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An Event study on effects of Kenya's varying application of Capital Gains Tax on stock market performance at Nairobi Securities Exchange

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AN EVENT STUDY ON EFFECTS OF KENYA'S VARYING APPLICATION OF CAPITAL GAINS TAX ON STOCK MARKET PERFORMANCE AT NAIROBI SECURITIES EXCHANGE

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DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

LILIAN AKOTH OBADHA

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Dated…….

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ABSTRACT

Whether CGT has a positive or negative impact on liquidity and stock returns is a puzzle stock markets across the World are yet to answer. Secondly, whether to go long or short on different portfolios held by investors during events surrounding CGT is a crucial investment decision most investors struggle with. The purpose of this research therefore was to assess the stock market performance following the three most recent events surrounding CGT in Kenya (Proposal to reintroduce CGT through the Budget Speech on 12th June, 2014, Reintroduction of CGT on 1st January, 2015 and Suspension of CGT on securities listed at any exchange licenced by CMA on 11th September, 2015). Using daily stock prices, volumes traded and market index (NASI), the paper employed a 15 day event methodology to examine the reaction of stock returns to CGT before, during and after the events. Data analysis found correlation between stock returns and CGT. There were abnormal returns and cumulative abnormal returns after CGT which were insignificant. Volumes Traded was analysed using Mann – Whitney U test, the null hypothesis was rejected meaning that volumes traded was higher after CGT events. Authorised Trading Participants had varying opinions on the role of CGT on stock market performance, while almost half the respondents were in agreement that CGT affect investment decisions and hence stock returns. The majority are opined that CGT causes uncertainty, makes the market less competitive and 100% of the respondents want CGT totally abolished on gains from securities at NSE. Generally, CGT affects stock market performance though the effect is insignificant, priorities such as dividend yield, diversification, liquidity informs most investment decisions.

Key Words: Capital Gains Tax, Stock Returns, Trading Volume, Lock-in Effect

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LIST OF ABBREVIATIONS AND ACRONYMS

CGT – Capital Gains Tax

CMA – Capital Markets Authority

EMH – Efficient Markety Hypothesis

MSCI – Morgan Stanley Capital Investment

NSE – Nairobi Securities Exchange

SPSS – Statistical Package for Social Science

WFE – World Federation of Exchanges

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CHAPTER 1: INTRODUCTION TO THE STUDY

1.1 Background of the Study

Kenya has made significant strides on key economic pillars which have largely resulted into sustained economic growth, social development and political gains over the past decade (CMA, 2018). Despite the milestones achieved, major development challenges still include among others poverty, inequality in income distribution, and an economy that is susceptible to both internal and external shocks (NSE Annual Report, 2017). At the centre of these challenges is the question of fiscal inadequacies. The government has thus made several policy reforms over time to address this central issue including taxation.

Taxation systems and processes have more particularly attracted significant structural changes because of their criticality in striking a delicate balance between redressing the above mentioned development challenges and ensuring a competitive investment environment. However, even through the reforms, Kenya has largely failed to strike the balance. This is visible through various examples.

The recent enactment of the Finance Bill 2018 into law is an apt example. Following its enactment into law, the World Bank has issued a report indicating that 32% of the Kenyan population now live below the poverty line and amongst the East African Community States, Kenya is leading with the highest population living below the poverty line (World Bank, 2018). Apart from the implications of the new tax reforms on poverty levels, the Nairobi Securities Exchange (NSE) has also reported that investors have lost value in paper wealth to the tune of Kenya Shs. 568 Billion in a span of five months from April to September 2018, with foreign investors at NSE being in a net selling position (NSE Report, 2018). Recent amendments on tax laws have also been mentioned as a contributing factor to the exit of foreign investors. The investors are exiting the market citing unattractiveness of returns on investment due to increased taxation, among other factors. To the foregoing extent, therefore, taxation is a market dynamic that has far-reaching implications on investor expectation. The following is an analysis of peer

reviewed literature on how taxation of capital gains has impacted on the stock market performance.

NSE has, from time to time, received favourable ranking as compared to its African counterparts, in January, 2018 for instance, NSE became the first Exchange in East and Central Africa to be admitted as a full member of the World Federation of Exchange (WFE) (NSE, Annual Report 2017). Morgan Stanley Capital International (MSCI) ranked NSE in 2017as being the fifth largest by market capitalization amongst the African Exchanges. According to NSE 2017 Half Year Presentations (NSE, 2017), foreign investors entering the NSE had reported great growth. Looking at such favourable NSE ranking and reports amongst its peers, it is necessary that factors leading to certainty, reliability, efficiency and competitiveness of the stock market are promoted. One of the issues that appear to cause uncertainty at the NSE is the varying application CGT, hence the need for this research to contribute to knowledge that can be relied upon by various stakeholders to have a lasting solution on uncertainty surrounding CGT at the stock market.

A change in a market dynamic that result into a change in the expectation of an investor in terms of risk and returns is of great interest to the various players in the stock market. From an investor's perspective, the stock market plays two important roles; namely, that of risk sharing and consumption smoothing (Dai, Shackelford and Zhang, 2008). By risk sharing, investors hold assets with different risk levels based on their risk appetite awaiting a buy or sell decision. There is also an aspect of risk sharing with the government through taxation, for instance, in the instance of the Capital Gain Tax (CGT) where loss of value in capital assets results into reduction of capital gain tax liability and in some instances a tax rebate from the government. As such, taxation is a crucial factor in the stock market. It is within this context that the study interrogates the recent reforms that were made with respect to CGT in Kenya. The study; therefore, examines the extent to which such reforms have impacted on the equity values and overall investor behaviour at the stock market. CGT has been selected for this study due to the uncertainty surrounding its implementation at the NSE as elaborated in context below.

1.1.1 Context of the Problem

CGT is a tax applied on gains arising from the transfer of property situated in Kenya (KRA, 2014). CGT is levied on the entire gain that arises to a company or an individual. CGT is not a new tax in Kenya since it was first introduced in 1975. The changes in taxation fell within the broader scheme of changes in the tax structure of the country. According to (Muriithi and Moyi, 2003), a great number of reforms started in mid 1980s leading to the publication of Sessional Paper No. 1 of 1986. Among the areas affected by reforms during this period was the Kenyan tax system. Indirect taxes had been increased with the motive of bridging the widening budged deficit. Since indirect taxes are regressive and therefore poor end up paying higher taxes, this shift was criticized as reducing equity or income redistribution effect of the tax system.

Consequently, in 1995, the government put in place several measures and mechanisms which would help in modernizing tax collection. It established Kenya Revenue Authority (KRA), key roles of this government wing were to strengthen revenue collections and have in place a central tax collection arm. KRA was to set up an efficient and effective system that would ensure the existing loopholes in the tax system were eradicated Wawire, (2006).The 2006 Budget Speech announced two measures that would specifically affect high income earners: the taxation of the very large non-salary benefits enjoyed by MPs and the reintroduction of the CGT, these never got to implementation. The CGT was, thus, reintroduced on 1st January 2015 through the Finance Act of 2014; the reintroduction was as a result of the widening budget deficit. In a Kenya Gazette Supplement No. 141 dated 19th September 2014, a formal notification was given on the reintroduction of CGT. CGT was successfully reintroduced effective 1st January 2015. Nine months into reintroduction of CGT, The Finance Act 2015 was enacted on the 11th September 2015 suspending the law specifically on securities traded at exchanges licensed by Capital Markets Authority (CMA). The back and forth in implementing CGT in Kenya is intricately linked to its perceived implications for the stocks market and the economy as elaborated hereinafter.

1.1.2 Perspectives on Implications of CGT for Stocks Market Performance

The activities around CGT law in Kenya and the world over have attracted views from numerous researchers. There are varying findings as to the effect of CGT laws on the overall economy. The interrelatedness of the various economic sectors implies ripple effects of reforms on CGT across sections of the economy. One of the sections is the operation at the NSE. According to Abdullah (1996), the behaviour of a nation's stock market is increasingly seen as a measure of its economic growth, strength and stability. Functionality of the stock market therefore remains central to achievement of key economic growth objectives. While the behaviour of well-established equity markets is well researched and documented, that of small and emerging exchanges is still not much studied.

According to (Bohl & Henke, 2003) the higher the returns are said to be volatile, the more risky the security or index is. The desire to reduce risk exposure in an investment decision preoccupies investment managers and analysts in their day to day operations. The difference in their decisions lies in how well they can make highest possible returns at the lowest possible risk; precision in estimations or forecasts is an example of ways of reducing risk exposure. Being able to enhance accuracy in predicting returns would be of great importance to this group of people. (Bohl & Henke, 2003) find that fluctuations tend to reduce in persistence when trading volume is included in the conditional variance equations with the Polish Stock Market as a case study. These provide an indication that trading volume has an impact on the stock returns.

Beside (Bohl & Henke, 2003) several authors writing on return variations have made considerable efforts on modelling the dynamic behaviour of this fundamental measure of risk, return volatility. For instance, Lee, Jiang and Indro, (2002), studying the role of investor sentiment on stock return variations, find that sentiment is a systematic risk which is usually priced. Excess returns are said to have a positive correlation with shifts in sentiment. The finding also imply that changes in CGT law affecting operations at the stock market may lead to changes in investor expectation or sentiment about the future returns resulting into return volatility.

Contrary to the study by Schwerts, (1990), Forbe and Rigobon (2002), attribute stock return variations to contagions. The authors have defined contagion as a significant fluctuation in market co-movement after a shock to one country (Forbe and Rigobon, 2002). The study reveals high levels of market co-movement were experienced during 1997 Asian Crisis, 1987 United States (US) market crash and 1978 Mexican Devaluation. The study further brings out the fact that markets are interdependent and factors affecting a market in a different jurisdiction can possibly escalate to global markets. In a similar study, Shiller (1981), related stock return variations to erroneous asset pricing by the present value models. The author alludes that stock return variations is not consistent with the predictions of the present value models. According to Shiller, (1981) there have been excess price fluctuations, excess returns which seem to be predictable. These perspectives largely fail to focus on the role of institutional investors.

According to Gabaix, Gopikrishnan, Plerou and Stantley (2006), stock market variations to results from trade by large institutional investors, the authors find that such trade results into significant spikes in return and volume. The study; however, finds no significant role in stock return fluctuations from important news on market fundamentals. The finding contradicts that of Kurov, (2012) which concludes that the announcement of news on important monetary and fiscal policy statements results into return fluctuation. Although they are not focused on CGT, the foregoing perspectives have a bearing on CGT and the stock market.

Studying the stock market reaction to CGT changes in the 1997-1998 Tax Act in the US, Shackelford, (2000) finds that stock prices react to changes in the CGT policy. Shackelford notes that these price reactions are largely complete by public announcements of the changes. The study concludes that the magnitude of the stock price reaction is material. While Kurov,(2012) and Shackelford, (2000) conclude that announcements of new on tax reforms materially results into stock return volatility, Gabaix *et al,* (2006) concludes that no significant change in returns is noted during announcement of news on CGT changes.

Following from the above studies, stock return fluctuations exists and has a wide range of triggers including among others contagions, sentiments, trading volumes, fiscal and monetary factors.

Such contradiction has seen a number of authors research further in the area to unravel this puzzle taking into account quite a number of finance models derive their assumptions from EMH. Contrary to Fama's work, evidence for the view that stock market returns are predictable appears to be growing according to Abdullah, (1996). The issue that arises therefrom would then be that of whether and how reliable and accurate an analyst can forecast future returns based essentially on historical returns or patterns if stock returns are predictable.

The above findings informed the study of CGT in Kenya and how it has contributed to stock return fluctuations at the NSE. In a study conducted in the USA, Officer, (1973) noted huge stock return variability between the periods of 1929–1939 during the Great Depression. Officer, (1973) found significant correlation between fluctuation in returns and leverage. However, Officer's research found that leverage explained a very small part of movement in stock return volatility; macroeconomic variables largely explained the stock return volatility. Officer defined a microeconomic variable as an element or pattern that can be used to describe an economic unit. The present study uses capital gain taxation (and related leakages) to explain operations at the NSE, which is an economic unit.

Tax legislative information usually leaks to the market over a long period of time as legislation proceedings take place through Parliament. Investors therefore tend to strategically position themselves based on their expectations of the effects of anticipated changes. CGT is no exemption to such reactions. The recent changes to CGT provide a useful setting for re-evaluation of the effect of these changes on equity prices and investor behaviour.

With the highlighted literature on legislative initiatives on CGT and effects on stock prices across the World, there has been no consensus about the impact of CGT changes on stock prices. According to Lang and Shackelford, (2000) the proposed CGT rate cut in

the US in 1997 led to predictions that the reduction would spur savings and investment, others foresaw disaster with Rothchild (Fortune, 1997) terming the rate reduction "the worst thing to happen to the stock since Saddam Hussein invaded Kuwait." Levine ,(1991) on the other hand alludes that tax policies directly affect growth of an economy since it alters investment incentives and indirectly changes incentives underlying a financial contract. Favourable tax policies affecting listed securities results in economic growth through active involvement of existing investors at the stock market and enhances market attractiveness to potential investors.

