

**THE EFFECTS OF SHARE SPLITS ON LONG RUN STOCK
RETURNS FOR COMPANIES LISTED AT THE NAIROBI
SECURITIES EXCHANGE**

BY

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DECLARATION

This Research project is my original work and has not been presented for a degree in any other University or institution. No part of this project may be reproduced without the prior written permission of the author and/ or University of Nairobi.

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May God Bless you all.

DEDICATION

This work is dedicated to my late Father, Eliud Ndegwa for instilling in me the importance of Education from a very tender age. May the Almighty God Rest his soul in eternal Peace.

ABSTRACT

Share splits are a common corporate event among listed companies. Though it is commonly practiced it has been described as a mere accounting change that increases the number of shares outstanding without any benefit to the shareholders. This study sought to determine the effects of share splits on long run stock returns among listed companies at the Nairobi securities Exchange. The study covered returns for twenty four months after the company had undergone a share split. The study therefore sampled firms that had been in operation for at least twenty four months after they had undergone a share split. There were eleven firms listed at the NSE that fulfilled this condition and were therefore sampled for this study.

The study used the long run study methodology and applied the buy and hold benchmark approach. The method required the identification of the event firm and its benchmark firm and comparing the returns achieved by each of these firms correspondingly for the same month. Secondary data obtained from the Nairobi Securities Exchange was used in this study. The data consisted of monthly opening and closing share prices of each of the sampled firms together with those of its identified benchmark firm for the entire twenty four months of the study. The study method required the determination of each of the sampled event firm's monthly buy and hold returns and comparing these returns with those of its benchmark firm, which acted as a proxy for the market. The benchmark firm was identified as another firm which had not undergone a share split and was within 70% to 130% of the share capital of the event firm at the time of the event firm's share split, and has a book to market equity (BE/ME) ratio that is closest to that of the event firm. The monthly returns of the event firm are then compared with those of its benchmark firm. The difference in the monthly returns achieved by the paired firms constitutes the buy and hold abnormal return (BHAR) for the event firm. The buy and hold abnormal returns for each firm were then tested for difference from zero at 5% significance level in order to determine whether there is any difference between the returns of the event firm and the returns of its benchmark firm.

The study found that among all the eleven firms sampled; only two firms achieved a positive mean buy and hold abnormal return of 1.89% and 3.72% respectively. The other nine firms representing 82% of the sampled firms achieved a mean negative buy and hold abnormal returns ranging from -4.94 % to -0.14 %. These returns were however found to be insignificant at 95% confidence level. This implies that there was no significant difference between the returns achieved by the event firm and the returns achieved by its benchmark firm for the period under study. The study therefore concluded that share splits at the Nairobi securities exchange have insignificant effects on stock returns for the first two years following a share split. However further studies on its effects on periods longer than two years would be recommended in order to develop a hypothesis. The criteria for the choice of the benchmark firm would also need to include a consideration of the industry in which the event firm is operating in order to allow for proper benchmarking of the paired firms returns. Firms from the same industry would be affected by market conditions in the same way.

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ABBREVIATIONS

AMEX	American Stock Exchange
BAT (K) ltd	British American Tobacco Limited
BE/ME Ratio	Book to Market Equity Ratio
BBK	Barclays Bank limited
BHAR	Buy and Hold Abnormal Return
CMC Holdings	Cooper Motor Corporation limited
EABL	East Africa Breweries limited
KENOL	Kenya National Oil Company limited
KPLC	Kenya Power and lighting company limited
NASDAQ	National Association of securities dealers automated Quotations
NSE	Nairobi Securities Exchange
NYSE	New York Stock Exchange
US	United States
USA	United States of America

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Share splits are a common corporate event among listed firms. Fama et al, (1969) defined a stock split as an exchange of shares in which at least five shares were distributed for every four previously outstanding. According to Dhar and Chhaochharia (2008) share splits occur in ratios, the most common ones being 2:1, 3:2, 5:4 etc. He gives an example of a 2-for-1 share split as meaning that a shareholder with one share is given an additional share. After the split there will be two shares for every one pre-split share.

In some countries however, there are legal restrictions on the ability of companies to split their shares. According to Roger, (2007) in Switzerland, companies can only split their shares up to a legally prescribed minimum par value. The same types of restrictions on minimum par values also apply in Germany (Wulff 1999). In Kenya, there are no such restrictions.

Several reasons have been advanced to explain the reasons why companies split their shares. According to Shourun et al (2006), key among them is the desire to make the shares more affordable in order to increase their trading volumes. He argues that shareholders are wealth constrained and therefore cannot afford a round lot of stocks if the prices are too high. Splitting the shares reduces their market prices by the same factor as the split factor, at least in theory. This makes them more affordable to a majority of small shareholders.

Lakonishok and Lev, (1987) argues that by splitting their shares, firms make their stocks more attractive for the individual investor. According to Copeland (1979) a stock split changes stock prices to a more optimal price, which in turn increases its demand. Lamoureux et al (1987) in his studies noted that managers expected stocks trading at lower prices to be generally more liquid and to attract a larger pool of potential investors.

The main objective of any firm is the maximization of the wealth of its shareholders. This means that every corporate event undertaken by the firm should be geared towards achieving this goal. A share split is a major corporate event and is therefore no exception. According to Dennis and Strickland (2002) a stock split is merely an accounting change in the share composition. It should therefore not theoretically elicit any reaction on the share price. However considerable research undertaken has shown that stock prices usually react positively to a stock split.

A stock split has always been a puzzle (Lyroud et.al. (2006). It results in a reduction of the par value of the shares and a proportionate increase in the number of shares outstanding (Baker and Gallagher, 1980). Dennis and Strickland, (2002) argues that it is merely an accounting change that increases the number of shares outstanding without any benefit to the shareholders.

Grinblatt et al. (1984) studied the effects on returns from stocks after splits for the period 1967 to 1976 and found an excess positive return of 3.44% during the three days surrounding the stock splits. Koski, (1998) also observed similar results of 3.4% excess positive returns surrounding the split announcement days. Ikenbery et al.

(1996) found long term positive abnormal return of 7.93% of excess return in the first year and 12.15% in the three years subsequent to the splits. Desai and Jain (1997) found 7.05% and 11.87% excess returns respectively after one and three years of the split events.

Chakraborty, (2012) studied the reaction of share prices to a split from 1999 to 2008 and found that there is significant short lived positive price reaction associated with a split followed by an abnormally larger negative returns a few days after the split execution.

This inconsistency between the expectations and the actual findings of the effects of a split has been a subject of continued interest among researchers. Lyroudi, et,al (2006) have called this a puzzle. This means that the expectations of the reaction of share prices to stock splits among firms may not be obvious. Despite this companies continue splitting their shares.

In Kenya, several companies listed at the Nairobi securities exchange have in the recent past split their shares. East Africa Breweries Limited, Equity Bank Limited, Nation Media group Limited, Centum investments Limited , and Kenya commercial Bank Limited are some of the companies that have split their shares in the recent past. This study therefore seeks to determine the effects of splits on share prices among listed firms at the Nairobi securities exchange.

1.1.1 Share splits

According to Dhar and Chharchharia (2008) a stock split is a mere ‘cosmetic’ event because it simply represents a change in the number of shares outstanding, and has no direct valuation implications. It is a corporate action that increases the number of the corporation's outstanding shares by dividing each share, which in turn diminishes its price. The stock's market capitalization however, remains the same. For instance, in a 2 for 1 stock split, every shareholder with one share is given an additional share. This means that there will be 2 shares for every pre-split share in the company.

Ross (1977) observes that splits are preceded by unusually high growth in earnings and dividends. The signaling theory of splits suggests that managers’ use splits to signal good information to investors. According to this view, the key role of splits is to convey information, not to seek out some optimal price level. Value increases on split announcements are often attributed to this signaling effect.

Share splits lead to increased stock liquidity. Muscarella et al (1996) provided empirical evidence that share splits leads to increased stock liquidity. They also found increased trading activity after the split, which they cite as additional evidence of liquidity benefits. Liquidity is evidenced by increase in share mobility among investors.

Dolley (1933) in his survey of companies with splits in the first third of the century sought to determine the main reason for splitting their shares. He reported that over 90% of the managers of those companies said that the primary reason for splitting their shares was to achieve a wider distribution of shares.

Baker and Powel, (1993) studied the reasons for share split for the period 1987 to 1990. He found out that a managers' major stated purpose of splits is to lower the stock price and thus bring it into a preferred trading range.

1.1.2 Reverse splits

According to Lihua, (2002), a reverse split is a non economic event that has no effect on shareholder wealth. They affect only the number of outstanding shares without changing the ownership among shareholders. For example a 10:1 reverses split means that for every ten shares held they are consolidated into one share. It is used by companies with low share prices who would like to increase their share prices.

Market reaction to reverse splits has been mixed. Woodridge and Chambers, (1983) found that reverse splits leads to negative abnormal returns among US firms. On the other hand, Masse, and Hanrahan (1997) in their study of Canadian firms found positive abnormal returns with reverse splits.

Radcliffe and Gillespie (1979) argue that the main motive for reverse splits by firms is to improve its image. This observation supports the neglected firm theory that suggests that firms use stock splits to attract attention.

1.1.3 Stock Returns

The value of a stock is the price that a market attaches to it. This price is largely influenced by the forces of demand and supply. Stock prices are therefore not static and oscillate in reaction to conditions in the market. Mehra (2002) argues that returns

are determined by investor preferences, the uncertainty in asset's payoffs, and the state of the economy in which it pays off.

According to Shiller (1981) real stock prices equal the present value of rationally expected or optimally forecasted future real dividends discounted by a constant real discount rate. Zhiwu and Ming (2001) argue that the price of the share represents the value of the companies underlying assets plus its growth potential divided by the number of shares outstanding.

Stocks are risky securities. According to Thomas, (2002) there is no universally accepted method of estimating returns for risky assets. However he argues that returns of such securities can be estimated using the following formula;

$$R_t = \frac{(C_t + D_t)}{P_{t-1}}$$

Where;

R_t = Return at time t

C_t = Capital gain from time $t - 1$ to time t

D_t = Dividend payment at time t

P_t = Price of the stock at time t (Time at the end of the period)

P_{t-1} = Price of stock at time $t-1$ (Time at the beginning of the period)

Arising from the above formula, there are two ways in which stock returns may be realized, through dividend income and through share price appreciation commonly referred to as capital gains.

Gilblatt et al (1984) hypothesized that firm's signal information about their future earnings through the stock split announcement. Ross (1977) argues that financial decisions convey information about firm value. Copeland (1979) observed that a stock split changed stock prices to a more optimal price, which in turn increased demand for the stock. His hypothesis stated that there was a price range within which trading was most liquid for stocks of a company and concluded that firms split their stock to keep prices within this range.

Conroy and Harris (1999) noted that when a stock became too expensive, a split brought it back to the optimal price range. Lakonishok et al (1987) argued that there existed benchmark values regarding stock prices and managers were guided by these comparative figures in making decisions on whether to split their shares.

1.1.4 Relationship between Share splits and Long run Stock Returns.

According to Naidu, (2000) a stock split is merely a numerical change which leaves the investors no better or worse off than they were before the split. Baker and Gallagher, (1980) argued that a stock split is a mere arithmetic exercise which results in a reduction of the par value and a consequent increase in the number of shares proportionate to the split while all other capital accounts remain unchanged. Based on these arguments, a share split should therefore not on itself elicit any reaction from the market.

Baker and Gallagher (1980) also state that theoretically shareholders receive no tangible benefits from a stock split, while there are costs associated with it. If this be so, then the expected reaction of the market to a stock split should be a reduction in

the prices of shares, in order to recognize the effects of the additional costs associated with it. However empirical evidence in several markets indicates that on average, share prices increase as a result of a split announcement. In the long as well as the short run therefore share splits would not necessarily be expected to elicit any responses from the market unless the splits are accompanied by other corporate announcements such as higher dividend payouts or bonus shares.

Most of the studies undertaken on the effects of share splits on long run stock returns have shown mixed reactions. Rodney (2001) studied the long run performance of shares after splits for firms listed at the NYSE and found a significant positive return during the first year of the split announcement followed by insignificant returns in subsequent years.

Ikenberry et al. (1996) examined the effects of share splits on the long run stock returns for a sample of 1275 two for one stock splits and found significant post split excess returns of 7.93% in the first year following the split, and 12.15% in the first three years following the split. The announcement returns was however at 3.38% suggesting that the market under reacts to the immediate share splits announcement.

Desai and Jain (1997) examined one to three year performance of common stocks following 5596 stock splits and 76 reverse split announcements made during the period 1976 to 1991. They found a buy and hold abnormal return of 7.05% during the first year following a split and 11.87% for the three year buy and hold return. For reverse splits they found 11.76% during the first year of the announcement and -33.90% for the three year holding period.

Equally in the short run the findings of the effects of share splits on returns have been mixed.

Arbel and Swanson (1993) found that companies listed on the NYSE elicited a positive response to splits in the USA. In Germany Wulff (1999) also found that stock splits elicited a positive response to the market. In India, Gupta and Gupta (2007) found mixed reaction with stock splits.

In Kenya Aduda and Chamarum (2010) and Simbovo (2006) found positive changes to the market as a result of a share split announcement. This shows that the relationship between stock splits and share prices may not be truly understood due to the conflicting findings. These empirical findings are contrary to the expectations. As a result, the relationship between stock splits and share prices remains a puzzle to financial economists and practitioners (Desiras et al. 2006).

1.1.5 Nairobi securities Exchange

In Kenya informal trading in shares started in the 1920's. Trading at the time took place through a gentleman's agreement as there were no rules or regulations to govern trade in shares.

In 1954 the Nairobi stock exchange was constituted as a voluntary association of stock brokers and registered under the society's Act. Formal trading in shares commenced then but was dominated by the whites and Asians. Africans were then not allowed to trade at the bourse but started trading in shares after the attainment of independence in 1963.

There are currently 62 companies listed at the NSE. Some of these listed companies are cross listed in other countries of the East Africa e.g Kenya Airways Limited and East Africa Breweries limited. The Instruments traded in the market are the common shares, preference shares, and bonds.

The market is made up of different segments, with each representing an industry. Companies that have undergone stock splits at the NSE are fairly representative of the market because construction, Energy, Manufacturing, Investments, Agriculture, Commercial and services, Automobiles and the Banking segments are represented. The banking sector has taken 25% of the total number of stock splits undertaken at the NSE so far.

1.1.6 Stock splits in Kenya

The first stock split in Kenya was undertaken in 2004 by Kenya National Oil Company Limited, followed by East Africa Breweries Limited the same year. Subsequently, between 2004 and 2012, twelve companies listed at the NSE have undergone a stock split on their shares.

Shares splits therefore remain a major corporate event undertaken by firms regularly. Furthermore, according to Debabrata and Pradip (2012) stock splits involve several costs including administrative cost, printing costs, legal expenses etc. These costs have to be borne by the shareholders. Fundamentally, the expected reaction to these events would therefore be a reduction in the market values of the firm's shares. On the contrary, many studies undertaken in Kenya and elsewhere have found empirical evidence that stock returns on average increase after a split.

1.2 Research Problem

In theory, stock splits have no direct effect on firm values (Dennis and Strickland 2003). In an efficient market a split is expected to elicit a response from the market as a consequence of this new set of information. According to Ayodeji, (1998) however, all the information communicated by a stock split to the market should be recognized at the time of the split and subsequent stock prices should not show any unusual price reaction

Studies on the effects of stock splits on returns have been mixed. In India, Gupta and Kumar (2007) studied split events from 1999 to 2004 taking 60 stocks and found a mixed announcement effect. They found significant positive abnormal returns on the very next day of announcement but the following days showed significant negative abnormal returns.

In Germany, Wulff, (1999) reported abnormal positive returns following a stock split among companies around the announcement day. In the US, Arbel and Swanson (1993) found that stocks listed on the New York Stock Exchange (NYSE) and the American Stock Exchange (AMEX) reacted positively to stock splits announcements.

In Kenya, Simbovo (2006) studied the effects of stock splits and large stock dividends on liquidity among firms in the NSE and found that stock splits have a positive effect on liquidity although the change in liquidity was found to be statistically insignificant. Aduda and Chemarum (2010) in their study on market reaction to stock splits found that the Kenyan market reacts positively to stock splits.

Nkonge (2010) studied the effects of stock splits on the securities returns at the NSE and found abnormal returns. Ongere (2011) studied the effects of stock splits on the ownership structure of firms with reference to the Nairobi stock Exchange and found an increase in shareholders as a result of a split. Obunde (2011) studied the impact of stock splits on stock performance of firms listed in the Nairobi stock with specific reference to trading volumes and found that trading volumes increases with the announcement of a split.

Studies so far undertaken in other developed markets indicate mixed reaction to stock splits. The findings range from positive responses, negative responses and even no effect at all. However in Kenya, the findings of all the studies so far undertaken indicate positive responses to stock splits.

Furthermore, most of the studies on stock splits in Kenya have been on effects of share splits on returns in the short run. The findings of these studies have shown a positive response to share splits. There has not been any significant study on the effects of share splits on the long run stock returns. There is a need for such a study to be undertaken in Kenya. This study therefore seeks to evaluate the effects of share splits on long run returns among firms listed at the Nairobi securities Exchange.

1.3 Research Objective

The objective of this study is to evaluate the effects of share splits on long run stock returns for companies listed at the Nairobi securities Exchange.

1.4 Value of the Study

Stock splits are a major corporate event in a company. As such it is important for a firm to understand the implications of this event on the firm's future growth and prosperity. This study will generate knowledge in which several groups of people will benefit. Among the expected beneficiaries include;

1.4.1 Researchers

This study will enable researchers understand the likely effect of share splits on long run stock returns. It will also provide a framework for further research in this area of study. Researchers may also determine which other area of study has not been covered in the previous studies including this one and undertake studies on it. Further, this study will act as a good reference material in future studies related to the share splits and stock prices particularly on the Kenyan Market.

1.4.2 Investors

Investors could use the findings of this study to enable them predict the likely effects of stock values as a result of a share split announcement. They are concerned with the returns that accrue from their investments and as such any information that may act as a reference guide to them would be welcome. The study findings will serve this purpose. Short term investors who speculate in the market would also use the findings of this study to position their purchasing and selling strategies in reaction to a stock split announcement. The long term investors will also be keen on the findings of this study.

1.4.3 Government and its regulatory Agencies

In formulating policies regarding stock markets, the Government and its regulatory Agencies would find the findings of this study as an important reference document. Quoted companies in the NSE in 2003 agitated for an amendment to the capital markets authority Act to allow for stock splits, which the Government did in 2004. It would be of interest for the Government to find out how the subsequent splits have generally performed in the market. This will guide the Government in formulating future policies towards stock splits. A positive effect on the share values also has a positive effect on the economy.

Activity levels at the securities exchange market have variously been used as a standard measure of the robustness of the economy of a country. Increased activities indicate that the economy is robust enough and leads to a bullish run in the market. A positive effect of share splits on share values will enhance market activity and hence improve economic performance.

1.4.4 Financial practitioners and Advisors

Financial advisors provide specialized consultancy services to their clients. Before a company's management undertakes a major corporate decision such as splitting the company's shares, they need to understand the likely effects of their actions on the wealth of the firm's shareholders. This they do by seeking advice from their consultants or financial advisers.

Financial advisers therefore need information on empirical evidence of the effects of such events on the company's share values. An increase in the prices of shares will serve this objective while a decrease will reduce the wealth of the shareholders.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter begins by reviewing efficient market hypothesis and the various theories that have been advanced to explain the concept of share splits. Several of these theories explain the main motivation behind managers' decisions to split their stocks. It also discusses the different forms of stock splits and also reviews stock values and their determinants. It concludes with a review of the empirical evidence of the studies that have been undertaken on share splits.

2.2 Efficient market hypothesis

Efficient market hypothesis is a notion that markets fully, accurately and instantaneously incorporate all the available information into market prices (Andrew, 2005). It states that in highly competitive and developed markets it is impossible to derive a trading strategy that can generate persistent excess profits after correction for risk and transaction costs (Gerwin, 2003). The assumption behind this observation is that market participants are rational and will be motivated by the desire to increase their wealth in their investment decisions.

Efficient market hypothesis states that market prices fully reflect all available information (Fama 1969). Reilley and Brown (1997) defines an efficient market as one in which stock prices adjust rapidly to new information immediately the market becomes aware of it and therefore the current stock prices have already reflected all

information about the stock. This means that in an efficient market, it's nearly impossible to manipulate the share prices.

According to Fama (1970) there are three forms of informational market efficiency. These are efficiency in the strong form, efficiency in the semi strong form and efficiency in the weak form. A market is said to be efficient in the weak form if the market prices of shares reflect all the historical information related to a share. This information includes the historical price trends of the shares and the market trading data. Fama (1970) adds that if a market is efficient in the weak form, past prices are useless in predicting future prices.

A market is said to be efficient in the semi strong form if the share prices reflect all the publicly available information including information that is only known to company insiders. In this form all publicly available information has no predictive power, thus the current prices of shares reflect all information content about historical prices and all publicly available information about the company.

A strong form efficiency market is one in which the share prices reflect all information pertaining to the company including historical, private and even confidential information. Grossman and Stiglitz (1980) stated that prices can only fully reflect costless information since there must be a cost of acquiring information. As a result of this observation Fama (1991) indicated that in a strong form efficiency market, trading and information costs are assumed to be non-existent.

Based on the concept of efficient market hypothesis, share prices of securities should adjust immediately the market becomes aware of the company's intention to split their shares. However according to Dhar and Chharchharia (2008) a share split only represents a change in the number of shares outstanding and has no direct valuation implications on the firm. The information therefore would not necessarily be expected to lead to any price adjustments at least in theory. Several empirical findings however indicate that shares on average react to share splits.

2.3 Theories of stock splits

Several theories have been advanced to explain why firms split their shares. These include the signaling theory, liquidity theory, neglected firm theory, trading range theory, value manipulation theory and trading speed improvement theories. There are several other theories related to stock splits besides these.

2.3.1 Signaling theory

According to Brennan and Copeland (1988) managers have private information about the future prospects of their company. This hypothesis suggests that stock splits are actions made by management to reveal this information about future earnings of the company to the market. Fama et al (1969) argues that investors interpret stock split as a message about future changes in the firm's expected cash flows.

Glinblatt, et al (1984) argues that stock splits can reduce information asymmetry between the management and the shareholders by attracting attention paid to a firm. Brennan and Copeland (1988) indicated that managers only split their stocks if they

are optimistic the future prices would increase, or at worst not decrease. McNichols and Dravid (1990) noted that a split conveys information to the market.

2.3.2 Liquidity hypothesis

According to this theory, stock splits increase liquidity of firms' shares and successfully attract more noise traders into that counter. Black, (1986) argues that an increase in noise traders should improve liquidity. Dennis, and Strickland, (2003) studied liquidity effects of stock splits at the Nasdaq-100 Index and found that the frequency, share volume, and dollar-volume of small trades were all increased after the split, indicating that the split improved liquidity for small traders.

Arnold, and Lipson, (1997) studied a two for one stock split from 1995 to 1996 for companies listed at the NYSE and confirmed that liquidity increases as a result of splits. Baker and Powell (1993) in their study found that the main motivation for the executives to split stock was for improved liquidity. Lamoureux and Poon (1987) and Conroy et al (1990) noted that managers expected stocks trading at lower prices to be generally more liquid and to attract a larger pool of potential investors, hence the need to split shares whose prices have soared to unattractive levels.

2.3.3 Neglected firm theory

Firms are neglected when they attract little or no attention from investors. Arbel and Swanson (1993) suggested that if there is little information known about a firm, its shares will be trading at a discount. The firm therefore uses share splits as a means of drawing investor's attention about it. Management of neglected firms usually applies share splits as a means of achieving the attention getting effect (Conroy, 1990). When

investors are attracted to a firm the demand for its shares rises. This theory suggests that share splits are a powerful tool used by neglected firms to rebound into the market.

2.3.4 Trading range theory

This theory suggests that there exists an optimal price range in which the shares of a company are more liquid (Copeland 1979). Conroy and Harris (1999) also supported this theory by arguing that manager's engineer splits to return their companies share prices to a preferred range.

Lamoureux et al. (1987) argues that lower stock prices would attract smaller shareholders thus extending the shareholder base. An extended shareholder base increases the trading activities among investors thus positively affecting the share prices. Angel et al. (2004) found increased trading activity by retail shareholders after the split. Easley, et al (2001) in their studies also found evidence that trading activity of uninformed (noise traders) market participants increased following stock splits.

2.3.5 Value Manipulation hypothesis

This is a fairly recent theory proposed by Shourun, et,al (2006). It explains why firms split their stocks before acquisition announcement. This hypothesis suggests that acquiring firms split their stocks before acquisition announcements in order to inflate the market value of their equity. They reported that some firms manipulate their stock prices before large acquisitions financed by stock, probably in an attempt to manipulate the share prices before an acquisition announcement.

A firm intending to acquire another firm through share for share exchange will according to this theory manipulate the share price in order to reduce the net effects of this transaction on the acquiring firm. If the prices of their shares rise then fewer of their shares will be exchanged for the shares of the acquired firm, thus benefitting the acquiring firm's shareholders.

2.4 Review of Empirical Evidence

In his study on market reaction to stock splits in Germany, Wulff (1999) found that stock splits are associated with abnormal returns on both the announcement day and the execution day, though these returns are much lower in Germany than in the United States of America. He attributed this to the inability of German firms to use splits for signaling due to legal restrictions on splits. The law in Germany requires firms to maintain a minimum par value of their shares. In most other countries including Kenya there are no such restrictions.

In India, Ashim (2007) studied market reaction to stock splits on stock prices, returns, volatility and trading volumes around the ex-split dates on a sample of firms over the period 1999 to 2005. He found an overall negative effect on stock prices and returns after the split, but the effects on volatility and trading volume was positive. Gupta and Gupta (2007) studied split events from 1999 to 2004. He studied the reaction of a total of 60 splits and found a mixed split announcement effect, positive abnormal returns on the next day following the announcement followed by consecutive negative abnormal returns on other days.

Vijay et.al. (2004) studied the implications of stock splits, reverse stock splits and dividends on the market in Canada. They found that the performance of the stocks after the split announcement is less than the pre- split period but there is an increase in the trading volume after the split. They also found a permanent change in the P/E ratio which they attribute to a change from institutional investors to individual investors. These findings suggest that when a firm splits its shares, it experiences a shift of its clientele from institutional investors to individual investors.

