THE LONG TERM PERFORMANCE OF THE COMMON STOCK AFTER STOCK SPLIT FOR FIRMS LISTED AT THE NAIROBI STOCK EXCHANGE

BY

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NOVEMBER 2009

DECLARATION

This project is my original work and has not been submitted for a degree in any other university or college.

Signature.....

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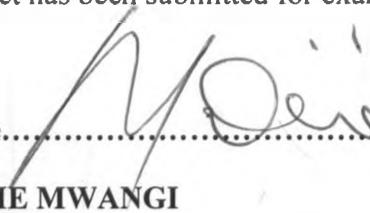
Date 21/11/2019

This project has been submitted for examination with my approval as University Supervisor.



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DEDICATION

This project is dedicated to my parents Mr John Mwangi Kariuki and Mrs Teresa Wambui Mwangi for the prayers and encouragement, also my siblings Alvin, Nathan and Stella for being an inspiration to me.

May the Lord, God Almighty bless you abundantly.

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ABSTRACT

The objective of the study was to measure the post split performance of eleven stock splitting firms as well as those who announced large stock dividend from 1st January 2000 to 31st December 2005. This also included an investigation to determine if the market allows the investor to capture abnormal returns after a stock split announcement.

The study methodology involved obtaining the buy-and-hold abnormal return for the splitting stock against the benchmark (control) portfolio with bootstrapping. Benchmark portfolios were formed from firms of the same size reference portfolio.

Based on the evidence in this study, it can be concluded that stock split are not followed by abnormally positive returns, and that investors have not systematically under reacted to stock split announcement. The results of the study suggest that the stock market overreacted to the information conveyed in the stock split announcements. After controlling for the potential effects of firm size, eleven (11) stock splitting firms, on average, earn significant abnormal return of -1.49% for the 1- year period after the announcement month. The abnormal returns for the 2- and 3- year periods after the announcement month are -5.27% and -6.55% respectively.

ABBREVIATIONS

AIMS	Alternative Investment Market Segment
CDSC	Central Depository and Settlement Corporation
CRSP	Centre for Research in Security Prices
CHAR	Cumulative buy and hold abnormal return
CMA	Capital Markets Authority
DJ	Desai and Jain (1997)
FFJR	Fama, Fisher, Jensen, and Roll (1969)
FISMS	Fixed Income Securities Market Segment
FOMS	Futures and Options Market Segment
GDP	Gross domestic product
IRS	Ikenberry, Rankine and Stice (1996)
MIMS	Main Investment Market Segment
NSE	Nairobi Stock Exchange

CHAPTER ONE

INTRODUCTION

1.1 Background

In Kenya, stocks split and stock dividends (bonus issue) are fairly frequent mode of paying dividend payments to shareholders. In the last 15 years about 101 companies quoted on Nairobi Stock exchange (NSE) have declared stock dividend / stock split. Mbugua (2004) noted that some companies might knowingly or unknowingly abused stock dividend/ stock split by being put under receivership a few months after receivership as well as announcing huge losses after the announcement.

Investopedia (2005) defines stock split as a corporate action in which a company's existing shares are divided into multiple shares. Although the number of shares outstanding increases by a specific multiple, the total dollar value of the shares remains the same compared to pre-split amounts, because no real value has been added as a result of the split.

A bonus issue is an allotment of additional shares to the existing shareholders of a company in proportion to their existing holdings at no extra cost. The additional shares allotted to each existing shareholder are determined by the ratio of the bonus declared by the Company. In Kenya, the existing balances in the accumulated revenue reserves and the share premium accounts are used to finance bonus issues. The accounting entry involves an increase in the share capital account and an equal decrease in the accumulated revenue reserves or the share premium account.

Why do companies split their stocks? This question has attracted a lot of attention in the finance literature but the answer remains unclear. In perfect capital markets, splits would neither create nor destroy value. But in the real world, splits have an impact. Firms do split their stocks, which they would not make an effort to do if it was completely irrelevant. On a split announcement, there is a significantly positive abnormal return. On the split ex date, there is a variety of negative effects such as larger percent spreads, increased volatility, and larger commission costs. (Goyenko,Holden and Ukhov, 2006)

A stock split results in a reduction of the par value and a consequent increase in the number of shares proportionate to the split. Theoretically, shareholders receive no tangible benefit from a stock split, while there are some costs associated with it. ''Splits are at one level only cosmetic change, slicing the same pie into smaller pieces but not changing an investor's fractional ownership of the equity interest and votes in the company'' (Lamoureux and Poon, 1987).

The relatively high frequency of stock split at the NSE is similar to that observed in emerging markets such as Spain Menendez, Gomes-Anson (2003). Similarly, in the developed markets such as the United State of America, high frequencies have been observed, and according to lakonishock and Levi (1987) between 5-10% of companies listed on the New York Stock Exchange split their shares every year.

Lyroudi et al (2003) noted that over the years the relationship between stock splits and stock prices has been a subject of continuing interest to economists and practitioners. Stock splits have long been a puzzling phenomenon to financial economists. They usually occur after an increase

in stock prices and usually elicit a positive stock price reaction upon the announcement. The reaction occurring after the announcement, however, has not been fully understood and explained.

Grin blat et al (1994), document that stock prices rise on average when stock dividend/ stock split announced. They hypothesized that this transactions signal information about the firm on future earning or equity values.

Several studies on stock splits find conflicting evidence regarding whether there is a long-term drift in stock returns following the split announcement. Fama, Fisher, Jensen, and Roll (1969) examine stock splits from 1927 to 1959, and, consistent with market efficiency, they find no abnormal returns on the splitting firms in 30 months after the split. Ikenberry, Rankine, and Stice (1996) study stock splits from 1975 to 1990 and observe abnormal returns of 7.93 percent in one year after the split announcement. The results of these two studies, however, are not readily comparable since they examine stock splits over different time periods and use different methods to adjust for risk. Fama, et al. use the market model while Ikenberry, et al. use size and book-to-market ratio to compute excess returns.