Since stock markets provide platforms through which capital is raised, it plays a critical role in achieving economic growth parameters. According to Stiglitz, (1989) in a study on the desirability of taxes on security markets, the findings agree with those of Levine (1991), the study finds that tax burden on equity securities has remained an issue of constant policy review. The author further alludes that well-structured capital markets play a very important role in modern capitalist economies. Stiglitz, (1989) however, indicates that narrow based taxes as opposed to broad based taxes such as income tax lead to unnecessary stock market price distortions.

Umlauf, (1993) studying transaction taxes and investor behaviour in the Swedish stock market gives contrary findings to those of Levine, (1991) and Stiglitz, (1989). Umlauf, (1993) finds that since the taxes were imposed for political reasons rather than to alter the behaviour of the stock market, stock return fluctuation did not decline in response to the introduction of taxes although stock prices and turnover did since large proportions of trading activities migrated to other markets for instance London when the tax rate was increased to 2% in 1986.

According to a study by Summers and Summers, (1989) on the desirability and feasibility of implementing a U.S. Securities Transfer Excise Tax (STET) meant to curb excesses associated with short-term speculation and at raising revenue, the study concludes that strong economic efficiency arguments can be made in support of a STET in the U.S stock market. The study finds taxation can be used for stabilizing trading at the stock market. Does CGT changes in Kenya have stabilizing or destabilizing effects at the stock market.

Summers and Summers, (1989) findings contradicts that of Stiglitz, (1989) who concludes that such taxes lead to distortion of stock market prices.

Runyenjes, (1985) in a study on the impact of capital gain taxes on the prices of ordinary share listed at the NSE found that CGT has a positive effect in the market and the pressure put by the investors and other stakeholders to do away with CGT is exaggerated. The following studies document that imposing CGT increases stock price and current stock return hence volatility, (Feldstein, Slemrod, and Yitzhaki, (1980), Landsman and Shackelford (1995), Reese (1998), Poterba and Weisbenner (2001), Klein (2001), Blouin, Raedy, and Shackelford (2003), Jin (2006), Ellis, Li, and Robinson (2006), George and Hwang, (2006).

Contrary to the above authors, Clemens, Lammam and Lo, (2016) in a study on the impact of capital gain taxes on the performance of the economy found CGT to be a self-destructive factor to growth of the economy. The authors argued that CGT reduces returns on investment since it is an additional cost hence distorts decision making by the various investors. They term investment decisions influenced by CGT as tax motivated trading strategy. Perhaps these contradictory perspectives are reflected in Kenya where arguments for the reintroduction of CGT have been made over time.

A research conducted by Marangu, (2011) on the Kenyan stock market aimed at attaining equality in income distribution, wealth transfer tax was proposed to be introduced. The study compared Kenya to Japan and finds that equality in income distribution would be achieved by imposing tax on property transfer. The study proposed the reintroduction of CGT. The bottomline of the discussion of perspectives in literature are intended to give a sneak preview of the fact that arguments on CGT and stocks market are full of contradictions that are often irreconcilable.

Looking at the above summary on prior literature relating to stock returns and CGT application, the gap in research still exists due to the contradictions in findings. This research looked at how the Kenyan stock market responded to events surrounding CGT application in Kenya. This study sought to argue a Kenyan case through the inclusion of announcement of a proposal to introduce CGT in the 2014 Budget Speech, as one of the

event periods under study. The research used trend analysis technique to study the investor behaviour through trading volumes analysis during the three recent events surrounding CGT in Kenya, announcement during the 2014 Budget Speech proposing reintroduction of CGT, when CGT was reintroduced on 1st January, 2015 and when it was suspended on the 11th September, 2015 to answer objective two of the study.

1.2 Problem Statement

Of interest to this research are answers to the following questions, how did the stock returns behave following the three recent events sounding application of CGT laws? Secondly, were there patterns in volumes traded during the three events which can be relied upon during similar occurrences in the future, and finally, what were the opinions of authorized trading participants on the effect of CGT on stock market performance?

Controversy exists as to the effectiveness, desirability and feasibility of implementation of CGT not only in Kenya but across jurisdictions. The challenge of balancing the interests of different groups has made the capital gains tax for securities difficult to implement (Akindayomi, 2013). Some of these challenges include striking the delicate balance between using CGT to curb fluctuations in stock returns, speculative short term trading and raise revenue while at the same time ensuring CGT does not result into stock prices distortion, unattractive market among other desired CGT objectives.

Kenyan stock market has not been left behind in this dilemma, taxation of capital gain taxes since its introduction in 1975 has been a subject of much opposition across the various stakeholders. Kenya Law Society, for instance, wrote a memorandum proposing removal of CGT and in its place be a doubling of stamp duty on all documents. When the CGT law was enacted on the 13th June, 1975, business at the stock market stalled, quotations and daily call overs were suspended and the then Chairman of NSE called upon the regulator to suspend CGT on transactions at the stock market (Runyenjes, 1985).

CGT implementation in Kenya and specifically on the Stock Market has resulted into uncertainty amongst the various stakeholders, the recent reintroduction of CGT

implemented on 1st January, 2015 and an almost immediate suspension only nine months after reintroduction on transactions at the NSE is an item of interest to this research.

On the contrary are studies in support of CGT, Summer and Summer, (1989) finds that CGT enhances efficiency of stock market through price stabilization. A study by Adjei (2015), concludes that African Markets have offered an investment alternative to investors from developed markets. It is therefore necessary that the African stock markets are efficient and competitive to enhance consistency and sustainability of possible capital flows. Summer and Summer, (1989) further mentions that implementation of Securities Transfer Excise Tax would lead to efficiency benefits that would outweigh any costs of reduced liquidity or increased cost of capital. Similarly, Marangu, (2011) alludes that taxation of CGT promotes distribution of income hence equality. The issue that arises therefore would be whether the reintroduction of CGT on listed securities in Kenya offer benefits similar to those mentioned in the study by Summer and Summer, (1989).

1.3 Research Objectives

1.3.1 General Objective

The general objective of this study was to investigate the role of CGT changes on stock market performance with the aim of building a case for or against reintroduction of CGT at the NSE.

1.3.2 Specific Objectives

1. To examine the effect of CGT policy implementation on stock returns at NSE.
2. To examine the effect of CGT policy implementation on trading volumes at NSE.
3. To determine the authorized trading participants' opinion on the role of CGT on stock market performance.

1.4 Research Questions

1. Are there any links between CGT changes and stock returns at NSE?
2. Do investors trade more volumes before or after CGT?

3. What are the views of authorized Trading Participants with regards to CGT on stock market performance?

1.5 Scope of the Study

The research involved companies listed at the Nairobi Securities Exchange and were trading during all the three events under study. That is when the 2014/2015 Budget Speech was read on the 12th June, 2014 among other things proposing reintroduction of CGT, when CGT was actually reintroduced on the 1st January, 2015 and when 2015/2016 Finance Bill was assented to on the 11th September, 2015 suspending CGT on stocks traded at exchange markets licenced by the Capital Markets Authority. Though there are two other events surrounding CGT that is when it was initially introduced in 1975 and when it was suspended in 1985, the three events above were settled on for study due to availability of secondary data. It is important to note that companies delisted, suspended or listed during the periods of study were excluded from the study for ease of comparison. Primary data was collected from authorized trading participants (brokers) to enhance completeness. Various literatures relevant to the area were consulted to ensure a comprehensive, informative and rich research work is delivered. The research period covered the 15 days before and after Budget Speech 2014 proposing CGT reintroduction, CGT reintroduction on 1st January, 2015 and CGT suspension on securities traded at the Exchange on the 11th September, 2018. Among other studies in support of the 15 days study duration is that of Hayashida and Ono, (2010) the authors allude that results deteriorate when longer periods are used rendering the investigation of effect of CGT meaningless. The authors further indicated that more often, with market level data, only short-term price changes correlate with trading. The choice of 15 days period was also supported by two other studies by Lang and Shackelford, (2000) and that of Abdullah, (1996). Daily stock prices and volumes traded data were used both at firm-level and market-level (NASI). Given inherent trading data limitations, cross- sectional analysis was conducted to supplement the research findings and conclusion.

1.6 Significance of the Study

This study will be of great importance to several classes of stakeholders. First, it will be important for policy makers such as the Capital Markets Authority (CMA), as the securities market regulator. In this respect, the research findings will help CMA assess the effects of CGT on the stock price fluctuations and come up with better trading policies that incorporate all the possible negative effects. The research will also examine the overall appropriateness of the CGT to the Kenyan securities market.

The second group of stakeholders are investors such as stockbrokers who would want to make reliable investment decisions so as to maximise returns and minimize risk. Knowing contributors to the abnormal stock price fluctuations will help them reduce risk levels. They will also find the findings of objective two useful as they make future investment decisions. The third group is the academicians and future researchers, since this study will contribute to the existing wealth of literature and specific to Kenya. With publication, reference could be made to the research work.

The fourth group that the research findings will be of great insight to is the listed companies. These companies operate in a very competitive environment; as a result, factors that affect the value of their stocks would be of great interest to them.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter reviews literature on CGT in general, empirical studies on how changes in implementation of CGT relate with stock returns movement. The chapter also review literature that covers the rationale advanced for and against capital gains taxation to inform this study. Among the studies reviewed are those of(Shackelford, 2000; Caro & Cebada, 2016;Constantinides, 1984; Landsman & Shackelford, 1995; (Akindayomi, 2013); Dai, Shackelford & Zhang, 2008; Lang & Shackelford, 2000; Landsman Shackelford &Yetman, 1999)The chapter is broken down into the following subsections:- 2.2 Theoretical Review; 2.3 Empirical Review of Literature; 2.4 Conceptual Framework; 2.5 Research Gap and; 2.6 Summary of the chapter on literature review.

2.2. Theoretical Framework

Literature on the relationship between CGT implementation and stock market reaction has been underpinned on a wide range of theories. The following theories were predominant in related literature. Theory of Market Efficiency, Lock-in theory and Random walk theory. This study was therefore be informed by Lock in Theory and Theory of Market Efficiency.

2.2.1. Theory of Market Efficiency (EMH)

EMH remains a very important hallmark in finance because most of the finance models derive their assumptions from the EMH. This theory was developed in 1970 by Eugene Fama an American Economist. The theory postulates that, in an efficient market, prices of securities rapidly adjust to reflect all the information coming to the market such that no investor can make supernormal profits from either a buy or sell decision. Fama (1970), classifies markets in strong form, semi-strong form and weak form market efficiency.

In a research of the Africa's Equity markets, seven major markets of Kenya, Nigeria, Tunisia, Egypt, Morocco, South Africa and Zimbabwe were studied, Alagidede (2008) finds mixed results as to the existence of anomalies in these markets. Day of the week effect is lacking in Egypt, Kenya, Tunisia and Morocco. Findings for the Nigerian,

Zimbabwean and South African stock markets confirm significant existence of daily stock return volatility. The existence of such fluctuations contradict the EMH concept, literature confirms growing existence of patterns that have been relied upon by investors to make supernormal profits.

NSE for instance is classified under a semi-strong form of market efficiency, this implies that prices of securities reflect information both past and current such that an investor is not able to rely on any predictable pattern to make supernormal returns (Ndegwa & Mboya, 2014). EMH theory was therefore be of importance in meeting objective one of the study, the study will gauge whether effect of CGT changes on stock returns are aligned with the EMH theory.

Ideally, borrowing from the EMH theory, in an efficient market, investors should not be in a position to leverage on technical and fundamental analysis to make buy or sell decisions that results into supernormal profits compared to an investor who chooses their portfolios randomly. The reality however is that, technical analyst for instance study patterns and trends and make different investment decisions based on results from their analysis, which results into higher profits. This explains why most investors rely on the professional analysts like the investment managers' advice on whether to make a sell or buy decision rather than their own random thinking. The EMH theory was thus important in assessing whether the market behaviour following the happenings around CGT is aligned to the semi – strong form of market efficiency as postulated by Ndegwa & Mboya (2014) or there exists patterns in stock returns and volumes traded during the three study events.

