	2018	5.628	0.364	1.041	0.699	0.000	5.746	0.130	0.023
Home Afrika Ltd	2018	4.843	0.417	1.079	0.602	0.000	5.228	0.391	0.099
Kurwitu Ventures	2018	3.040	0.500	1.000	0.602	0.000	5.380	0.000	0.000
Nairobi Securities Exchange Ltd	2018	4.692	0.417	1.079	0.602	0.000	5.770	0.003	0.000
B.O.C Kenya Ltd	2018	4.013	0.600	1.000	0.602	0.000	5.641	0.010	0.001
British American Tobacco Kenya Ltd	2018	6.106	0.417	1.079	0.699	0.000	6.017	0.061	0.004
Carbacid Investments Ltd	2018	3.305	0.455	1.041	0.699	0.000	4.966	0.100	0.013
East African Breweries Plc	2018	3.382	0.500	0.903	0.602	0.000	5.264	0.002	0.000
Unga Group Ltd	2018	4.097	0.455	1.041	0.602	0.000	6.593	0.008	0.001
Eveready East Africa Ltd	2018	5.106	0.417	1.079	0.699	0.000	4.944	0.027	0.002
Kenya Orchards Ltd	2018	4.405	0.600	1.000	0.602	0.000	4.871	0.029	0.002

Company	Year								
Flame Tree Group Holdings Ltd	2018	3.163	0.417	1.079	0.477	0.000	5.779	0.062	0.008
Safaricom PLC	2018	4.111	0.900	1.000	0.602	0.000	5.315	0.001	0.000
Eaagads Ltd	2019	3.269	1.000	0.477	0.602	0.000	5.341	0.347	0.050
Kapchorua Tea Co. Ltd	2019	3.396	0.571	0.845	0.477	0.000	5.139	0.112	0.051
Kakuzi	2019	3.871	0.455	1.041	0.602	0.000	5.309	0.051	0.033
Limuru Tea Co. Ltd	2019	3.598	0.286	0.845	0.602	0.000	6.384	0.112	0.040
Rea Vipingo Plantations Ltd	2019	2.356	0.200	0.699	0.477	0.000	6.017	0.005	0.005
Sasini Ltd	2019	3.802	0.316	1.279	0.699	0.000	5.844	0.011	0.003
Williamson Tea Kenya Ltd	2019	9.535	0.500	0.903	0.602	0.000	4.903	0.011	0.002
Car and General (K) Ltd	2019	6.046	0.500	0.903	0.477	1.000	5.731	0.082	0.011
Absa Bank Kenya PLC	2019	0.741	0.714	0.845	0.602	0.000	6.393	0.074	0.036
Stanbic Holdings Plc.	2019	6.252	0.300	1.000	0.602	0.000	6.314	0.063	0.026
I&M Holdings Ltd	2019	2.495	0.200	1.000	0.602	0.000	5.487	0.015	0.013
Diamond Trust Bank Kenya Ltd	2019	0.020	0.250	1.079	0.602	0.000	5.248	0.189	1.300
HF Group Ltd	2019	0.547	0.333	1.079	0.602	0.000	5.681	0.006	0.006
KCB Group Ltd	2019	1.290	0.500	1.000	0.602	0.000	4.903	0.063	0.017
National Bank of Kenya Ltd	2019	0.202	0.333	1.079	0.602	0.000	6.299	0.523	1.804
NCBA Group PLC	2019	0.442	0.333	1.079	0.602	0.000	5.129	0.075	0.105
Standard Chartered Bank Ltd	2019	0.416	0.300	1.000	0.602	0.000	5.795	0.207	0.160