According to the efficient market hypothesis proposed by Fama (1969), any market effects caused by stock split will be fully discounted by the ex-split day. Hence the efficient-market conception of near-perfect capital markets that render only fleeting and nonsystematic gain and loss opportunities to investors has been criticized in recent years by the behavioral finance literature, which offers evidence that stock transactions are often executed (in relation to known

events such as stock issues, stock splits, and repurchases) at price levels that imply predictably high or low risk-adjusted returns. If these findings are factually correct, they pose a challenge to the efficient market hypothesis, which predicts a lack of capital market profit and loss opportunities due to the abilities of investors rapidly and unbiasedly to interpret information according to correct assessments of the underlying economic processes. The behavioral literature attributes its findings to various investor biases.

Academic researchers have confirmed that changes in corporate financial policies affect stock prices in a systematic and predictable ways. The notion that financial decisions convey information about the value of the firm was proposed by Ross (1977), Leland and Pyle (1977) and Bhattacharya (1979) Lakonishock and Levi 1987. However, the economic rationale for market reaction to stock splits has not been entirely resolved. A major part of theoretical explanations relies on asymmetric of information and argues that managers are insiders and are likely to know more about the current and future earnings prospects of the firm than outsiders are.

Changes in corporate financial policy may reveal some information to outsiders about the value of the corporation. Moreover, insiders may even use such policy changes deliberately to change the markets' perception about the firm's value. This study will investigate the long run performance of common stock after stock split in the Kenyan context.

There exists ample empirical evidence that in the U.S. stock splits are associated with positive abnormal returns around the announcement and the execution day and in addition with an

increase in variance following the ex-day. Since stock splits seem to be purely cosmetic corporate events these findings are puzzling. Several hypotheses have been put forward to explain the market reaction around the announcement day. Most theories that explain why firms split their stocks agree that they reveal the manager's private information. Signalling models argue that stock splits contain favorable inside information (Brennan and Copeland, 1988, Asquith, Healy, and Palepu (1989), Rankine and Stice (1997)) while price range explanations (Baker and Gallagher, 1980; Muscarella and Vetsuypens, 1996) also argue that managers will only stock split if they believe their share price is high and likely to keep rising. In addition, several studies find that the neglected firm hypothesis provides some explanation power as well (Grinblatt, Masulis, and Titman (1984), Arbel and Swanson (1993), and Rankine and Stice (1997)).

Several other hypotheses have tried to explain the reaction of the market around the announcement day they include dividend hypothesis, self selection hypothesis, retained earnings hypothesis as well as liquidity hypothesis. (Lyroudi and Dasilas, (2006))Whereas these hypotheses have been developed to explain market value effects under the institutional arrangements of developed capital markets, especially those of Western Europe and the United States of America, the market and institutional environment of other markets may not justify these hypotheses.

A number of recent studies document that the stock market seems to under react to firm-specific announcements. Since stock split announcements are associated with positive abnormal returns, one might expect a positive drift in prices subsequent to the announcements.

1.2 The statement of the problem

A critical objective in corporate financial management is the adoption of strategies which maximize the value of the firm. This is important because the market draws inferences from such decisions and incorporates them in the firm's market value. Therefore the performance of the common stocks after a split would form an important aspect for research.

The study of the long run performance of the common stock after a stock split has been riddled with controversy. A number of research papers done in the past have showed conflicting results as far as the subject is concerned. The case of stock splits is especially interesting for several reasons. First, there is a strong contradiction between earlier and later empirical findings. Fama, Fisher, Jensen and Ross. (1969) find no abnormal performance subsequent to stock splits, whereas both Ikenberry, Rankine, and Stice (1996) and Desai and Jain (1997) report abnormal returns of seven to eight percent in the 12 months following stock splits. Second, the stock split is a relatively uncomplicated event whose informational implications probably can be gauged rather easily by traders. As such, if traders fail to trade split stocks at correct prices, then judgmental errors may be deemed more likely to prevail in other more complex informational situations such as new issues and repurchases.

Since splits are widely reported and noted, a stock split anomaly would be a particularly flagrant violation of market efficiency. Hence this research seeks to analyse and find out whether returns after stock splits actually do allow investors to capture abnormal returns.In the finance literature, we are accustomed to event study effects that happen immediately. In particular, we are used to

the idea that financial markets decipher complex information very quickly and so prices react in minutes. However, with stock splits we are not only concerned with the immediate price effect, but with the long-run trading behavior of investors and/or the long-run revelation of private information. This makes sense because the leading split theories all propose mechanisms that take time to work.

In Kenya, the long run performance of the common stocks after a firm has carry out a stocks split at the NSE have not been widely investigated as far as the researcher is aware. This research seeks to analyze the effects of the announcement of bonus issues/ stock splits in the long run for the selected firms listed at the NSE as way of filling the gap that exists.

1.3 Objectives of the study

The specific objective of the study is to determine the long-run performance of common stocks following stock split in Nairobi stock exchange.

1.4 Significance of the study

The findings of this study will be useful to various stakeholders such as, company management, market analysts, researchers and academicians.

Company management

The results of the study will be available to the company managers of those firms selected in the study. It will help them to predict the long run performance of the common stock after stock split

Investors

Investors and firms at the NSE will improve their knowledge and understanding of the implication of announcement of a stock split. This will assist them in making informed decisions such as whether to invest, whether to hold or whether to divest from particular stocks.

Capital market analysts

The study will assist the analyst in understanding the relationship between stock split and the changes in the market price of shares in the long run . This knowledge will enable them to advice investor clients appropriately leading to an efficient allocation of resources and confidence in the market.

Research and academicians

By providing more insight about the long run effect of stock splits on the market prices at the NSE, the researchers and academicians will update themselves about the long run effect of stock split in an emerging economy. The report will be used as guide for future research in other sectors of the Kenyan economy and in the East African Community.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter examines literature from various journals, books, publications from the stock exchange and the relevant acts of parliament.

I have classified the literature review into three parts. The first part will be to give a history of the Nairobi Stock Exchange, the second shall the review of the journals, which have been done in the developed markets; the thirdly we shall review the various explanatory hypotheses why the stock split occurs while the fourthly will constitute on the efficient market hypothesis.