2.2.2. Lock-In Theory

The lock-in theory is about the behaviour of investors following the expectation of a bigger tax burden on an investment decision. Imposing CGT on marketable securities may lead to stagnation at the stock market, this is where investors choose to hold onto their securities for fear of reduced return caused by a higher tax liability. This is termed lock-in effect (Chan, 1986).The ability to balance interest from different stakeholders has

greatly affected implementation of CGT on marketable securities across the globe. An example is the Taiwan Securities Market; CGT was reintroduced in Taiwan in 2013. The government's objective for reintroduction was to generate tax revenue, promote fairness in taxation and improve the tax system (Min-Lo, 2015), the reintroduction was received with rebellion and the lock-in effect led to a depression in the Taiwan Capital Market; the end result was a net loss rather than gain.

Lock in theory postulates that, people make decisions based on the following three areas; their rational outlook, the information available and finally their prior experience. The theory will therefore be relevant to this study in the sense that, it is individuals' decisions on buy or sell that will lead to movement in stock price (the demand and supply concept). The available information, for instance, an expectation of changes in tax rates and prior experience, for instance, how the stock prices behaved during the previous similar change on CGT or whether an investor incurred losses or gains that will determine the direction the stock returns and investor behaviour take.

Gemmill, (1956) on the other hand urges that lock-in effect will result into greater returns for the individual investors since the effect leads to shortage in supply hence prices go up. Gemmill further posits that investors are largely driven by ability to make profits and not tax avoidance, once they believe that prices are at their peak, they will dispose of their stock and buy other assets they feel are profitable.

Contrary to Gemmill (1956), ICPAK (2014) urges that capital gains are normally taxed upon disposal of the said assets, this creates lock-in where investors are reluctant to dispose of their assets due to additional transactional cost of CGT. The investors will therefore delay selling investments that have large unrealized gains to avoid the tax hit. As a result, investors hold assets too long and forgo beneficial diversification opportunities. ICPAK concludes that, for the overall economy, lock-in reduces growth because it blocks the beneficial shifting of resources from lower- to higher-valued uses.

This theory will therefore be relevant in studying the movement of stock returns and volumes traded, this is where the effect of CGT on investment will be measured using the lock in effect. The lock in effect will determine the reduced returns of securities investors are willing to supply.

2.3 Empirical Review

This section will review work and findings by other authors in relation to the objectives of the study. The empirical review on objective one looks at how changes in CGT affect movement in stock prices at the NSE. Literature on the relationship between CGT changes and stock market reaction following such changes is reviewed. Literature on second objective which looks at possibility of existence of patterns in buy or sell decisions amongst investors at NSE is also reviewed. The literature has been reviewed globally, Africa and finally narrowed to Kenya.

2.3.1 Stock Return Reaction to Changes in Capital Gain Taxation

CGT across jurisdictions have witnessed numerous historical changes; these changes have been made among others on the magnitude of tax, for example, the changes in tax rate and structurally, for example, exclusion of gains from taxation and the holding period within which a capital gain can be subjected to CGT or not (Akindayomi, 2013). As a result of the numerous changes over time, analytical and theoretical literature according to Dai Shackelford & Zhang, (2008) in a study done on the U.S stock market, suggests that outside tax consideration, stock market investors will nonetheless dispose of their portfolios with the aim of realization of capital gains for liquidity, diversification priorities among other reasons. The above findings imply that taxation of capital gains realised from disposal of securities is not a factor that influences an investor's decision whether to buy or sell a portfolio, but liquidity and diversification priorities does.

Contrary to Dai *et al*'s findings, Jin, (2006) finds that in many countries, the concept of deferral is central to CGT, according to the study, taxation of capital gains will result into most investors holding onto their portfolios since taxation of capital gains impacts on transaction costs therefore reducing return on investment, investors' perception is that,

returns will be lower than in the absence or lower CGT rates. Clinch & Odat (2012) refers to this trading strategy as the lock in effect trading strategy. The effect of investors adopting the lock in trading strategy is that supply of securities in the market will go down, through price mechanism, prices will go up leading to an increase in stock prices.

In a similar study by Shackelford (2000) on the stock market reaction to CGT changes during the enactment of the 1997 -1998 Tax Act in the U.S, the author mentions that no consensus was reached as to the impact of CGT legislation on stock prices. The study lists conditions that must be met for changes in CGT to affect stock prices, the conditions are as follows; the individual has to be a marginal investor, the portfolio must be in a net gain position, the gains must have accrued within the requisite holding period, the marginal investor must intend to dispose of the stock in a taxable transaction, the marginal investor must intend to comply to pay CGT on net gains since failure to comply weakens stock price reactions to CGT changes. Condition six is that the change in capital gains must alter the marginal investor's expectations about the capital gains tax rate that will apply when the stock is sold such that in the event the marginal investor's expectation remains unchanged then stock prices may not react upon changes to CGT. Final condition is that of inelasticity in supply in capital, this according to the author is believed to inhibit an immediate readjustment of the long term changes in CGT.

The findings from Shackelford (2000) reveals that, assuming the above conditions hold, stock prices react to changes in CGT, secondly, that the stock price reactions are largely complete by a public announcement and finally that the magnitude of the stock price reaction is material. The research further alludes that, investment strategies such as buy-and-hold render effect of CGT changes irrelevant on stock prices.

Lang and Shackelford (2000) assuming the above conditions find that, when CGT rates were reduced in the U.S in May, 1997, returns on high dividend yield stocks were lower than the returns on low dividend yield stock. According to the research, investors tend to discriminate amongst companies based on the probability that returns are likely to be affected by the change in CGT. Investors are likely to adopt lock in trading strategy on

the high dividend yielding stocks while low dividend yielding stocks may experience increased disposal pending an anticipated CGT change likely to increase transactional costs.

Reese (1998) studying the effect of CGT on stock market activities specializing on Initial Public Offers (IPO) in the U.S. finds that, prior to the Tax Reform Act of 1986, capital gains arising from stocks held over a specified long term period were taxed at a lower rate than those disposed of before the stipulated long term holding period. According to the research, the effect of attaching the tax rate to a holding period presented to investors an opportunity to delay the sale of appreciated assets prior to holding period qualification while depreciated assets where sold prior to holding period qualification. Further to the above finding, Blouin, Raedy & Shackelford (2003) also finds that attaching a holding period as a pre-condition result into an effect on the stock return, the effect in returns arises since disposal after holding period qualification lowers transaction costs due to the lower CGT rate, as a result, stocks that appreciated in value and were disposed of prior to long term qualification exhibit increased volume but decreased returns just after their qualification date, while stocks that depreciated prior to long term qualification exhibit these effects just prior to their qualification date. Reese's finding is consistent with a concept in finance known as tax capitalization. Tax capitalization is a situation where changes in the rates of taxation on capital gains directly change the value of the underlying property (Blouin, Hail &Yetman, 2009).Somers (1948) and Dai *et al*. (2008) indicated that capital gains taxes for securities create a lock-in effect in securities markets, affects investors' trading confidence and amplify volatility. In addition, such taxation is detrimental to market price stability.

H1: The stock returns at NSE react negatively to changes on CGT irrespective of the above conditions.

Several studies (Lang and Shackelford (2000), Ayers, Lefanowicz, and Robinson (2003), among others) report that the presence of capital gains taxes reduces stock price and current stock return, while other studies document that imposing capital gains taxes

increases stock price and current stock return (Feldstein, Slemrod, and Yitzhaki (1980), Reese (1998), Klein (2001), Jin (2005), among others).With regards to capital gains taxes and trading volume, Dhaliwal and Li (2006) report that tax-motivated trading activity creates excess trading volume around ex-dividend days. Specifically, they find a concave relation between ex-dividend day trading volume and institutional ownership, their measure of investor tax heterogeneity.

While the need for changes to CGT is unquestionable, the response of the Kenyan stock market to such changes is of interest to this study. Akindayomi (2013), in a study on the U.S stock market assumes that, rational taxpayers are expected to react to changes in the tax rate. The study finds that, on aggregate, total capital gains realized and not capital gains rate affect stock market investments. Contrary to Akindayomi's findings, Jin (2006) indicates that the notion that increasing CGT rate will slow down stock market activities is an overstatement. Jin's study concludes that, the tax insensitive investors are on average larger than tax sensitive investors. This therefore implies that, the tax sensitive investors are more active in turning over their portfolio even with capital gain taxes relative to tax insensitive investors

Borrowing from the above authors, the findings on the relationship between CGT changes and stock returns is at best inconclusive, the findings further trigger interest for research in this area since in finance, no issue is fundamental than that of price formation, as mentioned in Fama (1970, 1991) seminal papers, the two studies concluded that in an efficient market, investors cannot make supernormal profits, this position has since been challenged by a number of research reporting market prices not only being predictable on the basis of previous information but also dividend yield among other parameters leading to fluctuation in returns. Akindayomi (2013) asserts that the relevance of capital gains taxation in pricing and trading decisions in the stock market is undeniable.

Capital gains generated through stock market transactions are a major source of tax in the US (Akindayomi, 2013).In a study on the response of the stock market investment on the changes on CGT, the researcher's findings reveal that the capital gains realized will affect

stock market investment and not the capital gains taxes. The author further alludes that high-end investors with long-end holding period and substantially appreciated capital assets tend to hold onto their assets to defer tax liability.

In a similar study conducted at the South African stock market, Marcus (2006) finds that, the proposal to introduce CGT was backed by the reason that lack of CGT led to distortion in the economy. The author indicates that the South African government conducted a research and found that sophisticated taxpayers were moving taxable income to non-taxable capital gain investments hence defeating purpose of taxation of equity and income redistribution. The researcher however finds that CGT is a countermeasure to achievement of the set government goals hence should not be introduction.

Contrary to Marcus (2006) findings, Karinga (2013) in a similar research that sought to examine the effects of announcement of reintroduction of CGT on the stock performance at NSE finds that positive performance was recorded following announcement of reintroduction of CGT and therefore recommends reintroduction of CGT because of its positive relationship with stock returns.

From the mixed and interesting findings above, it is clear that there has been no consensus on the effect of CGT changes on stock returns. The issue has been emotive over decades with some research dating decades back like that of Jensen (1937) Fama(1970) among others. Kenya has not been left behind in the confusion as to whether CGT is a positive factor and is in congruence with the government growth policies. The research findings will add to the growing literature on CGT in Kenya. The reintroduction of CGT and almost immediate suspension of the same on listed securities is an affirmation of the controversy, hence an area worth research.

There was a period of uncertainty between when the CGT law was to take effect that is 1st January 2015 and15th September, 2015 when CGT law was suspended on listed securities. There had been the back and forth between The Kenya Association of Stockbrokers and Investment Bank (KASIB) and KRA. KASIB challenged the

implementation of CGT urging that the law was ambiguous. KASIB also asserted that reintroduction of CGT would contribute towards making the NSE unattractive and as a result would hamper the achievement of Vision 2030 of making the city an international financial centre. KRA on the other hand continued to pile pressure on stockbrokers who were the CGT collection agents to deduct and remit the CGT on property traded.

2.3.2 Assessing predictability of trading volumes around CGT Changes

Evidence for the view that stock market returns are predictable appears to be growing (Abdullah, 1996). This section reviews literature that ties CGT changes across the globe to the possibility of existence of patterns in investor decisions whether to buy or sell portfolios during such changes. The objective will address how well an investment analyst can forecast future returns based essentially on historical patterns.

The empirical review on objective two addresses the following questions, during the three recent events surrounding CGT in Kenya, were the volumes transacted in net sell or net buy positions? Are the positions attributed to changes in CGT? If so, to what extent? Several studies have been done in other jurisdictions to this effect, in contrast, such studies are quite few in the Kenyan context.

Predicting direction the market is likely to take pending and upon a change in a factor or factors likely to affect stock return preoccupies a number of stock market participants. The participants engage in technical and fundamental analysis to enhance accuracy in their predictions. Such analysis is meant to help leverage buy or sell decisions and enhance profitability (Clinch & Odat, 2012).Technical analysis looks at the price movement of a security and uses this data to predict future price movements (Ivkovic, Poterba and Weisbenner, 2005).Trends and charts are key tools used during technical analysis to study existence of patterns. Fundamental analysis on the other hand applies economic and financial factors that influence a business to arrive at a decision.

Reilly and Brown (2012) allude that investors have inbuilt biases and misconception that can push prices away from their intrinsic values. The authors further expound that

investors are not 100% rational 100% of the time. This implies that the investor decisions may not be predictable 100% of the time. Further to Reilly and Brown, (2012) Richard Thaler, 2017 Nobel Prize Winner conducted a study on human weaknesses and lack of rationality and how they affect markets. Richard's study lays an important foundation for behavioural finance. This study will therefore borrow from their findings.