This is consistent with the trading range theory that suggests that individual investors prefer a specific price range due to psychological reasons. A split reduces the share prices and as a result attracts small investors to the firm. It also indicates that firms may use stock splits to deliberately change the shareholder composition. Greenberg and Brooker (1999) argued that many companies prefer retail investors to institutional investors because retail investors are thought to be more loyal than institutional investors.

Empirical evidence in Australia has shown that the market generally react positively to the announcement of a stock split. McNichols. and Dravid (1990) studied stock price reaction around the announcements of 'stock capitalization changes' (bonus stock issues, stock splits and rights issues) for the period between 1960 and 1969 using monthly data and found 20.2% abnormal returns.

Lakonishok and Lev (1987) studied the effects of stock splits and stock dividends on growth and trading volumes of 1000 firms during the period 1963 to 1982 in the USA. They found that stock splits occur to bring the stock price to what they referred to as

an optimal range. They also found that firms splitting their shares recorded higher growth in earnings and dividends in the intervening periods. They however did not find any increase in trading volumes on shares.

Arbel and Swanson (1993) found that stocks listed at the New York Stock Exchange (NYSE) and the American stock exchange (AMEX) reacted positively to stock splits.

Desai and Jain (1997) found that there was an excess return after a holding period of one year, followed by a higher return after a holding period of three years.

In the Hong Kong market, Wu and Chang (1997) found excess returns after examining 67 splits in the period 1986 to 1992. Wulff (1999) found excess returns during the four days following the stock splits announcement and four days following the split in Germany. Angel et al, (2004) noted an increase in trading activity among the retail investors following a split. Bechmann and Raaballe (2004) reported a positive and significant announcement effect of 2.5% in Denmark.

In other instances studies on stock splits found negative reactions on the market. Conroy et al. (1990) found declining trading volumes after share splits.

In Kenya, studies have shown that stock splits elicit positive reactions in the market. Simbovo (2006) studied the effects of stock splits and large stock dividend on liquidity at the NSE and found that stock splits elicited a positive reaction on the firm's liquidity. He also found that a high demand for the company shares preceded the decision to splits. This demand had apparently led to huge increases in the share prices making them unaffordable to a majority of the small investors, and hence the need to split them.

Aduda and Chemarum (2010) studied market reaction to stock splits at the Nairobi stock exchange. Their studies covered nine companies that had undergone stock splits from 2002 to 2008. They analyzed the trading activity ratio to determine whether splits elicited any reaction in the Kenyan market. Their studies sought to determine the reaction of the market to stock splits, using 101 days window period. They found that the Kenyan market reacts positively to stock splits as evidenced by the relative increase in the volumes of shares traded around the stock splits.

Nkonge (2010) also studied the effects of stock splits on the securities returns at the Nairobi securities exchange. He did this by examining the behavior of stock returns for a period of 10 days prior to the split and 10 after the split. He also found that there were abnormal returns on the day of the split announcement, as well as two days before the announcement and two days after the announcement.

Obunde (2011) studied the impact of stock splits on stock performance of firms listed in the Nairobi stock Exchange with specific reference to trading volumes and returns. He studied the performance of firms that had undertaken a stock split in the period 2004 to 2011 and found that trading volumes tended to increase with the announcement of the split. He also found that due to this overreaction by investors on the announcement, the short run liquidity and returns on the shares tended to rise, though momentarily.

2.4.1 Empirical Evidence on effects of stock splits on Long run returns

Rodney (2001) studied the long run performance of shares after a split in the US. In his studies he examined the long run equity performance of 6000 firms following stock splits during the period 1950 to 2000 for a period of twelve months after the stock split announcement and found robust weighted abnormal returns during the first year following the announcement month. In the long run there was insignificant change in returns in subsequent years. This suggests that the shares reacted positively in the short run while in the long run the reaction was insignificant.

Ikenberry et al. (1996) examined the effects of share splits on the long run stock returns for a sample of 1275 two for one stock splits and found significant post split excess returns of 7.93% in the first year following the split, and 12.15% in the first three years following the split. The announcement returns were however at 3.38% suggesting that the market under reacts to share splits announcement.

Desai and Jain (1997) examined one to three year performance of common stocks following 5596 stock splits and 76 reverse split announcements made during the period 1976 to 1991. They found a buy and hold abnormal return of 7.05% during the first year following a split and 11.87% for the three year buy and hold return. For reverse splits they found 11.76% during the first year of the announcement and -33.90% for the three year holding period.

2.5 Share splits

Firms split shares in order to manage the nominal share price and number of shares outstanding but cannot change its overall market value through these means (Malcolm et al 2008). According to Angel (1997), splits signal inside information, or that prices in certain ranges constitute a market norm and that trading activity by small investors' increases following a stock split.

2.5.1 Why firms split their shares

Baker and Powell (1993) found that the main motivation for the executives to split stock was to improve liquidity. Shourun et al., (2006) argues that the firm's main motive for splitting their shares is known only to insiders and management and cannot be observed directly by outsiders. This is consistent with the signaling hypotheses that suggest that managers implement stock splits to communicate favorable private information about the firm's prospects.

According to Baker et al, (1993) the main motivation for stock splits by firms is to move the stock price into a better trading range, the preferred trading range. This supports the trading range theory that firms split their shares to move their prices to a preferred price range.

(Ross (1977) also argues that Managers use financial decisions such as stock splits to convey favorable private information about the current value of the firm. This supports the neglected firm hypotheses that suggest that neglected firms use splits for visibility.

Baker et al (1980) argues that marketability is a major reason for executing a split. Research findings tend to support this motive. Lamoureux et al (1987) and Maloney et al (1992) reported that the number of shareholders increases following common stock splits. Schultz (1999) found that the number of small orders increases following a stock split, and that the bulk of these orders are buys. Angel et al (1997) found that trading activity by small investors' increases following a stock split. Fernando et al, (1999) found that firms going public use the offering price to influence investor interest in the issue.

2.5.2 Constraints to share Splits

The managements' scope to decide on a stock split may be constrained by law. In Switzerland and Germany, firms are legally required to maintain a minimum mandatory par value of their shares (Roger, (2007). This limits the split options of firms in those countries. In other countries including Kenya there are no such restrictions and as such firms can split their shares to the barest minimum par values. The par value of the Safaricom Company limited is Ksh.0.05, the lowest possible value in the Kenyan market.

2.6 Stock prices.

An asset is considered to be efficiently priced if the asset price reflects all the available market information (Farma et al 1969). Economists argue that the price of a commodity is determined by the forces of demand and supply. Shiller (1981) argues that real stock prices equal to the present value of all rationally expected or optimally forecasted future real dividends discounted by a constant real discount rate. Zhiwu

and Ming, (2001) argues that a share price represents the value of the companies underlying assets plus its growth potential divided by the number of shares outstanding. These are the fundamental elements of a stock price.

Past studies on share price movement has indicated that share prices move randomly in what is commonly referred to as random walk. Sharma and Kennedy (1977) studied the behavior of stock prices in Bombay, London and New York stock Exchanges in the period 1963 to 1973 and found that share prices in all the three stock exchanges obey a random walk.

2.7 Conclusions

There is overwhelming empirical evidence that stock splits lead to positive outcomes. It has been shown variously that splits leads to increased liquidity, positive market reaction, marketability of shares and increased demand for shares. It has also been shown that share splits are associated with significant wealth creation among firms. These findings encourage firms to undertake stock splits as a corporate event when the circumstances allow. However further research would be necessary to determine the factors that are responsible for this trend.

In Kenya since the first stock splits were undertaken by the Kenya National Oil Company (KENOL) and East Africa Breweries in 2004, several other companies have followed suit. This trend shows that firms are increasingly using split events as a means of making their shares marketable. It is a relief to companies whose shares are deemed to be too expensive for a majority of investors.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter begins by describing the research design adopted in this study. It then identifies the target population from which the sample was selected and the sample size and the sampling techniques employed in identifying the firms that were subjected to the study. The nature of data collected and analyzed is also identified. The chapter ends by describing the data analysis techniques used in analyzing the data and the models used in the data analysis.

3.2 Research Design

According to Donald and Pamela, (2006), research design constitutes the blue print for the collection, measurement and analysis of data. The research design used in this study was the descriptive design. Donald and Pamela (2006) argued that descriptive design leads to the discovery of associations among the different variables.

This study used the long run event study methodology. It applied the buy and hold benchmark approach in order to determine the long run stock returns of the event firms within a period of two years after the share splits. In order to correctly measure the abnormal returns for the target firms, a control firm which had not undergone a stock split, and was comparable in size and BE/ME ratio to the event firm was identified to act as the benchmark whose returns were used as a proxy for expected returns.

3.3 Target Population

The target population for this study was all the twelve firms listed at the Nairobi securities exchange, and that had undergone a stock split. These companies are shown in appendix 1.

3.4 Sample Design

Sampling design refers to that part of the research plan that indicates how cases are to be selected for observation (Kombo and Tromp, 2006). In this case a non probabilistic sampling design was used because the data to be included in the study are from only those firms that have undergone stock splits at the Nairobi securities exchange and have been in existence for at least two years since they split their shares. The study therefore covered eleven companies listed at the Nairobi securities exchange and which had undergone a share split from 2004 to 2010.

These companies that qualified for this study are East Africa Breweries Limited , Barclays Bank of Kenya limited, Equity Bank limited, Kenya power and lighting company limited, Centum Investments company limited, CMC holdings limited, East Africa Cables limited, Kenya Commercial Bank limited, Kenya Oil Company Ltd, Nation Media Group limited and Sasini tea and coffee company limited. A list of these companies, their split ratios and the split dates are shown in Appendix 2.

3.5 Data Collection Procedures

The study used secondary data collected from the Nairobi securities exchange. The nature of data used included the monthly opening and closing prices of the selected

companies' shares starting from the month immediately following the share split date for each of the firms. Data for twenty four months was collected and analyzed.

3.6 Data Analysis

The Long run event study methodology was used in this study and used the buy and hold benchmark approach. There are two main tasks in long run event study methodology. These tasks are to measure the event related long run abnormal returns and then to test the null hypothesis that the distribution of these long run abnormal returns concentrates around zero.

The long run buy and hold abnormal return (BHAR) of firm i is calculated as;

$$AR_i = R_i - BR_i$$

Where;

AR_i is the buy and hold abnormal return for firm i

R_i is the long run buy and hold return for firm i

BR_i is the long run return of a benchmark of firm i

According to Kothari and Warner (2007) a benchmark of a firm or a control firm is another firm that matches the event firm in size and book to market equity ratio (BE/ME) but has not undergone a share split.

The benchmark return, (BR_i) is the return that an event firm would have earned if the event had not happened. The returns of the benchmark firm will therefore be used as a proxy for the expected returns of the event firm if it had not undertaken a share split.

According to Fama and French (1993) the expected monthly return is related to three factors; market factor, size factor and book to market Equity ratio (BE/ ME). They further argue that a firm with 70% to 130% of the event firm's market value may be used as an equivalent of the event firm and therefore may be used as a benchmark firm for a long run event study.

The monthly buy and hold abnormal returns for each of the event firms was computed for the entire window period of twenty four months. EXCEL 2007 windows program was used to plot graphs of the event firm's monthly buy and hold returns against the returns of the benchmark firm. The statistical package for social Sciences (SPSS) Version 18 was used to calculate the summary descriptive statistics for each of the sampled firms mean buy and hold abnormal returns (BHAR) tested for any significant difference from zero at 95% confidence level.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

This chapter presents the analysis of data related to the monthly buy and hold returns of the sampled firms from 2004 to 2010. Secondary data on the monthly opening and closing prices of shares for each of the sampled firms beginning from the month following the date the company underwent a share split for a period of twenty four months was collected from the NSE. Similar data for the identified benchmark firm over the same period was also collected. Data on the market prices of shares, the par value of shares and number of shares outstanding of all companies listed at the NSE on the day each sampled firm split its shares was also collected. This enabled the identification of a suitable benchmark firm for each of the event firms by computing of the market capitalization and the BE/ME ratio of each of the listed firms as at that date.

The chapter contains graphical presentations of each of the firm's buy and hold monthly returns plotted against similar returns for its benchmark firm. A summary of descriptive statistics for each of the firm's buy and hold abnormal return was computed to test its difference from zero at 95% confidence level This was to determine if the monthly buy and hold returns of the event firm were significantly different from those of its benchmark firm.

4.2 Data presentation

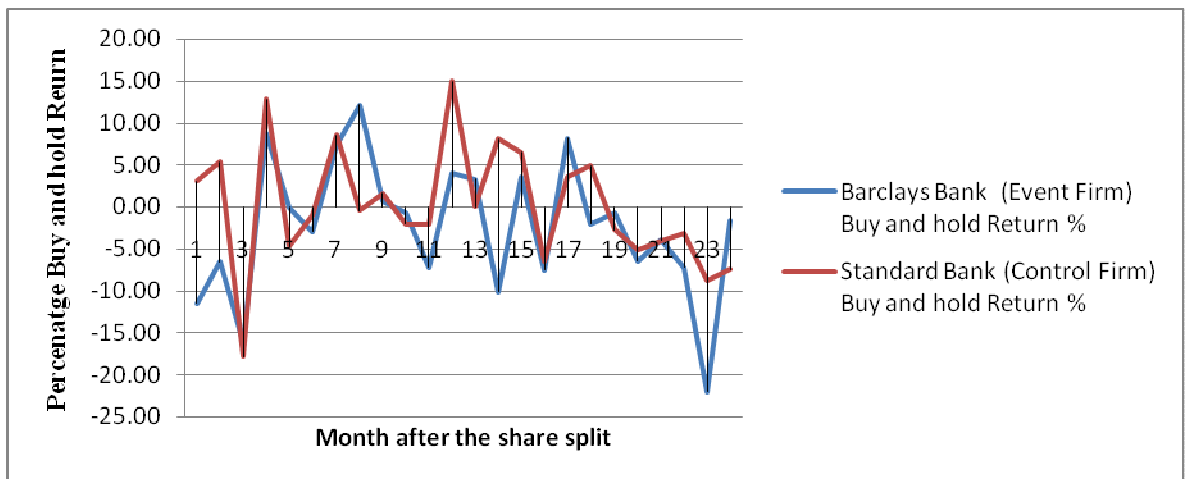
The data was analyzed using EXCEL 2007 windows program to generate the required graphs for each of the paired firm's percentage monthly buy and hold returns. The

Statistical package for social Sciences (SPSS) version 18 was used to calculate the summary descriptive statistics for the mean BHAR of each of the event firms tested for difference from zero at 5% significance level.

4.2.1 Monthly buy and hold returns

The monthly buy and hold returns of a firm is the difference between the closing price and the opening price of a share in a month. In order to compare the monthly buy and hold returns of a firm against its benchmark firm, a graph of its monthly buy and hold returns for the entire window period of twenty four months after it split its shares was plotted against a graph of the monthly buy and hold returns of its identified benchmark or control firm over the same period.

Figure 1: A graph showing the monthly Buy and hold Returns for Barclays Bank Limited against its Benchmark Firm Standard Chartered Bank after the BBK share split.

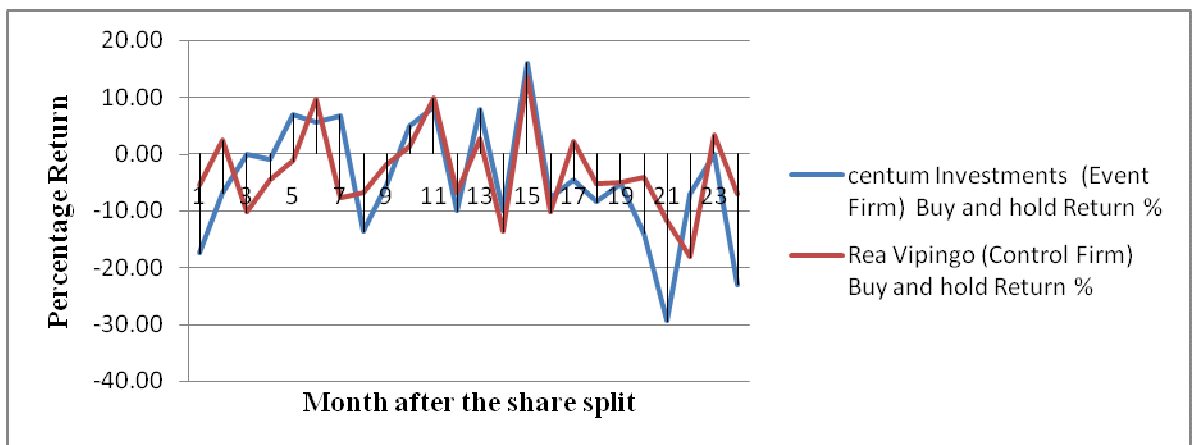


Source: Research Data

Figure 1 presents a plotted graph comparing the percentage monthly buy and hold returns for Barclays Bank (K) Limited and its Benchmark firm, standard Chartered Bank (K) Limited for the entire period of twenty four months after BBK split its shares. The graph shows that the two firms' performances were proportionately comparable for the first twelve months after the share split. The benchmark firm however performed better than the event firm in the subsequent twelve months.

Barclays Bank recorded a mean buy and hold return of -2.4% compared with the benchmark firm which recorded a mean buy and hold return of 0.98 %. The mean BHAR for the company was therefore -2.5%. The interpretation of this data is that the Benchmark firm, standard Chartered Bank limited achieved higher returns than the event firm, Barclays Bank limited by 2.5%.

Figure 2: A graph showing the monthly Buy and hold Returns for Centum Investment Limited against its Benchmark Firm Rea Vipingo plantations limited after centum investments split its shares.



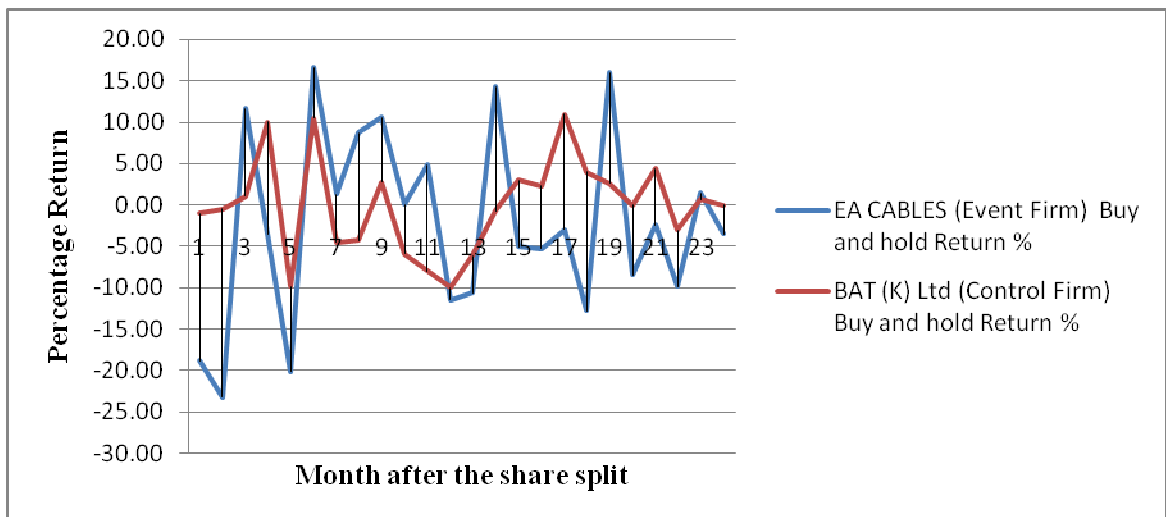
Source: Research Data

Figure 2 presents a plotted graph comparing the percentage monthly buy and hold returns for Centum Investments Limited and its Benchmark firm, Rea Vipingo

plantations limited for the entire period of twenty four months after centum investments limited split its shares. No meaningful differences can be noted in the monthly buy and hold returns of these two firms.

The mean buy and hold monthly return for the centum investments company was -4.47 % compared with the benchmark firm which recorded -3.18%. This means that the mean buy and hold abnormal return (BHAR) for centum investment's company was -1.29%. This indicates that the benchmark firm yielded higher returns than the event firm by 1.29%

Figure 3: A graph showing the monthly Buy and hold Returns for E.A Cables Limited against its Benchmark Firm BAT (K) limited after EA Cables split its shares.



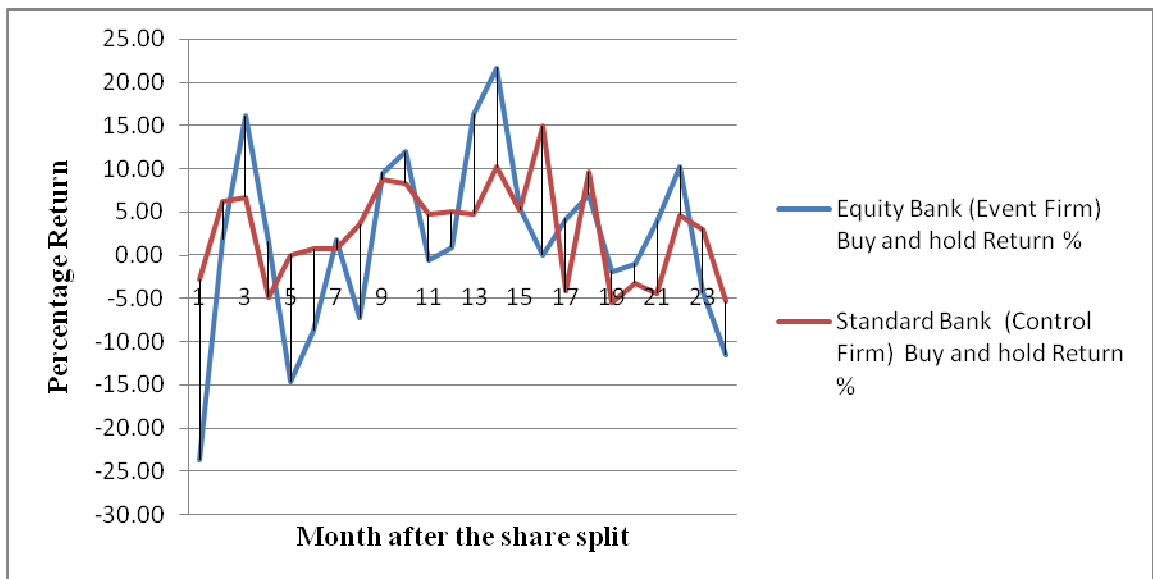
Source: Research Data

Figure 3 presents a plotted graph comparing the percentage monthly buy and hold returns for East Africa Cables Limited and its Benchmark firm, BAT (K) limited for the entire period of twenty four months after East Africa cables split its shares. The

graph does not show any significant differences between the two firms. However it is noted that from the 13th month to the 18th month, the benchmark firm recorded significantly higher returns compared to the event firm that recorded low returns.

The mean buy and hold monthly return for the East Africa cables limited during the window period was -2.22 % while the monthly buy and hold returns for its benchmark firm was -0.08 %. The mean buy and hold abnormal return for the East Africa Cables company limited was therefore -2.14%. This indicates that the Benchmark firm performed better than the event firm by 2.14%.

Figure 4: A graph showing the monthly Buy and hold Returns for Equity Bank Limited against its Benchmark Firm Standard Chartered Bank limited after the share split



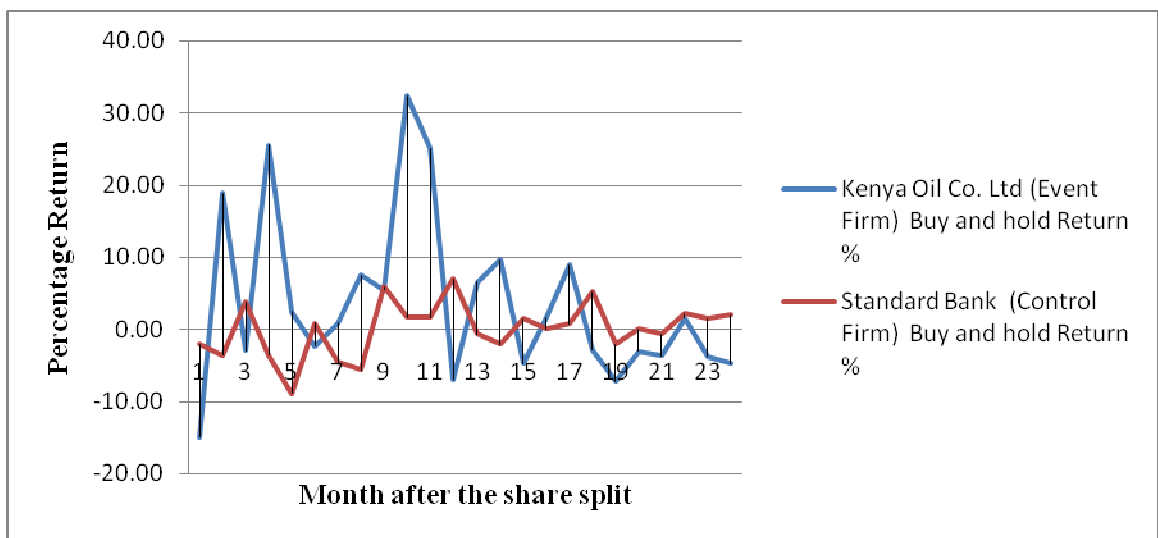
Source: Research Data

Figure 4 shows plotted graphs of the percentage buy and hold monthly returns of Equity Bank limited against its benchmark firm Standard Chartered Bank limited for twenty four months after Equity Bank split its shares. The Benchmark firm performed well compared to the event firm throughout the entire window period. It achieved a

mean buy and hold monthly returns of 2.8% during the period compared with the event firm which recorded a mean of 1.6%. Both firms performed well in year two.

The mean buy and hold abnormal return for the Equity Bank limited was therefore - 1.2 %. This indicates that the benchmark firm achieved better results than the event firm by 1.2% during the twenty four months period.