Company	Year								
Equity Group Holdings	2019	0.300	0.300	1.000	0.699	0.000	4.997	0.030	0.026
The Co-operative Bank of Kenya Ltd	2019	0.066	0.300	1.000	0.602	0.000	5.891	0.141	0.587
Express Ltd	2019	0.301	0.400	1.000	0.602	0.000	5.113	0.012	0.009
Sameer Africa PLC	2019	0.252	0.200	1.000	0.699	0.000	5.595	0.093	0.069
Kenya Airways Ltd	2019	0.354	0.250	1.079	0.602	0.000	6.348	0.211	0.204
Nation Media Group	2019	0.242	0.300	1.000	0.602	0.000	5.802	0.149	0.181
Standard Group Ltd	2019	0.119	0.300	1.000	0.602	0.000	5.832	0.017	0.023
TPS Eastern Africa (Serena) Ltd	2019	0.154	0.250	1.079	0.602	0.000	5.428	0.257	0.299
Scangroup Ltd	2019	0.131	0.333	1.079	0.602	0.000	5.468	0.161	0.344
Longhorn Publishers Ltd	2019	0.111	0.333	1.079	0.699	0.000	6.291	0.002	0.003
Deacons (East Africa) Plc	2019	2.982	0.400	1.000	0.699	0.000	5.420	0.000	0.000
Nairobi Business Ventures Ltd	2019	4.389	0.400	1.000	0.602	0.000	5.972	0.001	0.000
Athi River Mining	2019	5.584	0.400	1.000	0.699	0.000	5.204	0.001	0.000
Bamburi Cement Ltd	2019	6.917	0.500	1.000	0.699	0.000	5.970	0.005	0.000
Crown Paints Kenya PLC.	2019	8.383	0.417	1.079	0.699	0.000	6.246	0.006	0.000
E.A.Cables Ltd	2019	36.691	0.500	1.000	0.699	0.000	6.614	0.016	0.008
E.A.Portland Cement Ltd	2019	42.001	0.333	1.079	0.602	0.000	6.189	0.006	0.003
Total Kenya Ltd	2019	45.478	0.500	1.000	0.602	0.000	6.277	0.001	0.000
KenGen Ltd	2019	61.194	0.417	1.079	0.602	0.000	5.662	0.001	0.000

Kenya Power & Lighting Co Ltd	2019	39.598	0.500	1.000	0.699	0.000	4.997	0.001	0.001
Umeme Ltd	2019	62.743	0.417	1.079	0.699	0.000	5.705	0.015	0.007
Jubilee Holdings Ltd	2019	28.704	0.600	1.000	0.699	0.000	5.644	0.000	0.000
Sanlam Kenya PLC	2019	90.389	0.417	1.079	0.699	0.000	5.113	0.001	0.001
Kenya Re-Insurance Corporation Ltd	2019	56.209	0.500	1.000	0.602	0.000	5.577	0.002	0.002
Liberty Kenya Holdings Ltd	2019	35.155	0.417	1.079	0.602	0.000	5.519	0.002	0.002
Britam Holdings Ltd	2019	51.544	0.333	1.079	0.699	0.000	6.260	0.000	0.000
CIC Insurance Group Ltd	2019	18.095	0.300	1.000	0.602	0.000	5.728	0.005	0.007
Olympia Capital Holdings ltd	2019	10.600	0.417	1.079	0.699	0.000	5.206	0.001	0.001
Centum Investment Co Ltd	2019	19.118	0.500	1.000	0.699	0.000	4.924	0.003	0.003
Trans-Century Ltd	2019	5.869	0.364	1.041	0.699	0.000	6.549	0.001	0.001
Home Afrika Ltd	2019	9.489	0.417	1.079	0.602	0.000	6.116	0.003	0.003
Kurwitu Ventures	2019	38.491	0.500	1.000	0.602	0.000	5.681	0.010	0.003
Nairobi Securities Exchange Ltd	2019	31.051	0.417	1.079	0.602	0.000	4.798	0.001	0.000
B.O.C Kenya Ltd	2019	39.816	0.600	1.000	0.602	0.000	6.200	0.025	0.005
British American Tobacco Kenya Ltd	2019	15.007	0.417	1.079	0.699	0.000	5.187	0.000	0.000