Hayashida and Ono, (2010) studied CGT and its effects on individual trading in the Japan stock market, the study among other tax issues focuses on the effects of reforms on the14-year-old CGT regime on trading volumes. Prior to the reforms in 2003, individual investors had the prerogative to either pay CGT at source or pay the taxes when filing end year returns. This was abolished with the reforms on the basis that investors engaged in imprudent tax saving strategies and ended up defeating the tax objective of enhancing equity. Amongst the changes in the 2003 reforms was the reduction of CGT tax rate from 26% to 10% as a temporary measure till 2006. A cross-sectional study is conducted using time series and panel data analysis both using individual stock and market level data, the study examines price-change sensitivity of winners' volume before and after the CGT reforms. The findings reveal that tax cut helped expand individual trading volumes since the average tax rate negatively correlated significantly with individual trading. The research also finds that the ratio of individual to total trading volume increased from 30% in April, 2000 to 56% in October, 2005. It is however noted in their study that transaction commission fee charged by security firms also exerts influence on buy or sell decisions made by individual investors hence a factor worth considering in the study.

In the above regression analysis, TV is made up of the sum of all stocks purchased and all stocks sold; the analysis fails to differentiate between the winner and loser stocks. A different cross sectional analysis is conducted on winner stocks only as a supplement to the above outcome since capital gain tax is levied only on winner stocks, the results are compared with those of aggregated stock, price change sensitivity on winners' stock turnover is examined against the trading volumes. Again the findings are in agreement with those of the first analysis which indicate that a reduction in transaction costs majorly

made up of taxes and commission fee motivates individual investors hence increased trading volumes.

In agreement with Hayashida and Ono, (2010) study is that of Clinch and Odat, (2012), the authors sought to investigate the impact of CGT on market prices and trading volume response to public announcements in an indexation-based tax regimes. This study differs from other studies in this area in that, an interesting aspect called indexation is introduced. This refers to a tax relief on capital gains through indexation of an asset's cost base. Most studies on CGT look at a more prevalent approach to capital gains taxation called differential tax rates approach, this approach applies different tax rates to short and long term capital gains. Their study find that indexation makes share prices more responsive to public announcements, the study also finds that trading volumes increase with increase in the asset value.

Contrary to the above studies, Lo, (2015) in a study on the Taiwan stock market focuses on how CGT affect trading volumes and hence stock market liquidity. The Taiwan stock market founded in 1953 has levied CGT numerous times (Lo, 2015). CGT on securities traded at the Taiwan stock market was introduced in 1973 but repealed in 1975, a second introduction in 1989 was repealed in 1990,the most recent being the reintroduction of CGT in 2013, Taiwan's case on CGT closely mirrors that of the Kenya market and confirms the challenges surrounding seamless implementation of CGT across jurisdictions. The empirical findings in Lo's study mirrors that of Summer and Summer, (1989) and shows that the changes in trading volume of Taiwan stock market exhibited negative short term and long term lock in effects thus affecting liquidity of the market, this was attributed to changes in CGT for securities.

While fairness and efficiency are fundamental to taxation reformation, Poterba and Weisberner, (2001) allude that CGT appears to be different and "delicate" and may hamper achievement of the fairness principle. The market reaction to changes on CGT may cause a "butterfly effect". This the authors equate to a flap of a butterfly causing a typhoon. Borrowing from Lo (2015) study, the ripple effects resulting from changes on

CGT may result into far reaching effects. Such effects arise due to inherent government inefficiency in administering the tax, capital market developments among other reasons. The investors' reaction following announcements of changes in taxation may result into both micro and macro-economic impacts. Feldstein & Yitzhaki, (1978) empirically showed that taxpayer investment decisions are extremely sensitive to changes in taxation. CGT has a negative impact on the investor income expectation and investment interest, levying tax therefore leads to market stagnation (Jin, 2006). Jin further finds that such investor behaviour result into lock in effect on stock trading volumes. The findings are in agreement with that of Ellis, Li and Robinson (2006) which conclude that lock-in effect distorts the liquidation and investment decision. Such market inefficiency increases stock market volatility, further reducing the willingness of investors to trade and intensifying the lock-in effect.

Reese (1998) concurs with Lo, (2015) and allude that levying a tax on capital gains for securities is that it could cause investors to adjust trading decisions to avoid paying taxes, this the author terms as tax avoidance effect. Such investor behaviour may lead to disposal of portfolios before the taxes are introduced, alternatively, the investors may defer the time they realize capital gains to delay tax payment. The tax avoidance effect often results in asset price reversals (Lo, 2015).It is also mentioned by Poterba, (1987) that rather than increasing government revenue, increasing marginal tax rate increases chances of tax avoidance hence defeating the objective of levying the tax. The author recommends abolishment of CGT on stock market transactions. In a different study by George and Hwang, (2007), the authors find that, lock in effect is amongst the main causes of U.S stock market long-term price reversal. Lo, (2015) study adopts two empirical models, classical regression model and Difference in Difference model.

Contrary to the above studies which conclude that CGT has a negative correlation with stock trading volumes, Henderson, (1990) conclude that the United States Tax Reform Act of 1986 which increased capital gains tax rate increased overall stock market trading volume. The author alludes that the main concern for investors are investment gains or losses on their portfolios making tax rate a secondary factor to their decisions. Henderson

thus argues that, CGT is not significantly related to stock market trading volumes. In support of Henderson, (1990) is a study by Gemmill, (1956) who indicates that maximization of stock returns is a core objective for a majority of investors, thus, decisions on disposal of investments should be made solely under the expectation that current stock prices are at their peak and are unlikely to increase further in the near future. This is the only point at which a sell decision will be made thus rendering influence of CGT rate an insignificant factor to consider.

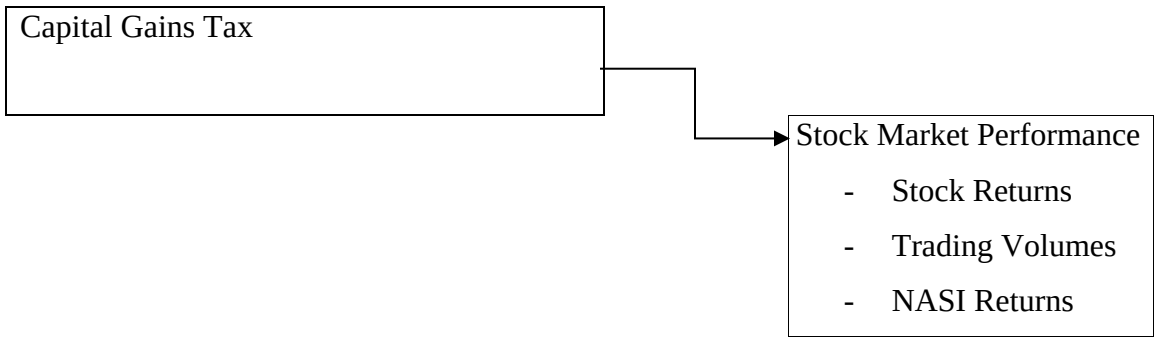
Ngaruiya, (2012) found a negative correlation between capital gain taxes and volumes of share traded at the NSE. The model indicates that CGT resulted into a 4.75% decline in volumes traded which it considered significant; it therefore supported suspension of CGT.

2.4. Conceptual Framework

This section brings out the variables in the study, generally, the study assessed the relationship between CGT changes and stock market performance; the study has both dependent and independent variables. Stock returns, trading volumes and NASI returns were measures of stock market performance. The purpose of the variables is to enhance measurability.

The variables are diagrammatically presented below:-

Independent Variable **Dependent Variable**



2.5. Research Gap

The Taiwan Reintroduction of CGT in 2013 was received with rebellion and it resulted into depression of the Taiwan Capital Account. Reintroduction of CGT in Malaysian market was aborted. UK and US also experienced market return volatilities during CGT introduction and changes. The Kenyan government reintroduced CGT and suspended it on listed securities. For the Taiwan case the consecutive reintroduction and suspension has been attributed to difficulty in balancing the interest of the different stakeholders i.e. the government wants to increase revenue and enhance equality in wealth distribution, the investors defy investment hence stagnation at the stock market etc.

A Kenyan research by Runyenjes, (1985) found that CGT has a positive effect in the market and the pressure put by the investors and the lawyers to do away with CGT is exaggerated. Other international studies document that imposing CGT increases stock price and current stock return (Feldstein, Slemrod, and Yitzhaki, (1980);,Landsman and Shackelford, (1995); Reese, (1998);Poterba and Weisbenner, (2001);Klein, (2001);Blouin, Raedy, and Shackelford, (2003); Jin, (2006); Ellis, Li, and Robinson, (2006); George and Hwang, (2006).Kimani, (2012) found negative linkage between CGT and level of trading at NSE hence recommended abolishment of CGT. These contradictions coupled with the recent happenings on CGT in Kenya enumerated above leads to a gap in research.

CHAPTER 3: RESEARCH METHODOLOGY

3.1 Introduction

The study focuses on the Nairobi Securities Exchange (NSE). The research investigated the role played by changes in CGT on stock market performance at the NSE. Research methodology section is divided into the following subsections, 3.2 Discussed the research philosophy, section 3.3 Research Design 3.4 Population and Sampling, 3.5 Data collection; 3.6 Data analysis; 3.7 Research Quality and 3.7 Ethical considerations.

3.2 Research Philosophy

A research philosophy is defined as a belief about the way in which data about a phenomenon should be gathered, analysed and used (Mugenda & Mugenda, 1999). A research philosophy clearly brings into perspective the underlying assumptions supporting the research strategy adopted together with the practical experiences, relationship to knowledge and the process through which they were formed in real life situations (Saunders, Lewis, & Thornhill, 2009). A pragmatic research philosophy was adopted in this study. Under practical research philosophy, a concept is only accepted and considered relevant if it supports action.

3.2 Research Design

According to Mugenda & Mugenda, (1999) research methodology refers to the philosophical basis on which the research is founded. Bougie & Sekaran, (2015) define research design as a blueprint for data collection, measurement and analysis in a manner that addresses the objectives of the study. To achieve the objectives of the study; the research adopted a correlational research design. According to Ngechu (2004), correlational research design measures and assesses the relationship between two variables. This research design was relevant to this study as it assessed whether changes in CGT implementation and stock returns, trading volumes and NASI returns correlated. The design provides outstanding advantages over the other techniques in that it provides a holistic perspective of the issues under research. The correlational research design has

the ability to guarantee minimization of bias and optimization of dependability of evidence gathered (Kothari, 2004).

3.3 Population& Sampling

The population for the study comprised of all the listed companies at NSE which are 67 in number. Purposive sampling technique was used for the listed companies where suspended, delisted and inactive companies were omitted from the study hence a total of 46 actively trading companies were studied. All authorized trading participants between 2014 and 2015 which were 24 in number (Appendix III) were studied hence no sampling for the authorised trading participants.

3.4 Data Collection

The study used both primary and secondary data. Primary Data was collected through structured and standardized questionnaires circulated to all the authorized trading participants. The questionnaires had both open-ended and closed questions on the investor behaviour and returns of individual stock and market indices before, during and after changes to CGT. The respondents were investment analysts working at the authorized trading participant firms who are engaged on a day to day basis on portfolio analysis and decision making. Persons who had worked with the firms for at least 5 years were picked randomly to respond to the questionnaires. Data collected from the trading participants included their opinion on the influence of CTG implementation changes on investors' investment decisions, their opinion on why CGT is a negative or positive factor to growth, efficiency and competitiveness of NSE. This data was used to achieve objective 3 of the research.

Secondary data was collected from the NSE database. The nature of data collected was daily share prices, index performance (NASI returns) and trade volumes for purpose of answering objectives 1and 2. For secondary data, diagnostic tests were conducted before subjecting it to data analysis.

Secondary data which included daily observations of prices of all listed stocks and market index (NASI) was obtained from the NSE database. It is important to note that delisted, suspended, inactive and companies listed during the period of study were omitted from the study for uniformity and ease of comparison, secondary data addressed objectives 1 and 2.

The triangulation in data collection methodology both primary and secondary data helped in capturing the different dimensions of the CGT phenomenon and attested to the accuracy and reliability of the data that was used in this study. Secondary source of data which is NSE also provides dependable data source on stock prices and market indices in Kenya. The frequency of data observations was daily stock prices and market indices over the 15 days period before the event, the event date and 15 days after the event for the three events.

3.5 Data Analysis

Data analysis is defined as the systematic application of statistical tools to process data into meaningful information (Kothari, 2004). The primary data collected was checked for completeness and cleaned. Cleaned data was keyed into excel worksheet and uploaded to SPSS software where descriptive and inferential statistical results were displayed for presentation and further conclusion made on the findings. From diagnostic tests, data was found to be non-normal, non-parametric data analysis techniques were therefore employed in analysing data before, during and after the three events. Correlation analysis methodology was also used to investigate the relationship between CGT and stock market returns. Since the study was an event study, Mean Adjusted Return Model was used to compute abnormal returns and cumulative abnormal returns which were tested for significance.