2.1.1 Nairobi stock exchange

The Nairobi Stock Exchange (NSE) started its operations in 1954, after getting permission from the London Stock Exchange, to operate as an overseas stock exchange, this was at a time Kenya was a colony of Britain. At this time Africans and Asians were not allowed to trade in securities, therefore dealing in shares was confined to the resident European community. At independence it was therefore difficult to convince the native Kenyans of the importance of the exchange. Nairobi Stock Exchange is Africa's fourth largest Stock Exchange in terms of trading volumes and fifth in terms of market capitalisation as a percentage of GDP, (NSE, 2008)

In 1975 a 35% capital gains tax was introduced at the NSE, this inflicted losses to the exchange which at the time also lost its regional character following nationalizations, exchange controls and other inter-territorial restrictions introduced in neighbouring Tanzania and Uganda. For instance, either in 1976 Uganda compulsorily acquired a number of companies, which were quoted or were subsidiaries of companies quoted, on the NSE, (NSE ,2009).

In 1984 a joint study between the International Finance Corporation (IFC) and the Central Bank of Kenya (CBK) dubbed ''Development of Money and Capital Markets in Kenya'' became a blue print for structural reforms in the financial markets, which led to the formation of a regulatory body 'The Capital Market Authority' (CMA) in 1989. The objective of CMA was to assist in the creation of an environment conducive for the growth and development of the country's capital markets.

The first privatization through the NSE in 1988 was successful with the government selling 20% stake in the Kenya Commercial Bank. The sale left the Government of Kenya and affiliated institutions retaining 80% ownership of the bank.

In 1995 the Kenya Government relaxed exchange controls in locally controlled companies subject to aggregate limit of 20% and an individual 2.5%, these were doubled to 40% and 5% respectively in June 1995 budget to help encourage foreign portfolio investments. The entire exchange control act was repealed in December 1995. Seven more stockbrokers were licensed, bringing the number to twenty from the original six at its inception in 1954. Commission rates, which were among the highest in the region, were reduced considerably from 2.5% to between 2% and 1% on a sliding scale for equities and 0.05% for all fixed interest securities for every shilling, (NSE, 2009)

In 2001, there was a fundamental reorganisation of the Kenya's capital markets into four independent market segments: the Main Investment Market Segment (MIMS), the Alternative Investment Market Segment (AIMS), and the Fixed Income Securities Market Segment (FISMS)

and at a later stage a Futures and Options Market Segment (FOMS). To encourage more listings on the Nairobi Stock Exchange, newly listed companies approved under the Capital Markets Act, were to be taxed at a reduced corporation tax rate of 27% as compared to the standard rate of 30%. This would be for a period of three years following the date of listing. However such companies were required to offer at least 20% of their share capital to the public, and the companies that applied and were listed would get a tax amnesty on their past omitted profits, subject to their full disclosure of their income, assets and liabilities during the year commencing at the date of listing and undertaking to hence forth pay their taxes in full. As of November 2006, the reduced corporate tax was 20% as compared to the 30% standard rate. The new rates were for five years following the date of listing, subject to such companies offering at least 25% of their share capital to the public.

The Capital Market Authority (CMA) announced the approval of the new NSE trading and settlement rules in 2002. In summary, the amount for block trades was revised upwards from Kshs. 3.0 million to between Kshs. 50.0 – 200.0 million. The block trade rules were now applied to trade values of above Kshs. 50.0 million but less than Kshs. 200.0 million. Lastly, the brokerage commissions' regime was liberalized (NSE, 2009)

The indexes in use at the NSE are the All Share Index (NASI) and NSE 20-Share Index. NSE 20 Share Index is a geometric Mean of 20 Companies share prices. The NASI is a comprehensive and complementary index designed to represent investors' expectations of the future performance of all listed companies. NASI's calculation is based on market capitalization,

implying that the index level will reflect the total market value of the constituent stocks. The base year for NASI is 1st. January 2008=100 (NSE, 2009)

Delivery and settlement of payments at the NSE is done through the Central Depository and Settlement Corporation CDS. The CDSC is the legal entity that owns and runs the clearing, settlement, depository and registry system for securities traded in Kenya's capital markets. The shareholders consisted of the Nairobi Stock Exchange (20%), the Association of Kenya Stockbrokers (18%), the CMA Investor Compensation Fund (7%), and 9 institutional investors through the Capital Markets Challenge Fund (50%); who collectively have invested in the Central Depository and Settlement Corporation (CDSC), (NSE, 2009)

2.2 THEORITICAL ORIENTATION

The market reaction to the announcement that a firm will split its stock can be separated into the short run or announcement period reaction, spanning a few days following the announcement, and the longer term reaction which covers the period after. Most studies of the short run reaction find that firms earn positive abnormal returns when they announce they will split their stocks. For example Fama, Fisher, Jensen, and Roll (1969) (FFJR) show that stock splits between 1927 and 1959 earned abnormal returns in their announcement month. As simultaneous dividend announcements might have biased the results of FFJR, Grinblatt, Masulis and Titman (1984) examine the reaction to uncontaminated stock split announcements and still find evidence of abnormal returns in the two-day window post stock splits. Desai and Jain (1997) (DJ) also confirm this finding. Pilotte and Manuel (1986) and Nayak and Prabhala (2001) examine the determinants of the short-term market reaction to stock split announcements. Pilotte and Manuel

find that the market's reaction to the announcement of a stock split may depend on how the particular firm concerned performed after previous split announcements. Nayak and Prabhala investigate why firms that pay dividends earn lower abnormal returns when they announce their stock split compared to firms that do not pay dividends. They conclude that dividends are an information substitute for stock splits, and market participants are therefore less surprised when a stock split is announced by a dividend-paying firm. As a result these firms earn a lower abnormal return when they announce a stock split.

Ikenberry, Rankine and Stice (1996) (IRS), Ikenberry and Ramnath (2002) and DJ all find evidence of long run positive abnormal returns after stock splits. IRS and Ikenberry and Ramnath (2002) find positive abnormal returns in the first year following stock split announcements of 7.93% and 9% respectively. DJ also find that splits earn abnormal returns of 7.05% between one and twelve months after their stock split announcements.