Figure 5: A graph showing the monthly Buy and hold Returns for Kenya Oil Limited against its Benchmark Firm Standard Chartered Bank limited after the share split

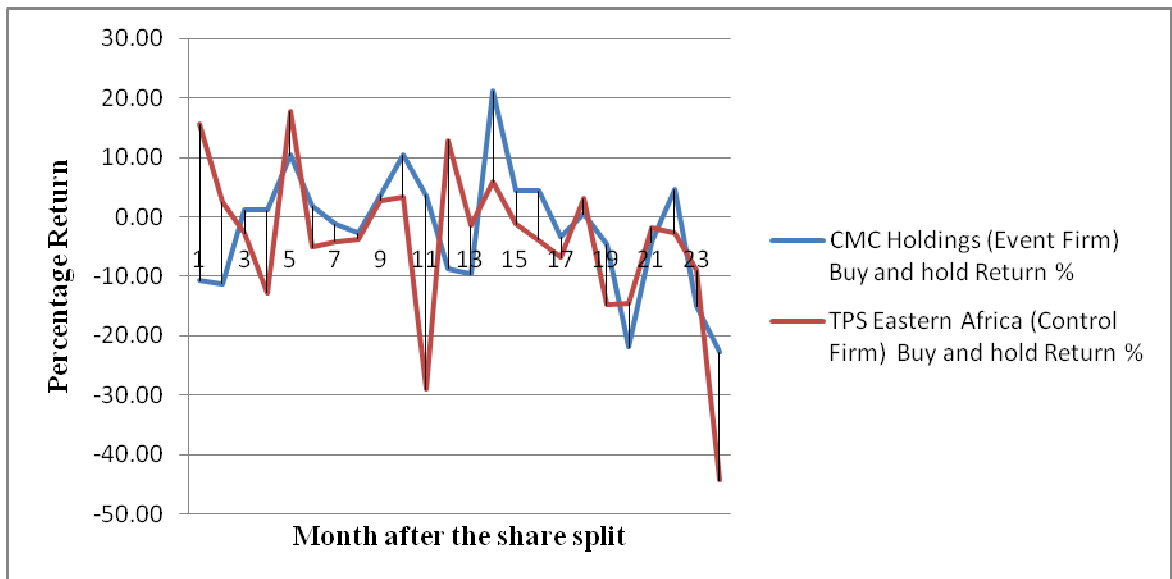


Source: Research Data

Figure 5 shows a plotted graph of the percentage monthly buy and hold return for the Kenya oil company limited and its benchmark firm Standard Chartered Bank limited for the entire window period of twenty four months after Kenya Oil split its shares. Kenya Oil Company limited, the event firm recorded a mean return of 3.69 % compared with its benchmark firm which recorded a mean return of -0.03%.

The mean Buy and hold abnormal return for Kenya Oil Company limited was therefore 3.72%. This can be interpreted to mean that the Kenya Oil company achieved a higher return than its benchmark firm by 3.72%

Figure 6: A graph showing the monthly Buy and hold Returns for CMC Holdings Limited against its Benchmark Firm TPS Eastern Africa limited after the share split

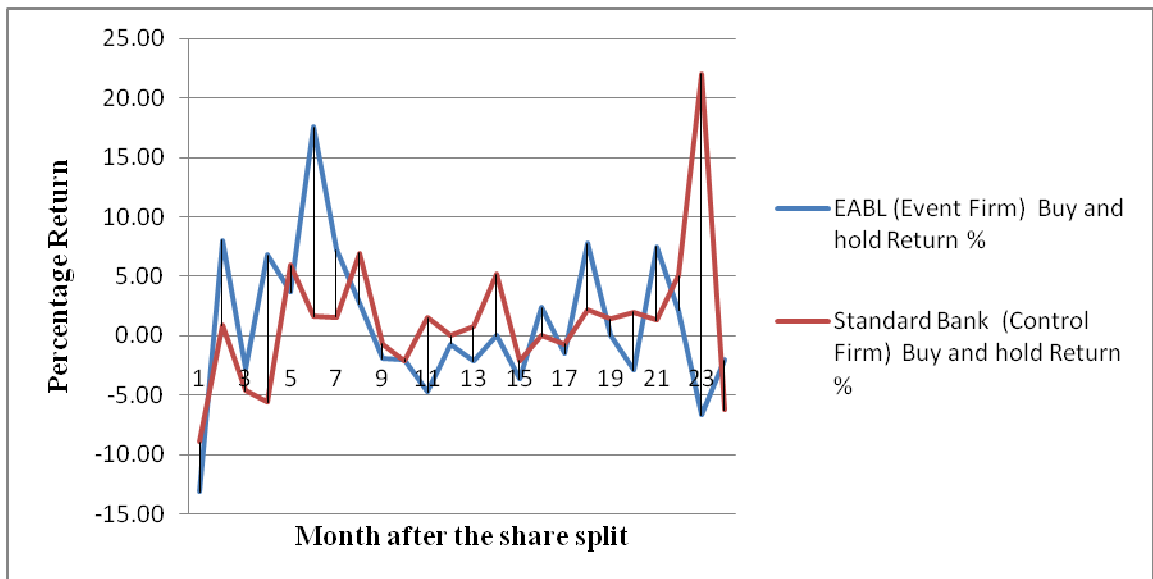


Source: Research Data

Figure 6 shows a plotted graph of the percentage monthly buy and hold returns for the CMC Holdings limited against its benchmark firm TPS Eastern Africa limited for the entire twenty four months after CMC split its shares. In the first twelve months CMC Holdings recorded returns that were higher than those of its benchmark firm. The following twelve months however show comparable returns were recorded. CMC Holdings also recorded a significantly high return comparatively in the fourteenth month.

The mean monthly buy and hold returns for CMC Holdings limited was -2.1% compared with its benchmark firm TPS Eastern Africa limited which recorded a mean of -3.98 %. This means that the event firm recorded a mean buy and hold abnormal return of 1.9% during the window period.

Figure 7: A graph showing the monthly Buy and hold Returns for East Africa Breweries Limited against its Benchmark Firm Standard Chartered Bank limited after the share split

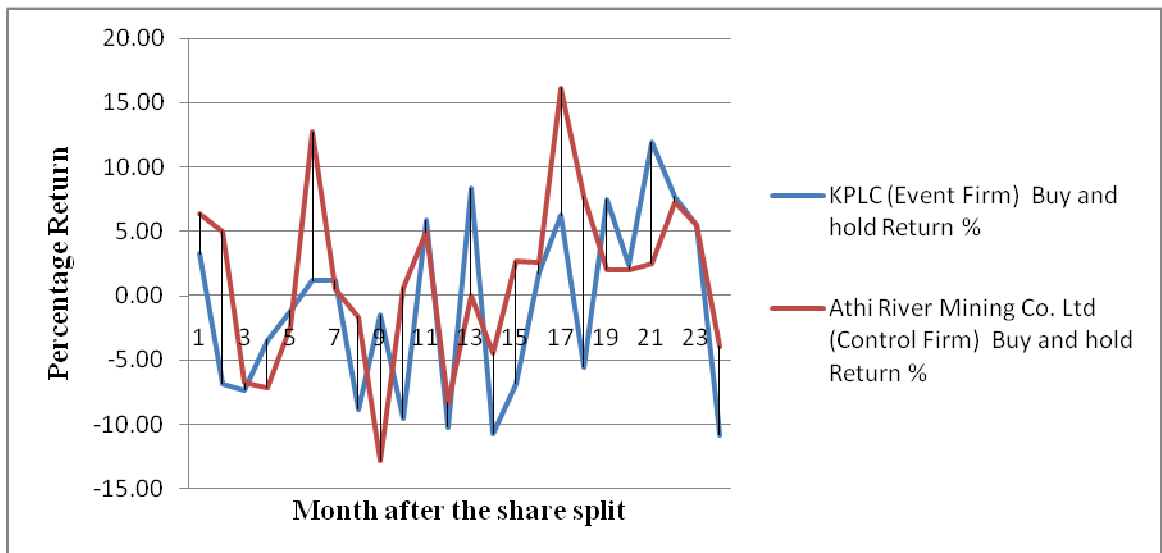


Source: Research Data

Figure 7 shows a plotted graph of the percentage monthly buy and hold returns for the EABL Company limited against its benchmark firm Standard chartered Bank limited for the twenty four months window period after EABL split its shares. It shows that EABL performed better than its benchmark firm during the first seven months after the share split. In the twenty third month, the event firm recorded impressive returns compared to its benchmark firm.

East Africa Breweries Limited recorded a mean monthly buy and hold return of 0.87% compared with its benchmark firm Standard Chartered Bank limited that recorded 1.12%. This means that the event firm recorded a mean buy and hold abnormal return of -0.25%.

Figure 8: A graph showing the monthly Buy and hold Returns for KPLC Limited against its Benchmark Firm Athi River Mining Company limited after the share split

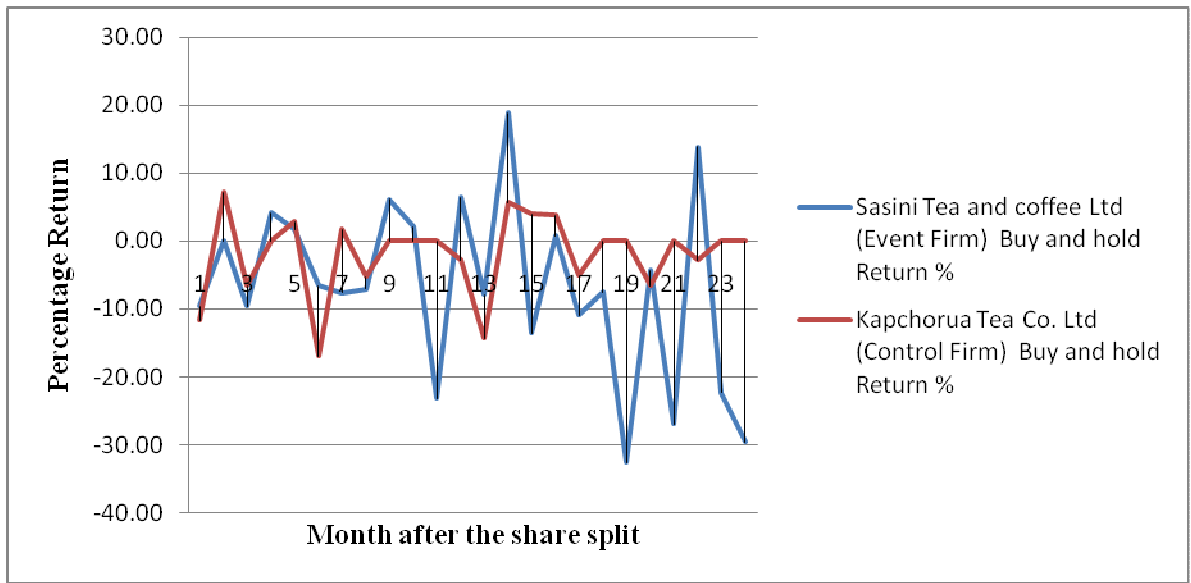


Source: Research Data

Figure 8 shows a plotted graph of percentage monthly buy and hold return for KPLC limited against its benchmark firm Athi River Mining limited for twenty four months after KPLC split its shares. The mean buy and hold monthly return for KPLC was -0.84% compared with the buy and hold monthly returns for its benchmark firm, Athi River Mining which achieved a higher mean of 1.29%.

The mean buy and hold abnormal return for the company was -2.13%. This means that the benchmark firm achieved higher returns than the event firm by 2.13%.

Figure 9: A graph showing the monthly Buy and hold returns for Sasini Tea and coffee Limited against its Benchmark Firm Kapchorua Tea Company limited after the share split

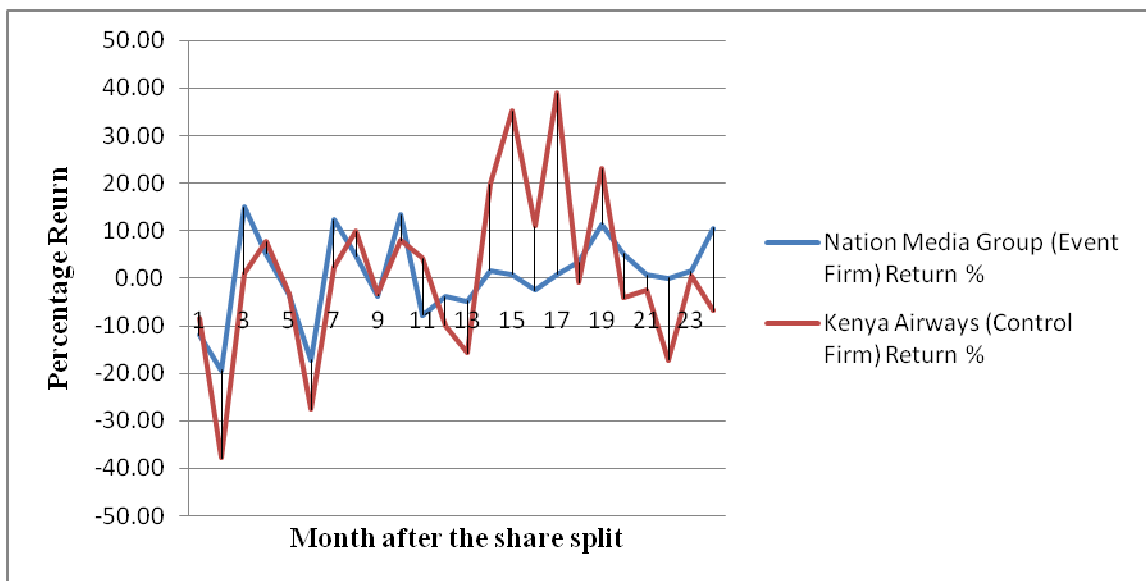


Source: Research Data

Figure 9 shows a plotted graph of percentage buy and hold monthly returns for Sasini Tea and coffee limited compared with its benchmark firm Kapchorua Tea limited for the entire twenty four months after Sasini split its shares. In the first ten months after the share split both companies show comparable returns but the event firm showed huge fluctuations after the tenth month culminating in a huge negative return in the nineteenth month.

The mean buy and hold monthly return for Sasini Tea and coffee was -6.92 % compared with its benchmark firm, Kapchorua Tea limited which was -1.97%. The company therefore achieved a mean buy and hold abnormal return of -4.94%. This means that the benchmark firm achieved higher returns than the event firm by 4.94%

Figure 10: A graph showing the monthly Buy and hold returns for Nation Media Group Limited against its Benchmark Firm Kenya Airways limited after the share split

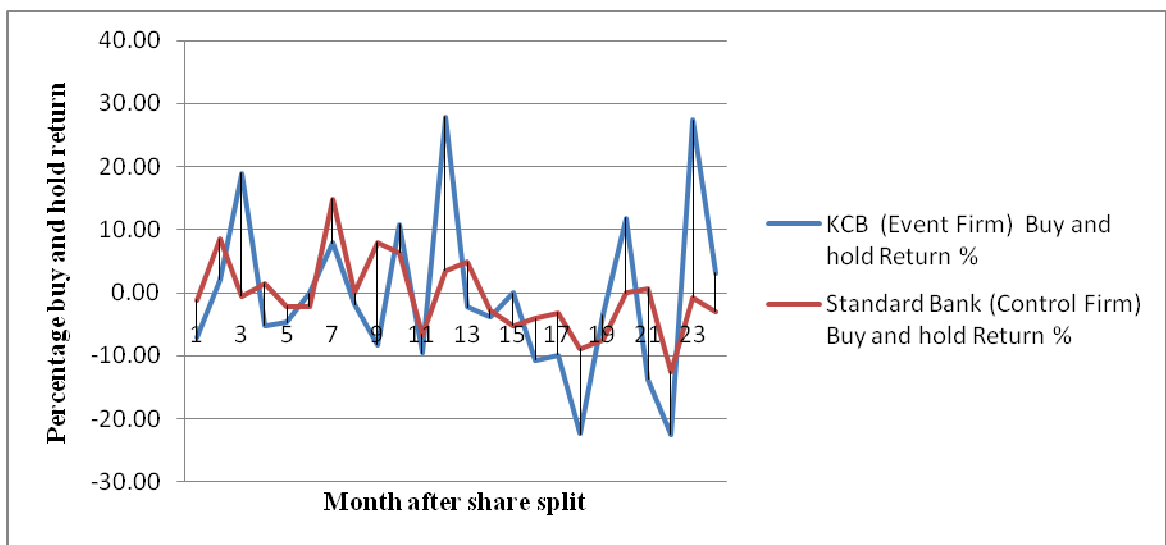


Source: Research Data

Figure 10 shows a plotted graph of percentage buy and hold monthly returns for the Nation Media group limited compared with its benchmark firm Kenya Airways limited for the entire twenty four months after Nation Media Group limited split its shares. The two companies recorded comparable returns during the first twelve months. However the benchmark firm is shown to have achieved higher returns compared to the event firm up to the 19th month.

The company achieved a mean buy and hold monthly return of 0.47% compared with its benchmark firm that achieved a mean return of 0.93%. Nation media group therefore recorded a mean monthly buy and hold abnormal return of -0.46%. The interpretation of this is that the benchmark firm recorded higher returns than the event firm by 0.46%

Figure 11: A graph showing the monthly Buy and hold returns for Kenya commercial Bank Limited against its Benchmark Firm Standard Chartered Bank limited after the share split



Source: Research Data

Figure 11 shows a plotted graph of percentage buy and hold monthly returns for the Kenya Commercial Bank limited compared with its benchmark firm Standard Chartered Bank limited for the entire twenty four months after Kenya commercial Bank limited split its shares.

The mean buy and hold monthly returns for KCB for the entire window period of twenty four months was -0.62 % compared with its benchmark firm Standard Chartered Bank which achieved a mean buy and hold monthly return of -0.48 % during the same period. This means that the company recorded a mean buy and hold abnormal return of -0.14 %. The interpretation of this is that the benchmark firm returned a higher buy and hold return than the event firm by 0.14%.

4.2.2 Monthly buy and hold Abnormal Returns (BHAR).

The monthly buy and hold abnormal return for a firm is the difference between the monthly buy and hold return of the event firm and that of its benchmark firm over the same month. It is the excess monthly return earned by an event firm over its benchmark. The assumption in the buy and hold approach is that the benchmark or control firm is used as a proxy for the market. The returns achieved by the benchmark firm therefore represents the market return, hence the buy and hold abnormal returns for an event firm represents the excess return that an event company achieved above the market as a result of splitting its shares.

The objective of this study was twofold, to determine if the event firms achieved higher monthly buy and hold returns than their benchmark firms and, then to determine if the differences between the means of the two firms' returns are significant at 95% confidence level. The null hypothesis of the study was that there was no difference between them.

This was interpreted to mean that the mean BHAR of the event firm is zero ie $H_0: BHAR = 0$. The alternative hypothesis was that the returns of the event firm differ from that of its benchmark firm, ie, $H_1: BHAR \neq 0$. This hypothesis was tested for significance at 95% confidence level. Summarized descriptive statistics for each of the event firm's mean BHAR tested for significance from zero at 5% significance level was calculated to test this hypothesis.

Table 1: Barclays Bank : Mean BHAR Descriptive Statistics

		Statistic	Bias	Std. Error	95% Confidence Interval	
					Lower	Upper
					BHAR	N
	Mean	-2.5125	-.0271	1.4889	-5.6172	.2377
	Std. Deviation	7.22728	-.19382	1.03197	4.93791	9.02272
Valid N (listwise)	N	24	0	0	24	24

Source: Research Data

Table 1 shows the calculated summary descriptive statistics for the percentage mean BHAR for Barclays Bank (K) limited during the 24 months window period after its share split tested for difference from zero at 95% confidence level. The summary shows that the mean BHAR for the firm was -2.51 % with a standard deviation of 7.23. It also shows that the true mean BHAR at 5% significance level is likely to be within the range -5.61 % to 0.24%. Since zero is within this range we conclude that there was no difference between the returns of the event firm and its benchmark firm.

Table 2: Centum investments limited: BHAR Descriptive Statistics

		Statistic	Bias	Std. Error	95% Confidence Interval	
					Lower	Upper
					BHAR %	N
	Mean	-1.2892	-.0611	1.5989	-4.4293	1.8786
	Std. Deviation	8.32514	-.22648	1.03176	6.01485	10.04588
Valid N (listwise)	N	24	0	0	24	24

Source: Research Data

Table 2 shows the calculated summary descriptive statistics for the percentage mean BHAR for Centum investments limited during the 24 months window period after its share split tested for difference from zero at 95% confidence level.

The summary shows that the mean BHAR of the firm was -1.289 % with a standard deviation of 8.325. It also shows that the true mean BHAR at 5% significance level is likely to be within the range - 4.43 % to 1.88%. Since zero is within this range we conclude that there was no difference between the returns of the event firm and its benchmark firm.

Table 3: East Africa Cables limited: Descriptive Statistics

		Statistic	95% Confidence Interval			
			Bias	Std. Error	Lower	Upper
BHAR %	N	24	0	0	24	24
	Minimum	-22.74				
	Maximum	15.02				
	Mean	-2.1404	-.1427	2.2711	-6.7166	1.9725
	Std. Deviation	11.07514	-.24938	1.14515	8.44794	12.94466
Valid N (listwise)	N	24	0	0	24	24

Source: Research Data

Table 3 shows the calculated summary descriptive statistics for the percentage mean monthly buy and hold abnormal returns (BHAR) for East Africa Cables limited during the 24 months window period after its share split tested for difference from zero at 95% confidence level.

The summary shows that the mean BHAR for the company was -2.14 % with a standard deviation of 11.075. It also shows that true mean BHAR at 5% significance level is likely to be within the range - 6.72% to 1.97%. Since zero is within this range we conclude that there was no difference between the returns of the event firm and its benchmark firm.

Table 4: Equity Bank limited: Mean BHAR Descriptive Statistics

		Statistic	95% Confidence Interval			
			Bias	Std. Error	Lower	Upper
BHAR %	N	24	0	0	24	24
	Minimum	-20.78				
	Maximum	11.56				
	Mean	-1.1450	.0707	1.7805	-4.5198	2.5476
	Std. Deviation	8.84606	-.25302	1.07329	6.42287	10.63665
Valid N (listwise)	N	24	0	0	24	24

Source: Research Data

Table 4 shows the calculated summary descriptive statistics for the percentage mean monthly buy and hold abnormal returns (BHAR) for Equity Bank limited during the 24 months window period after its share split tested for difference from zero at 95% confidence level.

The summary shows that the mean BHAR for the company was -1.145 % with a standard deviation of 8.846. It also shows that true mean BHAR at 5% significance level is likely to be within the range – 4.52% to 2.55%. Since zero is within this range we conclude that there was no difference between the returns of the event firm and its benchmark firm.

Table 5: Kenya Oil limited: Mean BHAR Descriptive Statistics

		Statistic	95% Confidence Interval			
			Bias	Std. Error	Lower	Upper
BHAR %	N	24	0	0	24	24
	Minimum	-13.88				
	Maximum	30.78				
	Mean	3.7225	-.1530	2.5782	-1.2357	8.9414
	Std. Deviation	12.75176	-.52228	1.70452	8.46729	15.17132
Valid N (listwise)	N	24	0	0	24	24

Source: Research Data

Table 5 shows the calculated summary descriptive statistics for the percentage mean monthly buy and hold abnormal returns (BHAR) for Kenya Oil limited during the 24 months window period after its share split tested for difference from zero at 95% confidence level.

The summary shows that the mean BHAR for the company was 3.722 % with a standard deviation of 12.751. It also shows that true mean BHAR at 5% significance level is likely to be within the range – 1.235 % to 8.94 %. Since zero is within this range we conclude that there was no difference between the returns of the event firm and its benchmark firm.

Table 6: Nation Media Group Limited: Mean BHAR Descriptive Statistics

		Statistic	95% Confidence Interval			
			Bias	Std. Error	Lower	Upper
					Lower	Upper
BHAR %	N	24	0	0	24	24
	Minimum	-38.03				
	Maximum	18.37				
	Mean	-.4571	-.1217	2.9684	-6.6090	5.0568
	Std. Deviation	14.88238	-.43932	2.51976	9.07396	19.17062
Valid N (listwise)	N	24	0	0	24	24

Source: Research Data

Table 6 shows the calculated summary descriptive statistics for the percentage mean monthly buy and hold abnormal returns (BHAR) for Nation Media group limited during the 24 months window period after its share split tested for difference from zero at 95% confidence level.

The summary shows that the mean BHAR for the company was -0.457 % with a standard deviation of 14.88. It also shows that true mean BHAR at 5% significance level is likely to be within the range – 6.61 % to 5.06 %. Since zero is within this range we conclude that there was no difference between the returns of the event firm and its benchmark firm.

Table 7: CMC Holdings Limited: Mean BHAR Descriptive Statistics

		Statistic	95% Confidence Interval			
			Bias	Std. Error	Lower	Upper
BHAR %	N	24	0	0	24	24
	Mean	1.8867	-.1071	2.5760	-3.3004	6.9163
	Std. Deviation	12.90251	-.48459	2.06549	8.40889	16.61551
Valid N (listwise)	N	24	0	0	24	24

Source: Research Data

Table 7 shows the summary descriptive statistics for the percentage mean monthly buy and hold abnormal returns (BHAR) for CMC Holdings limited during the 24 months window period after its share split tested for difference from zero at 95% confidence level.

The summary shows that the mean BHAR for the company was 1.89 % with a standard deviation of 12.90. It also shows that true mean BHAR at 5% significance level is likely to be within the range -3.30 % to 6.92 %. Since zero is within this range we conclude that there was no difference between the returns of the event firm and its benchmark firm.

Table 8: East Africa Breweries limited: Mean BHAR Descriptive Statistics

		Statistic	Bias	Std. Error	95% Confidence Interval	
					Lower	Upper
					BHAR %	N
	Minimum	-28.69				
	Maximum	15.97				
	Mean	-.2525	-.0758	1.6649	-3.7756	2.7835
	Std. Deviation	8.24406	-.30007	2.15001	4.09800	12.07389
Valid N (listwise)	N	24	0	0	24	24

Source: Research Data

Table 8 shows the calculated summary descriptive statistics for the percentage mean monthly buy and hold abnormal returns (BHAR) for East Africa Breweries limited during the 24 months window period after its share split tested for difference from zero at 95% confidence level.

The summary shows that the mean BHAR for the company was -0.25 % with a standard deviation of 8.244. It also shows that true mean BHAR at 5% significance level is likely to be within the range – 3.77 % to 2.78 %. Since zero is within this range we conclude that there was no difference between the returns of the event firm and its benchmark firm.

Table 9: Kenya Commercial Bank limited: Mean BHAR Descriptive Statistics

		Statistic	95% Confidence Interval			
			Bias	Std. Error	Lower	Upper
BHAR %	N	24	0	0	24	24
	Minimum	-16.20				
	Maximum	28.13				
	Mean	-.1404	-.0587	2.3107	-4.3410	4.6769
	Std. Deviation	11.59440	-.50026	1.89788	7.15281	14.55668
Valid N (listwise)	N	24	0	0	24	24

Source: Research Data

Table 9 shows the calculated summary descriptive statistics for the percentage mean monthly buy and hold abnormal returns (BHAR) for the Kenya Commercial Bank limited during the 24 months window period after its share split tested for difference from zero at 95% confidence level.