Objective one of the study which aimed at investigating the existence of a relationship between CGT and stock returns was achieved by analysing changes in daily stock prices and market index (NASI). A standard event methodology was used to measure the share price reaction to changes in CGT application. A 15 day event period was studied, the

duration was informed by prior research and the fact that NSE being in a semi-strong market efficiency form, a number of factors outside the scope of this study may affect market performance if the duration is extended.

A number of models have been used in prior similar event studies, they include among others Capital Asset Pricing Model (CAPM), the mean adjusted return, market model adjusted return, Fama-French three factor models. This study adopted the Mean Adjusted Return Model, the choice of the model was informed by a study by (Waweru & Otieno, 2016) which is a recent research done locally. The model helped in estimation of the abnormal returns within the event window. The study adopts a 31 days event window, 15 days before, 15 days after and the event day being day 0. The model's equation is as follows

AR*it* = R*it* - R*mt*

Where:

AR*it*) is the Market Adjusted Abnormal Returns of firm *i* on day *t* in the event window

R*it* is the return of firm i on day t within the event window

R*mt*is the NASI return on day *t* within the event window

To test significance of the abnormal returns, Average Abnormal Returns (AAR) and Cummulative Abnormal Returns was computed.

Primary data collected through questionnaires were cleaned, coded and uploaded to SPSS where meaningful results were derived. The findings were interpreted to meet objective three of the study, the voice of primary data were triangulated with that of secondary data in objectives one and two.

3.6 Research Quality

The research work adhered to the University stipulated Policies and high ethical standards to ensure quality. The work takes cognisance of the fact that time series data which is predominant in finance is vulnerable to shortcomings such as that of data being

inherently non-linear. Due to the shortcomings of time series data for instance violation of the underlying assumptions of linear regression, diagnostic tests were undertaken.

Peer reviewed literature, institutional reports, reliable online data sources have largely been consulted and well referenced.

3.7. Ethical Considerations

The work takes cognisance of ethical matters in conducting research. First, all authored documents consulted were duly acknowledged using Strathmore University set thesis writing guidelines to ensure plagiarism does not arise. Secondly, the entire research flowed in a way as not to cause harm to the different stakeholders involved, information obtained was treated with the privacy and confidentiality that it deserved while at the same time maintaining anonymity. On Primary data collected, the researcher ensured authority was obtained from the different authorised trading participants.

CHAPTER 4: PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

The study objective was to examine how the changes surrounding application of CGT in Kenya affect stock market performance at the NSE. The chapter therefore entails a presentation of data analysis. The chapter is divided into seven sub-sections. Section 4.2 discusses the information both secondary and primary used in data analysis in meeting the objectives of the study. Section 4.3 entails diagnostic tests on data prior to data analysis. Section 4.4 looks at an analysis of stock market performance following the three CGT events with a purpose of meeting objective one of the study. Section 4.5 analyses volumes traded around the three CGT events to meet objective two of the research. Section 4.6 presents the opinion of authorized trading participants about the effects of the three CGT events on stock trading at NSE. Finally, section 4.7 summarizes the entire chapter four.

4.2 General Information

The data analysis consists of both primary and secondary data. Primary data includes structured questionnaires which were administered to all authorized trading participants which were 24 in number (Appendix IV). The respondents were persons working as investment analysts at the stock brokerage firms, they were both male and female who were picked randomly. It is also important to mention that 100% of the respondents were within 35Years and below age bracket and had worked with the firms for at least 5years. A total of 17 participants responded to the questionnaires hence a response rate of 71%. Secondary data was collected for all the companies actively trading at NSE with the exemption of suspended, delisted and those listed during the three events of study, the data was collected from NSE database. Secondary data included daily stock prices, NSE All Share Index returns and volumes traded 15 days before the event day, the event date and 15 days after the event. Secondary data was obtained from NSE Database.

Table 4.1 Descriptive Statistics

Descriptive statistics refers to summary of information about the data set used in the study, it summarizes the basis features of data used in research.

Descriptives						
		N	Mean	Std. Deviation	Minimum	Maximum
RETURNS	2014	1548	0.089	1.266	-0.9879	36.4332
	2015_1	1550	0.019	0.572	-0.9555	21.3938
	2015_2	1531	0.215	2.464	-0.9898	70.8881
	Total	4629	0.107	1.631	-0.9898	70.8881
NASI	2014	1548	149.991	1.032	148.84	153.64
	2015_1	1550	162.860	4.757	14.15	167.54
	2015_2	1531	146.008	3.078	137.51	149.66
	Total	4629	152.983	7.926	14.15	167.54
TRADING VOLUMES	2014	1548	750,108.572	3,320,632.120	0.00	5.53E+07
	2015_1	1427	868,524.177	5,574,826.835	100.00	1.53E+08
	2015_2	1410	435,699.521	2,251,837.152	0.00	5.26E+07
	Total	438	687,545.814	3,957,556.224	0.00	1.53E+08

Table 4.1 contains Stock Returns, NASI Returns and trading volumes which were used in the study as measures of stock market performance. There were three events in the study, 12th June, 2014 when the budget speech was read proposing reintroduction of CGT, 1st January, 2015 CGT reintroduction date and 11th September, 2015 when the Finance Bill 2015/2016 was signed into law suspending CGT from gains on stocks traded at any exchange licenced by the CMA. The events are represented in the tables as (2014, 2015-1 and 2015-2). N represents the number of observations. Mean which is a measure of central tendency gives an average of where the observations under each measure and event lie. Standard deviation measures dispersion from the mean. Minimum represents the smallest data value while maximum the largest data value, the two can be used to identify if data has outliers.

4.3. Diagnostic Tests

To avoid the consequences of model misspecifications and wrong inference from data analysis, diagnostic tests were conducted, the tests were also important because they informed data analysis techniques used in the study. Diagnostic Tests were conducted on the data collected prior to analysis to ensure there is no spurious relationship. Normality, Stationarity and Multicollenearity tests were conducted.

Normality Test

A great number of statistical data analysis tools require that data is normally distributed, therefore, prior to data analysis, data was checked to ensure that the normality assumption was not violated. The Null Hypothesis under normality is that Data is normally distributed and the alternative hypothesis is that data is not normally distributed. The Table 4.2 presents the findings on normality test which revealed non-normality.

Table 4.2: Normality Test Table

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
RETURNS	0.477	4383	0.000	0.061	4383	0.000
NASI	0.255	4383	0.000	0.848	4383	0.000
TRADING VOLUMES	0.431	4383	0.000	0.141	4383	0.000

a. Lilliefors Significance Correction

From the Normality Test output derived using SPSS, there are two sets of results, those from Kolmogorov-Smirnov and Shapiro-Wilk Tests, it is advisable to use Shapiro Wilk Tests results when the number of observations is 2000 and below, in this case therefore, the research used results from Kolmogorov Smirnov since the number of observations were 4383. From the results on Table 4.2, the P-values for all the variables (Returns, NASI and Trading Volumes) is less than 0.05, P-values are 0.000. This is strong evidence against the null hypothesis, we therefore reject the null and conclude that data is not

normally distributed. The findings on non-normality also meant non-parametric statistical methods were advisable for data analysis.

Stationarity/Unit Root Tests

To establish the stationarity properties of the data in the study, Augmented Dickey-Fuller test were carried out. The Dickey Fuller test is based on linear regression. Serial correlation can be an issue, in which case the Augmented Dickey-Fuller (ADF) test can be used. The null hypothesis is that the variable contains a unit root, and the alternative is that the variable was generated by a stationary process.

Table 4.3: Stationarity Test Table

Dickey-Fuller test for unit root — Number of obs = 4629

	Test Statistic	Interpolated Dickey-Fuller: 1% Critical Value	5% Critical Value	10% Critical Value
Z(t)	-58.810	-3.430	-2.860	-2.570

MacKinnon approximate p-value for Z(t) = 0.0000

From the results above we reject the null hypothesis and conclude that the data is stationary

Multicollinearity Test

Under the test, the assumption is usually that the explanatory variables are not correlated with one another, it is advisable that variables with higher values are omitted from the study so that they do not influence the outcome. When there is a perfect linear relationship among the varibles, the estimates for a regression model cannot be uniquely computed. The term collinearity implies that two variables are near perfect linear

combinations of one another. When more than two variables are involved it is often called multicollinearity (Brooks, 2008).

The primary concern is that as the degree of multicollinearity increases, the regression model estimates of the coefficients become unstable and the standard errors for the coefficients can get wildly inflated. We used the variance inflation factor **(vif)** after the regression to check for multicollinearity. The criteria is that, a variable whose VIF values are greater than 10 may merit further investigation. The results from our analysis are as shown below.

Table 4.4: Multicollinearity Test Table

```
. vif

    Variable |       VIF       1/VIF
-------------+----------------------
         cgt |      1.03    0.973800
        nasi |      1.03    0.974423
tradingvol~s |      1.00    0.997582
-------------+----------------------
    Mean VIF |      1.02
```

From the table above, VIF is less than 10 hence presence of multicollinearity is not significant to affect overall the model.

4.4. Existence of Relationship between CGT and Stock Return

Objective one of the study sought to examine the existence of relationship between stock returns and CGT at the Nairobi Securities Exchange during the three events of study, these are, first, when the budget speech was read on 12th June, 2014 proposing

reintroduction of CGT, when the CGT implementation took effect on 1st January, 2015 and finally on 11th September, 2015 when the Finance Bill, 2015/2016 was signed into law suspending CGT on securities traded at exchanges licenced by the CMA.

Objective one was to determine whether stock returns reacted either positively, negatively or no reaction to changes in application of CGT 15 day before during and after the three mentioned events. Daily stock prices, volumes traded and NASI Returns were used for the analysis. The data collected was cleaned prior to analysis in order to take care of outliers that could arise due to corporate events for instance profit warnings, mergers and takeovers, bonus issues among other events.

Taking into account non-normality of data, non-parametric statistical technique of Spearman Rank correlation analysis was used to test whether there is a relationship between CGT and stock returns at NSE. Spearman Rank correlation tests the strength and direction of relationship between variables. Spearman's correlation coefficient (R) ranges from -1 to 1. 00 - .19 shows very weak relationship, .20-.39 shows weak relationship, .40-.59 shows moderate relationship, .60-.79 shows strong relationship and .80 -1.0 shows very strong relationship.

Table 4.5: Spearman Rank Correlation Analysis

Spearman's rho Correlations

		RETURNS	CGT	LOG_tV	LOG_NASI
RETURNS	Correlation Coefficient	1.000	.052**	-0.013	.049**
	Sig. (2-tailed)		0.000	0.406	0.001
CGT	Correlation Coefficient	.052**	1.000	-.046**	.132**
	Sig. (2-tailed)	0.000		0.003	0.000
LOG_tV	Correlation Coefficient	-0.013	-.046**	1.000	.065**
	Sig. (2-tailed)	0.406	0.003		0.000
LOG_NASI	Correlation Coefficient	.049**	.132**	.065**	1.000
	Sig. (2-tailed)	0.001	0.000	0.000	

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

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

Table 4.5 presents the findings from Spearman Rank Correlation, there is a relationship between CGT and stock returns. The output correlation coefficient of 0.052 and 0.049 for stock returns and NASI returns respectively which are both positive and significant though very weak imply that informational signal from CGT impacts positively on both stock returns and NASI returns. The relationship was very weak and statistically significant at 1% significance level (R_s = 0.052, p value = 0.000 < 0.01). The findings means though there is a relationship between stock returns and CGT, the relationship is very weak which means that a small percentage of CGT can be used to explain the variations in the stock and NASI returns hence most of the variations in returns can be explained by factors other than CGT.

Analysis of Abnormal Returns and Cumulative Abnormal Returns

Event study methodology employs marked adjusted model in data analysis to establish whether there exists difference in abnormal returns before and after the event. The abnormal returns are thereafter tested to check whether they are significant. An abnormal return is the difference between expected returns (NASI returns) and a firm's stock returns.

One sample Wilcoxon Rank sign tests

Nonparametric t-test was carried out to determine the significance of the abnormal returns before CGT and after CGT. The results are displayed in Tables 4.6 and Table 4.7.

Table 4.6. Abnormal Returns Before CGT

Abnormal returns were computed and significance levels tested before and after CGT, the findings before CGT are displayed in Table 4.7.

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The median of abnormal_rtn equals 0.0000.	One-Sample Wilcoxon Signed Rank Test	.786	Retain the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

From the summaries on Table 4.6, the null hypothesis is retained showing that the abnormal returns before CGT were not significant

Table 4.7 Abnormal Returns After CGT

Hypothesis Test Summary

	Null Hypothesis	Test	Sig.	Decision
1	The median of abnormal_rtn equals 0.0000.	One-Sample Wilcoxon Signed Rank Test	.031	Reject the null hypothesis.

Asymptotic significances are displayed. The significance level is .05.