The results beyond the one-year marker are mixed with IRS finding no abnormal returns thereafter while DJ find small positive abnormal returns in years two and three following split announcements. All three papers also investigate the cross-sectional determinants of these abnormal returns and find that firm characteristics and pre-split performance have a bearing on how firms do in the long run after their split announcement. In contrast, Byun and Rozeff (2003) examine long run performance after splits, but do not study the window after stock splits are announced instead focusing on the period after stock splits actually take place. Using two for one splits and equally weighted abnormal returns, they find evidence of positive abnormal returns over the year following actual stock splits. However, when they work with all splits and calculate

returns using value weighting, they find little evidence of abnormal returns over the year after actual stock splits. Ikenberry and Ramnath (2002) attempt to shed light on why prices appear to absorb the information contained in stock splits slowly, rather than in a rapid manner. They show those analysts' earnings forecasts considerably under predict realized earnings for splitting firms prior to their split announcement, but that afterwards they catch-up. Taking these analysts' forecasts as representative of market expectations as a whole, they argue that the upward drift in expected earnings explains the observed pattern of under reaction after splits

Grinblatt, Masuli and Titman (1984) investigated proposed splits and bonus issues in USA. The initial announcements of proposed splits and stock dividends for the years 1967-1976 were independently collected from two sources: (i) the Wall Street Journal Index and (ii) a search of the Wall Street Journal and the Centre for Research in Security Prices (CRSP) Daily Master Report for split or stock dividend declaration date. The criteria for selection were a stock dividend or split of ten percent or more and listing of the common stock on the American or New York Stock Exchanges at the announcement date. By limiting the sample to distributions of ten percent or more, periodic predictable stock dividends were largely eliminated.

After removing sixteen announcement events and thirty-eight ex-date events from the sample, they were left with one thousand seven hundred and sixty two (1762) announcement events and one thousand seven hundred and forty (1740) ex-date events.

The stock returns for this study were obtained from the CRSP Daily Returns File. These returns were then characterized according to when they occur in event time. For the announcement

sample, day 0 was one thousand seven hundred (1700) defined to be the earlier of (i) the trading day prior to the issue date of the Wall Street Journal that announced the event or (ii) the declaration date of the event on the CRSP daily master tape. Day 0 was presumed to be the date on which the market becomes aware of the firm's intention to expand the number of shares.

Using the Wall Street Journal Index, the sample was initially categorized into sub samples based on simultaneous announcements. The purity of the sub sample with no contaminating simultaneous announcements on trading days 0, 1 and 2 in event time was further checked, and, if necessary, reclassified, on examination of the actual Wall Street Journal articles, which are more accurate sources than the Wall Street Journal Index. It is interesting to note that for approximately 10% of the split announcements where the Wall Street Journal Index did not specify a simultaneous announcement, other announcements were found when the actual Wall Street Journal articles were examined. The pure event sub sample was also checked for contamination by examining the cash dividend declaration dates on the CRSP Daily Master Tape for event days –1, 0 and 1. An analogous procedure was applied to the sample of events where only a simultaneous cash dividend was announced where the dividend was unchanged from the prior dividend. Categorizations of the sample by split factor, exchange listing, dividend policy, and type of stock distribution was done.

Two approaches were examined for dividing the sample into stock dividend and stock split categories. The split factor method defined all events with split factors in excess of twenty five percent (25%) as 'splits', the remainder as 'stock dividends'. The second method used the CRSP classification of splits and stock dividends, which was taken from Moody's Dividend Record.

Moody's uses the manager's own classification of the event, regardless of whether or not the stock distribution is taken out of retained earnings.

The study presented evidence which indicates that stock prices, on average, react positively to stock dividend and stock split announcements that are uncontaminated by other contemporaneous firm-specific announcements. In addition, it documents significantly positive excess returns on and around the ex-dates of stock dividends and splits. Both announcement and ex-date returns were found to be larger for stock dividends than for stock splits. While the announcement returns cannot be explained by forecasts of imminent increases in cash dividends, several signalling based explanations were offered consistent with a cross-sectional analysis of the announcement period returns.

Doran and Nachtman (1988), using a sample of eight hundred and seventy nine (879) firms which issued stock dividends and eight hundred and ninety eight (898) firms that announced stock splits between 1971 and 1982 found that immediately after the announcement of stock dividend there was a significant positive revision in earnings expectations similar to the attention getting hypothesis.

2.3 EXPLANATORY HYPOTHESES

The second part of this literature review will be to review all the proposed explanatory hypotheses as to why managers split their stocks, which are: the signalling, the liquidity, the neglected-firm, the optimal tick size and the self-selection hypotheses.

2.3.1 Signalling hypothesis

Brennan and Copeland (1988b), McNichols and Dravid (1981), and Brennan and Hughes (1991), interpreted the positive stock market reaction to split announcements as a response to managers signalling favourable inside information. Signalling explanations are consistent with abnormal increases in earnings and/or dividends around the split. When a manager believes that the future share price will decrease, he may not be willing to split the stock due to the increased cost of trading a lower priced stock, or due to their reluctance to split the stock and then have the share price fallen below the manager's perceived optimal trading range. While managers may not explicitly intend for the split to be a positive signal about the future prospects of the firm, the split conveys information to the market. Institutional owners may be better able to take advantage of this signal, compared to individual owners, either because they trade much more than individuals, and are not as wealth constrained, or because they are more efficient at interpreting and processing the signal.

2.3.2 Liquidity hypothesis

The most common rationale behind stock splits according to the liquidity hypothesis is that there is an optimal price range for securities. The stocks that trade in this range are presumed to be more liquid since they have lower brokerage fees as a per cent of value traded. This optimal range is considered to be a compromise between the desires of wealthy investors and institutions that will minimize brokerage costs if securities are highly-priced, and the desires of small investors who will minimize odd-lot brokerage costs if securities are low-priced. The optimal trading range hypothesis is in contrast to the decrease in trading activity after a stock split that was observed by Copeland (1979) and Conroy et al. (1990). Also, Muscarella and Vetsuypens

(1996) showed that liquidity after a stock split improves which is accompanied by wealth gains for the investors.

Their findings support the model of Amihud and Mendelson (1986) that predicts a positive relationship between equity value and liquidity. According to this model, rational investors discount illiquid securities heavier than liquid ones due to the higher transaction costs and the greater trading frictions they face.