The summary shows that the mean BHAR for the company was -0.14 % with a standard deviation of 11.594. It also shows that true mean BHAR at 5% significance level is likely to be within the range – 4.34 % to 4.67 %. Since zero is within this range we conclude that there was no difference between the returns of the event firm and its benchmark firm.

Table 10: Kenya Power and Lighting Limited : Mean BHAR Descriptive Statistics

		Statistic	Bias	Std. Error	95% Confidence Interval	
					Lower	Upper
					BHAR %	N
	Minimum	-13.21				
	Maximum	11.31				
	Mean	-2.1358	-.0789	1.4049	-4.9037	.5828
	Std. Deviation	6.95238	-.17350	.78228	5.17744	8.23321
Valid N (listwise)	N	24	0	0	24	24

Source: Research Data

Table 10 shows the calculated summary descriptive statistics for the percentage mean monthly buy and hold abnormal returns (BHAR) for the Kenya Power and lighting company limited during the 24 months window period after its share split tested for difference from zero at 95% confidence level.

The summary shows that the mean BHAR for the company was -2.14 % with a standard deviation of 6.95. It also shows that true mean BHAR at 5% significance level is likely to be within the range – 4.90 % to 0.582 %. Since zero is within this range we conclude that there was no difference between the returns of the event firm and its benchmark firm.

Table 11: Sasini Tea and coffee limited: Mean BHAR Descriptive Statistics

		Statistic	95% Confidence Interval			
			Bias	Std. Error	Lower	Upper
BHAR %	N	24	0	0	24	24
	Minimum	-32.61				
	Maximum	16.68				
	Mean	-4.9438	-.1166	2.7376	-10.6711	-.0198
	Std. Deviation	13.88014	-.38324	1.67432	9.83705	16.51990
Valid N (listwise)	N	24	0	0	24	24

Source: Research Data

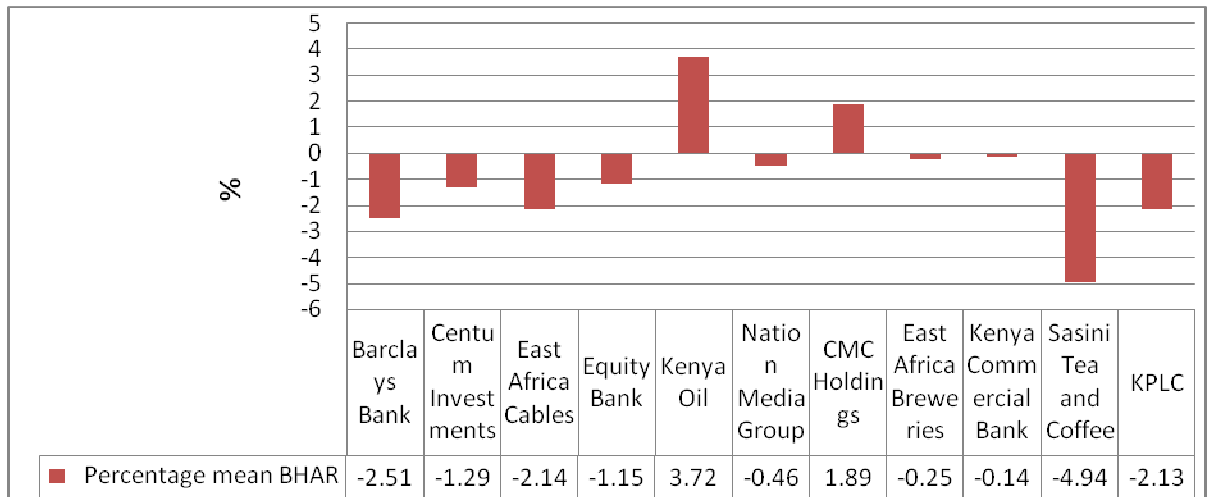
Table 11 shows the calculated summary descriptive statistics for the percentage mean monthly buy and hold abnormal returns (BHAR) for Sasini tea and coffee limited during the 24 months window period after its share split tested for difference from zero at 95% confidence level.

The summary shows that the mean BHAR for the company was -4.94 % with a standard deviation of 13.88. It also shows that true mean BHAR at 5% significance level is likely to be within the range -10.67 % to - 0.0198%. Since zero is outside this range we conclude that there was a difference between the returns of the event firm and its benchmark firm. The returns of the event firm were lower than those of the benchmark firm.

4.2.3 The mean BHAR

Most of the firms achieved negative percentages mean BHAR over the window period. Out of the eleven firms that were subjected to this study, nine firms representing 82% achieved negative mean BHAR ranging from -4.94 % to -0.14 %. Only Kenya Oil Company limited and CMC Holdings limited achieved positive mean BHAR of 3.72 % and 1.89 % respectively as shown in the bar graph below.

Table 12: Bar graphs showing the percentage mean BHAR of the sampled companies.



Resource: Research data

4.2.4 Hypothesis test

The mean monthly BHAR for each of the sampled firms was tested for difference from zero at 5% significance level. This was done in order to determine whether the mean buy and hold return achieved by the event firm was significantly different from the returns achieved by the benchmark firm at 95% confidence level. The summary findings are as given below.

Table 13: Statistical summary of the firm’s mean BHAR tested for difference from zero at 95% Confidence level.

Company	Mean BHAR	Standard Deviation	95% confidence interval Mean Range
Barclays Bank	-2.51	7.227	-5.61 to 0.24
Centum Investments	-1.29	8.325	-4.43 to 1.88
East Africa Cables	-2.14	11.075	-6.72 to 1.97
Equity Bank	-1.14	8.846	-4.52 to 2.55
Kenya Oil	3.72	12.752	-1.24 to 8.94
Nation Media Group	-0.46	14.882	-6.61 to 5.06
CMC Holdings	1.89	12.90	-3.30 to 6.91
East Africa Breweries	-0.25	8.244	-3.78 to 2.78
Kenya Commercial Bank	-0.14	11.594	-4.34 to 4.68
KPLC	-2.13	6.952	-4.90 to 0.58
Sasini Tea and coffee	-4.94	13.880	-10.67 to -0.0198

Resource: Research data

Table 13 shows a descriptive statistical summary of all sampled firm’s mean BHAR tested for significance from zero at 95% confidence level. 82% of the firms studied achieved negative mean percentage BHAR.

4.3 Summary and Interpretation of the Findings

The summarized findings and its interpretation is given in two stages. The first considers the returns for each event firm compared with its benchmark and notes whether there was any difference and the direction of these difference if any. The next summarizes the statistical findings of the hypothesis tests of each event firm’s mean BHAR tested for difference from zero at 5% significance level.

Generally the study found, that share splits elicit negative effect on firm returns. This is because 9 out of 11 sample firms achieved buy and hold monthly returns that were lower than their benchmark firms. Only two firms achieved returns that were higher than their benchmark firms.

Sasini tea and coffee limited achieved the lowest return at -4.94% while Kenya Commercial Bank Limited had -0.14%. CMC Holdings Limited achieved 1.89% while Kenya Oil Limited achieved the highest return at 3.72%.

When tested for significance from zero at 95% confidence level, no significant difference is observed. The study therefore concludes that share splits at the NSE elicit negative long run effects on firm returns but these negative returns are not insignificant. The study covered a period of two years.

The findings of this study are consistent with the findings of Rodney (2001) who studied the long run performance of shares after split in the USA. He studied the long run equity performance of 6000 firms following stock splits, during the period 1950 to 2000 and found robust abnormal returns in the first year followed by an insignificant change in returns in subsequent years.

The findings however contrast with other past findings. Desai and Jain (1997) studied a one to three year performance of 5596 stocks following stock splits during the period 1976 to 1991 and found an abnormal return of 7.05 % during the first year and 11.87% in the subsequent years. Ikenberry et al (1996) studied the effects of share splits on the long run stock returns for a sample of 1275 two for one stock splits and

found significant post split excess returns of 7.93% in the first year and 12.15% in the first three years after the split.

Long run effects appear to contrast with short term effects of share splits. Studies on short run effects have largely shown that share splits elicit a positive response in the market. In the USA, Arbel and Swanson (1993) found that share splits elicit positive responses from the market in the short run. In Germany, Wulff (1999) also found that share splits elicited positive responses.

In Kenya, most of the studies undertaken on share splits have been on the short run effects of share splits. Obunde (2011) studied the impact of stock splits on stock performance of firms listed in the Nairobi stock Exchange with specific reference to trading volumes and returns. He studied the performance of firms that had undertaken a stock split in the period 2004 to 2011 and found that trading volumes tended to increase with the announcement of the split. Nkonge (2010) studied effects of share splits on stock returns for a window period of forty days and found abnormal returns on the day of the split, two days before and two days after the split. Simbovo (2006) studied the effects of stock splits and large stock dividend on liquidity at the NSE and found that stock splits elicited a positive reaction on the firm's liquidity.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary

This study was to investigate the effects of share splits on long run stock returns for companies listed at the NSE. The period of the study was twenty four months window period after each of the sampled firms had undergone a share split. Eleven firms that had undergone share splits from 2004 to 2010 were sampled for the study.

Each of the sampled firm's monthly buy and hold returns was computed. The monthly buy and hold returns of a company was determined by subtracting the opening market price of a share of the company at the beginning of a month from the closing price of that share at the end of the same month. The same procedure is repeated for the benchmark firm that acts as the proxy for the market return. Fama and French (1993) describes a benchmark firm as one that has not undergone a share split and is within 70% to 130% of the market capitalization of the event firm, and also has a book to market (BE/ME) equity ratio that is closest to the event firm.

To determine the relationship between the monthly returns of the event firm and the returns of its benchmark firm, each of the event firm's monthly buy and hold returns were plotted on a graph against its benchmark firm for the entire window period of twenty four months of the event firm's share split.

The difference between the monthly buy and hold returns of the event firm and its benchmark is the event firm's buy and hold abnormal return (BHAR). The BHAR of a company is therefore the return that an event firm would have earned if it had not split its shares. The mean BHAR of the event firm is then computed as the arithmetic mean of the monthly buy and hold abnormal returns of the event firm for twenty four months.

The mean BHAR for each firm were then tested for difference from zero at 5% significance level. This test was to determine if there was any significant difference between the mean return achieved by the event firm and that achieved by its benchmark firm. This was achieved through the calculation of the summary descriptive statistics for each event firm's BHAR at 95% confidence level.

Out of 11 firms that had been sampled for this study, 9 firms representing 82% of all firms achieved mean negative percentage BHAR ranging from -4.94 % to - 0.14 %. Only two companies achieved a positive mean BHAR of 3.72 % and 1.89 % respectively. These mean BHAR for each of the sampled firms was tested for significance at 5% and found to be insignificant.

5.2 Conclusions

This study found that share splits at the NSE elicit insignificant negative returns among firms within the first two years. Generalized, this study supports the hypothesis that firms listed at the NSE would not be expected to increase their long run returns as a result of splitting their shares within the first two years.

The findings support earlier findings by Rodney (2001) who studied the long run equity performance of firms listed at the NYSE and found a long run insignificant change in returns among firms in the USA. But the findings are inconsistent with other findings. Ikenberry et al (1996) studied the effects of share splits on long run stock returns for a sample of 1275 firms and found excess returns of 7.93% in the first and 12.15% in the subsequent three years. Jain (1997) found positive return after a holding period of one year followed by a higher return after three years. McNichols and Dravid (1990) studied monthly price reaction to share splits and found 20.2% abnormal returns.

The findings also differ substantially from most studies on short term effects of share splits on returns. Arbel and Swanson (1993) studied the effects of share splits on the market and found that they reacted positively to splits share splits. Wu and Chang (1997) found excess returns in the short run. Nkonge (2010) studied the effects of share splits on returns and found excess returns.

5.3 Recommendations to policy and practice.

Share splits have been adopted as a common corporate event among firms. It is especially implemented by firms as a means of reducing the share prices to a more affordable level (Shourun et al, 2006). The signaling theory explains that share splits signal expected good future performance of the company (Brennan and Copeland, 1988). The expected signal would be interpreted to mean higher returns to the investor. According to the findings of this study, this may not necessarily be the case. Investors therefore need to subject the firm to further analysis in order to determine whether there are likely to be other benefits accruing from stock splits other than

expected higher returns as the expectations of higher returns have not been proved by this study.

To the Government, share splits lead to increased trading activity among investors (Aduda and Chemarum, 2010). This increase in the trading ratio is a sign of the robustness of the economy. As a result, more international investors are likely to be attracted to the bourse with its attendant positive effects on the economy. Increased foreign investment results in more direct inflow of foreign currency especially hard currency in the economy. The Government therefore should encourage share splits among firms for this reason.

5.4 Limitations of the study

This study was faced with certain limitations. The identification of a suitable benchmark firm upon which the returns of the event firm could be compared was a challenge. This is because the adopted criteria of size and BE/ME ratio was insufficient. Some firms had no suitable benchmarks according to this criterion. East African breweries was paired with a firm whose market size was 54.16% of its capital because it was the next largest in terms of market capitalization. None of the firms listed at the NSE achieved the recommended threshold of 70% of the EABL's capital. The returns that were considered in this study were those generated through capital gains. Returns earned through dividends and other incomes to shareholders were not considered. As is the practice, different companies have adopted different dividend policies and this may affect the actual returns earned from a firm. The inclusion of these types of incomes as returns may yield different results.

Due to the great disparity in sizes of firms' listed at the NSE; the choice of the benchmark did not take into consideration the industry in which the benchmark of an event firm was selected. As noted earlier, benchmark firms which are in the same industry as an event firm would make a better match for more reliable results. Firms were however selected on account of size and BE/ME ratio only.

5.5 Suggestions for further studies

This study covered a period of two years which may not be lengthy enough to draw conclusive evidence on long term effects of shares splits on returns. A longer period covering at least five years would be preferred. This is because the market may take a longer time to adjust to corporate events.

A study on the longer term effects of the dividend policy of firms following a stock split may also be relevant. This is because it may partly explain why firms that split their shares experience higher trading activities among investors. The trading activity ratio has been shown to increase after share splits. Due to the increase in the number of shares outstanding after a share split, firms may be compelled to change their dividend policies as a consequence of a change in one of the important variables that are considered in its formulation.

REFERENCES

- Aduda, J., & Chemarum, S. (2010). Market reaction to stock splits. *African Journal of Business and Management*, 165-184.
- Al-Qenae, R., Li, C., & Bob, W. (2002). The Information Content of Earnings on Stock Prices: The Kuwait Stock Exchange. *Multinational Finance Journal*.
- Andrew, W. (2005). Reconciling efficient markets with behavioral finance: The Adaptive market hypothesis. *Journal of Investment Consulting, Forthcoming*.
- Angel, J., Brooks, R., & Mathew, P. (1997). When-Issued Shares, Small Traders and the Variance of Returns around Stock Splits, Georgetown University Working Paper.
- Angel, J., Raymond B., & Prem, M. (2004). When issued shares, Small trades and the variance of Returns around stock splits. *Journal of Financial Research*.
- Arbel, A. & Swanson, G. (1993). The role of information in stock split announcement effects. *Quarterly Journal of Business and Economics*, 32(2), 14-25.
- Arnold, T. & Lipson, M. (1997). Tick Size and limit order execution: An Examination of Stock Splits. Working Paper, University of Georgia.

- Baker, H. & Gallagher, P. (1980). Management's view of stock splits. *Financial Management*, 9, 73-77
- Baker, H., & Powell, G. (1993). Further Evidence on managerial motives for stock splits *Quarterly Journal of business and Economics*, 32 (3).
- Baker, H. & Powell, G. (1993). Further Evidence on Managerial Motives for Stock Splits. *Quarterly Journal of Business and Economics*, 20-31
- Bechmann, K. & Raaballe, J. (2004). The Differences between Stock Splits and Stock Dividends: Evidence from Denmark. *Working Paper Copenhagen Business School*
- Black, F. (1986). Noise. *Journal of Finance*, 529-543
- Brennan, M. & Copeland, T. (1988). Stock splits, stock prices, and transaction costs. *Journal of Financial Economics*, 22, 83-101
- Brown, S. & Warner, J. (1980). Measuring Security Price Performance. *Journal of Financial Economic*, 8, 205-258
- Chakraborty, M. (2012). The Equity Market Around the Ex-split Date: Evidence from India. *Vikalpa*, 37 (1) , 57-68.

- Conroy, R., & Harris, R. (1999). Stock splits and information: The role of share price, *Financial management*, 28, 28-40
- Conroy, R. Harris, R. & Benet, B. (1990). The effect of stock splits on bid-ask spreads. *Journal of Financial Economics*, 45, 1285-1295.
- Copeland, T. (1979). Liquidity changes following stock splits. *Journal of Finance*, 34, 115-141.
- Debabrata, D. & Pradip, B. (2012). Better portfolio Diversification – A neglected aspect of stock splits: Findings from Indian Stock Market. Working Paper Series.
- Dennis, P. & Stickland, D. (2002). The effect of stock splits on liquidity and Excess returns . *Journal of Financial Research*.
- Dennis, P. & Strickland, D. (2003). The Effect of Stock Splits on Liquidity and Excess Returns: Evidence from Shareholder Ownership Composition. *Journal of Financial Research*, 26 (3), 355-370.
- Desai, H., & Jain, J. (1997). Long-run Common Stock Returns Following Stock Splits and Reverse Splits. *Journal of Business*, 409-433
- Dhar, S & Chhaochharia, S. (2008). Market reactions around stock splits and bonus issues. Some Indian Evidence. *Working paper series*

- Dolley, J. (1933). Characteristics and Procedure of Common Stock Split –ups. *Harvard Business review*, 11, 316-326.
- Easley, D., O’Hara, M., & Saar, G. (2001). How stock splits affect trading: A microstructure Approach. *Journal of Financial and Quantitative Analysis*, 36, 25-51.
- Donald, R. & Pamela S. (2006). *Business Research methods, (9th Ed.)*, New York City: McGraw-Hill/Irwin.
- Fama, E., Fisher, L., Jensen, M., & Roll, R. (1969). The Adjustments of Stock Prices to New Information. *International Economic Review*, 10.
- Fama, E. (1970). Efficient capital markets. A review of theory and Empirical work. *Journal of Finance*
- Fama E. & French R. (1993). Common risk factors in the returns on stocks and bonds. *Journal of Financial Economics* 33, 3-56
- Fernando, C., Krishnamurthy, S., & Spindt, P. (1999). Offer Price and IPO Performance: An Empirical Assessment. Tulane University Working Paper.
- Gerwin A. (2003). Technical Analysis in financial markets. working papers series.

- Grinblatt, M., Masulis, R., & Titman, S. (1984). The Valuation Effects of Stock Splits and Stock Dividends. *Journal of Financial Economics*, 13 (4), 461-490.
- Grossman, S. & Stiglitz, J. (1980). On the impossibility of informationally efficient markets. *American Economic Review*.
- Gupta, A., & Gupta, O. (2007). Market Reaction to Stock Market Splits: Evidence from India. *The Icfai Journal of Applied Finance*, 13(1), 5-22
- Gupta, C., & Kumar, R. (2007). A Re- Examination of factors affecting returns in the Indian stock Market. *Journal of Emerging Market Finance*, *Forthcoming*.
- Ikenberry, D., Rankine, G., & Stice, L. (1996). What do Stock Splits really signal? *Journal of Financial and Quantitative Analysis*, 31, 357-375
- Kombo, D. & Tromp, D. (2006). *Proposal and thesis writing: An Introduction* (2nd Ed.). Nairobi: Pauline's publications Africa.
- Koski, J. (1998). Measurement Effects and the Variance of Returns after Stock Splits and Stock Dividends. *The Review of Financial Studies*, 11, 143-162.
- Kothari S. & Warner B. (2007). *Econometrics of event studies. Hand book of corporate Finance*:Amsterdam: Elsevier/North Holland

- Lakonishok, J., & Lev, B. (1987). Stock Splits and Stock dividends: Why, Who and When. *The Journal of Finance*, 42, 913-932.
- Lamoureux, C., & Poon, P. (1987). The Market Reaction to Stock Splits. *Journal of Finance*, 1347-1370.
- Lihua, J. (2002). Why firms consolidate their stock. Working Paper Series.
- Lintner, J. (1956). Distribution of incomes of corporations among Dividends, Retained earnings And Taxes. *American Economic Review*.
- Lyrout, K., Dasilas, A., & Varnas, A. (2006). The valuation effects of stock splits in NASDAQ. *Management Finance*, 32(5), 401-414.
- Maloney, M., & Mulherin, J. (1992). The Effects of Splitting on the Ex: A Microstructure Reconciliation. *Financial Management*, 44-59.
- Masse, I., Hanrahan J., & Kushner, J. (1997). The Effect of Canadian Stock Splits, Stock Dividends, and Reverse Splits on the Value of the Firm. *Quarterly Journal of Business & Economics*, 36(4), 51-62.
- McNichols, M., & Dravid, A. (1990). Stock Dividends, Stock Splits, and Signaling. *Journal of Finance*, 45, 857-879.

- Mehra, R. (2002). The Equity Premium: Why Is It A Puzzle? *Financial Analysts Journal*.
- Michaelson, J. (1961). The determinants of Dividend policies: A theoretical and empirical Study. An unpublished doctoral dissertation, University of Chicago.
- Miller, H., & Modigliani, F. (1961). Dividend policy, Growth and the valuation of shares. *Journal of Business*.
- Muscarella, C., & Vetsuypens, M. (1996). Stock splits: Signaling or Liquidity? The case of ADR Solo-Splits. *Journal of Financial Economics*, 42, 3-26.
- Nkonge, T. (2010). The effect of stock splits on securities returns at the NSE. An unpublished MBA Research project, University of Nairobi.
- Obunde, W. (2011). An empirical Examination of the relationship between stock splits and stock performance of firms listed on the NSE. An unpublished MBA project, University of Nairobi.
- Ongere, J. (2011). The effects of stock splits on the ownership structure of firms. Evidence from NSE. An unpublished MBA project, University of Nairobi.
- Radcliffe, R. & Gillespie, W. (1979). The Price Impact of Reverse Splits. *Financial Analysts Journal*.

- Reilly, F., & Brown, K. (1997). *Investment analysis and portfolio management*. Philadelphia: San Diego Dryden press.
- Roger, M., & Sandro, R. (2007): Stock splits in Switzerland: To signal or not to signal? Working Paper Series.
- Ross, S. A. (1977). The Determination of Financial Structure: The Incentive Signaling approach. *Bell Journal of Economics*, 8, 23-40.
- Schultz, P. (1999). Why Do Stocks Split? The Optimal Tick Size and Preferred Price Range Hypotheses. *Journal of Finance*.
- Serra, A. (2002), Event Study Tests: A brief survey. *Accepted Paper Series*.
- Shiller, R. (1981). Do stock prices move too much to be justified by subsequent changes in Dividend? Working Paper Series.
- Shourun, G., Mark, H. & Weihong, S. (2006). Why do firms split their stocks before acquisition? *American Economic Review*, 71, 421-436.
- Simbovo, H. (2006). The effects of stock splits and large stock dividends on liquidity: Evidence from the Nairobi stock exchange. An unpublished MBA Research project, University of Nairobi.
- Thomas, K. (2002). Estimating Expected returns. *Journal of Investing*.