Company	Year								
Carbacid Investments Ltd	2019	10.286	0.455	1.041	0.699	0.000	6.141	0.007	0.006
East African Breweries Plc	2019	11.242	0.500	0.903	0.602	0.000	5.052	0.151	0.218
Unga Group Ltd	2019	17.504	0.455	1.041	0.602	0.000	5.256	0.001	0.002
Eveready East Africa Ltd	2019	11.378	0.417	1.079	0.699	0.000	5.859	0.025	0.029
Kenya Orchards Ltd	2019	2.638	0.600	1.000	0.602	0.000	5.696	0.008	0.010
Flame Tree Group Holdings Ltd	2019	2.095	0.417	1.079	0.477	0.000	6.194	0.019	0.019
Safaricom PLC	2019	2.279	0.900	1.000	0.602	0.000	5.543	0.001	0.001
Eaagads Ltd	2020	2.540	1.000	0.477	0.602	0.000	5.363	0.009	0.008
Kapchorua Tea Co. Ltd	2020	2.447	0.571	0.845	0.477	0.000	4.951	0.449	0.121
Kakuzi	2020	2.703	0.455	1.041	0.602	0.000	6.114	0.146	0.020
Limuru Tea Co. Ltd	2020	4.843	0.286	0.845	0.602	0.000	5.476	0.200	0.029
Rea Vipingo Plantations Ltd	2020	3.840	0.200	0.699	0.477	0.000	5.426	0.083	0.013
Sasini Ltd	2020	3.989	0.316	1.279	0.699	0.000	6.465	0.001	0.000
Williamson Tea Kenya Ltd	2020	2.862	0.500	0.903	0.602	0.000	4.903	0.115	0.014
Car and General (K) Ltd	2020	6.686	0.500	0.903	0.477	1.000	6.193	0.197	0.019
Absa Bank Kenya PLC	2020	7.255	0.714	0.845	0.602	0.000	5.757	0.010	0.001
Stanbic Holdings Plc.	2020	13.531	0.300	1.000	0.602	0.000	5.031	0.077	0.007
I&M Holdings Ltd	2020	4.884	0.200	1.000	0.602	0.000	5.631	0.013	0.003

Diamond Trust Bank Kenya Ltd	2020	6.299	0.250	1.079	0.602	0.000	5.549	0.056	0.011
HF Group Ltd	2020	8.643	0.333	1.079	0.602	0.000	5.011	0.013	0.007
KCB Group Ltd	2020	31.030	0.500	1.000	0.602	0.000	5.204	0.003	0.000
National Bank of Kenya Ltd	2020	40.574	0.333	1.079	0.602	0.000	5.099	0.008	0.002
NCBA Group PLC	2020	6.719	0.333	1.079	0.602	0.000	5.518	0.232	0.030
Standard Chartered Bank Ltd	2020	25.657	0.300	1.000	0.602	0.000	4.799	0.005	0.004
Equity Group Holdings	2020	62.612	0.300	1.000	0.699	0.000	5.764	0.018	0.004
The Co-operative Bank of Kenya Ltd	2020	33.647	0.300	1.000	0.602	0.000	5.548	0.026	0.004
Express Ltd	2020	11.440	0.400	1.000	0.602	0.000	4.071	0.002	0.001
Sameer Africa PLC	2020	14.276	0.200	1.000	0.699	0.000	6.138	0.011	0.003
Kenya Airways Ltd	2020	18.017	0.250	1.079	0.602	0.000	5.222	0.002	0.000
Nation Media Group	2020	17.562	0.300	1.000	0.602	0.000	7.531	0.005	0.001
Standard Group Ltd	2020	3.028	0.300	1.000	0.602	0.000	7.972	0.054	0.378
TPS Eastern Africa (Serena) Ltd	2020	7.139	0.250	1.079	0.602	0.000	7.214	0.010	0.018
Scangroup Ltd	2020	10.409	0.333	1.079	0.602	0.000	6.505	0.006	0.002
Longhorn Publishers Ltd	2020	90.425	0.333	1.079	0.699	0.000	6.871	0.007	0.002
Deacons (East Africa) Plc	2020	92.702	0.400	1.000	0.699	0.000	5.887	0.004	0.001