The idea is that a split lowers the price, which makes trading more affordable especially by avoiding odd lot trading costs. Eventually this leads to an increase in the base of traders in the firm. In turn, this eventually increases the volume of trade, which eventually lowers the percent spread. The empirical evidence finds that split firms experience an increase in the base of traders and an increase in volume. Baker and Gallagher (1980) survey top executives and find that the dominant executive belief is that splits keep stock prices within an optimal trading range, make it easier for small investors to buy round lots, and result in an increase in the number of shareholders. An empirical challenge for the trading range hypothesis is that there is no evidence that split firms eventually experience a lower percent spread. In other words, there is no evidence that splitting firms receive the predicted long-run liquidity improvement from splitting.

2.3.3 The retained earnings hypothesis

It is generally accepted that firms declaring stock distributions of 25 per cent or greater consider them as stock splits which, therefore, have no effect on retained earnings. Stock distributions of less than 25 per cent are considered as stock dividends that reduce the retained earnings account.

Since stock dividends reduce retained earnings, and thus the firm's ability to pay cash dividends, they have been viewed as conveying information regarding managers' outlook about future earnings. In declaring a stock distribution that reduces retained earnings, managers are seen as signalling their confidence in being able to replenish the retained earnings account with future earnings' streams. In effect, the signal has value because it is costly. This line of reasoning has been called the ''retained earnings hypothesis'' (Peterson et al., 1996).

2.3.4 The neglected-firm hypothesis

Arbel and Swanson (1993) in the context of stock splits predominantly propose the neglected-firm hypothesis. It states that if there is little information about a firm, its shares trade at a discount. Thus, the firm's managers use the split to draw attention to ensure that information about the company is wider recognized than before.

2.3.5 Optimal tick size hypothesis

Angel (1997) introduced the optimal tick size hypothesis. According to this hypothesis, in equity markets there is an institutionally mandated minimum absolute tick size, which is optimal relative to the share price. A wider tick size reduces transaction costs and offers more incentives for limit orders, enhancing liquidity. On the other hand, a wider tick size increases the cost to investors inherent in a wider percentage spread.

The idea is that a split causes an increase in percent spread. This eventually causes more limit orders to be submitted for two reasons. First, some traders will switch from using market orders (which are now more costly) to using limit orders (which are now more profitable). Second, some people will be enticed to become pseudo market makers who profit by submitting limit

order on both sides and gaining the spread. The increase in limit orders will eventually cause the percent spread to cross-over and drop below where it would be without the split. The empirical evidence finds that after a split the number of limit orders does increase and the limit order to market order ratio does go up. An empirical challenge for the optimal tick size is that there is no evidence that split firms eventually experience a lower percent spread. Again, there is no evidence that splitting firms receive the predicted long-run liquidity improvement from splitting.

Hence, there is a cost trade-off and an optimal point where the companies want to be. A stock split is one mechanism used by the companies to move their share prices into the optimal range of the tick size.

2.3.6 Self selection hypothesis

Ikenberry et al. (1996) used the self-selection hypothesis as a synthesis of the signaling and the trading range hypothesis. In particular, it states that managers use stock splits to move share prices into a trading range, but condition their decision to split based on expectations about the future performance of the firm.

2.3.7 The dividend hypothesis

Copeland (1979) supported the view that split announcements may be interpreted as news about dividend increases. In other words, the positive abnormal returns around the announcement day are not the result of the split per se, but the result of the dividend increases or decreases that followed or preceded the stock split. ''Higher dividends provide investors with signals of management's increased confidence in their companies' future levels of profitability and cash

flows. Thus, it is not stock splits per se that cause higher stock prices, but rather management's emphatic statements of continued confidence in the company's future performance conveyed to the market in the form of larger than expected dividend increases'' (Copeland, 1979).

2.4 Efficient market hypothesis and stock splits.

The Efficient Market Hypothesis (EMH) states that all relevant information is fully and immediately reflected in a security's market price, thereby assuming that an investor will obtain an equilibrium rate of return. In other words, an investor should not expect to earn an abnormal return. Fama (1970), identified three forms of market efficiency namely; the weak, semi-strong and strong form. The weak from of efficiency suggest that current share prices fully reflect any past information contained within past share prices. The semi-strong form extends the notion of efficiency a little further and describes the situation where any published information relating to a company will be reflected in its share price. The strong form describes the situation where all relevant information, whether it is within the public domain or outside the public domain, will be reflected in the price of a share. Subsequently, Fama (1991) revised the categories and coverage of informational efficiency. According to the new categorization, the weak form, now covers the more general area of test for return predictability, including work in forecasting returns with variables like dividend yields and interest rates. Further seasonality in returns and volatilities of security prices are to be considered under the theory of return predictability. He further continued that semi-strong tests will be called event studies and strong form tests will be called tests for private information.

In event studies, it is measured how rapidly security prices respond to different items of news, such as an earnings or dividend announcement, news of a takeover, or macroeconomic news. The study on stock price reaction for stock splits and bonus issues is thus based on test of semi-strong form of market efficiency.

The EMH of near perfect capital markets that renders only fleeting and non-systematic gain and loss opportunities to investors has been criticized in recent years by the behavioural finance literature. According to the behavioural finance, stock transactions are often executed (in relation to known events such as stock issues, stock split, share buy-back) at price levels that imply predictably high or low risk adjusted return. If these findings are factually correct, then they pose a challenge to the EMH, which predicts a lack of capital market profit or loss opportunities due to the ability of investors to rapidly to interpret information according to correct assessments of the underlying economic process. The behavioural literature attributes its findings to various investors' biases. Supporters of efficient market argue that risk adjustment methods in behavioural finance are imperfect, data mining may have occurred. According to them, all the behavioural anomalies taken together suggest an unbiased market at work and they asked for behavioural models that explain a broader range of evidence, Fama (1998). On the other hand, Haugen (1999-2002), from the behavioural camp points out the superior powers of capital market phenomena like momentum to predict and explain returns.

Locally, a few studies have supported the notion that dividend announcements have information content; Kiptoo (2006) analyzed 13 companies trading at NSE between 1998 and 2002 and found out that there is significant reaction by the market to cash dividend announcements.

Mbugua (2004) analyzes the returns of 24 companies which issued stock dividends and concluded that the stock dividends have an impact on stock returns.

Iminza (1997) did a study to test whether or not there is a relationship between dividends and share prices and found that dividends and share prices are highly correlated.