- Udegbunam, R. & Eriki, P. (2001). Inflation and Stock Price Behavior: Evidence from Nigerian Stock Market. *Journal of Financial Management & Analysis*, 20(14).
- Vijay, J., & Pencheng, Z. (2004). Thirty years of stock splits, reverse stock splits and stock Dividends in Canada. Working Paper Series.
- Woodridge, J., & Chambers, D. (1983). Reverse split and shareholder wealth. *Financial management*.
- Wu, L., & Chan, B. (1997). On Existence of an Optimal Stock Price: Evidence from Stock Splits and Reverse Stock Splits in Hong Kong. *International Journal of Business*, 2(1), 45-67.
- Wulff, C. (1999). Market reaction to stock splits: Evidence from Germany. *Schmalenbach Business Review*.
- Zhiwu, C. & Ming, D. (2001). Stock valuation and investment strategies. *Working paper series*

APPENDICES

Appendix 1:

Companies Listed at the NSE that have undergone Share Splits

Company	Split Ratio	Split Date
KenolKobil Ltd	5:1	5 July 2004
East Africa Breweries Ltd	10:1	29 Nov. 2004
East Africa Cables	10:1	5 Sept. 2006
Barclays Bank of Kenya Ltd	5:1	30 Nov.2006
Centum Investment	10: 1	5 Jan. 2007
Sasini Tea and coffee Ltd	5:1	15 Feb. 2007
CMC Holdings	10:1	26 Feb. 2007
Kenya Commercial Bank Ltd	10: 1	3 April 2007
Nation Media Group Ltd	2:1	4 Aug. 2008
Equity bank Ltd	10:1	25 March 2009
Kenya power & Lighting Co.	8:1	19 Nov. 2010
Athi River Mining Co. Ltd	5: 1	21 Dec. 2012

Appendix 2:

Companies Listed at the NSE that Split their shares between 2004 and 2010

Company	Split Ratio	Split Date
KenolKobil Ltd	5:1	5 July 2004
East Africa Breweries Ltd	10:1	29 Nov. 2004
East Africa Cables	10:1	5 Sept. 2006
Barclays Bank of Kenya Ltd	5:1	30 Nov.2006
Centum Investment	10: 1	5 Jan. 2007
Sasini Tea and coffee Ltd	5:1	15 Feb. 2007
CMC Holdings	10:1	26 Feb. 2007
Kenya Commercial Bank Ltd	10: 1	3 April 2007
Nation Media Group Ltd	2:1	4 Aug. 2008
Equity bank Ltd	10:1	25 March 2009
Kenya power & Lighting Co.	8:1	19 Nov. 2010

Appendix 3 (a)

ANALYSIS OF NSE FIRMS DATA FOR THE IDENTIFICATION OF BARCLAYS BANK CONTROL FIRM Data for 30/11/2006

Shares outstanding	AGRICULTURAL	Par value	Market value	BE/ME Ratio	Market capitalisation	%age of BBK Capital
48,875,000	Unilever Tea Ord 10.00	10.00	85.00	0.12	4,154,375,000.00	3.33
19,599,999	Kakuzi Ord.5.00	5.00	40.00	0.13	783,999,960.00	0.63
60,000,000	Rea Vipingo Ord 5.00	5.00	25.75	0.19	1,545,000,000.00	1.24
38,009,250	Sasini Tea & Coffee LtdOrd 5.00	5.00	125.00	0.04	4,751,156,250.00	3.80
	COMMERCIAL AND SERVICES				-	-
22,279,616	Car & General (K) Ltd Ord 5.00	5.00	54.50	0.09	1,214,239,072.00	0.97
48,559,120	CMC Holdings Ltd Ord 5.00	5.00	162.00	0.03	7,866,577,440.00	6.30
360,000	Hutchings Biemer Ltd Ord 5.00	5.00	20.25	0.25	7,290,000.00	0.01
461,615,484	Kenya Airways Ltd Ord 5.00	5.00	118.00	0.04	54,470,627,112.00	43.60
14,393,106	Marshalls (E.A.) Ltd Ord 5.00	5.00	40.00	0.13	575,724,240.00	0.46
71,305,260	Nation Media Group Ord. 5.00	5.00	334.00	0.01	23,815,956,840.00	19.06
159,000,000	Scangroup Ltd Ord 1.00	1.00	21.00	0.05	3,339,000,000.00	2.67
89,865,588	TPS Eastern Africa Ord 1.00	1.00	84.50	0.01	7,593,642,186.00	6.08
180,000,000	Uchumi Supermarket Ltd Ord 5.00	5.00	14.50	0.34	2,610,000,000.00	2.09
	FINANCE AND INVESTMENT				-	-
1,357,884,000	Barclays Bank Ltd Ord 2.00	2.00	92.00	0.02	124,925,328,000.00	100.00
156,000,000	C.F.C Bank Ltd ord.5.00	5.00	84.50	0.06	13,182,000,000.00	10.55
124,218,750	Diamond Trust Bank Ord 4.00	4.00	72.00	0.06	8,943,750,000.00	7.16
90,564,550	Equity Bank Ltd Ord 5.00	5.00	135.00	0.04	12,226,214,250.00	9.79
115,000,000	Housing Finance Co Ltd Ord 5.00	5.00	40.50	0.12	4,657,500,000.00	3.73
54,995,188	I.C.D.C Investments Ord 5.00	5.00	360.00	0.01	19,798,267,680.00	15.85
36,000,000	Jubilee Holdings Ltd Ord 5.00	5.00	355.00	0.01	12,780,000,000.00	10.23
199,600,000	Kenya Commercial Bank Ord 10.00	10.00	215.00	0.05	42,914,000,000.00	34.35

200,000,000	National Bank Ord 5.00	5.00	58.50	0.09	11,700,000,000.00	9.37
82,414,551	NIC Bank Ltd Ord 5.00	5.00	99.00	0.05	8,159,040,573.75	6.53
48,000,000	Pan Africa Insurance Ord 5.00	5.00	80.00	0.06	3,840,000,000.00	3.07
271,967,810	Standard Chartered Bank Ord 5.00	5.00	209.00	0.02	56,841,272,290.00	45.50
	INDUSTRIAL AND ALLIED				-	-
93,000,000	Athi River Mining Ord 5.00	5.00	83.00	0.06	7,719,000,000.00	6.18
19,525,446	B.O.C Kenya Ltd Ord 5.00	5.00	160.00	0.03	3,124,071,360.00	2.50
362,959,275	Bamburi Cement Ltd Ord 5.00	5.00	208.00	0.02	75,495,529,200.00	60.43
100,000,000	B. A. T. Ord 10.00	10.00	195.00	0.05	19,500,000,000.00	15.61
11,326,755	Carbacid Investments Ord 5.00	5.00	137.00	0.04	1,551,765,435.00	1.24
23,727,000	Crown Berger Ltd Ord 5.00	0.50	38.50	0.01	913,489,500.00	0.73
202,500,000	E.A.Cables Ltd Ord 0.50	0.50	43.75	0.01	8,859,375,000.00	7.09
90,000,000	E.A.Portland Cement Ord 5.00	5.00	130.00	0.04	11,700,000,000.00	9.37
658,978,630	EABL Ord 2.00	2.00	140.00	0.01	92,257,008,200.00	73.85
101,696,120	Kenya Oil Co Ltd Ord 0.50	0.50	107.00	0.00	10,881,484,840.00	8.71
79,128,000	K PLC Ord 20.00	20.00	266.00	0.08	21,048,048,000.00	16.85
2,198,361,456	KenGen Ltd. Ord. 2.50	2.50	32.00	0.08	70,347,566,592.00	56.31
510,000,000	Mumias Sugar Co. Ltd Ord 2.00	2.00	54.00	0.04	27,540,000,000.00	22.05
10,000,000	Olympia Capital Ord 5.00	5.00	24.50	0.20	245,000,000.00	0.20
278,342,393	Sameer Africa Ltd Ord 5.00	5.00	27.25	0.18	7,584,830,209.25	6.07
175,064,706	Total Kenya Ltd Ord 5.00	5.00	33.00	0.15	5,777,135,298.00	4.62
63,090,728	Unga Group Ltd Ord 5.00	5.00	18.55	0.27	1,170,333,004.40	0.94
	ALTERNATIVE INVESTMENT MARKET SEGMENT				-	-
3,840,066	A.Baumann & Co.Ltd Ord 5.00	5.00	11.00	0.45	42,240,726.00	0.03
4,166,046	City Trust Ltd Ord 5.00	5.00	407.00	0.01	1,695,580,722.00	1.36
8,039,250	Eaagads Ltd Ord 1.25	1.25	37.00	0.03	297,452,250.00	0.24
35,403,790	Express Ltd Ord 5.00	5.00	25.25	0.20	893,945,697.50	0.72
8,756,320	Williamson Tea Ord 5.00	5.00	110.00	0.05	963,195,200.00	0.77
3,912,000	Kapchorua Tea Ord Ord 5.00	5.00	95.00	0.05	371,640,000.00	0.30
12,868,124	Kenya Orchards Ltd Ord 5.00	5.00	5.00	1.00	64,340,620.00	0.05
600,000	Limuru Tea Co. Ltd Ord 20.00	20.00	350.00	0.06	210,000,000.00	0.17
65,133,359	Standard Group Ltd Ord 5.00	5.00	54.00	0.09	3,517,201,386.00	2.82

Appendix 3 (b)

Computation of Barclays Bank Monthly Return

Period	Share price		Return (Ksh.)	%age Return
	Opening price (Ksh.)	Closing price (Ksh.)		
Dec. 06	87.00	77.00	-10	-11.49
Jan. 07	84.50	79.00	-5.5	-6.51
Feb 07	78.00	65.50	-12.5	-16.03
March 07	62.50	68.00	5.5	8.80
April 07	68.50	68.50	0	0.00
May 07	69.00	67.00	-2	-2.90
June 07	67.50	72.50	5	7.41
July 07	70.00	78.50	8.5	12.14
Aug. 07	77.50	78.00	0.5	0.65
Sept. 07	77.50	77.00	-0.5	-0.65
Oct. 07	76.50	71.00	-5.5	-7.19
Nov. 07	73.50	76.50	3	4.08
Dec. 07	75.50	78.00	2.5	3.31
Jan. 08	74.00	66.50	-7.5	-10.14
Feb. 08	69.50	72.00	2.5	3.60
March 08	73.00	67.50	-5.5	-7.53
April 08	67.50	73.00	5.5	8.15
May 08	72.50	71.00	-1.5	-2.07
June 08	71.00	70.50	-0.5	-0.70
July 08	70.50	66.00	-4.5	-6.38
Aug. 08	65.50	63.00	-2.5	-3.82
Sept. 08	63.00	58.50	-4.5	-7.14
Oct.08	58.00	45.25	-12.75	-21.98
Nov. 08	48.75	48.00	-0.75	-1.54

Appendix 3 (c)

Computations of the percentage monthly buy and hold abnormal return: (BHAR):

Barclays Bank (K) limited

	Barclays Bank (Event Firm)	Standard Bank (Control Firm)	
Month	Buy and hold Return %	Buy and hold Return %	BHAR %
Dec. 06	-11.49	3.02	-14.51
Jan. 07	-6.51	5.34	-11.85
Feb 07	-16.03	-17.81	1.78
March 07	8.80	12.72	-3.92
April 07	0.00	-4.76	4.76
May 07	-2.90	-1.10	-1.79
June 07	7.41	8.52	-1.12
July 07	12.14	-0.53	12.67
Aug. 07	0.65	1.60	-0.95
Sept. 07	-0.65	-2.07	1.43
Oct. 07	-7.19	-2.13	-5.06
Nov. 07	4.08	14.92	-10.84
Dec. 07	3.31	0.00	3.31
Jan. 08	-10.14	8.02	-18.16
Feb. 08	3.60	6.47	-2.87
March 08	-7.53	-6.57	-0.96
April 08	8.15	3.48	4.67
May 08	-2.07	4.88	-6.95
June 08	-0.70	-2.78	2.07
July 08	-6.38	-5.24	-1.14
Aug. 08	-3.82	-4.06	0.24
Sept. 08	-7.14	-3.19	-3.95
Oct.08	-21.98	-8.84	-13.14
Nov. 08	-1.54	-7.51	5.98

Appendix 4 (a)

**ANALYSIS OF NSE FIRMS DATA FOR THE IDENTIFICATION
OF CENTUM INVESTMENTS CONTROL FIRM Data for
5/1/2007**

Shares outstanding	AGRICULTURAL	Par Value	Market price	Market capitalisation	BE/ME Ratio	%age of Centum capital
48,875,000	Unilever Tea Kenya Ltd Ord 10.00	10.00	80.00	3,910,000,000.00	0.13	197.49
19,599,999	Kakuzi Ord.5.00	5.00	41.50	813,399,958.50	0.12	41.08
60,000,000	Rea Vipingo Plantations Ltd Ord 5.00	5.00	28.25	1,695,000,000.00	0.18	85.61
38,009,250	Sasini Tea & Coffee Ltd Ord 5.00	5.00	139.00	5,283,285,750.00	0.04	266.86
	COMMERCIAL AND SERVICES					
22,279,616	Car & General (K) Ltd Ord 5.00	5.00	59.50	1,325,637,152.00	0.08	66.96
48,559,120	CMC Holdings Ltd Ord 5.00	5.00	226.00	10,974,361,120.00	0.02	554.31
360,000	Hutchings Biemer Ltd Ord 5.00	5.00	20.25	7,290,000.00	0.25	0.37
461,615,484	Kenya Airways Ltd Ord 5.00	5.00	119.00	54,932,242,596.00	0.04	2774.60
14,393,106	Marshalls (E.A.) Ltd Ord 5.00	5.00	37.75	543,339,751.50	0.13	27.44
71,305,260	Nation Media Group Ord. 5.00	5.00	338.00	24,101,177,880.00	0.01	1217.34
159,000,000	Scangroup Ltd Ord 1.00	1.00	25.75	4,094,250,000.00	0.04	206.80
89,865,588	TPS Eastern Africa (Serena)	1.00	86.00		0.01	390.36

	Ltd Ord 1.00			7,728,440,568.00		
180,000,000	Uchumi Supermarket Ltd Ord 5.00	5.00				
	FINANCE AND INVESTMENT					
1,357,884,000	Barclays Bank Ltd Ord 2.00	2.00	93.00	126,283,212,000.00	0.02	6378.50
156,000,000	C.F.C Bank Ltd ord.5.00	5.00	92.00	14,352,000,000.00	0.05	724.91
139,746,093	Diamond Trust Bank Kenya Ltd Ord 4.00	4.00	85.00	11,878,417,905.00	0.05	599.97
90,564,550	Equity Bank Ltd Ord 5.00	5.00	169.00	15,305,408,950.00	0.03	773.07
115,000,000	Housing Finance Co Ltd Ord 5.00	5.00	43.75	5,031,250,000.00	0.11	254.13
54,995,188	I.C.D.C Investments Co Ltd Ord 5.00	5.00	36.00	1,979,826,768.00	0.14	100.00
36,000,000	Jubilee Holdings Ltd Ord 5.00	5.00	333.00	11,988,000,000.00	0.02	605.51
199,600,000	Kenya Commercial Bank Ltd Ord 10.00	10.00	270.00	53,892,000,000.00	0.04	2722.06
200,000,000	National Bank of Kenya Ltd Ord 5.00	5.00	64.50	12,900,000,000.00	0.08	651.57
82,414,551	NIC Bank Ltd Ord 5.00	5.00	110.00	9,065,600,637.50	0.05	457.90
48,000,000	Pan Africa Insurance Holdings Ltd	5.00	95.00	4,560,000,000.00	0.05	230.32
271,967,810	Standard Chartered Bank Ltd Ord 5.00	5.00	217.00	59,017,014,770.00	0.02	2980.92
	INDUSTRIAL AND ALLIED					
93,000,000	Athi River Mining Ord 5.00	5.00	84.50	7,858,500,000.00	0.06	396.93
19,525,446	B.O.C Kenya Ltd Ord 5.00	5.00	160.00	3,124,071,360.00	0.03	157.80
362,959,275	Bamburi Cement Ltd Ord 5.00	5.00	211.00	76,584,407,025.00	0.02	3868.24

100,000,000	British American Tobacco Kenya Ltd Ord 10.00	10.00	196.00	19,600,000,000.00	0.05	989.99
11,326,755	Carbacid Investments Ltd Ord 5.00	5.00	137.00	1,551,765,435.00	0.04	78.38
23,727,000	Crown Berger Ltd Ord 5.00	5.00	42.50	1,008,397,500.00	0.12	50.93
202,500,000	E.A.Cables Ltd Ord 0.50	0.50	49.75	10,074,375,000.00	0.01	508.85
90,000,000	E.A.Portland Cement Ltd Ord 5.00	5.00	128.00	11,520,000,000.00	0.04	581.87
658,978,630	East African Breweries Ltd Ord 2.00	2.00	141.00	92,915,986,830.00	0.01	4693.14
210,000,000	Eveready East Africa Ltd Ord.1.00	1.00	16.15	3,391,500,000.00	0.06	171.30
101,696,120	Kenya Oil Co Ltd Ord 0.50	0.50	110.00	11,186,573,200.00	0.00	565.03
79,128,000	Kenya Power & Lighting Ltd Ord 20.00	20.00	298.00	23,580,144,000.00	0.07	1191.02
2,198,361,456	KenGen Ltd. Ord. 2.50	2.50	28.00	61,554,120,768.00	0.09	3109.07
10,000,000	Olympia Capital Holdings Ltd Ord 5.00	5.00	31.25	312,500,000.00	0.16	15.78
278,342,393	Sameer Africa Ltd Ord 5.00	5.00	30.25	8,419,857,388.25	0.17	425.28
175,064,706	Total Kenya Ltd Ord 5.00	5.00	34.50	6,039,732,357.00	0.14	305.06
63,090,728	Unga Group Ltd Ord 5.00	5.00	17.70	1,116,705,885.60	0.28	56.40
	ALTERNATIVE INVESTMENT MARKET SEGMENT					
3,840,066	A.Baumann & Co.Ltd Ord 5.00	5.00	32.00	122,882,112.00	0.16	6.21
4,166,046	City Trust Ltd Ord 5.00	5.00	86.00	358,279,956.00	0.06	18.10
8,039,250	Eaagads Ltd Ord 1.25	1.25	52.00	418,041,000.00	0.02	21.12

35,403,790	Express Ltd Ord 5.00	5.00	28.75	1,017,858,962.50	0.17	51.41
8,756,320	Williamson Tea Kenya Ltd Ord 5.00	5.00	112.00	980,707,840.00	0.04	49.54
3,912,000	Kapchorua Tea Co. Ltd Ord Ord 5.00	5.00	100.00	391,200,000.00	0.05	19.76
12,868,124	Kenya Orchards Ltd Ord 5.00	5.00	5.00	64,340,620.00	1.00	3.25
600,000	Limuru Tea Co. Ltd Ord 20.00	20.00	350.00	210,000,000.00	0.06	10.61
65,133,359	Standard Group Ltd Ord 5.00	5.00	65.50	4,266,235,014.50	0.08	215.49

Appendix 4 (b)

Computation of Centum Investments Monthly Return

Period	Share price		Return (Ksh)	%age Return
	Opening price (Ksh)	Closing price (Ksh)		
Feb 07	30.00	24.75	-5.25	-17.50
March 07	25.50	23.75	-1.75	-6.86
April 07	24.50	24.50	0	0.00
May 07	24.75	24.50	-0.25	-1.01
June 07	25.00	26.75	1.75	7.00
July 07	27.00	28.50	1.5	5.56
Aug. 07	29.50	31.50	2	6.78
Sept. 07	31.00	26.75	-4.25	-13.71
Oct. 07	27.00	25.50	-1.5	-5.56
Nov. 07	25.25	26.50	1.25	4.95
Dec. 07	26.75	29.00	2.25	8.41
Jan. 08	27.25	24.50	-2.75	-10.09
Feb. 08	25.25	27.25	2	7.92
March 08	27.75	25.00	-2.75	-9.91
April 08	25.00	29.00	4	16.00
May 08	29.25	27.00	-2.25	-7.69
June 08	27.50	26.25	-1.25	-4.55
July 08	26.50	24.25	-2.25	-8.49
Aug. 08	24.25	23.00	-1.25	-5.15
Sept. 08	22.50	19.35	-3.15	-14.00
Oct. 08	19.55	13.80	-5.75	-29.41
Nov. 08	14.90	13.85	-1.05	-7.05
Dec. 08	18.75	18.75	0	0.00
Jan. 09	18.90	14.55	-4.35	-23.02

Appendix 4(c)

Computations of the percentage monthly buy and hold abnormal return: (BHAR):

Centum Investments limited

	centum Investments (Event Firm)	Rea Vipingo (Control Firm)	
Month	Buy and hold Return %	Buy and hold Return %	BHAR %
Feb 07	-17.50	-5.49	-12.01
March 07	-6.86	2.33	-9.19
April 07	0.00	-10.23	10.23
May 07	-1.01	-4.75	3.74
June 07	7.00	-1.25	8.25
July 07	5.56	9.64	-4.08
Aug. 07	6.78	-7.78	14.56
Sept. 07	-13.71	-6.90	-6.80
Oct. 07	-5.56	-2.00	-3.56
Nov. 07	4.95	1.23	3.72
Dec. 07	8.41	9.76	-1.34
Jan. 08	-10.09	-6.83	-3.26
Feb. 08	7.92	2.50	5.42
March 08	-9.91	-13.56	3.65
April 08	16.00	13.39	2.61
May 08	-7.69	-10.24	2.55
June 08	-4.55	2.15	-6.70
July 08	-8.49	-5.32	-3.17
Aug. 08	-5.15	-5.08	-0.07
Sept. 08	-14.00	-4.23	-9.77
Oct. 08	-29.41	-11.76	-17.65
Nov. 08	-7.05	-18.18	11.13
Dec. 08	0.00	3.33	-3.33
Jan. 09	-23.02	-7.14	-15.87

Appendix 5 (a)

ANALYSIS OF NSE FIRMS DATA FOR THE IDENTIFICATION OF EA CABLES

CONTROL FIRM Data for 5/9/2006

Shares outstanding	AGRICULTURAL	Par Value	Market value	BE/ME Ratio	Market capitalisation	%age of E.A Cables capital
48,875,000	Unilever Tea Kenya Ltd Ord 10.00	10.00	84.00	0.12	4,105,500,000.00	26.16
19,599,999	Kakuzi Ord.5.00	5.00	35.00	0.14	685,999,965.00	4.37
60,000,000	Rea Vipingo Plantations Ltd Ord 5.00	5.00	22.50	0.22	1,350,000,000.00	8.60
38,009,250	Sasini Tea & Coffee Ltd Ord 5.00	5.00	32.75	0.15	1,244,802,937.50	7.93
	COMMERCIAL AND SERVICES				-	0.00
22,279,616	Car & General (K) Ltd Ord 5.00	5.00	34.75	0.14	774,216,656.00	4.93
48,559,120	CMC Holdings Ltd Ord 5.00	5.00	90.00	0.06	4,370,320,800.00	27.85
360,000	Hutchings Biemer Ltd Ord 5.00	5.00	20.25	0.25	7,290,000.00	0.05
461,615,484	Kenya Airways Ltd Ord 5.00	5.00	112.00	0.04	51,700,934,208.00	329.44
14,393,106	Marshalls (E.A.) Ltd Ord 5.00	5.00	32.00	0.16	460,579,392.00	2.93
71,305,260	Nation Media Group Ord. 5.00	5.00	202.00	0.02	14,403,662,520.00	91.78
159,000,000	Scangroup Ltd Ord 1.00	1.00	23.50	0.04	3,736,500,000.00	23.81
89,865,588	TPS Eastern Africa (Serena) Ltd Ord 1.00	1.00	100.00	0.01	8,986,558,800.00	57.26
180,000,000	Uchumi Supermarket Ltd Ord 5.00	5.00			-	0.00
	FINANCE AND INVESTMENT				-	0.00

203,682,600	Barclays Bank Ltd Ord 10.00	10.00	301.00	0.03	61,308,462,600.00	390.66
156,000,000	C.F.C Bank Ltd ord.5.00	5.00	80.00	0.06	12,480,000,000.00	79.52
124,218,750	Diamond Trust Bank Kenya Ltd Ord 4.00	4.00	67.50	0.06	8,384,765,625.00	53.43
90,564,550	Equity Bank Ltd Ord 5.00	5.00	95.00	0.05	8,603,632,250.00	54.82
115,000,000	Housing Finance Co Ltd Ord 5.00	5.00	39.00	0.13	4,485,000,000.00	28.58
54,995,188	I.C.D.C Investments Co Ltd Ord 5.00	5.00	169.00	0.03	9,294,186,772.00	59.22
36,000,000	Jubilee Holdings Ltd Ord 5.00	5.00	160.00	0.03	5,760,000,000.00	36.70
199,600,000	Kenya Commercial Bank Ltd Ord 10.00	10.00	177.00	0.06	35,329,200,000.00	225.12
200,000,000	National Bank of Kenya Ltd Ord 5.00	5.00	48.50	0.10	9,700,000,000.00	61.81
82,414,551	NIC Bank Ltd Ord 5.00	5.00	89.50	0.06	7,376,102,336.88	47.00
48,000,000	Pan Africa Insurance Holdings Ltd Ord 5.00	5.00	75.00	0.07	3,600,000,000.00	22.94
271,967,810	Standard Chartered Bank Ltd Ord 5.00	5.00	157.00	0.03	42,698,946,170.00	272.08
	INDUSTRIAL AND ALLIED				-	0.00
93,000,000	Athi River Mining Ord 5.00	5.00	87.00	0.06	8,091,000,000.00	51.56
19,525,446	B.O.C Kenya Ltd Ord 5.00	5.00	160.00	0.03	3,124,071,360.00	19.91
362,959,275	Bamburi Cement Ltd Ord 5.00	5.00	178.00	0.03	64,606,750,950.00	411.67
100,000,000	British American Tobacco Kenya Ltd Ord 10.00	10.00	189.00	0.05	18,900,000,000.00	120.43
11,326,755	Carbacid Investments Ltd Ord 5.00	5.00	137.00	0.04	1,551,765,435.00	9.89
23,727,000	Crown Berger Ltd Ord 5.00		35.25	0.14		5.33

		5.00			836,376,750.00	
202,500,000	E.A.Cables Ltd Ord 0.50	0.50	77.50	0.01	15,693,750,000.00	100.00
90,000,000	E.A.Portland Cement Ltd Ord 5.00	5.00	130.00	0.04	11,700,000,000.00	74.55
658,978,630	East African Breweries Ltd Ord 2.00	2.00	140.00	0.01	92,257,008,200.00	587.86
100,796,120	Kenya Oil Co Ltd Ord 0.50	0.50	115.00	0.00	11,591,553,800.00	73.86
79,128,000	Kenya Power & Lighting Ltd Ord 20.00	20.00	203.00	0.10	16,062,984,000.00	102.35
2,198,361,456	KenGen Ltd. Ord. 2.50	2.50	34.50	0.07	75,843,470,232.00	483.27
510,000,000	Mumias Sugar Co. Ltd Ord 2.00	2.00	59.00	0.03	30,090,000,000.00	191.73
10,000,000	Olympia Capital Holdings ltd Ord 5.00	5.00	15.50	0.32	155,000,000.00	0.99
278,342,393	Sameer Africa Ltd Ord 5.00	5.00	15.00	0.33	4,175,135,895.00	26.60
175,064,706	Total Kenya Ltd Ord 5.00	5.00	38.25	0.13	6,696,225,004.50	42.67
63,090,728	Unga Group Ltd Ord 5.00	5.00	17.15	0.29	1,082,005,985.20	6.89
	ALTERNATIVE INVESTMENT MARKET SEGMENT				-	0.00
3,840,066	A.Baumann & Co.Ltd Ord 5.00	5.00	12.50	0.40	48,000,825.00	0.31
4,166,046	City Trust Ltd Ord 5.00	5.00	60.50	0.08	252,045,783.00	1.61
8,039,250	Eaagads Ltd Ord 1.25	1.25	17.60	0.07	141,490,800.00	0.90
32,185,264	Express Ltd Ord 5.00	5.00	23.25	0.22	748,307,388.00	4.77
8,756,320	Williamson Tea Kenya Ltd Ord 5.00	5.00	81.00	0.06	709,261,920.00	4.52
3,912,000	Kapchorua Tea Co. Ltd Ord Ord 5.00	5.00	87.00	0.06	340,344,000.00	2.17

12,868,124	Kenya Orchards Ltd Ord 5.00	5.00	5.00	1.00	64,340,620.00	0.41
600,000	Limuru Tea Co. Ltd Ord 20.00	20.00	350.00	0.06	210,000,000.00	1.34
65,133,359	Standard Group Ltd Ord 5.00	5.00	43.25	0.12	2,817,017,776.75	17.95

Appendix 5(b)

Computation of EA Cables Monthly Return

Period	Share price		Return ((Ksh)	%age Return
	Opening price (KSH)	Closing price (Ksh)		
Oct. 06	69.00	56.00	-13	-18.84
Nov 06	57.00	43.75	-13.25	-23.25
Dec. 06	43.00	48.00	5	11.63
Jan. 07	49.50	47.75	-1.75	-3.54
Feb 07	49.75	39.75	-10	-20.10
March 07	34.75	40.50	5.75	16.55
April 07	40.75	41.25	0.5	1.23
May 07	40.50	44.00	3.5	8.64
June 07	43.00	47.50	4.5	10.47
July 07	46.50	46.50	0	0.00
Aug. 07	46.25	48.50	2.25	4.86
Sept. 07	50.00	44.25	-5.75	-11.50
Oct. 07	44.75	40.00	-4.75	-10.61
Nov. 07	38.50	44.00	5.5	14.29
Dec. 07	44.25	42.00	-2.25	-5.08
Jan. 08	42.50	40.25	-2.25	-5.29
Feb. 08	42.00	40.75	-1.25	-2.98
March 08	43.00	37.50	-5.5	-12.79
April 08	37.75	43.75	6	15.89
May 08	44.50	40.75	-3.75	-8.43
June 08	41.50	40.50	-1	-2.41
July 08	40.50	36.50	-4	-9.88
Aug. 08	36.00	36.50	0.5	1.39
Sept. 08	35.00	33.75	-1.25	-3.57