From the result displayed in Table 4.7, it's clear that the abnormal returns after CGT were statistically significant hence the significance of the abnormal returns can be attributed to introduction of CGT and other factors.

Independent sample t tests (Mann Whitney U)

A non-parametric equivalent of Independent sample t tests was carried out to determine whether there was a difference between after CGT and before CGT in terms of abnormal profits. The findings are as shown on Table 4.8.

Table 4.8. Independent Sample t-test

Independent sample t test		
	Before CGT	After CGT
N	2398	2232
Mean Rank	2281.87	2351.64
Sum of Ranks	5471913.00	5248852.00
Test statistics	-1.775	
Asymp. Sig. (2-tailed)	0.076	

From Table 4.8 , there was no statistically significant difference between before CGT and after CGT (Z = -1.775, p value = 0.076 > 0.05). Hence we can conclude that the differences in CGT before and after are insignificant. Though the Mean Rank after CGT were higher than before CGT.

Table 4.9. Abnormal Returns & Cummulative Abnormal Returns Ranks

Ranks

CGT		N	Mean Rank	Sum of Ranks
abnormal_rtn	Before CGT	2398	2281.87	5471913.00
	After CGT	2232	2351.64	5248852.00
	Total	4630		
CAR	Before CGT	2398	2318.04	5558662.00
	After CGT	2232	2312.77	5162103.00
	Total	4630		

Table 4.9 presents the difference in mean ranks for Abnormal Returns (AR) and Cumulative Abnormal Returns (CAR) both before and after CGT. Abnormal return Mean Rank for after CGT is higher compared to before CGT. For cumulative abnormal returns, the mean rank is higher before CGT though the difference is insignificant.

Analysis of Covariates (ANACOVA)

ANACOVA was used to determine the effect of CGT on the outcome variable (Returns) in the presence of other continuous variables which are not key variables in the study but they have an influence on the outcome variable. The purpose of including this variables (covariates) is to reduce the within group error by explaining some of the unexplained variations.

Table 4.9: Summary of ANOVA

Tests of Between-Subjects Effects

Dependent Variable:

Source	Type III Sum of Squares	Df	Mean Square	F	P values
Corrected Model	5.518[a]	1	5.518	2.075	0.150
Intercept	54.404	1	54.404	20.460	0.000
CGT	5.518	1	5.518	2.075	0.150
Error	12303.513	4627	2.659		
Total	12362.274	4629			
Corrected Total	12309.031	4628			

a. R Squared = .140 (Adjusted R Squared = .100)

b. Computed using alpha = .05

Table 4.9 shows the ANOVA table for these data when the covariate is not included. It is clear from the significance value that there are no differences in returns between the before CGT and after CGT hence CGT policy changes do not affect movement in stock returns at NSE as seen in the correlation table. From the table 4.9, we fail to reject the null hypothesis and conclude that the model is not statistically significant at 1%

significance level (F value = 2.075, p value = 0.150 > 0.05). Also from the table above, the overall model is not statistically significant (F value = 2.075, p value = 0.150 >0.05).

Table 4.10: Levene's Test of Equality of Error Variances

Levene's Test of Equality of Error Variances[a]			
Dependent Variable:			
F	df1	df2	Sig.
8.523	1	4312	0.004
Tests the null hypothesis that the error variance of the dependent variable is equal across groups.			
a. Design: Intercept + LOG_tV + LOG_NASI + CGT			

Table 4.10 shows the results of Levene's test when trade volumes and NASI is included in the model as a covariate. Levene's test is significant (F value = 8.523, p value = 0.004 < 0.01), indicating that the group variances are not equal (hence the assumption of homogeneity of variance has likely been violated). Although the assumptions is violated, other methods suggests otherwise such as ratio of the variances.

Table 4.10 presents the overall significance of the model when covariates are introduced in the model. Analysis of variance (ANOVA) tables tells us whether the percentage explained by the independent variables is statistically significant. From the hypothesis,

H_0: The model is not significant

H_1: The model is significant

The summary of ANOVA is as shown in the table below:-

Table 4.11: Test of Between-Subjects Effects

Tests of Between-Subjects Effects					
Dependent Variable:					
Source	Type III Sum of Squares	Df	Mean Square	F	Sig.
Corrected Model	24.983[a]	3	8.328	2.940	0.032
Intercept	7.436	1	7.436	2.625	0.105
LOG_TV	12.083	1	12.083	4.266	0.039
LOG_NASI	6.119	1	6.119	2.160	0.142
CGT	6.979	1	6.979	2.464	0.117
Error	12207.641	4310	2.832		
Total	12286.537	4314			
Corrected Total	12232.625	4313			
a. R Squared = .002 (Adjusted R Squared = .001)					
b. Computed using alpha = .05					

Table 4.11 is the ANOVA table with the covariate included. Compare this to the summary table when the covariate was not included. The format of the ANOVA table is largely the same as without the covariate, except that there are additional rows of information about the covariates (LogTV and LogNASI). Looking first at the significance values, it is clear that one of the covariate (LogTV) significantly predicts the dependent variable, because the significance value is less than 0.05 (F value = 4.266, p value = 0.039 < 0.05). Therefore, the returns are influenced by the trading volumes. What is more interesting is that the effect of CGT on returns is not significant when the covariates are introduced in the model (F value = 2.464, p value = 0.117 > 0.01). Although the effect of CGT in the presence of covariates is not statistically significant, the overall model does not improve as compared to Table 4.9, model without covariates. The model is statistically significant (F value 2.94, p value = 0.032 < 0.05).

The above findings means, with introduction of covariates, the model does not improve and CGT is still not statistically significant which means that the effect of CGT in presence of other factors does not improve the model.

4.5. Existence of Patterns in Trading Volume Following Changes in CGT at NSE

Objective two of the study sought to examine whether there existed a pattern in volumes traded around the three CGT events, whether investors largely went long or short on their portfolios and if such patterns could inform decisions in similar occurrences in the future.

Independent Mann-Whitney U tests.

The Mann-Whitney test is an alternative for the independent samples t-test when the assumptions required by the independent samples t-test are not met by the data. In this case, t-test requires an assumption that data is normally distributed which is not the case. The Mann-Whitney U test is used to compare whether there is a difference in the dependent variable for two independent groups. It compares whether the distribution of the dependent variable is the same for the two groups and therefore from the same population. The test ranks all of the dependent values i.e. lowest value gets a score of one and then uses the sum of the ranks for each group in the calculation of the test statistic.

This test was used to check whether there is a difference in the distribution of trading volumes before and after CGT. The Test Statistics table on trading volume gives results of the tests.

Table 4.12. Test Statistics on Trading Volumes

Test Statistics[a]	
	TRADING VOLUMES
Mann-Whitney U	2294054.500
Wilcoxon W	4500104.500
Z	-2.512
Asymp. Sig. (2-tailed)	0.012
a. Grouping Variable: CGT	

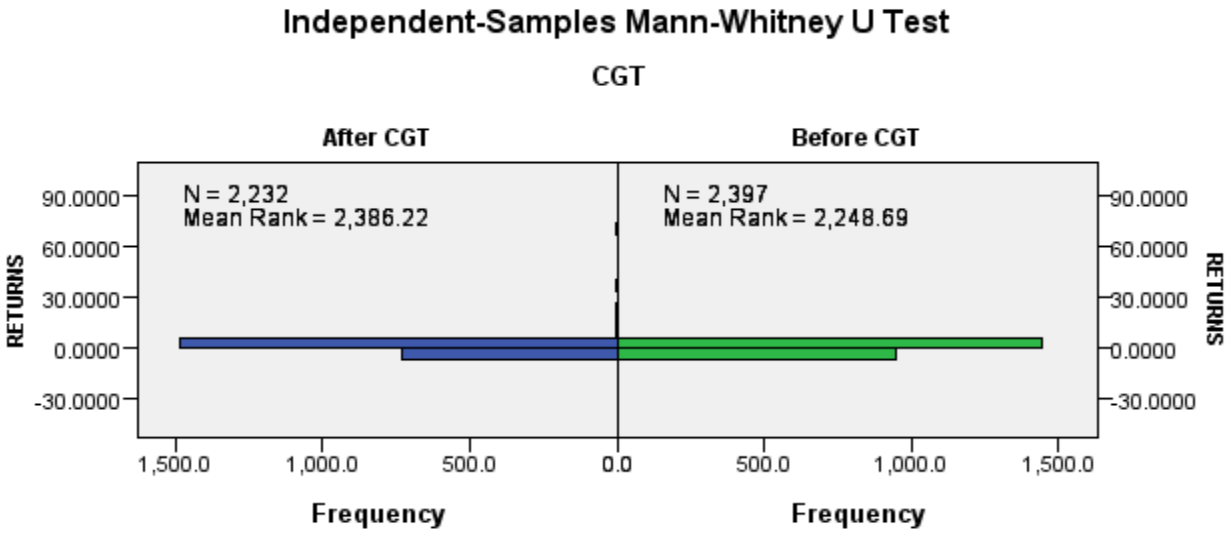
From Table 4.9 , there was statistically significant difference between before CGT and after CGT (Z = -2.512, p value = 0.0012< 0.05) trading volumes. Hence we can conclude that the differences in CGT before and after are significant.

Table 4.13: Trading Volumes and CGT.

One of the parameters used to test stock market performance was trading volumes, Table 4.9 presents the statistical findings on the relationship between CGT and trading volume to meet objective two of the study.

Hypothesis Test Summary				
	Null Hypothesis	**Test**	**Sig.**	**Decision**
3	The distribution of TRADING VOLUMES is the same across categories of CGT.	Independent-Samples Mann-Whitney U Test	0.012	Reject the null hypothesis.
Asymptotic significances are displayed. The significance level is .05.				

The output on Table 4.9 clearly states that the distributions are being compared, that the p-value is 0.012 and that the null hypothesis of equal distributions has been rejected. This means that there is a difference in trading volumes before and after the events surrounding CGT, to corroborate the findings on table 4.9, Independent –Sample Mann-Whitney U Test is conducted.



The after CGT have higher ranks suggesting that they generally have higher trading volumes after introduction of CGT. There are three test statistics in the table below (U, W and Z) but the Mann-Whitney U statistic is commonly reported. The Wilcoxon W is simply the lowest sum of ranks but in order to calculate the p-value (Asymp. Sig), SPSS uses an approximation to the standard normal distribution to give the Z statistic and resulting p-value. This is only appropriate for large samples so if the sample size is 40 or less, an Exact test is performed automatically and another row appears in the output entitled "Exact Sig. [2*(1- tailed Sig.)]" which is the p value that should be used. Here the sample size is large so the Z approximation p-value of 0.000 should be used.

A Mann-Whitney U test showed that there was a significant difference (U = 2,834,006 p = 0.000 < 0.05) between the before CGT for the trade volumes compared to the after CGT for trade volumes. The mean rank for the after CGT trade volume was 2386.22 compared to 2248.69 for before CGT trade volumes suggesting that the introduction of CGT is more effective on trade volumes. Hence we can conclude that CGT has a positive effect on the trade volumes.

4.6. Opinion of Authorized Trading Participants on effect of Varying Application of CGT on Stock Return

Objective three sought the views of authorised trading participants on the effect of varying application of CGT to stock market performance. Questionnaires were administered randomly to the 24 stock brokerage firms where persons working as investment analysts with the firms were randomly picked to respond to the questionnaires, out of the 24 investment analysts, 17 responded, their response greatly informed the study findings as analysed below:-

On a brief introduction of the respondents, out of the 17 respondents, 100 percent were aged between 25 to 35 years, 88 percent had worked with the firms for a period of 5 years and above. 76.5 percent of the respondents had bachelor's degrees while 23.5 percent had post graduate qualifications.

From the analysis, over 52.9% of the respondents are in agreement that stock returns are sensitive to CGT and fluctuations were experienced during the three events while 47.1%

are opined that stock market returns reacts way earlier during the law making or budgeting process and that is usually before the implementation hence the events do not affect stock returns. Looking at the above findings, there is almost mixed results since the figures are almost equal. This position further confirms the weak correlation coefficient on the relationship between stock returns and CGT.

The other aspect sought to be known through the primary data was the kind of decision investors make 15 days before a tax event likely to affect returns positively for instance suspension of CGT, the findings were, 76.5% indicated that investors in such circumstance usually go long, buy and hold onto the portfolios. 23.5% indicated that the investors will make a sell decision, further explanations showed that the decisions most investors make largely depend on the risk appetite of an investors.

On the volumes traded objective, 23.5% of the respondents indicated that news on CGT events affect volumes traded, 47.1% of the respondents are of the opinion that news on neither reintroduction nor suspension of CGT have any effect on the volumes traded. The other 29.4% were of the opinion that it can either affect volumes traded or not depending on investors' risk profile and perception. What is more interest is the fact that 100% of the respondents feel that CGT should be absolutely abolished owing to the fact that it causes uncertainty making the market less competitive therefore scaring away investors.