Onyango (1999) in her study on factors manager consider before declaring bonus issue and the estimation of the benefits to shareholders found out that the managers believe that stock dividends benefits firm the terms of increased cash dividends. The gain registered an average increase of 10.23% during the period 1994 to 1998 which was found t be statistically significant.

Njuru (2007) sought to test for existence of under reaction anomaly at NSE using a company self- selecting event, the stock dividends announcement. From a sample of 21 stock dividends announcing companies covering a 7 year period i.e. from 1st January 1999 to 31st December 2006 showed a continuation of positive returns in the day following the stock dividends announcement date for the majority of the announcements.

Conclusion

Nairobi stock exchange just like all the other emerging markets in the world also has firms that make corporate announcements. One of those corporate announcements is stock splits. Stock splits are purely cosmetic corporate events since the underlying cash flows of the company and its risks are unaffected. Theoretically, shareholders receive no tangible benefit from stock splits.

Several hypotheses have tried to explain the reaction of the market around the announcement day and can be summarized as the signalling hypothesis, which interpreted the positive stock market reaction to split announcements as an investors' response to managers' signaling favourable inside information. Signalling explanations are consistent with abnormal increases in earnings

and/or dividends around the split. The liquidity hypothesis states that the most common rationale behind stock splits according to this hypothesis is that there is an optimal price range for securities. This optimal price range is a relatively lower price for the underlying security. It is assumed that the liquidity/marketability of the security will improve after the split, as the lower price of the stock will attract more small investors.The retained earnings hypothesis states that in declaring a stock distribution that reduces retained earnings, managers are seen as signalling their confidence in being able to replenish the retained earnings account with future earnings' streams. The neglected-firm hypothesis states that if there is little known about a firm its shares trade at a discount. Thus, firms use the split to both draw attention and ensure that information about the company is going to be spread wider than before. The optimal tick size hypothesis states that a company may split its stock to move its share price into the range where the institutionally mandated minimum absolute tick size is optimal relative to the share price. Self-selection hypothesis deduces that managers use splits to move share prices into a trading range, but condition their decision to split on expectations about the future performance of the firm.

The dividend hypothesis states that the positive returns around the announcement day are not the result of the split per se, but the result of the increased dividend announcements that followed, or preceded the stock split.

According to the market efficiency paradigm, all relevant information should be factor instantaneously reflected in prices. Therefore in this kind of a market all investors should not be able to earn abnormal returns as result of such corporate announcements that are regarded as cosmetic.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0. Introduction

This chapter presents the research methodology that will be adopted in this study. The chapter highlights the research design, the population and sampling technique and sample size, as well as the data collection and analysis techniques.

3.1. Research Design

The descriptive research design was used to carry out this study. According to Cooper and Schindler (2001), a descriptive study is typically structured with a clearly stated objective of discovering associations and causal relationships among different variables. The descriptive study will be necessary to generate detailed information regarding the key aspects in order to develop profiles of those aspects. The rationale for using this design was that it would enable the study to establish the relationship between stock split announcement (independent valuable) and stock price over the thirty-six months (dependent variables).

To measure the long run performance of the companies that has split their shares from 2000 – 2005 an event study approach will be used for the analysis with month zero being the split announcement month. Our event window runs from 6 months prior to the announcement month to 36 months after the announcement.

3.2. Population and sampling design

3.2.1. Population

The study confined itself only to companies listed at the Nairobi Stock Exchange (NSE). The population of interest in this study will comprised of selected firms that split their share under the finance and investment sector that were quoted at the NSE, and that had made stock split announcements through the NSE in the period (2000-2005). In this period, there are 21 (twenty one) firms that had made bonus issues announcements while 2 (two) firms had announced stock split in the same period.

3.2.2 Sampling design

The sample consisted of all the stock splits that have announcements dates on the data available from NSE library during the period 2000 – 2005.Stock dividends or bonus issues of less than twenty five percent (25%) are generally regarded as small and therefore are not included in the study. In addition, like existing studies such as Grinblatt et al. (1984) and Byun and Rozeff (2003), we define a stock split as occurring when there is a split factor of 25% or above, i.e. a 5 for 4 stocks split or greater. Both stock dividends and stock split samples were analyzed as stock split sample since they normally yield similar result even if they were analyzed separately (Desai and Jain, 1997).

3.2.3 Hypothesis

Null hypothesis: No abnormal returns are earned over the thirty-six months after a stock split.

Alternate hypothesis: Abnormal returns are earned over thirty–six months after a stock split.

For a 12-month period, the study measured an individual firm's stock market performance by examining the buy and hold (holding period) returns. The buy-and-hold return for stock i for t months was computed as: -

$$BHAR_i = \prod_{t=1}^{12}(1 + R_{it}) - \prod_{t=1}^{12}(1 + R_{bt}),$$

Where, r_{it} is the raw return (with dividends) for stock i in month t. and R_{bt} is the average the benchmark portfolio firm's return in the month t. As an averaging method for the return of the benchmark portfolio, the study used value weighting.Each splitting stock was matched to its appropriate benchmark portfolio using a size as a criterion. Byun and Rozeff (2003), Hwang, Keswnai and Shackleton (2007).

The study used all the available NSE firms on the NSE library to form the benchmark portfolios. To construct the benchmark portfolios, all NSE firms were sorted into size deciles at the end of each month. Returns on these reference portfolios were then calculated using value weighting. To eliminate benchmark contamination bias (Loughran and Ritter (2000)), stock split firms were removed from the reference portfolios. If a firm in a reference portfolio ceases to exist, the remaining returns for that firm to the end of the event study window were filled with the equally weighted returns of the remaining firms in the portfolio. Firms were matched to reference portfolios one month before their stock split announcements. Abnormal returns by stock were calculated each month as the difference between the return on the splitting stock and its reference portfolio. This is shown in the equation below as:-

The buy-and-hold abnormal return for stock *i* was calculated as

$$HAR_{It} = R_{iT} - R_{bT} \quad \ldots\ldots(2)$$

where R_{bt} is the return for the benchmark (control) portfolio.