Appendix 5(c)

Computations of the percentage monthly buy and hold abnormal return: (BHAR): East

Africa Cables

	EA CABLES (Event Firm)	BAT (K) Ltd (Control Firm)	
Month	Buy and hold Return %	Buy and hold Return %	BHAR %
Oct. 06	-18.84	-1.03	-17.81
Nov 06	-23.25	-0.51	-22.74
Dec. 06	11.63	1.03	10.60
Jan. 07	-3.54	10.00	-13.54
Feb 07	-20.10	-9.91	-10.19
March 07	16.55	10.56	5.99
April 07	1.23	-4.52	5.75
May 07	8.64	-4.26	12.90
June 07	10.47	2.79	7.67
July 07	0.00	-5.95	5.95
Aug. 07	4.86	-8.05	12.91
Sept. 07	-11.50	-10.00	-1.50
Oct. 07	-10.61	-6.12	-4.49
Nov. 07	14.29	-0.73	15.02
Dec. 07	-5.08	2.96	-8.05
Jan. 08	-5.29	2.27	-7.57
Feb. 08	-2.98	10.95	-13.93
March 08	-12.79	4.00	-16.79
April 08	15.89	2.56	13.33
May 08	-8.43	0.00	-8.43
June 08	-2.41	4.38	-6.78
July 08	-9.88	-3.03	-6.85
Aug. 08	1.39	0.64	0.75
Sept. 08	-3.57	0.00	-3.57

Appendix 6 (a)

ANALYSIS OF NSE FIRMS DATA FOR THE IDENTIFICATION OF EQUITY

BANK CONTROL FIRM Data for 25/3/2009

No. of shares outstanding	AGRICULTURAL	Par Value	Market value	BE/ME Ratio	Market capitalisation	%age of Equity Capital
19,599,999	Kakuzi Ord.5.00	5.00	20.75	0.24	406,699,979.25	0.88
60,000,000	Rea Vipingo Ord 5.00	5.00	13.05	0.38	783,000,000.00	1.69
228,055,500	Sasini Ltd Ord 1.00	1.00	5.35	0.19	1,220,096,925.00	2.64
	COMMERCIAL AND SERVICES					
203,581,223	AccessKenya Group Ltd Ord. 1.00	1.00	15.45	0.06	3,145,329,895.35	6.80
22,279,616	Car & General (K) Ltd Ord 5.00	5.00	34.00	0.15	757,506,944.00	1.64
582,709,440	CMC Holdings Ltd Ord 0.50	0.50	11.45	0.04	6,672,023,088.00	14.42
360,000	Hutchings Biemer Ltd Ord 5.00	5.00	20.25	0.25	7,290,000.00	0.02
461,615,484	Kenya Airways Ltd Ord 5.00	5.00	17.95	0.28	8,285,997,937.80	17.90
14,393,106	Marshalls (E.A.) Ltd Ord 5.00	5.00	24.00	0.21	345,434,544.00	0.75
142,610,520	Nation Media Group Ord. 2.50	2.50	125.00	0.02	17,826,315,000.00	38.51
40,000,000,000	Safaricom limited Ord 0.05	0.05	3.05	0.02	122,000,000,000.00	263.59
220,689,655	Scangroup Ltd Ord 1.00	1.00	17.85	0.06	3,939,310,341.75	8.51
73,275,029	Standard Group Ltd Ord 5.00	5.00	41.25	0.12	3,022,594,946.25	6.53

105,864,742	TPS Eastern Africa Ord 1.00	1.00	30.00	0.03	3,175,942,260.00	6.86
180,000,000	Uchumi Supermarket Ltd Ord 5.00	5.00	14.50	0.34	2,610,000,000.00	5.64
	FINANCE AND INVESTMENT					
1,357,884,000	Barclays Bank Ltd Ord 2.00	2.00	39.50	0.05	53,636,418,000.00	115.88
549,951,880	Centum Investment Ord 0.50	0.50	9.85	0.05	5,417,026,018.00	11.70
273,684,211	CFC Stanbic Holdings Ltd ord.5.00	5.00	47.00	0.11	12,863,157,917.00	27.79
163,037,108	Diamond Trust Bank Ord 4.00	4.00	54.50	0.07	8,885,522,386.00	19.20
370,277,702	Equity Bank Ltd Ord 5.00	5.00	125.00	0.04	46,284,712,750.00	100.00
230,000,000	Housing Finance Co Ltd Ord 5.00	5.00	13.90	0.36	3,197,000,000.00	6.91
45,000,000	Jubilee Holdings Ltd Ord 5.00	5.00	94.00	0.05	4,230,000,000.00	9.14
2,217,777,777	Kenya Commercial Bank Ltd Ord 1.00	1.00	17.00	0.06	37,702,222,209.00	81.46
600,000,000	Kenya Re-Insurance Ord 2.50	2.50	10.45	0.24	6,270,000,000.00	13.55
200,000,000	National Bank of Kenya Ltd Ord 5.00	5.00	27.50	0.18	5,500,000,000.00	11.88
296,692,383	NIC Bank Ltd Ord 5.00	5.00	27.50	0.18	8,159,040,532.50	17.63
40,000,000	Olympia Capital Holdings ltd Ord 5.00	5.00	9.00	0.56	360,000,000.00	0.78
48,000,000	Pan Africa Insurance Ord 5.00	5.00	44.00	0.11	2,112,000,000.00	4.56
271,967,810	Standard Chartered Bank Ltd Ord 5.00	5.00	136.00	0.04	36,987,622,160.00	79.91
3,499,212,000	The Co-operative Bank	1.00	6.10	0.16		46.12

	Ord 1.00				21,345,193,200.00	
	INDUSTRIAL AND ALLIED					
94,000,000	Athi River Mining Ord 5.00	5.00	63.50	0.08	5,969,000,000.00	12.90
19,525,446	B.O.C Kenya Ltd Ord 5.00	5.00	160.00	0.03	3,124,071,360.00	6.75
362,959,275	Bamburi Cement Ltd Ord 5.00	5.00	118.00	0.04	42,829,194,450.00	92.53
100,000,000	B.A .T Ltd Ord 10.00	10.00	149.00	0.07	14,900,000,000.00	32.19
11,326,755	Carbacid Investments Ltd Ord 5.00	5.00	137.00	0.04	1,551,765,435.00	3.35
23,727,000	Crown Berger Ltd Ord 5.00	5.00	12.10	0.41	287,096,700.00	0.62
202,500,000	E.A.Cables Ltd Ord 0.50	0.50	16.75	0.03	3,391,875,000.00	7.33
90,000,000	E.A.Portland Cement Ltd Ord 5.00	5.00	75.00	0.07	6,750,000,000.00	14.58
790,774,356	East African Breweries Ltd Ord 2.00	2.00	109.00	0.02	86,194,404,804.00	186.23
210,000,000	Eveready East Africa Ltd Ord.1.00	1.00	3.15	0.32	661,500,000.00	1.43
147,176,120	Kenya Oil Co Ltd Ord 0.50	0.50	45.00	0.01	6,622,925,400.00	14.31
79,128,000	K.P.L.C Ord 20.00	20.00	107.00	0.19	8,466,696,000.00	18.29
2,198,361,456	KenGen Ltd. Ord. 2.50	2.50	11.75	0.21	25,830,747,108.00	55.81
1,530,000,000	Mumias Sugar Co. Ltd Ord 2.00	2.00	4.00	0.50	6,120,000,000.00	13.22
278,342,393	Sameer Africa Ltd Ord 5.00	5.00	4.55	1.10	1,266,457,888.15	2.74
173,013,000	Total Kenya Ltd Ord 5.00	5.00	32.50	0.15	5,622,922,500.00	12.15
75,708,873	Unga Group Ltd Ord 5.00	5.00	7.05	0.71	533,747,554.65	1.15

	ALTERNATIVE INVESTMENT MARKET SEGMENT					
3,840,066	A.Baumann & Co.Ltd Ord 5.00	5.00	11.10	0.45	42,624,732.60	0.09
5,728,314	City Trust Ltd Ord 5.00	5.00	148.00	0.03	847,790,442.40	1.83
8,039,250	Eaagads Ltd Ord 1.25	1.25	36.00	0.03	289,413,000.00	0.63
35,403,790	Express Ltd Ord 5.00	5.00	8.65	0.58	306,242,783.50	0.66
8,756,320	Williamson Tea Ord 5.00	5.00	47.00	0.11	411,547,040.00	0.89
3,912,000	Kapchorua Tea Ord Ord 5.00	5.00	68.00	0.07	266,016,000.00	0.57
12,868,124	Kenya Orchards Ltd Ord 5.00	5.00	3.00	1.67	38,604,372.00	0.08
600,000	Limuru Tea Co. Ltd Ord 20.00	20.00	305.00	0.07	183,000,000.00	0.40

Appendix 6(b)

Computation of Equity Bank Monthly Return

Period	Share price		Returns (Ksh)	%age Returns
	Opening price (Ksh)	Closing price (Ksh)		
April 09	17.75	13.55	-4.2	-23.66
May 09	13.65	13.90	0.25	1.83
June 09	13.95	16.20	2.25	16.13
July 09	16.70	16.95	0.25	1.50
Aug. 09	16.80	14.35	-2.45	-14.58
Sept. 09	15.45	14.10	-1.35	-8.74
Oct. 09	14.10	14.35	0.25	1.77
Nov. 09	14.50	13.45	-1.05	-7.24

Dec. 09	13.10	14.35	1.25	9.54
Jan. 10	14.25	15.95	1.7	11.93
Feb. 10	15.70	15.60	-0.1	-0.64
March 10	15.60	15.75	0.15	0.96
April 10	15.95	18.55	2.6	16.30
May 10	18.50	22.50	4	21.62
June 10	22.75	24.00	1.25	5.49
July 10	23.75	23.75	0	0.00
Aug. 10	24.00	25.00	1	4.17
Sept. 10	25.00	26.75	1.75	7.00
Oct. 10	26.75	26.25	-0.5	-1.87
Nov. 10	25.75	25.50	-0.25	-0.97
Dec. 10	25.75	26.75	1	3.88
Jan. 11	26.75	29.50	2.75	10.28
Feb. 11	29.00	27.75	-1.25	-4.31
Mar-11	28.25	25.00	-3.25	-11.50

Appendix 6(c)

Computations of the percentage monthly buy and hold abnormal return: (BHAR):

Equity Bank Limited

	Equity Bank (Event Firm)	Standard Bank (Control Firm)	
Month	Buy and hold Return %	Buy and hold Return %	BHAR %
April 09	-23.66	-2.88	-20.78
May 09	1.83	6.20	-4.37
June 09	16.13	6.67	9.46
July 09	1.50	-4.86	6.36
Aug. 09	-14.58	0.00	-14.58
Sept. 09	-8.74	0.72	-9.46
Oct. 09	1.77	0.71	1.06
Nov. 09	-7.24	3.52	-10.76
Dec. 09	9.54	8.78	0.76

Jan. 10	11.93	8.33	3.60
Feb. 10	-0.64	4.71	-5.34
March 10	0.96	5.00	-4.04
April 10	16.30	4.74	11.56
May 10	21.62	10.20	11.42
June 10	5.49	5.21	0.28
July 10	0.00	14.93	-14.93
Aug. 10	4.17	-4.20	8.37
Sept. 10	7.00	9.56	-2.56
Oct. 10	-1.87	-5.47	3.61
Nov. 10	-0.97	-3.23	2.25
Dec. 10	3.88	-4.44	8.33
Jan. 11	10.28	4.63	5.65
Feb. 11	-4.31	2.95	-7.26
Mar-11	-11.50	-5.40	-6.11

Appendix 7 (a)

ANALYSIS OF NSE FIRMS DATA FOR THE IDENTIFICATION OF KENYA OIL

CONTROL FIRM Data for 5/7/2004

Shares outstanding	AGRICULTURAL	Par Value B/E	Market Price M/E	Market capitalisation	BE/ME	%age of Kenya oil capital
48,875,000	Brooke Bond Ltd Ord 10.00	10	70.50	3,445,687,500.00	0.14	8.08
19,599,999	Kakuzi Ord.5.00	5	29.00	568,399,971.00	0.17	1.33
60,000,000	Rea Vipingo Plantations Ltd Ord 5.00	5	9.00	540,000,000.00	0.56	1.27
38,009,250	Sasini Tea & Coffee Ltd Ord 5.00	5	19.00	722,175,750.00	0.26	1.69
	COMMERCIAL AND SERVICES					
22,279,560	Car & General (K) Ltd Ord 5.00	5	13.80	307,457,928.00	0.36	0.72
48,559,120	CMC Holdings Ltd Ord 5.00	5	52.00		0.10	5.92

				2,525,074,240.00		
360,000	Hutchings Biemer Ltd Ord 5.00	5	20.25	7,290,000.00	0.25	0.02
461,615,484	Kenya Airways Ltd Ord 5.00	5	12.70	5,862,516,646.80	0.39	13.75
14,393,106	Marshalls (E.A.) Ltd Ord 5.00	5	16.70	240,364,870.20	0.30	0.56
53,478,945	Nation Media Group Ord. 5.00	5	184.00	9,840,125,880.00	0.03	23.08
38,679,000	TPS Ltd Ord 5.00 (Serena)	5	30.00	1,160,370,000.00	0.17	2.72
60,000,000	Uchumi Supermarket Ltd Ord 5.00	5	17.55	1,053,000,000.00	0.28	2.47
	FINANCE AND INVESTMENT					
203,682,600	Barclays Bank Ltd Ord 10.00	10	201.00	40,940,202,600.00	0.05	96.02
144,000,000	C.F.C Bank Ltd ord.5.00	5	45.50	6,552,000,000.00	0.11	15.37
99,375,000	Diamond Trust Bank Kenya Ltd Ord 4.00	4	30.75	3,055,781,250.00	0.13	7.17
115,000,000	Housing Finance Co Ltd Ord 5.00	5	9.50	1,092,500,000.00	0.53	2.56
54,982,863	I.C.D.C Investments Co Ltd Ord 5.00	5	62.50	3,436,428,937.50	0.08	8.06
36,000,000	Jubilee Insurance Co. Ltd Ord 5.00	5	53.00	1,908,000,000.00	0.09	4.48
149,600,000	Kenya Commercial Bank Ltd Ord 10.00	10	56.00	8,377,600,000.00	0.18	19.65
200,000,000	National Bank of Kenya Ltd Ord 5.00	5	18.60	3,720,000,000.00	0.27	8.72
82,414,551	NIC Bank Ltd Ord 5.00	5	46.00	3,791,069,357.50	0.11	8.89
39,708,334	Pan Africa Insurance Holdings Ltd	5	28.00	1,111,833,352.00	0.18	2.61
271,967,810	Standard Chartered Bank Ltd Ord 5.00	5	130.00	35,355,815,300.00	0.04	82.92
	INDUSTRIAL AND ALLIED					

93,000,000	Athi River Mining Ord 5.00	5	18.95	1,762,350,000.00	0.26	4.13
19,525,446	B.O.C Kenya Ltd Ord 5.00	5	137.00	2,674,986,102.00	0.04	6.27
362,959,925	Bamburi Cement Ltd Ord 5.00	5	79.00	28,673,834,075.00	0.06	67.25
100,000,000	British American Tobacco Kenya Ltd Ord 10.00	10	205.00	20,500,000,000.00	0.05	48.08
9,438,963	Carbacid Investments Ltd Ord 5.00	5	115.00	1,085,480,768.00	0.04	2.55
21,570,000	Crown Berger Ltd Ord 5.00	5	31.00	668,670,000.00	0.16	1.57
10,000,000	Dunlop Kenya Ord 5.00	5	17.00	170,000,000.00	0.29	0.40
20,250,000	E.A.Cables Ltd Ord 5.00	5	30.75	622,687,500.00	0.16	1.46
90,000,000	E.A.Portland Cement Ltd Ord 5.00	5	49.75	4,477,500,000.00	0.10	10.50
109,830,026	East African Breweries Ltd Ord 10.00	10	445.00	48,874,361,570.00	0.02	114.63
278,342,400	Firestone East Africa Ltd Ord 5.00	5	10.05	2,797,341,120.00	0.50	6.56
100,796,120	Kenya Oil Co Ltd Ord 5.00	5	423.00	42,636,758,760.00	0.01	100.00
510,000,000	Mumias Sugar Co. Ltd Ord 2.00	2	11.15	5,686,500,000.00	0.18	13.34
79,128,000	Kenya Power & Lighting Ltd Ord 20.00	20	90.00	7,121,520,000.00	0.22	16.70
174,813,306	Total Kenya Ltd Ord 5.00	5	40.75	7,123,642,219.50	0.12	16.71
63,089,124	Unga Group Ltd Ord 5.00	5	14.25	899,020,017.00	0.35	2.11
	ALTERNATIVE INVESTMENT MARKET SEGMENT					
3,840,066	A.Baumann & Co.Ltd Ord 5.00	5	8.00	30,720,528.00	0.63	0.07
4,166,046	City Trust Ltd Ord 5.00	5	30.00		0.17	0.29

				124,981,380.00		
6,341,400	Eaagads Ltd Ord 1.25	1.25	17.00	107,803,800.00	0.07	0.25
32,185,264	Express Ltd Ord 5.00	5	9.00	289,667,376.00	0.56	0.68
8,756,320	Williamson Tea Kenya Ltd Ord 5.00	5	90.50	792,446,960.00	0.06	1.86
3,912,000	Kapchorua Tea Co. Ltd Ord Ord 5.00	5	100.00	391,200,000.00	0.05	0.92
7,800,000	Kenya Orchards Ltd Ord 5.00	5	3.80	29,640,000.00	1.32	0.07
600,000	Limuru Tea Co. Ltd Ord 20.00	20	231.00	138,600,000.00	0.09	0.33
65,133,359	Standard Newspapers Group Ord 5.00	5	48.75	3,175,251,251.25	0.10	7.45

Appendix 7(b)

Computation of Kenya Oil Monthly return

Period	Share price Ksh.		Returns	%age Returns
	Opening price KSh.	Closing price Ksh.		
Aug.04	50.00	42.50	-7.5	-15.00
September	42.50	50.50	8	18.82
Oct. 04	50.50	49.00	-1.5	-2.97
Nov. 04	49.00	61.50	12.5	25.51
Dec. 04	61.50	63.00	1.5	2.44
Jan.05	63.00	61.50	-1.5	-2.38
February	61.50	62.00	0.5	0.81
March	60.00	64.50	4.5	7.50
April	64.50	68.00	3.5	5.43
May	68.00	90.00	22	32.35
June 05	88.00	110.00	22	25.00
July	115.00	107.00	-8	-6.96
Aug.05	107.00	114.00	7	6.54

Sept.05	115.00	126.00	11	9.57
Oct.05	126.00	120.00	-6	-4.76
Nov. 05	120.00	122.00	2	1.67
Dec. 05	124.00	135.00	11	8.87
Jan. 06	140.00	136.00	-4	-2.86
Feb.06	139.00	129.00	-10	-7.19
March.06	130.00	126.00	-4	-3.08
April 06	134.00	129.00	-5	-3.73
May 06	129.00	131.00	2	1.55
June 06	131.00	126.00	-5	-3.82
July 06	126.00	120.00	-6	-4.76

Appendix 7(c)

Computations of the percentage monthly buy and hold abnormal return: (BHAR):

Kenya Oil Company limited

Month	Kenya Oil Co. Ltd	Standard Bank	%age BHAR
	(Event Firm)	(Control Firm)	
	Buy and hold Return %	Buy and hold Return %	
Aug.04	-15.00	-2.13	-12.87
September	18.82	-3.62	22.45
Oct. 04	-2.97	3.73	-6.70
Nov. 04	25.51	-3.60	29.11
Dec. 04	2.44	-8.96	11.39
Jan.05	-2.38	0.82	-3.20
February	0.81	-4.62	5.43
March	7.50	-5.60	13.10
April	5.43	5.93	-0.51
May	32.35	1.57	30.78
June 05	25.00	1.56	23.44
July	-6.96	6.92	-13.88
Aug.05	6.54	-0.71	7.26
Sept.05	9.57	-2.16	11.72
Oct.05	-4.76	1.47	-6.23
Nov. 05	1.67	0.00	1.67

Dec. 05	8.87	0.72	8.15
Jan. 06	-2.86	5.15	-8.00
Feb.06	-7.19	-2.11	-5.08
March.06	-3.08	0.00	-3.08
April 06	-3.73	-0.71	-3.02
May 06	1.55	2.16	-0.61
June 06	-3.82	1.41	-5.23
July 06	-4.76	1.99	-6.75

Appendix 8(a)

ANALYSIS OF NSE FIRMS DATA FOR THE IDENTIFICATION OF NATION

MEDIA CONTROL FIRM Data for 4/8/2008

Outstanding shares	AGRICULTURAL	Par value	Market price	BE/ME Ratio	Market capitalisation	%age of KCB Capital
48,875,000	Unilever Tea Kenya Ltd Ord 10.00	10.00	45.00	0.22	2,199,375,000.00	8.34
19,599,999	Kakuzi Ord.5.00	5.00	38.00	0.13	744,799,962.00	2.82
60,000,000	Rea Vipingo Plantations Ltd Ord 5.00	5.00	18.80	0.27	1,128,000,000.00	4.28
228,055,500	Sasini Ltd Ord 1.00	1.00	12.50	0.08	2,850,693,750.00	10.81
						0.00
	COMMERCIAL AND SERVICES					0.00
199,885,578	AccessKenya Group Ltd Ord. 1.00	1.00	32.75	0.03	6,546,252,679.50	24.81
22,279,616	Car & General (K) Ltd Ord 5.00	5.00	50.00	0.10	1,113,980,800.00	4.22
582,709,440	CMC Holdings Ltd Ord 0.50	0.50	21.00	0.02	12,236,898,240.00	46.38
360,000	Hutchings Biemer Ltd Ord 5.00	5.00	20.25	0.25	7,290,000.00	0.03

461,615,484	Kenya Airways Ltd Ord 5.00	5.00	48.25	0.10	22,272,947,103.00	84.42
14,393,106	Marshalls (E.A.) Ltd Ord 5.00	5.00	30.00	0.17	431,793,180.00	1.64
142,610,520	Nation Media Group Ord. 2.50	2.50	185.00	0.01	26,382,946,200.00	100.00
40,000,000,000	Safaricom limited Ord 0.05	0.05	5.75	0.01	230,000,000,000.00	871.78
159,000,000	Scangroup Ltd Ord 1.00	1.00	29.75	0.03	4,730,250,000.00	17.93
73,275,029	Standard Group Ltd Ord 5.00	5.00	54.00	0.09	3,956,851,566.00	15.00
105,864,742	TPS Eastern Africa (Serena) Ltd Ord 1.00	1.00	63.50	0.02	6,722,411,117.00	25.48
180,000,000	Uchumi Supermarket Ltd Ord 5.00	5.00	14.50	0.34	2,610,000,000.00	9.89
						0.00
	FINANCE AND INVESTMENT					0.00
1,357,884,000	Barclays Bank Ltd Ord 2.00	2.00	64.50	0.03	87,583,518,000.00	331.97
273,684,211	CFC Stanbic Holdings Ltd ord.5.00	5.00	105.00	0.05	28,736,842,155.00	108.92
163,037,108	Diamond Trust Bank Kenya Ltd Ord 4.00	4.00	90.00	0.04	14,673,339,720.00	55.62
370,277,702	Equity Bank Ltd Ord 5.00	5.00	289.00	0.02	107,010,255,878.00	405.60
230,000,000	Housing Finance Co Ltd Ord 5.00	5.00	27.50	0.18	6,325,000,000.00	23.97
549,951,880	Centum Investment Company Ltd Ord 0.50	0.50	24.75	0.02	13,611,309,030.00	51.59
45,000,000	Jubilee Holdings Ltd Ord 5.00	5.00	175.00	0.03	7,875,000,000.00	29.85
1,996,000,000	Kenya Commercial Bank Ltd Ord 1.00	1.00	30.00	0.03	59,880,000,000.00	226.96
600,000,000	Kenya Re-Insurance Corporation Ltd Ord 2.50	2.50	15.05	0.17	9,030,000,000.00	34.23
200,000,000	National Bank of Kenya Ltd Ord	5.00	63.00	0.08		47.76

	5.00				12,600,000,000.00	
296,692,383	NIC Bank Ltd Ord 5.00	5.00	54.50	0.09	16,169,734,873.50	61.29
48,000,000	Pan Africa Insurance Holdings Ltd Ord 5.00	5.00	68.00	0.07	3,264,000,000.00	12.37
271,967,810	Standard Chartered Bank Ltd Ord 5.00	5.00	197.00	0.03	53,577,658,570.00	203.08
	INDUSTRIAL AND ALLIED					0.00
94,000,000	Athi River Mining Ord 5.00	5.00	108.00	0.05	10,152,000,000.00	38.48
19,525,446	B.O.C Kenya Ltd Ord 5.00	5.00	160.00	0.03	3,124,071,360.00	11.84
362,959,275	Bamburi Cement Ltd Ord 5.00	5.00	191.00	0.03	69,325,221,525.00	262.77
100,000,000	British American Tobacco Kenya Ltd Ord 10.00	10.00	151.00	0.07	15,100,000,000.00	57.23
11,326,755	Carbacid Investments Ltd Ord 5.00	5.00	137.00	0.04	1,551,765,435.00	5.88
23,727,000	Crown Berger Ltd Ord 5.00	5.00	37.75	0.13	895,694,250.00	3.39
202,500,000	E.A.Cables Ltd Ord 0.50	0.50	36.75	0.01	7,441,875,000.00	28.21
90,000,000	E.A.Portland Cement Ltd Ord 5.00	5.00	112.00	0.04	10,080,000,000.00	38.21
790,774,356	East African Breweries Ltd Ord 2.00	2.00	187.00	0.01	147,874,804,572.00	560.49
210,000,000	Eveready East Africa Ltd Ord.1.00	1.00	5.35	0.19	1,123,500,000.00	4.26
147,176,120	Kenya Oil Co Ltd Ord 0.50	0.50	89.00	0.01	13,098,674,680.00	49.65
79,128,000	Kenya Power & Lighting Ltd Ord 20.00	20.00	198.00	0.10	15,667,344,000.00	59.38
2,198,361,456	KenGen Ltd. Ord. 2.50	2.50	23.00	0.11	50,562,313,488.00	191.65
1,530,000,000	Mumias Sugar Co. Ltd Ord 2.00	2.00	10.75	0.19	16,447,500,000.00	62.34
40,000,000	Olympia Capital Holdings ltd Ord	5.00	14.00	0.36		2.12