On the level of reliance on stock return fluctuations to make investment decisions, 100% of the respondents agree that their firms make investment decisions based on the stock returns movement. A further 70.6% agree that higher returns are experienced prior to implementation of changes to CGT. Another interesting feedback is that, 100% of the respondents confirmed that tax motivated trading exists at the NSE and the same was experienced during the CGT events, the entire respondents also confirmed that CGT promoted lock in effect hence illiquidity at the Stock Market.

Chart 1.1: CGT Reintroduction in 2015

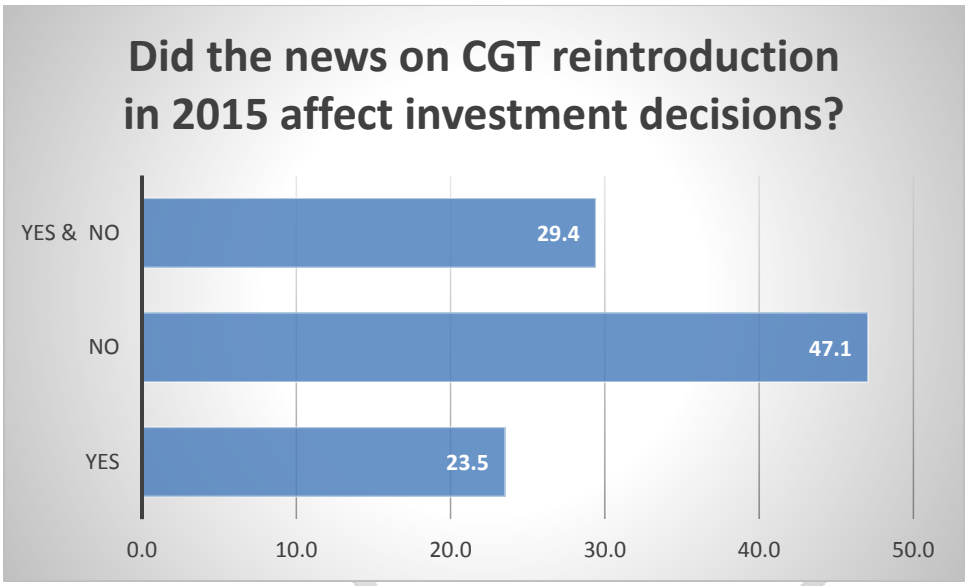


Chart 4.1 presents the opinions of the respondents on how the investors reacted to new on reintroduction of CGT on 1st January, 2015, the above findings are in concurrence with results from secondary data analysis that the stock market's response to CGT is very minimal and a response that there is very minimal effects around the CGT event dates, the market reacts much earlier than the event date for instance during the law making or budgeting process.

4.7. Chapter Summary

The study sought to answer three objectives, the existence of relationship between stock returns and CGT at NSE, the existence of patterns in trading volumes following changes in application of CGT and finally the perception of authorised trading participants on the effect of the recent changes to CGT on stock market performance.

From the analysis, though weak at 0.052 correlation coefficient, there is a relationship between stock returns and CGT which is significant at 1% confidence level. The secondary data analysis findings corroborated primary data findings that CGT affect stock returns though prior to implementation. It is therefore concluded that the effect of CGT on stock market performance is very minimal and other factors outside the scope of this study largely affect stock market performance.

For objective two, A Mann-Whitney U test showed that there was a significant difference (U = 2,834,006 p = 0.000 < 0.05) between the before CGT for the traded volumes compared to the after CGT for traded volumes. The mean rank for the after CGT trade volume was 2386.22 compared to 2248.69 for before CGT trade volumes suggesting that the introduction of CGT is more effective on trade volumes than on stock returns and NASI returns. With a Null hypothesis that trading volumes are the same across categories of CGT, the results give p-values of 0.012 hence we reject the null and conclude that volumes traded before CGT are lower than Volumes traded after CGT event as confirmed by Mann-Whitney U test results above.

The final objective of the study which sought to get opinion of authorized market participants find the following. That CGT affect trading at NSE, the effect is usually felt earlier during the budgeting or bill process. CGT also affects volumes traded, CGT is a negative effect and should therefore be abolished since it promotes lock in effect therefore affecting market liquidity.

CHAPTER 5: DISCUSSIONS, CONCLUSIONS & RECOMMENDATIONS

5.1 Introduction

This chapter discusses the research findings, conclusions and recommendations for the study. Section 5.2 discusses the findings from every objective of the study. Section 5.3 gives the conclusion for the study. Section 5.4 suggests areas for further research. Section 5.5 provides limitations for this research.

5.2 Discussion of Findings

5.2.1. Existence of Relationship between CGT and Stock Returns

In the first objective, the study sought to assess the existence of relationship between stock market returns and CGT. Data analysis on this objective revealed a presence of relationship between CGT and stock returns, a weak correlation coefficient was found at 0.052 which was significant at 1% confidence level. The findings contradict that of Dai Shackelford & Zhang, (2008), which concluded that capital gains taxation is not amongst the factors that affect stock market performance, investors' largely consider diversification and liquidity priorities to inform their decisions and not CGT.

This finding is however in agreement with that of Jin (2006) who alluded that, the concept of deferral is central to CGT and therefore, investors tend to hold onto their portfolios following CGT changes. Clich & Odat (2012) findings that lock in effect resulting from CGT eventually affects stock market performance is also in agreement with this research finding. The findings from Somers (1984) and Blouin, Hail & Yetman, (2009) who both argue that CGT is detrimental to market price stability hence affecting performance of stock at the stock market add to the studies against CGT. Karinga (2013),In a study conducted at NSE on effect of CGT announcements finds that positive performance was reported following such announcement.

To conclude on objective one, stock returns and as a result stock market performance is affected by changes in application of CGT, though minimally, the effect is significant, different stakeholders should therefore pay attention to CGT during decision making to

enable them leverage on risks and enhance their portfolio performance. On the part of the regulator, it is necessary that factors that promote price stability are promoted and prior to making changes likely to affect the market, the process should be comprehensively consultative with all possible dynamics explored. This will help in enabling seamless policy implementation and therefore promoting certainty.

5.2.2. Existence of Patterns in Trading Volume following Changes in CGT Application

In the second objective, the study sought to assess existence of patterns in trading volumes following the changes in CGT Application before and after the events. The findings of the study indicate that there's relationship between trading volume and CGT, with the null hypothesis that distribution of trading volumes is the same across categories of CGT, Mann-Whitney U Test was conducted, the findings gave p-value of 0.012 hence null hypothesis was rejected and concluded that, the volumes traded before the CGT events are different from trading volumes after CGT. Further to the above findings, the mean rank trading volumes after CGT is higher at 2,386.22 compared to the mean rank before CGT which is 2,248.69. This implies that, trading volumes are higher after the CGT event compared to before CGT.

The above findings are in agreement with the findings from studies by Lo, (2015) and Resee (1998) who conclude that investors will always adjust their trading decisions to avoid paying taxes on portfolios before taxes are introduced. Their findings are corroborated by the Mean Rank which has a higher figure after CGT implying investors tend to trade more after the CGT event. The same is confirmed by response from authorised market participants who alluded that investors will buy and hold onto their portfolios only to resume trade after the CGT event.

On the contrary, findings from Henderson (1990), the research conducted after the United States Tax Reform Actof 1986 found a positive correlation between CGT and volumes traded, on average, increased CGT rate increased overall stock market trading volumes.

5.2.3 Opinion of Authorized Trading Participants on CGT and Stock Returns

In the third objective, the researcher sought to find out the perception of authorized trading participants on the behaviour at the bourse following the three recent CGT events. Generally, most respondents confirmed that they study patterns both in stock prices and volumes traded and rely on the findings to inform investors on which decision to make whether buy, sell or hold onto their portfolios. On the question of role of CGT in stock market performance, majority of the respondents confirm CGT affect stock returns, 52% of the respondents are in agreement, the other 48% felt that the CGT event in itself does not affect stock market performance since many investors make investment decisions even way before the event date, this is because information coming into the market during the processes that lead to the event informs the decision before the event. This finding corroborates with other previous researchers (Chen et al., 2011; Rouwenhorst, 1998) who argued that past stock returns and trading volume information were critical in predicting the performance of a stock in future.

This finding equally confirms the findings of this study under the second objective in which the null hypothesis distribution of volumes traded is the same across categories of CGT was rejected. This implies that there exist patterns in buy and sell volumes following changes to CGT, before CGT investors tend to make buy decisions. This was attributed to implied increased transaction costs following introduction of CGT which would increase the share price. Most investors made sell decisions after the tax events.

5.3. Conclusions

Drawing from the research objectives and stakeholders likely to derive knowledge from the research findings, the following is the conclusion, for investors, both existing and potential, CGT and stock market performance at NSE correlate, this implies that studying the behaviour of the market during such events in the future can help improve portfolio performance. The Kenyan Government is in huge Budget Deficit, probability of reintroducing CGT at the Stock market cannot be ruled out in totality in a bid to curb the growing deficit. The findings from the research will therefore enable the investors to make the right investment decision at the right time should similar events on CGT re-

occur, the investors can for instance buy stocks before the CGT reintroduction and sell the same after the CGT event. This conclusion is also supported by authorized trading participants whose majority confirm that they rely on historical price movements when advising the investors on which investment decision to make. On the same note, volumes traded are higher after the CGT events, this confirms the existence of buy and hold trading strategy and hence lock in effect before the CGT event. Investors can therefore rely on the findings of this research to make profitable investment decisions.

5.5. Recommendations

For the regulators and policy makers, more needs to be done prior to introduction or implementation of new policies that affects the stock market. Uncertainty scares away both existing and potential investors, this affects the level of activities at the bourse leading to securities liquidity problems. Strategies such as benchmarking with markets that have successfully implemented such changes should be explored, stakeholder participation should also the encouraged to achieve a win-win situation in such policy changes.

For academicians, CGT and Stock Market Performance have received considerable attention in research. The study therefore contributes further to the existing body of knowledge as far as CGT and stock market performance are concerned. It combines existing literature on the relationship between trading volume and stock returns and thus provides literature for future researchers in this area.

5.6. Areas for Further Research

Following the review of literature and this research, CGT and Stock Markets still elicit discussions that could be of interest for future research. Widening the scope of research to conduct a comparative analysis on the reaction of stock markets to changes in CGT within the East African Community would be of interest and make generalization of research findings possible across the East African stock markets. Similarly, this research studies the effects of CGT on investment in securities at NSE. Future research could be

conducted on CGT and other areas of investment for instance its effects on property transactions such as the real estate sector, government securities, preference shares among other securities.

5.5. Limitations of the Study

The study was conducted on effects of CGT on securities traded at the NSE, this means the research findings can only be relied upon by stakeholders at NSE, the research findings cannot therefore be generalized in similar events but different stock markets. The research employs nonlinear statistical methods in data analysis; the relations between variables in social institutions like stock market may not always be nonlinear.

It was assumed that more detailed data on the kind of investment decisions made especially on trading volumes for example the buy and sell volumes would be readily available. The available secondary data on trading volumes was the aggregated volumes traded both buy and sell. Secondary data could therefore not be studied to ascertain existence of patterns. This limitation was overcome through primary data collection where the respondents were asked the kind of investment decisions usually made around the CGT events.

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Appendices:

Appendix I: Letter of Introduction

Dated: 1st April, 2019

RE: REQUEST FOR PARTICIPATION AS A RESPONDENT IN MY RESEARCH STUDY

My name is Lilian Akoth Obadha, a Master of Commerce (Finance) student at Strathmore University. I hope to do a thesis titled "***An Event Study on Effects of Kenya's Varying Application of Capital Gain Tax on Stock Market Performance at Nairobi Securities Exchange."*** The purpose of conducting this research is for fulfilment of the requirements of my Master's Program.

The focus therefore of the questionnaire is to collect data that will inform the findings of the research. The research findings will be of invaluable insight to the trading participants, the investing public and the regulator among others.

As part of the ethical consideration, I promise to use the information only for the purpose explained here above, confidentiality of your response will be highly kept. No specific feedback to your response will be mentioned. A full report on the findings of this study may also be availed to you at your request, am kindly looking forward to your participation.

Thank You.

Yours Faithfully,

LILIAN AKOTH OBADHA.

Appendix II: Questionnaire

SECTION 1: GENERAL INFORMATION

Name of the Company (Optional)……..

Kindly tick against the age group below:-

35 Years & Below [ ]

36 Years – 40 Years [ ]

41 Years & Above [ ]

Please indicate your highest level of education

Post Graduate [ ] Graduate [ ] Diploma [ ] Certificate [ ]

SECTION 2: CAPITAL GAIN TAX AND STOCK RETURNS

1. Does the firm agree that stock returns fluctuate around changes to CGT?

   Yes [ ] No [ ] Yes & No [ ]

2. Based on your answer above, to what extent does the fluctuation in stock returns if any influence your investment decisions?