The abnormal return was then averaged over all the stocks in the sample to obtain the average buy-and-hold abnormal return for a portfolio of n stocks and is given by:-

$$\overline{AHAR_T} = \frac{1}{n} \sum_{i=1}^{n} BHAR_{It} \quad \ldots\ldots(3)$$

Loughran and Ritter (2000) emphasize equal weighting because it measures the abnormal returns of a typical event. Abnormal returns are then aggregated over the next 36 months, using the buy and hold abnormal return approach.

Barber and Lyon (1996) suggest the use of a bootstrap to calculate significance levels for long run returns studies and the study used this approach to calculate our critical p–values. To do this, each splitting firm was matched with another firm randomly drawn from the same size reference portfolio in the month before the split announcement. The abnormal returns of this matched but not splitting stock were then calculated. Averaging over the abnormal returns of these matched, but not splitting, stocks provided us with one observation of the excess returns earned by a portfolio of matched, but not splitting, firms. This process was be repeated 1,000 times and was used to generate critical p-values.

3.3 Data and data specifications

The study was based on secondary data obtained from NSE database. The following details was obtained:

- The names of companies that made stock split and large stock dividends in the period from 1st January 2000 to 31st December 2005.
- The stock split and the stock dividends dates. This is the day when a company notified the NSE secretariat of the impending stock split or stock dividend.
- The number of shares that was split from one share i.e the split factor as well as the number of shares required to get one bonus share i.e the bonus rate.
- The end of the month closing stock prices for the 42 months i.e. six months prior to the announcement and thirty six months after the announcement..

3.4 Data analysis

The analysis was directed towards detecting any continuation in positive returns subsequent to the date of stock splits and large stock dividends announcement. The analysis proceeded as follows:

- The first step was to calculate the normal or expected return for each stock. Each splitting stock was then matched to its appropriate benchmark portfolio using a size as a criterion. Byun and Rozeff (2003), Hwang, Keswnai and Shackleton (2007).The study used all the available NSE firms on the NSE library to form the benchmark portfolios. Benchmark portfolios were constructed by first sorting all NSE firms into size deciles at the end of each month (end of month market value of common equity). Returns on these reference portfolios were then calculated using value weighting.

To eliminate benchmark contamination bias (Loughran and Ritter (2000)), stock split firms were removed from the reference portfolios.

Most studies done on return comparison at NSE have used the market model with the NSE 20 share index return being used as proxy for market return. However, Odera (2000) points out that the NSE index has been found to fluctuate according to trading by a few companies and may thus be a wrong proxy for the stock market activities. In calculating abnormal returns the assumption made is that earnings expectation are based on a random walk model. The security returns are assumed to be stationary over time and thus the effect of new information will automatically affect the prices as per the expectational naive model below:

$$R_{it} = \mu_{it} + \epsilon_{it}$$

Where,

R_{it} is the actual return on security: at time t.

μ_{it} is the expected return on security i at time t which is determined by the market pricing process and;

ϵ_{it} is the stochastic error term unique to a particular company, have an expected value of zero and is unrelated to overtime Bernard and Thomas (1990) show that stock return patterns around earnings announcement correspond to this naive earning expectations.

The monthly stock returns (R_{it}) was derived as follows:

$$R_{it} = (P_{it} - P_{it-1} + D_{it}) / P_{it-1}$$

Where,

P_{it} is the monthly closing price for stock i at time t.

D_{it} is the dividend payable for stock i at time t.

Theoretically, once the dividends are declared and the shares are trading cum dividends the price of the shares should go up by the amount of expected cash dividends (D_{it}). When the company closes its register the share starts to sell ex- dividend and therefore D_{it} shall be dropped from the above model.

- Next, monthly abnormal returns HAR_{it} for each stock are computed from month t = -6 to t = 36 as the difference between its actual return and the expected return as follows:

$$\mathbf{HAR}_{It} = \mathbf{R}_{iT} - \mathbf{R}_{bT}$$

$\mathbf{R}_{it}$ is the actual return on security: at time t.

$\mathbf{R}_{bt}$ is the return for the benchmark (control) portfolio.

- For each stock, the monthly buy and hold abnormal return from month t =-6 to t = 36 are added to get the cumulative buy and hold abnormal return (CHAR). From this, average cumulative abnormal return AHAR is computed by dividing the cumulative abnormal return (CHAR) by the total number of months ove which CHAR is derived i.e. 42
- Using the results above, a graphical presentation of cumulative abnormal return from t=-6 to t=36 is done for each stock. If the graph is upward sloping then it means that the impact of stock split or dividend announcement was not incorporated in stock prices and thus evidence in support of shareholder's being able to capture abnormal over a long period of time.
- The foregoing test was done for each stock separately. In order to get an overall picture, the cumulated abnormal returns will be computed for each month from t=-6 to t=36. This done by combining the abnormal returns of all stock by month from month -6 to month 36 and dividing the resultant sum of the month abnormal return by the number of stock

(n) equally. The average abnormal return obtained above were then added from t=-6 to t=36 to get the cumulative abnormal returns of all the stocks combined.

$$\overline{AHAR}_T = \frac{1}{n} \sum_{i=1}^{n} BHAR_{It}$$

The average cumulative abnormal return was then obtained by dividing the cumulative abnormal return calculated above by the total normal of post-event months, which in this case is equal to 42.

- As done for each stock individually, we graph the abnormal cumulative return for all stock combined over the 42 months. As noted above an upward sloping graph gives preliminary evidence in support of the fact that shareholders enjoy capturing abnormal returns after a stock split or a stock dividend announcement.
- Lastly a significant test was done using the bootstrapping procedure.

CHAPTER FOUR

DATA ANALYSIS AND RESEARCH FINDINGS

4.1. Introduction

This chapter presents the data analysis, interpretation, and discussion of the research findings. The researcher obtained secondary data from the monthly price lists, market capitalization and the corporate announcements bulletin, both available to the public from the NSE library. The study sought to determine the long run performance of the common stock after stock split. The main types of statistics used to achieve this objective were mainly descriptive statistics such as frequency distributions, percentages and charts

4.2 Firms in the study

The NSE provided a list of firms which had issued bonus shares (stock dividends) and had split their shares from 2000 to 2005. This aided the researcher in identifying the organisations that took part in the study. Although there were a total of twenty three companies that made either a stock dividend or a share split announcement, only eleven were found to have complied with the 25% rule for the stock dividend announcement. From the information about the date of announcement provided the researcher was able to determine the event window for every stock dividend and stock split. The firms that participated in the study and the date of announcement of bonus issues/ share split are indicated in table 4.2.1 below.