	5.00				560,000,000.00	
278,342,393	Sameer Africa Ltd Ord 5.00	5.00	8.60	0.58	2,393,744,579.80	9.07
173,013,000	Total Kenya Ltd Ord 5.00	5.00	30.00	0.17	5,190,390,000.00	19.67
63,090,728	Unga Group Ltd Ord 5.00	5.00	12.45	0.40	785,479,563.60	2.98
	ALTERNATIVE INVESTMENT MARKET SEGMENT					0.00
3,840,066	A.Baumann & Co.Ltd Ord 5.00	5.00	11.10	0.45	42,624,732.60	0.16
5,207,558	City Trust Ltd Ord 5.00	5.00	140.00	0.04	729,058,120.00	2.76
8,039,250	Eaagads Ltd Ord 1.25	1.25	33.00	0.04	265,295,250.00	1.01
35,403,790	Express Ltd Ord 5.00	5.00	19.00	0.26	672,672,010.00	2.55
8,756,320	Williamson Tea Kenya Ltd Ord 5.00	5.00	74.50	0.07	652,345,840.00	2.47
3,912,000	Kapchorua Tea Co. Ltd Ord Ord 5.00	5.00	75.00	0.07	293,400,000.00	1.11
12,868,124	Kenya Orchards Ltd Ord 5.00	5.00	3.00	1.67	38,604,372.00	0.15
600,000	Limuru Tea Co. Ltd Ord 20.00	20.00	338.00	0.06	202,800,000.00	0.77

Appendix 8(b)

Computation of Nation Media Monthly return

Period	Share price		Returns (Ksh)	%age Returns
	Opening price (Ksh)	Closing price (Ksh)		
Sept. 08	158.00	139.00	-19	-12.03
Oct. 08	139.00	112.00	-27	-19.42

Nov. 08	120.00	138.00	18	15.00
Dec. 08	137.00	144.00	7	5.11
Jan. 09	145.00	140.00	-5	-3.45
Feb. 09	139.00	115.00	-24	-17.27
March 09	114.00	128.00	14	12.28
Apr-09	126.00	132.00	6	4.76
May-09	132.00	127.00	-5	-3.79
June 09	127.00	144.00	17	13.39
July 09	141.00	130.00	-11	-7.80
Aug. 09	130.00	125.00	-5	-3.85
Sept. 09	125.00	119.00	-6	-4.80
Oct. 09	119.00	121.00	2	1.68
Nov. 09	122.00	123.00	1	0.82
Dec. 09	121.00	118.00	-3	-2.48
Jan. 10	117.00	118.00	1	0.85
Feb. 10	120.00	124.00	4	3.33
March 10	124.00	138.00	14	11.29
April 10	137.00	144.00	7	5.11
May 10	140.00	141.00	1	0.71
June 10	140.00	140.00	0	0.00
July 10	140.00	142.00	2	1.43
August 10	143.00	158.00	15	10.49

Appendix 8(c)

Computations of the percentage monthly buy and hold abnormal return: (BHAR):

Nation Media Group limited

Month	Nation Media Group	Kenya Airways	BHAR %
	(Event Firm)	(Control Firm)	
	Return %	Return %	
Sept. 08	-12.03	-8.47	-3.56
Oct. 08	-19.42	-37.79	18.37
Nov. 08	15.00	0.93	14.07
Dec. 08	5.11	7.55	-2.44
Jan. 09	-3.45	-3.48	0.03

Feb. 09	-17.27	-27.59	10.33
March 09	12.28	2.33	9.95
Apr-09	4.76	9.88	-5.11
May-09	-3.79	-3.33	-0.45
June 09	13.39	7.87	5.52
July 09	-7.80	4.17	-11.97
Aug. 09	-3.85	-10.00	6.15
Sept. 09	-4.80	-15.79	10.99
Oct. 09	1.68	19.75	-18.07
Nov. 09	0.82	35.05	-34.23
Dec. 09	-2.48	10.85	-13.33
Jan. 10	0.85	38.89	-38.03
Feb. 10	3.33	-1.00	4.33
March 10	11.29	23.08	-11.79
April 10	5.11	-4.24	9.35
May 10	0.71	-2.63	3.35
June 10	0.00	-17.26	17.26
July 10	1.43	0.54	0.89
August 10	10.49	-6.93	17.42

Appendix 9(a)

ANALYSIS OF NSE FIRMS DATA FOR THE IDENTIFICATION OF CMC

HOLDINGS CONTROL FIRM Data for 26/2/2007

Shares outstanding	AGRICULTURAL	Par value	Market value	BE/ME Ratio	Market capitalisation	%age of CMC Capital
48,875,000	Unilever Tea Kenya Ltd Ord 10.00	10	91.00	0.11	4,447,625,000.00	58.34
19,599,999	Kakuzi Ord.5.00	5	40.00	0.13	783,999,960.00	10.28
60,000,000	Rea Vipingo Plantations Ltd Ord 5.00	5	22.75	0.22	1,365,000,000.00	17.90
38,009,250	Sasini Tea & Coffee Ltd Ord 5.00	5	24.00	0.21	912,222,000.00	11.97
	COMMERCIAL AND					0.00

	SERVICES				-	
22,279,616	Car & General (K) Ltd Ord 5.00	5	48.75	0.10	1,086,131,280.00	14.25
48,559,120	CMC Holdings Ltd Ord 5.00	5	157.00	0.03	7,623,781,840.00	100.00
360,000	Hutchings Biemer Ltd Ord 5.00	5	20.25	0.25	7,290,000.00	0.10
461,615,484	Kenya Airways Ltd Ord 5.00	5	103.00	0.05	47,546,394,852.00	623.66
14,393,106	Marshalls (E.A.) Ltd Ord 5.00	5	29.00	0.17	417,400,074.00	5.47
71,305,260	Nation Media Group Ord. 5.00	5	300.00	0.02	21,391,578,000.00	280.59
159,000,000	Scangroup Ltd Ord 1.00	1	23.25	0.04	3,696,750,000.00	48.49
65,133,359	Standard Group Ltd Ord 5.00	5	70.00	0.07	4,559,335,130.00	59.80
89,865,588	TPS Eastern Africa (Serena) Ltd Ord 1.00	1	88.50	0.01	7,953,104,538.00	104.32
180,000,000	Uchumi Supermarket Ltd Ord 5.00	5			-	0.00
	FINANCE AND INVESTMENT				-	0.00
1,357,884,000	Barclays Bank Ltd Ord 2.00	2	71.50	0.03	97,088,706,000.00	1273.50
156,000,000	C.F.C Bank Ltd ord.5.00	5	125.00	0.04	19,500,000,000.00	255.78
139,746,093	Diamond Trust Bank Kenya Ltd Ord 4.00	4	68.50	0.06	9,572,607,370.50	125.56
90,564,550	Equity Bank Ltd Ord 5.00	5	220.00	0.02	19,924,201,000.00	261.34
115,000,000	Housing Finance Co Ltd Ord 5.00	5	31.00	0.16	3,565,000,000.00	46.76
549,951,880	I.C.D.C Investments Co Ltd Ord 0.50	0.5	28.00	0.02	15,398,652,640.00	201.98
36,000,000	Jubilee Holdings Ltd Ord 5.00	5	305.00	0.02	10,980,000,000.00	144.02

199,600,000	Kenya Commercial Bank Ltd Ord 10.00	10	225.00	0.04	44,910,000,000.00	589.08
200,000,000	National Bank of Kenya Ltd Ord 5.00	5	53.50	0.09	10,700,000,000.00	140.35
82,414,551	NIC Bank Ltd Ord 5.00	5	105.00	0.05	8,653,527,881.25	113.51
48,000,000	Pan Africa Insurance Holdings Ltd Ord 5.00	5	102.00	0.05	4,896,000,000.00	64.22
271,967,810	Standard Chartered Bank Ltd Ord 5.00	5	208.00	0.02	56,569,304,480.00	742.01
	INDUSTRIAL AND ALLIED				-	0.00
93,000,000	Athi River Mining Ord 5.00	5	75.50	0.07	7,021,500,000.00	92.10
19,525,446	B.O.C Kenya Ltd Ord 5.00	5	160.00	0.03	3,124,071,360.00	40.98
362,959,275	Bamburi Cement Ltd Ord 5.00	5	217.00	0.02	78,762,162,675.00	1033.11
100,000,000	British American Tobacco Kenya Ltd Ord 10.00	10	204.00	0.05	20,400,000,000.00	267.58
11,326,755	Carbacid Investments Ltd Ord 5.00	5	137.00	0.04	1,551,765,435.00	20.35
23,727,000	Crown Berger Ltd Ord 5.00	5	46.25	0.11	1,097,373,750.00	14.39
202,500,000	E.A.Cables Ltd Ord 0.50	0.5	43.75	0.01	8,859,375,000.00	116.21
90,000,000	E.A.Portland Cement Ltd Ord 5.00	5	147.00	0.03	13,230,000,000.00	173.54
658,978,630	East African Breweries Ltd Ord 2.00	2	145.00	0.01	95,551,901,350.00	1253.34
210,000,000	Eveready East Africa Ltd Ord.1.00	1	12.00	0.08	2,520,000,000.00	33.05
101,696,120	Kenya Oil Co Ltd Ord 0.50	0.5	100.00	0.01	10,169,612,000.00	133.39
79,128,000	Kenya Power & Lighting Ltd Ord 20.00	20	264.00	0.08	20,889,792,000.00	274.01

2,198,361,456	KenGen Ltd. Ord. 2.50	2.5	23.75	0.11	52,211,084,580.00	684.84
510,000,000	Mumias Sugar Co. Ltd Ord 2.00	2	32.75	0.06	16,702,500,000.00	219.08
10,000,000	Olympia Capital Holdings Ltd Ord 5.00	5	23.50	0.21	235,000,000.00	3.08
278,342,393	Sameer Africa Ltd Ord 5.00	5	18.75	0.27	5,218,919,868.75	68.46
175,064,706	Total Kenya Ltd Ord 5.00	5	29.25	0.17	5,120,642,650.50	67.17
63,090,728	Unga Group Ltd Ord 5.00	5	15.50	0.32	977,906,284.00	12.83
3,840,066	A.Baumann & Co.Ltd Ord 5.00	5	29.00	0.17	111,361,914.00	1.46
4,166,046	City Trust Ltd Ord 5.00	5	80.00	0.06	333,283,680.00	4.37
8,039,250	Eaagads Ltd Ord 1.25	1.25	67.00	0.02	538,629,750.00	7.07
35,403,790	Express Ltd Ord 5.00	5	26.00	0.19	920,498,540.00	12.07
8,756,320	Williamson Tea Kenya Ltd Ord 5.00	5	161.00	0.03	1,409,767,520.00	18.49
3,912,000	Kapchorua Tea Co. Ltd Ord Ord 5.00	5	122.00	0.04	477,264,000.00	6.26
12,868,124	Kenya Orchards Ltd Ord 5.00	5	5.00	1.00	64,340,620.00	0.84
600,000	Limuru Tea Co. Ltd Ord 20.00	20	350.00	0.06	210,000,000.00	2.75

Appendix 9(b)

Computation of CMC Holdings Monthly return

Period	Share price		Return (Ksh)	%age Return
	Opening price (Ksh)	Closing price (Ksh)		
March 07	16.80	15.00	-1.8	-10.71
April 07	15.45	13.70	-1.75	-11.33
May 07	13.75	13.90	0.15	1.09
June 07	13.85	14.00	0.15	1.08
July 07	13.95	15.40	1.45	10.39
Aug. 07	15.10	15.35	0.25	1.66
Sept. 07	15.55	15.35	-0.2	-1.29
Oct. 07	15.80	15.35	-0.45	-2.85
Nov. 07	15.45	16.00	0.55	3.56
Dec. 07	16.05	17.70	1.65	10.28
Jan. 08	16.90	17.50	0.6	3.55
Feb. 08	16.60	15.15	-1.45	-8.73
March 08	15.60	14.10	-1.5	-9.62
April 08	14.20	17.20	3	21.13
May 08	18.25	19.05	0.8	4.38
June 08	19.40	20.25	0.85	4.38
July 08	20.50	19.80	-0.7	-3.41
Aug. 08	19.85	19.95	0.1	0.50
Sept. 08	19.80	18.85	-0.95	-4.80
Oct. 08	18.90	14.75	-4.15	-21.96
Nov. 08	16.20	15.50	-0.7	-4.32
Dec. 08	15.30	16.00	0.7	4.58
Jan. 09	16.85	14.30	-2.55	-15.13
February 09	13.60	10.50	-3.1	-22.79

Appendix 9(c)

Computations of the percentage monthly buy and hold abnormal return: (BHAR):

CMC Holdings limited

	CMC Holdings (Event Firm)	TPS Eastern Africa (Control Firm)	
Month	Buy and hold Return %	Buy and hold Return %	BHAR %
March 07	-10.71	15.54	-26.25
April 07	-11.33	2.35	-13.68
May 07	1.09	-2.87	3.96
June 07	1.08	-12.79	13.87
July 07	10.39	17.69	-7.29
Aug. 07	1.66	-5.17	6.83
Sept. 07	-1.29	-4.22	2.93
Oct. 07	-2.85	-3.77	0.93
Nov. 07	3.56	2.72	0.84
Dec. 07	10.28	3.29	6.99
Jan. 08	3.55	-29.11	32.66
Feb. 08	-8.73	12.82	-21.56
March 08	-9.62	-1.43	-8.19
April 08	21.13	5.80	15.33
May 08	4.38	-1.32	5.70
June 08	4.38	-3.97	8.35
July 08	-3.41	-6.94	3.53
Aug. 08	0.50	3.05	-2.55
Sept. 08	-4.80	-14.81	10.02
Oct. 08	-21.96	-14.53	-7.43
Nov. 08	-4.32	-1.82	-2.50
Dec. 08	4.58	-2.78	7.35
Jan. 09	-15.13	-9.05	-6.09
February 09	-22.79	-44.32	21.53

Appendix 10 (a)

ANALYSIS OF NSE FIRMS DATA FOR THE IDENTIFICATION OF EA

BREWERIES CONTROL FIRM Data for 29/11/2004

Shares outstanding		Par value	Market price	Market capitalisation	BE/ME Ratio	%age of EA Breweries capital
	AGRICULTURAL					
48,875,000	Unilever Tea Kenya Ltd	10.00	92.00	4,496,500,000.00	0.11	5.99
19,599,999	Kakuzi	5.00	32.75	641,899,967.25	0.15	0.85
60,000,000	Rea Vipingo Plantations Ltd	5.00	10.00	600,000,000.00	0.50	0.80
38,009,250	Sasini Tea & Coffee Ltd	5.00	22.00	836,203,500.00	0.23	1.11
	COMMERCIAL AND SERVICES					0.00
22,279,560	Car & General (K) Ltd	5.00	15.00	334,193,400.00	0.33	0.44
48,559,120	CMC Holdings Ltd	5.00	59.00	2,864,988,080.00	0.08	3.81
360,000	Hutchings Biemer Ltd	5.00	20.25	7,290,000.00	0.25	0.01
461,615,484	Kenya Airways Ltd Ord 5.00	5.00	17.50	8,078,270,970.00	0.29	10.75
14,393,106	Marshalls (E.A.) Ltd Ord 5.00	5.00	15.00	215,896,590.00	0.33	0.29
53,478,945	Nation Media Group Ord. 5.00	5.00	190.00	10,160,999,550.00	0.03	13.52
38,679,000	TPS Ltd Ord 5.00 (Serena)	5.00	40.00	1,547,160,000.00	0.13	2.06
60,000,000	Uchumi Supermarket Ltd Ord 5.00	5.00	16.30	978,000,000.00	0.31	1.30
	FINANCE AND INVESTMENT					0.00
203,682,600	Barclays Bank Ltd Ord 10.00	10.00	217.00	44,199,124,200.00	0.05	58.83
172,800,000	C.F.C Bank Ltd ord.5.00	5.00	55.00	9,504,000,000.00	0.09	12.65
99,375,000	Diamond Trust Bank Kenya Ltd	4.00	26.25	2,608,593,750.00	0.15	3.47
115,000,000	Housing Finance Co Ltd Ord 5.00	5.00	9.25	1,063,750,000.00	0.54	1.42
54,982,863	I.C.D.C Investments Co Ltd Ord 5.00	5.00	60.00	3,298,971,780.00	0.08	4.39
36,000,000	Jubilee Insurance Co. Ltd Ord	5.00	57.00	2,052,000,000.00	0.09	2.73

	5.00					
199,600,000	Kenya Commercial Bank Ltd Ord 10.00	10.00	62.50	12,475,000,000.00	0.16	16.60
200,000,000	National Bank of Kenya Ltd Ord 5.00	5.00	18.00	3,600,000,000.00	0.28	4.79
82,414,551	NIC Bank Ltd Ord 5.00	5.00	50.00	4,120,727,562.50	0.10	5.48
39,708,334	Pan Africa Insurance Holdings Ltd	5.00	19.05	756,443,762.70	0.26	1.01
299,164,591	Standard Chartered Bank Ltd Ord 5.00	5.00	136.00	40,686,384,376.00	0.04	54.16
	INDUSTRIAL AND ALLIED					0.00
93,000,000	Athi River Mining Ord 5.00	5.00	15.25	1,418,250,000.00	0.33	1.89
19,525,446	B.O.C Kenya Ltd Ord 5.00	5.00	120.00	2,343,053,520.00	0.04	3.12
362,959,925	Bamburi Cement Ltd Ord 5.00	5.00	96.50	35,025,632,762.50	0.05	46.62
100,000,000	British American Tobacco Kenya Ltd Ord 10.00	10.00	200.00	20,000,000,000.00	0.05	26.62
9,438,963	Carbacid Investments Ltd Ord 5.00					0.00
23,727,000	Crown Berger Ltd Ord 5.00	5.00				0.00
10,000,000	Olympia Capital Holdings ltd Ord 5.00	5.00	16.85	168,500,000.00	0.30	0.22
20,250,000	E.A.Cables Ltd Ord 5.00	5.00	37.00	749,250,000.00	0.14	1.00
90,000,000	E.A.Portland Cement Ltd Ord 5.00	5.00	46.00	4,140,000,000.00	0.11	5.51
658,979,900	East African Breweries Ltd Ord 2.00	2.00	114.00	75,123,708,600.00	0.02	99.99
278,342,400	Firestone East Africa Ltd Ord 5.00	5.00	13.00	3,618,451,200.00	0.38	4.82
100,796,120	Kenya Oil Co Ltd Ord 0.50	0.50	60.00	6,047,767,200.00	0.01	8.05
510,000,000	Mumias Sugar Co. Ltd Ord 2.00	2.0	10.85	5,533,500,000.00	0.18	7.37
79,128,000	Kenya Power & Lighting Ltd Ord 20.00	20.0	86.50	6,844,572,000.00	0.23	9.11
174,813,306	Total Kenya Ltd Ord 5.00	5.00	38.00	6,642,905,628.00	0.13	8.84
63,089,124	Unga Group Ltd Ord 5.00	5.00	11.00	693,980,364.00	0.45	0.92
3,840,066	A.Baumann & Co.Ltd Ord 5.00	5.00	7.90	30,336,521.40	0.63	0.04
4,166,046	City Trust Ltd Ord 5.00	5.00	53.00	220,800,438.00	0.09	0.29

6,341,400	Eaagads Ltd Ord 1.25	1.25	17.00	107,803,800.00	0.07	0.14
32,185,264	Express Ltd Ord 5.00	5.00	8.00	257,482,112.00	0.63	0.34
8,756,320	Williamson Tea Kenya Ltd Ord 5.00	5.00	100.00	875,632,000.00	0.05	1.17
3,912,000	Kapchorua Tea Co. Ltd Ord Ord 5.00	5.00	100.00	391,200,000.00	0.05	0.52
7,800,000	Kenya Orchards Ltd Ord 5.00	5.00	3.80	29,640,000.00	1.32	0.04
600,000	Limuru Tea Co. Ltd Ord 20.00	20.00	355.00	213,000,000.00	0.06	0.28
65,133,359	Standard Group Ltd Ord 5.00	5.00	44.50	2,898,434,475.50	0.11	3.86

Appendix 10(b)

Computation of EA Breweries Monthly return

Period	Share price Ksh			
	Opening price (Ksh)	Closing price (Ksh)	Return (Ksh)	%age Return
Dec. 04	114.00	99.00	-15	-13.16
Jan.05	100.00	108.00	8	8.00
Feb.05	106.00	103.00	-3	-2.83
March	103.00	110.00	7	6.80
April	110.00	114.00	4	3.64
May	114.00	134.00	20	17.54
June 05	139.00	149.00	10	7.19
July	149.00	153.00	4	2.68
Aug.05	153.00	150.00	-3	-1.96
Sept.05	149.00	146.00	-3	-2.01
Oct.05	146.00	139.00	-7	-4.79
Nov. 05	139.00	138.00	-1	-0.72
Dec. 05	138.00	135.00	-3	-2.17
Jan. 06	135.00	135.00	0	0.00
Feb.06	135.00	130.00	-5	-3.70
March.06	130.00	133.00	3	2.31
April 06	133.00	131.00	-2	-1.50

May 06	130.00	140.00	10	7.69
June 06	138.00	138.00	0	0.00
July 06	138.00	134.00	-4	-2.90
August	134.00	144.00	10	7.46
Sept. 06	144.00	147.00	3	2.08
Oct. 06	150.00	140.00	-10	-6.67
Nov. 06	143.00	140.00	-3	-2.10

Appendix 10(c)

Computations of the percentage monthly buy and hold abnormal return: (BHAR): East

Africa Breweries limited

Month	EABL (Event Firm)	Standard Bank (Control Firm)	BHAR %
	Buy and hold Return %	Buy and hold Return %	
Dec. 04	-13.16	-8.96	-4.20
Jan.05	8.00	0.82	7.18
Feb.05	-2.83	-4.62	1.79
March	6.80	-5.60	12.40
April	3.64	5.93	-2.30
May	17.54	1.57	15.97
June 05	7.19	1.56	5.63
July	2.68	6.92	-4.24
Aug.05	-1.96	-0.71	-1.25
Sept.05	-2.01	-2.16	0.14
Oct.05	-4.79	1.47	-6.27
Nov. 05	-0.72	0.00	-0.72
Dec. 05	-2.17	0.72	-2.90
Jan. 06	0.00	5.15	-5.15
Feb.06	-3.70	-2.11	-1.59
March.06	2.31	0.00	2.31
April 06	-1.50	-0.71	-0.79
May 06	7.69	2.16	5.53
June 06	0.00	1.41	-1.41

July 06	-2.90	1.99	-4.89
August	7.46	1.30	6.16
Sept. 06	2.08	5.03	-2.95
Oct. 06	-6.67	22.02	-28.69
Nov. 06	-2.10	-6.28	4.18

Appendix 11 (a)

ANALYSIS OF NSE FIRMS DATA FOR THE IDENTIFICATION OF KENYA

COMMERCIAL BANK CONTROL FIRM: Data for 3/4/2007

Outstanding shares	AGRICULTURAL	Par value	Market price	BE/ME Ratio	Market capitalisation	%age of KCB Capital
48,875,000	Unilever Tea Kenya Ltd Ord 10.00	10.00	75.00	0.13	3,665,625,000.00	8.07
19,599,999	Kakuzi Ord.5.00	5.00	37.00	0.14	725,199,963.00	1.60
60,000,000	Rea Vipingo Plantations Ltd Ord 5.00	5.00	21.75	0.23	1,305,000,000.00	2.87
190,046,250	Sasini Ltd Ord 1.00	1.00	20.00	0.05	3,800,925,000.00	8.37
	COMMERCIAL AND SERVICES				-	0.00
22,279,616	Car & General (K) Ltd Ord 5.00	5.00	40.00	0.13	891,184,640.00	1.96
485,591,200	CMC Holdings Ltd Ord 0.50	0.50	15.95	0.03	7,745,179,640.00	17.06
360,000	Hutchings Biemer Ltd Ord 5.00	5.00	20.25	0.25	7,290,000.00	0.02
461,615,484	Kenya Airways Ltd Ord 5.00	5.00	93.50	0.05	43,161,047,754.00	95.05
14,393,106	Marshalls (E.A.) Ltd Ord 5.00	5.00	24.00	0.21	345,434,544.00	0.76
71,305,260	Nation Media Group Ord. 5.00	5.00	232.00	0.02	16,542,820,320.00	36.43

159,000,000	Scangroup Ltd Ord 1.00	1.00	24.50	0.04	3,895,500,000.00	8.58
65,133,359	Standard Group Ltd Ord 5.00	5.00	60.00	0.08	3,908,001,540.00	8.61
89,865,588	TPS Eastern Africa (Serena) Ltd Ord 1.00	1.00	83.00	0.01	7,458,843,804.00	16.43
180,000,000	Uchumi Supermarket Ltd Ord 5.00	5.00	14.50	0.34	2,610,000,000.00	5.75
	FINANCE AND INVESTMENT				-	0.00
1,357,884,000	Barclays Bank Ltd Ord 2.00	2.00	69.00	0.03	93,693,996,000.00	206.33
156,000,000	C.F.C Bank Ltd ord.5.00	5.00	118.00	0.04	18,408,000,000.00	40.54
139,746,093	Diamond Trust Bank Kenya Ltd Ord 4.00	4.00	72.50	0.06	10,131,591,742.50	22.31
90,564,550	Equity Bank Ltd Ord 5.00	5.00	272.00	0.02	24,633,557,600.00	54.25
115,000,000	Housing Finance Co Ltd Ord 5.00	5.00	27.25	0.18	3,133,750,000.00	6.90
549,951,880	I.C.D.C Investments Co Ltd Ord 0.50	0.50	25.25	0.02	13,886,284,970.00	30.58
36,000,000	Jubilee Holdings Ltd Ord 5.00	5.00	237.00	0.02	8,532,000,000.00	18.79
1,996,000,000	Kenya Commercial Bank Ltd Ord 1.00	1.00	22.75	0.04	45,409,000,000.00	100.00
200,000,000	National Bank of Kenya Ltd Ord 5.00	5.00	49.00	0.10	9,800,000,000.00	21.58
82,414,551	NIC Bank Ltd Ord 5.00	5.00	96.00	0.05	7,911,796,920.00	17.42
48,000,000	Pan Africa Insurance Holdings Ltd Ord 5.00	5.00	81.50	0.06	3,912,000,000.00	8.62
271,967,810	Standard Chartered Bank Ltd Ord 5.00	5.00	185.00	0.03	50,314,044,850.00	110.80
94,000,000	Athi River Mining Ord 5.00	5.00	72.00	0.07	6,768,000,000.00	14.90
19,525,446	B.O.C Kenya Ltd Ord 5.00	5.00	16000	0.03		6.88