   Large [ ] Moderate [ ] Small [ ]

3. Which is the investment decision commonly made 15 days before a tax legislation expected to positively affect returns?

   Buy [ ] Sell [ ] Buy & Sell [ ]

4. In your opinion what explains the behaviour in 5 above?

   ……

   ……

   ……

5. Which is the decision commonly made 15 days after a tax legislation expected to positively affect returns?

   Buy [ ] Sell [ ] Buy & Sell [ ]

6. In your opinion what explains the behaviour in 5 above?

   ……

   ……

   ……

7. What is the behaviour of stock returns on the tax legislation implementation date?

   Highly Fluctuate [ ] Moderately Fluctuate [ ] Calm [ ]

8. In your opinion what explains the behaviour in 5 above?

   ……

   ……

   ……

SECTION 3: CAPITAL GAINS TAXES, V OLUMES TRADED

9. Did the news on CGT reintroduction in 2015 affect volumes traded?

   Yes [ ] No [ ] Yes & No [ ]

10. If your answer above is Yes; which decision did most investors make?

    Buy [ ] Sell [ ]

11. In your opinion, what factors contributed to above decision?

    .....

    .....

    .....

12. In your opinion, which option would you advise the policy makers to go for?

CGT Reintroduction [ ] CGT Abolishment [ ]

13. In your opinion, what factors can we attribute to the answer in 10 above

.....

.....

.....

SECTION FOUR: STOCK RETURN FLUCTUATIONS

The following statements relate to stock returns volatility. Kindly indicate the extent to which you agree or disagree with the statements on a Likert scale of 1 – 5 by ticking in the appropriate space.

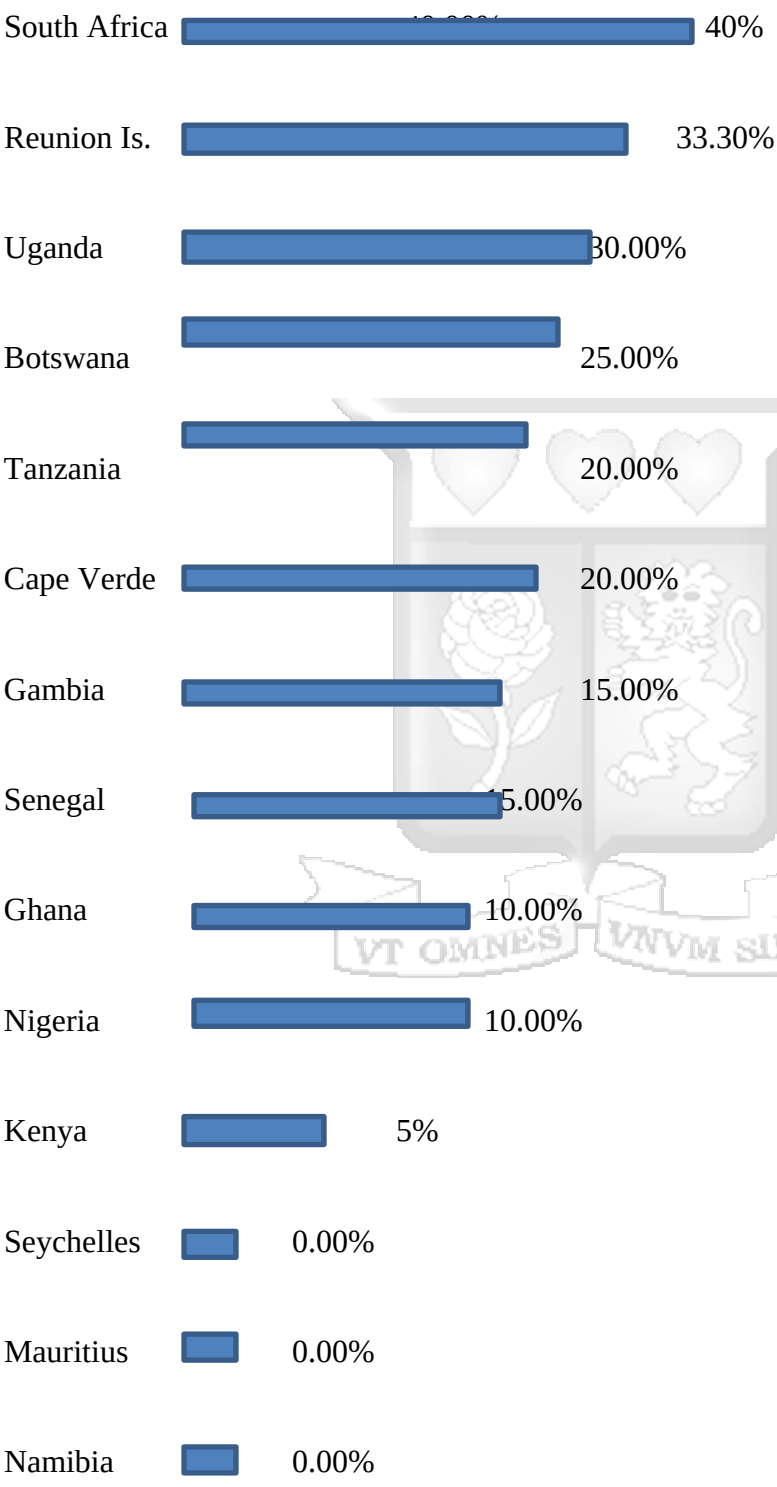
The numbers labelled indicated: 1- Strongly Disagree, 2 – Disagree, 3 – Somehow Agree,4 – Agree, 5 – Strongly Agree

Statement	Scale				
	1	2	3	4	5
Our company studies and relies on stock returns volatility to inform investment decisions					
Higher returns are experienced months before implementation of tax legislations					

Higher returns are experienced months after implementation of a tax legislation					
Tax motivated trading exists at the Nairobi Securities Exchange					
CGT reintroduction resulted into tax motivated trading					
CGT promotes lock-in effect					

Thank you for your cooperation

Appendix III: Capital Gains Taxes (%) - Kenya Compared to Continent



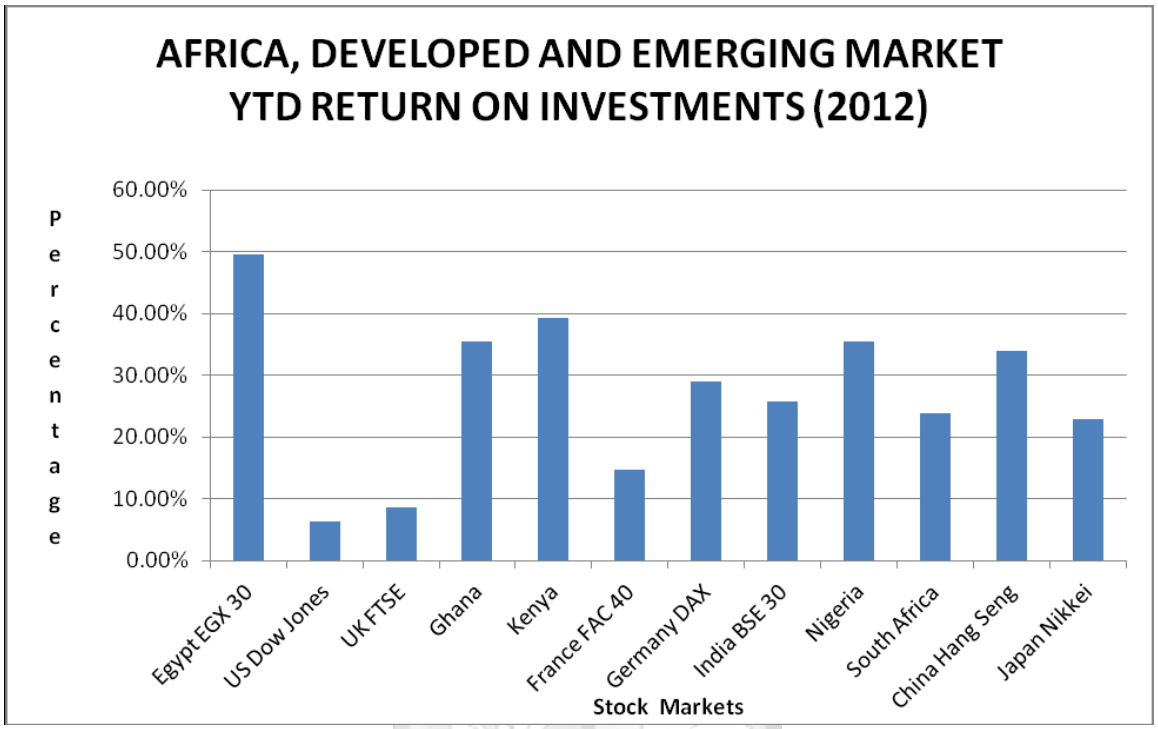
Source: ICPAK, 2014

Appendix IV: List of |Authorized Trading Participants

No.	Names
1	Dyer & Blair Investment Bank Ltd
2	Francis Drummond & Company Limited
3	NgenyeKariuki& Co. Limited (Under Statutory Management)
4	Suntra Investment Bank Ltd
5	Old Mutual Securities Ltd
6	SBG Securities Ltd
7	Kingdom Securities Ltd
8	AIB Capital Ltd
9	ABC Capital Ltd
10	Sterling Capital Ltd
11	Apex Africa Capital Ltd
12	Faida Investment Bank Ltd
13	NIC Securities Ltd
14	Standard Investment Bank Ltd
15	Kestrel Capital (EA) Ltd
16	Renaissance Capital (Kenya) Ltd
17	Genghis Capital Ltd
18	CBA Capital Limited
19	Equity Investment Bank Ltd
20	KCB Capital
21	Barclays Financial Services Ltd
22	Securities Africa Kenya Ltd
23	EFG Hermes Kenya Ltd
24	African Alliance Securities

Source: NSE Website, 2018

Appendix V



(Source: Ventures Africa, Wall Street Journal, Proshare)

Appendix VI

LISTED COMPANIES AT THE NAIROBI SECURITIES EXCHANGE

AGRICULTURAL SECTOR	**TELECOMMUNICATION AND TECHNOLOGY SECTOR**
Eaagads Ltd	Safaricom Ltd
Kapchorua Tea Company	
Kakuzi	**Real Estate Investment Trusts(REITS) SECTOR**
Limuru Tea Co. Ltd	StanlibFahari I-REIT
Rea Vipingo Plantations	
Sasini Ltd	**AUTOMOBILES AND ACCESSORIES SECTOR**
Williamson Tea Kenya	Car and General (K) Ltd
	Sameer Africa Ltd
BANKING SECTOR	Marshalls (E.A.) Ltd
Barclays Bank Kenya Ltd	
CFC Stanbic Holdings Ltd	**COMMERCIAL AND SERVICES SECTOR**
I&M Holdings Ltd	Express Ltd
Diamond Trust Bank Kenya Ltd	Kenya Airways Ltd
HF Group Ltd	Nation Media Group
KCB Group Ltd	Standard Group Ltd
National Bank of Kenya	TPS Eastern Africa (Serena)
NIC Bank Ltd	Scangroup Ltd
Standard Chartered Bank	Uchumi Supermarket
Equity Group Holdings	Eveready East Africa Ltd
The Co-operative Bank of Kenya	Longhorn Publishers
	Deacons (East Africa)
CONSTRUCTION AND ALLIED	Nairobi Business Ventures Ltd

SECTOR	
Athi River Mining	
Bamburi Cement Ltd	
Crown Berger Ltd	**ENERGY AND PETROLEUM SECTOR**
East African Cables Ltd	KenolKobil Ltd
East African Portland Cement Ltd	Total Kenya Ltd
	Kengen Ltd
INSURANCE SECTOR	Kenya Power & Lighting Co Ltd
Jubilee Holdings Ltd	Umeme Ltd
Pan Africa Insurance Holdings Ltd	
Kenya Re-Insurance Corporation Ltd	**INVESTMENT SECTOR**
Liberty Kenya Holdings Ltd	Centum Investment Co Lt
Britam Holdings Ltd	Trans-Century Ltd
CIC Insurance Group Ltd	Home Afrika Ltd
	Kurwitu Ventures
MANUFACTURING & ALLIED SECTOR	Olympia Capital
B.O.C Kenya Ltd	
Flame Tree Group Holdings Ltd	**INVESTMENT SERVICES SECTOR**
Carbacid Investments Ltd	Nairobi Securities Exchange Ltd
East African Breweries Ltd	
Mumias Sugar Company Ltd	
Unga Group Ltd	
Kenya Orchards Ltd	

Source (NSE Handbook 2001/2017, 2018)