Nairobi Business Ventures Ltd	2020	18.730	0.400	1.000	0.602	0.000	7.445	0.002	0.000
Athi River Mining	2020	12.114	0.400	1.000	0.699	0.000	6.398	0.018	0.005
Bamburi Cement Ltd	2020	2.344	0.500	1.000	0.699	0.000	7.141	0.004	0.003
Crown Paints Kenya PLC.	2020	24.690	0.417	1.079	0.699	0.000	6.635	0.004	0.001
E.A.Cables Ltd	2020	6.726	0.500	1.000	0.699	0.000	4.903	0.002	0.001
E.A.Portland Cement Ltd	2020	8.492	0.333	1.079	0.602	0.000	5.628	0.012	0.012
Total Kenya Ltd	2020	4.305	0.500	1.000	0.602	0.000	6.012	0.015	0.030
KenGen Ltd	2020	8.838	0.417	1.079	0.602	0.000	5.031	0.014	0.005
Kenya Power & Lighting Co Ltd	2020	74.729	0.500	1.000	0.699	0.000	6.519	0.042	0.001
Umeme Ltd	2020	3.123	0.417	1.079	0.699	0.000	6.162	0.091	0.076
Jubilee Holdings Ltd	2020	34.255	0.600	1.000	0.699	0.000	7.226	0.184	0.006
Sanlam Kenya PLC	2020	6.815	0.417	1.079	0.699	0.000	6.943	0.543	0.035
Kenya Re-Insurance Corporation Ltd	2020	14.857	0.500	1.000	0.602	0.000	6.844	0.511	0.082
Liberty Kenya Holdings Ltd	2020	0.502	0.417	1.079	0.602	0.000	5.431	0.274	1.139
Britam Holdings Ltd	2020	9.023	0.333	1.079	0.699	0.000	7.313	0.385	0.030
CIC Insurance Group Ltd	2020	0.855	0.300	1.000	0.602	0.000	7.223	0.161	0.111
Olympia Capital Holdings ltd	2020	1.380	0.417	1.079	0.699	0.000	6.291	0.045	0.017
Centum Investment Co Ltd	2020	2.745	0.500	1.000	0.699	0.000	7.889	0.005	0.001

Trans-Century Ltd	2020	0.944	0.364	1.041	0.699	0.000	5.790	0.055	0.033
Home Afrika Ltd	2020	0.535	0.417	1.079	0.602	0.000	6.071	0.006	0.035
Kurwitu Ventures	2020	4.612	0.500	1.000	0.602	0.000	5.236	0.006	0.007
Nairobi Securities Exchange Ltd	2020	0.826	0.417	1.079	0.602	0.000	7.364	0.105	0.078
B.O.C Kenya Ltd	2020	2.746	0.600	1.000	0.602	0.000	5.727	0.031	0.009
British American Tobacco Kenya Ltd	2020	1.095	0.417	1.079	0.699	0.000	5.653	0.085	0.028
Carbacid Investments Ltd	2020	6.192	0.455	1.041	0.699	0.000	5.681	0.064	0.018
East African Breweries Plc	2020	10.027	0.500	0.903	0.602	0.000	5.045	0.131	0.045
Unga Group Ltd	2020	6.387	0.455	1.041	0.602	0.000	5.243	0.144	0.013
Eveready East Africa Ltd	2020	1.373	0.417	1.079	0.699	0.000	5.002	0.022	0.020
Kenya Orchards Ltd	2020	12.888	0.600	1.000	0.602	0.000	6.093	0.035	0.004
Flame Tree Group Holdings Ltd	2020	2.189	0.417	1.079	0.477	0.000	7.587	0.039	0.028
Safaricom PLC	2020	1.732	0.900	1.000	0.602	0.000	4.903	0.014	0.008