					3,124,071,360.00	
362,959,275	Bamburi Cement Ltd Ord 5.00	5.00	200.00	0.03	72,591,855,000.00	159.86
100,000,000	British American Tobacco Kenya Ltd Ord 10.00	10.00	193.00	0.05	19,300,000,000.00	42.50
11,326,755	Carbacid Investments Ltd Ord 5.00	5.00	137.00	0.04	1,551,765,435.00	3.42
23,727,000	Crown Berger Ltd Ord 5.00	5.00	40.25	0.12	955,011,750.00	2.10
202,500,000	E.A.Cables Ltd Ord 0.50	0.50	40.00	0.01	8,100,000,000.00	17.84
90,000,000	E.A.Portland Cement Ltd Ord 5.00	5.00	123.00	0.04	11,070,000,000.00	24.38
658,978,630	East African Breweries Ltd Ord 2.00	2.00	141.00	0.01	92,915,986,830.00	204.62
210,000,000	Eveready East Africa Ltd Ord.1.00	1.00	8.85	0.11	1,858,500,000.00	4.09
101,696,120	Kenya Oil Co Ltd Ord 0.50	0.50	100.00	0.01	10,169,612,000.00	22.40
79,128,000	Kenya Power & Lighting Ltd Ord 20.00	20.00	203.00	0.10	16,062,984,000.00	35.37
2,198,361,456	KenGen Ltd. Ord. 2.50	2.50	21.00	0.12	46,165,590,576.00	101.67
510,000,000	Mumias Sugar Co. Ltd Ord 2.00	2.00	33.00	0.06	16,830,000,000.00	37.06
10,000,000	Olympia Capital Holdings ltd Ord 5.00	5.00	16.00	0.31	160,000,000.00	0.35
278,342,393	Sameer Africa Ltd Ord 5.00	5.00	15.15	0.33	4,216,887,253.95	9.29
175,064,706	Total Kenya Ltd Ord 5.00	5.00	32.00	0.16	5,602,070,592.00	12.34
63,090,728	Unga Group Ltd Ord 5.00	5.00	16.00	0.31	1,009,451,648.00	2.22
3,840,066	A.Baumann & Co.Ltd Ord 5.00	5.00	29.00	0.17	111,361,914.00	0.25
4,166,046	City Trust Ltd Ord 5.00	5.00	82.00	0.06	341,615,772.00	0.75

8,039,250	Eaagads Ltd Ord 1.25	1.25	67.00	0.02	538,629,750.00	1.19
35,403,790	Express Ltd Ord 5.00	5.00	22.00	0.23	778,883,380.00	1.72
8,756,320	Williamson Tea Kenya Ltd Ord 5.00	5.00	134.00	0.04	1,173,346,880.00	2.58
3,912,000	Kapchorua Tea Co. Ltd Ord Ord 5.00	5.00	120.00	0.04	469,440,000.00	1.03
12,868,124	Kenya Orchards Ltd Ord 5.00	5.00	5.00	1.00	64,340,620.00	0.14
600,000	Limuru Tea Co. Ltd Ord 20.00	20.00	400.00	0.05	240,000,000.00	0.53

Appendix 11(b)

Computation of KCB Monthly return

Period	Share price		Return (Ksh)	%age Return
	Opening price (Ksh)	Closing price (Ksh)		
May 07	25.00	23.25	-1.75	-7.00
June 07	23.00	23.50	0.5	2.17
July 07	23.75	28.25	4.5	18.95
Aug. 07	28.50	27.00	-1.5	-5.26
Sept. 07	26.75	25.50	-1.25	-4.67
Oct. 07	25.50	25.50	0	0.00
Nov. 07	25.25	27.25	2	7.92
Dec. 07	27.25	26.75	-0.5	-1.83
Jan. 08	27.50	25.25	-2.25	-8.18
Feb. 08	25.25	28.00	2.75	10.89
March 08	28.75	26.00	-2.75	-9.57
April 08	26.00	33.25	7.25	27.88
May 08	33.00	32.25	-0.75	-2.27
June 08	32.25	31.00	-1.25	-3.88
July 08	30.75	30.75	0	0.00

Aug. 08	30.25	27.00	-3.25	-10.74
Sept. 08	28.00	25.25	-2.75	-9.82
Oct. 08	25.50	19.80	-5.7	-22.35
Nov. 08	21.75	21.00	-0.75	-3.45
Dec. 08	21.00	23.50	2.5	11.90
Jan. 09	23.75	20.50	-3.25	-13.68
Feb. 09	20.00	15.50	-4.5	-22.50
March 09	15.50	19.75	4.25	27.42
April 09	19.40	20.00	0.6	3.093

Appendix 11(c)

Computations of the percentage monthly buy and hold abnormal return: (BHAR):

Kenya Commercial Bank limited

Month	KCB (Event Firm)	Standard Bank (Control Firm)	BHAR %
	Buy and hold Return %	Buy and hold Return %	
May 07	-7.00	-1.10	-5.90
June 07	2.17	8.52	-6.35
July 07	18.95	-0.53	19.48
Aug. 07	-5.26	1.60	-6.86
Sept. 07	-4.67	-2.07	-2.60
Oct. 07	0.00	-2.13	2.13
Nov. 07	7.92	14.92	-7.00
Dec. 07	-1.83	0.00	-1.83
Jan. 08	-8.18	8.02	-16.20
Feb. 08	10.89	6.47	4.42
March 08	-9.57	-6.57	-2.99
April 08	27.88	3.48	24.40
May 08	-2.27	4.88	-7.15
June 08	-3.88	-2.78	-1.10
July 08	0.00	-5.24	5.24
Aug. 08	-10.74	-4.06	-6.68
Sept. 08	-9.82	-3.19	-6.63

Oct. 08	-22.35	-8.84	-13.51
Nov. 08	-3.45	-7.51	4.07
Dec. 08	11.90	0.00	11.90
Jan. 09	-13.68	0.63	-14.31
Feb. 09	-22.50	-12.50	-10.00
March 09	27.42	-0.71	28.13
April 09	3.09	-2.88	5.97

Appendix 12 (a)

ANALYSIS OF NSE FIRMS DATA FOR THE IDENTIFICATION OF SASINI TEA AND COFFEE CONTROL FIRM: Data for 15/2/2007

Shares outstanding	AGRICULTURAL	Par value	Market price	BE/ME Ratio	Market capitalisation	%age of Sasini capital
48,875,000	Unilever Tea Kenya Ltd Ord 10.00	10.00	90.00	0.11	4,398,750,000.00	758.87
19,599,999	Kakuzi Ord.5.00	5.00	42.75	0.12	837,899,957.25	144.55
60,000,000	Rea Vipingo Plantations Ltd Ord 5.00	5.00	24.50	0.20	1,470,000,000.00	253.61
38,009,250	Sasini Tea & Coffee Ltd Ord 5.00	5.00	15.25	0.33	579,641,062.50	100.00
	COMMERCIAL AND SERVICES					0.00
22,279,616	Car & General (K) Ltd Ord 5.00	5.00	53.00	0.09	1,180,819,648.00	203.72
48,559,120	CMC Holdings Ltd Ord 5.00	5.00	166.00	0.03	8,060,813,920.00	1390.66
360,000	Hutchings Biemer Ltd Ord 5.00	5.00	20.25	0.25	7,290,000.00	1.26
461,615,484	Kenya Airways Ltd Ord 5.00	5.00	109.00	0.05	50,316,087,756.00	8680.56
14,393,106	Marshalls (E.A.) Ltd Ord 5.00	5.00	29.00	0.17	417,400,074.00	72.01

71,305,260	Nation Media Group Ord. 5.00	5.00	300.00	0.02	21,391,578,000.00	3690.49
159,000,000	Scangroup Ltd Ord 1.00	1.00	23.25	0.04	3,696,750,000.00	637.77
65,133,359	Standard Group Ltd Ord 5.00	5.00	76.00	0.07	4,950,135,284.00	854.00
89,865,588	TPS Eastern Africa (Serena) Ltd Ord 1.00	1.00	91.00	0.01	8,177,768,508.00	1410.83
180,000,000	Uchumi Supermarket Ltd Ord 5.00	5.00				0.00
	FINANCE AND INVESTMENT					0.00
1,357,884,000	Barclays Bank Ltd Ord 2.00	2.00	78.50	0.03	106,593,894,000.00	18389.64
156,000,000	C.F.C Bank Ltd ord.5.00	5.00	133.00	0.04	20,748,000,000.00	3579.46
139,746,093	Diamond Trust Bank Kenya Ltd Ord 4.00	4.00	76.00	0.05	10,620,703,068.00	1832.29
90,564,550	Equity Bank Ltd Ord 5.00	5.00	222.00	0.02	20,105,330,100.00	3468.58
115,000,000	Housing Finance Co Ltd Ord 5.00	5.00	34.75	0.14	3,996,250,000.00	689.44
549,951,880	I.C.D.C Investments Co Ltd Ord 0.50	0.50	29.00	0.02	15,948,604,520.00	2751.46
36,000,000	Jubilee Holdings Ltd Ord 5.00	5.00	310.00	0.02	11,160,000,000.00	1925.33
199,600,000	Kenya Commercial Bank Ltd Ord 10.00	10.00	251.00	0.04	50,099,600,000.00	8643.21
200,000,000	National Bank of Kenya Ltd Ord 5.00	5.00	54.50	0.09	10,900,000,000.00	1880.47
82,414,551	NIC Bank Ltd Ord 5.00	5.00	124.00	0.04	10,219,404,355.00	1763.06
48,000,000	Pan Africa Insurance Holdings Ltd Ord 5.00	5.00	114.00	0.04	5,472,000,000.00	944.03
271,967,810	Standard Chartered Bank Ltd Ord 5.00	5.00	216.00	0.02	58,745,046,960.00	10134.73
	INDUSTRIAL AND ALLIED					0.00
93,000,000	Athi River Mining Ord 5.00	5.00	80.00	0.06	7,440,000,000.00	1283.55

19,525,446	B.O.C Kenya Ltd Ord 5.00	5.00	160.00	0.03	3,124,071,360.00	538.97
362,959,275	Bamburi Cement Ltd Ord 5.00	5.00	210.00	0.02	76,221,447,750.00	13149.77
100,000,000	British American Tobacco Kenya Ltd Ord 10.00	10.00	240.00	0.04	24,000,000,000.00	4140.49
11,326,755	Carbacid Investments Ltd Ord 5.00	5.00	137.00	0.04	1,551,765,435.00	267.71
23,727,000	Crown Berger Ltd Ord 5.00	5.00	50.00	0.10	1,186,350,000.00	204.67
202,500,000	E.A.Cables Ltd Ord 0.50	0.50	48.50	0.01	9,821,250,000.00	1694.37
90,000,000	E.A.Portland Cement Ltd Ord 5.00	5.00	140.00	0.04	12,600,000,000.00	2173.76
658,978,630	East African Breweries Ltd Ord 2.00	2.00	155.00	0.01	102,141,687,650.00	17621.54
210,000,000	Eveready East Africa Ltd Ord.1.00	1.00	12.40	0.08	2,604,000,000.00	449.24
101,696,120	Kenya Oil Co Ltd Ord 0.50	0.50	112.00	0.00	11,389,965,440.00	1965.00
79,128,000	Kenya Power & Lighting Ltd Ord 20.00	20.00	270.00	0.07	21,364,560,000.00	3685.83
2,198,361,456	KenGen Ltd. Ord. 2.50	2.50	22.50	0.11	49,463,132,760.00	8533.41
510,000,000	Mumias Sugar Co. Ltd Ord 2.00	2.00	35.50	0.06	18,105,000,000.00	3123.48
10,000,000	Olympia Capital Holdings ltd Ord 5.00	5.00	25.00	0.20	250,000,000.00	43.13
278,342,393	Sameer Africa Ltd Ord 5.00	5.00	18.00	0.28	5,010,163,074.00	864.36
175,064,706	Total Kenya Ltd Ord 5.00	5.00	32.50	0.15	5,689,602,945.00	981.57
63,090,728	Unga Group Ltd Ord 5.00	5.00	17.00	0.29	1,072,542,376.00	185.04
3,840,066	A.Baumann & Co.Ltd Ord 5.00	5.00	29.00	0.17	111,361,914.00	19.21
4,166,046	City Trust Ltd Ord 5.00	5.00	80.00	0.06		57.50

					333,283,680.00	
8,039,250	Eaagads Ltd Ord 1.25	1.25	66.00	0.02	530,590,500.00	91.54
35,403,790	Express Ltd Ord 5.00	5.00	26.00	0.19	920,498,540.00	158.80
8,756,320	Williamson Tea Kenya Ltd Ord 5.00	5.00	145.00	0.03	1,269,666,400.00	219.04
3,912,000	Kapchorua Tea Co. Ltd Ord Ord 5.00	5.00	120.00	0.04	469,440,000.00	80.99
12,868,124	Kenya Orchards Ltd Ord 5.00	5.00	5.00	1.00	64,340,620.00	11.10
600,000	Limuru Tea Co. Ltd Ord 20.00	20.00	350.00	0.06	210,000,000.00	36.23

Appendix 12(b)

Computation of Sasini Tea and coffee Monthly return

Period	Share price		Return (Ksh)	%age Return
	Opening price (Ksh)	Closing price (Ksh)		
March 07	20.25	18.30	-1.95	-9.63
April 07	19.10	19.10	0	0.00
May 07	19.85	17.95	-1.9	-9.57
June 07	17.95	18.70	0.75	4.18
July 07	18.30	18.60	0.3	1.64
Aug. 07	19.70	18.40	-1.3	-6.60
Sept. 07	18.95	17.50	-1.45	-7.65
Oct. 07	17.60	16.35	-1.25	-7.10
Nov. 07	16.40	17.40	1	6.10
Dec. 07	17.65	18.00	0.35	1.98
Jan. 08	17.05	13.10	-3.95	-23.17
Feb. 08	14.00	14.90	0.9	6.43
March 08	15.05	13.85	-1.2	-7.97

April 08	13.80	16.40	2.6	18.84
May 08	16.20	14.00	-2.2	-13.58
June 08	14.10	14.20	0.1	0.71
July 08	14.55	12.95	-1.6	-11.00
Aug. 08	12.65	11.70	-0.95	-7.51
Sept. 08	11.50	7.75	-3.75	-32.61
Oct. 08	8.00	7.65	-0.35	-4.38
Nov. 08	8.35	6.10	-2.25	-26.95
Dec. 08	6.15	7.00	0.85	13.82
Jan.09	7.60	5.90	-1.7	-22.37
Feb. 09	6.25	4.40	-1.85	-29.6

Appendix 12(c)

Computations of the percentage monthly buy and hold abnormal return: (BHAR):

Sasini Tea and coffee Limited

	Sasini Tea and coffee Ltd (Event Firm)	Kapchorua Tea Co. Ltd (Control Firm)	
Month	Buy and hold Return %	Buy and hold Return %	BHAR %
March 07	-9.63	-11.72	2.09
April 07	0.00	7.14	-7.14
May 07	-9.57	-6.67	-2.91
June 07	4.18	0.00	4.18
July 07	1.64	2.83	-1.19
Aug. 07	-6.60	-16.97	10.37
Sept. 07	-7.65	1.66	-9.31
Oct. 07	-7.10	-5.26	-1.84
Nov. 07	6.10	0.00	6.10
Dec. 07	1.98	0.00	1.98
Jan. 08	-23.17	0.00	-23.17
Feb. 08	6.43	-2.78	9.21
March 08	-7.97	-14.29	6.31
April 08	18.84	5.56	13.29

May 08	-13.58	3.95	-17.53
June 08	0.71	3.80	-3.09
July 08	-11.00	-5.06	-5.93
Aug. 08	-7.51	0.00	-7.51
Sept. 08	-32.61	0.00	-32.61
Oct. 08	-4.38	-6.67	2.29
Nov. 08	-26.95	0.00	-26.95
Dec. 08	13.82	-2.86	16.68
Jan.09	-22.37	0.00	-22.37
Feb. 09	-29.60	0.00	-29.60

Appendix 13 (a)

ANALYSIS OF NSE FIRMS DATA FOR THE IDENTIFICATION OF KPLC

CONTROL FIRM: Data for 19/11/2010

Shares outstanding	AGRICULTURAL	Par Value	Market value	BE/ME Ratio	Market capitalisation	%age of KPLC Capital
19,599,999	Kakuzi Ord.5.00	5.00	83.00	0.06	1,626,799,917.00	9.14
60,000,000	Rea Vipingo Plantations Ltd Ord 5.00	5.00	16.55	0.30	993,000,000.00	5.58
228,055,500	Sasini Ltd Ord 1.00	1.00	13.80	0.07	3,147,165,900.00	17.68
	COMMERCIAL AND SERVICES				-	0.00
207,227,120	AccessKenya Group Ltd Ord. 1.00	1.00	16.45	0.06	3,408,886,124.00	19.15
22,279,616	Car & General (K) Ltd Ord 5.00	5.00	48.00	0.10	1,069,421,568.00	6.01
582,709,440	CMC Holdings Ltd Ord 0.50	0.50	13.25	0.04	7,720,900,080.00	43.37
360,000	Hutchings Biemer Ltd Ord 5.00	5.00	20.25	0.25	7,290,000.00	0.04
461,615,484	Kenya Airways Ltd Ord	5.00	43.75	0.11		113.43

	5.00				20,195,677,425.00	
14,393,106	Marshalls (E.A.) Ltd Ord 5.00	5.00	14.10	0.35	202,942,794.60	1.14
157,118,572	Nation Media Group Ord. 2.50	2.50	167.00	0.01	26,238,801,524.00	147.38
40,000,000,000	Safaricom Ltd Ord 0.05	0.05	4.50	0.01	180,000,000,000.00	1011.02
234,570,024	Scangroup Ltd Ord 1.00	1.00	62.50	0.02	14,660,626,500.00	82.35
74,059,026	Standard Group Ltd Ord 5.00	5.00	46.00	0.11	3,406,715,196.00	19.13
156,937,967	TPS Eastern Africa Ltd Ord 1.00	1.00	68.00	0.01	10,671,781,756.00	59.94
180,000,000	Uchumi Supermarket Ltd Ord 5.00	5.00			-	0.00
	FINANCE AND INVESTMENT				-	0.00
1,357,884,000	Barclays Bank Ltd Ord 2.00	2.00	63.00	0.03	85,546,692,000.00	480.50
604,947,068	Centum Investment Co Ltd Ord 0.50	0.50	22.75	0.02	13,762,545,797.00	77.30
273,684,211	CFC Stanbic Holdings Ltd ord.5.00	5.00	85.00	0.06	23,263,157,935.00	130.66
163,037,108	Diamond Trust Bank Ord 4.00	4.00	133.00	0.03	21,683,935,364.00	121.79
3,702,777,020	Equity Bank Ltd Ord 0.50	0.50	26.25	0.02	97,197,896,775.00	545.94
230,000,000	Housing Finance Co Ltd Ord 5.00	5.00	26.75	0.19	6,152,500,000.00	34.56
49,500,000	Jubilee Holdings Ltd Ord 5.00	5.00	197.00	0.03	9,751,500,000.00	54.77
2,950,259,818	Kenya Commercial Bank Ltd Ord 1.00	1.00	22.00	0.05	64,905,715,996.00	364.56
600,000,000	Kenya Re-Insurance Ord 2.50	2.50	11.45	0.22	6,870,000,000.00	38.59
280,000,000	National Bank of Kenya Ltd Ord 5.00	5.00	38.75	0.13	10,850,000,000.00	60.94

358,997,784	NIC Bank Ltd Ord 5.00	5.00	48.00	0.10	17,231,893,632.00	96.79
40,000,000	Olympia Capital Holdings Ltd Ord 5.00	5.00	6.60	0.76	264,000,000.00	1.48
48,000,000	Pan Africa Insurance Holdings Ord 5.00	5.00	70.00	0.07	3,360,000,000.00	18.87
287,077,133	Standard Chartered Bank Ltd Ord 5.00	5.00	274.00	0.02	78,659,134,442.00	441.81
3,492,369,900	The Co-operative Bank Ord 1.00	1.00	19.95	0.05	69,672,779,505.00	391.34
	INDUSTRIAL AND ALLIED				-	0.00
99,055,000	Athi River Mining Ord 5.00	5.00	175.00	0.03	17,334,625,000.00	97.36
19,525,446	B.O.C Kenya Ltd Ord 5.00	5.00	140.00	0.04	2,733,562,440.00	15.35
362,959,275	Bamburi Cement Ltd Ord 5.00	5.00	196.00	0.03	71,140,017,900.00	399.58
100,000,000	British American Tobacco Ord 10.00	10.00	288.00	0.03	28,800,000,000.00	161.76
33,980,265	Carbacid Investments Ltd Ord 5.00	5.00	150.00	0.03	5,097,039,750.00	28.63
23,727,000	Crown Berger Ltd Ord 5.00	5.00	35.00	0.14	830,445,000.00	4.66
202,500,000	E.A.Cables Ltd Ord 0.50	0.50	17.90	0.03	3,624,750,000.00	20.36
90,000,000	E.A.Portland Cement Ltd Ord 5.00	5.00	105.00	0.05	9,450,000,000.00	53.08
790,774,356	East African Breweries Ltd Ord 2.00	2.00	225.00	0.01	177,924,230,100.00	999.36
210,000,000	Eveready East Africa Ltd Ord.1.00	1.00	3.10	0.32	651,000,000.00	3.66
2,198,361,456	KenGen Ltd Ord. 2.50	2.50	17.65	0.14	38,801,079,698.40	217.94
1,471,761,200	KenolKobil Ltd Ord 0.05	0.05	10.45	0.00	15,379,904,540.00	86.39

79,128,000	Kenya Power & Lighting Ord 20.00	20.00	225.00	0.09	17,803,800,000.00	100.00
1,530,000,000	Mumias Sugar Co. Ltd Ord 2.00	2.00	9.70	0.21	14,841,000,000.00	83.36
278,342,393	Sameer Africa Ltd Ord 5.00	5.00	6.40	0.78	1,781,391,315.20	10.01
175,028,706	Total Kenya Ltd Ord 5.00	5.00	29.25	0.17	5,119,589,650.50	28.76
75,708,873	Unga Group Ltd Ord 5.00	5.00	11.80	0.42	893,364,701.40	5.02
	ALTERNATIVE INVESTMENT MARKET SEGMENT				-	0.00
3,840,066	A.Baumann & Co Ltd Ord 5.00	5.00	11.10	0.45	42,624,732.60	0.24
5,728,314	City Trust Ltd Ord 5.00	5.00	150.00	0.03	859,247,100.00	4.83
16,078,500	Eaagads Ltd Ord 1.25	1.25	47.25	0.03	759,709,125.00	4.27
35,403,790	Express Ltd Ord 5.00	5.00	9.00	0.56	318,634,110.00	1.79
8,756,320	Williamson Tea Kenya Ltd Ord 5.00	5.00	175.00	0.03	1,532,356,000.00	8.61
3,912,000	Kapchorua Tea Co. Ltd Ord Ord 5.00	5.00	120.00	0.04	469,440,000.00	2.64
12,868,124	Kenya Orchards Ltd Ord 5.00	5.00	3.00	1.67	38,604,372.00	0.22
1,200,000	Limuru Tea Co. Ltd Ord 20.00	20.00	305.00	0.07	366,000,000.00	2.06

Appendix 13(b)

Computation of KPLC Monthly return

Period	Share Price		Returns (Ksh)	%age Returns
	Opening price (Ksh)	Closing price (Ksh)		
Dec. 10	23.25	24.00	0.75	3.23
Jan 2011	25.75	24.00	-1.75	-6.80
Feb.11	23.75	22.00	-1.75	-7.37
March 11	21.75	21.00	-0.75	-3.45
April 11	21.25	21.00	-0.25	-1.18
May11	21.25	21.50	0.25	1.18
June 11	21.25	21.50	0.25	1.18
July 11	21.50	19.60	-1.9	-8.84
Aug.11	19.55	19.25	-0.3	-1.53
Sept. 11	19.00	17.20	-1.8	-9.47
Oct. 11	17.05	18.05	1	5.87
Nov. 11	18.05	16.20	-1.85	-10.25
Dec. 11	16.20	17.55	1.35	8.33
Jan 2012	17.35	15.50	-1.85	-10.66
Feb 12	15.45	14.40	-1.05	-6.80
March 12	14.05	14.30	0.25	1.78
April 12	14.50	15.40	0.9	6.21
May 12	15.40	14.55	-0.85	-5.52
June 12	14.05	15.10	1.05	7.47
July 12	15.00	15.35	0.35	2.33
August 12	15.55	17.40	1.85	11.90
Sept. 12	16.30	17.55	1.25	7.67
Oct.12	17.55	18.50	0.95	5.41
Nov. 12	18.50	16.50	-2	-10.81

Appendix 13 (c)

Computations of the percentage monthly buy and hold abnormal return: (BHAR):

Kenya Power and Lighting Company limited

	KPLC (Event Firm)	Athi River Mining Co. Ltd (Control Firm)	
Month	Buy and hold Return %	Buy and hold Return %	BHAR %
Dec. 10	3.23	6.40	-3.17
Jan 2011	-6.80	5.00	-11.80
Feb.11	-7.37	-6.81	-0.56
March 11	-3.45	-7.14	3.69
April 11	-1.18	-2.34	1.16
May11	1.18	12.73	-11.55
June 11	1.18	0.55	0.62
July 11	-8.84	-1.65	-7.19
Aug.11	-1.53	-12.85	11.31
Sept. 11	-9.47	0.63	-10.10
Oct. 11	5.87	4.97	0.90
Nov. 11	-10.25	-8.33	-1.92
Dec. 11	8.33	0.00	8.33
Jan 2012	-10.66	-4.43	-6.23
Feb 12	-6.80	2.65	-9.45
March 12	1.78	2.55	-0.77
April 12	6.21	16.15	-9.94
May 12	-5.52	7.69	-13.21
June 12	7.47	2.04	5.43
July 12	2.33	2.00	0.33
August 12	11.90	2.49	9.41
Sept. 12	7.67	7.32	0.35
Oct.12	5.41	5.45	-0.04
Nov. 12	-10.81	-3.95	-6.86