Table 4.2.1: Respondent organisations

Firm	Event	Ratio	Event Date
STANDARD CHARTERED	BONUS	2:1	February 23, 2000
B.A.T	BONUS	3:1	February 28, 2000
KENOL	BONUS	5:2	January 30, 2001
KCB	BONUS	3:1	February 23, 2001
NATION MEDIA GROUP	BONUS	2:1	March 7, 2002
DIAMOND TRUST	BONUS	4:1	February 25, 2003
CMC HOLDINGS	BONUS	1:1	January 12, 2004
KENOL	SHARE SPLIT	10:1	June 23, 2004
EABL	SHARE SPLIT	5:1	August 27, 2004
DIAMOND TRUST	BONUS	4:1	February 25, 2005
NATION MEDIA GROUP	BONUS	3:1	March 3, 2005

SCBK- Standard chartered bank of Kenya

EABL – East Africa Breweries Limited.

KCB – Kenya Commercial Bank

BAT- British American Tobacco Company limited.

SOURCE NSE (2009)

Table 4.2.2: Long –Run performance of stock split: 2000 - 2005

PERIOD	NO OF OBSERVATIONS	RAWF(%)	RAWP(%)	AHAR	P- VALUE	CHAR	P- VALUE
AM-6 to AM -1	11	-0.3184	4.5514	-4.8698	0.0000		
AM	11	20.7168	4.9404	15.7764	0.0000		
AM +1 to AM +12	11	-0.2192	5.2371	-5.4563	0.0000	-1.49452	0.0000
AM+ 13 to AM + 24	11	3.4088	7.1867	-3.7779	0.0001	-5.2724	0.0000
AM +25 to AM + 36	11	4.4735	5.7477	-1.2743	0.0001	-6.54666	0.0000

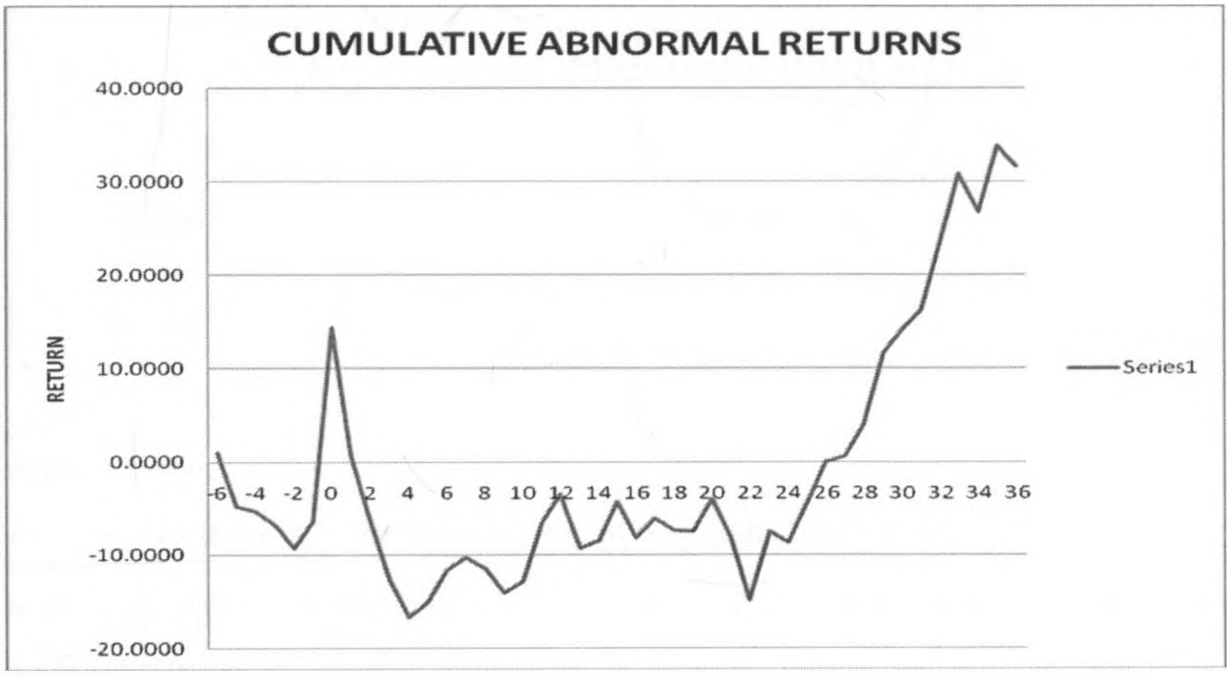
Note.—Holding period raw return for the sample firms (RAWF); holding period raw return for the benchmark portfolio formed on the basis of size ranking (RAWP); holding period abnormal return (AHAR) and its corresponding *p*-value; and the compounded holding period abnormal return (CHAR) and its corresponding *p*-value are reported for the sample of stock splits from 2000 to 2005.

Table 4.2.2 presents the results of abnormal returns for several holding periods around the stock split announcements. Month 0 is the calendar month of the announcement (represented by AM in the tables). The average announcement month abnormal return for the 11 stock split announcements is -6.55% (p- value of 0.000). The announcement month results in the developed markets such NYSE exhibit positive returns after stock split announcement. The main focus of this study is on the post announcement results. The results depicts that the market does incorporate the full effect of the stock split announcement in the month of announcement. The main finding is that, in the post announcement period from month +1 to +12, the stock split firms, on average, earn significant negative abnormal returns of -1.49 % (p-value of 0.000).

Additionally, the study examined abnormal returns in each month for months +1 to +12 and find that the abnormal returns are negative in 6 out of 12 months. In the last column of table 4.2.2, we report abnormal returns for 1-, 2-, and 3-year holding periods (compounded holding period abnormal returns [CHAR]) and their p-values. There is a small additional negative drift in years 2 and 3 (-3.78% and -1.27%, respectively). The 2- and 3-year CHARs are -5.27% and -6.55%, respectively. Overall, the results are inconsistent with the hypothesis that the market, on average,

does not react completely to stock split announcements in the month of the announcement; that is, the market underreacts to the announcements or reacts with a delay.

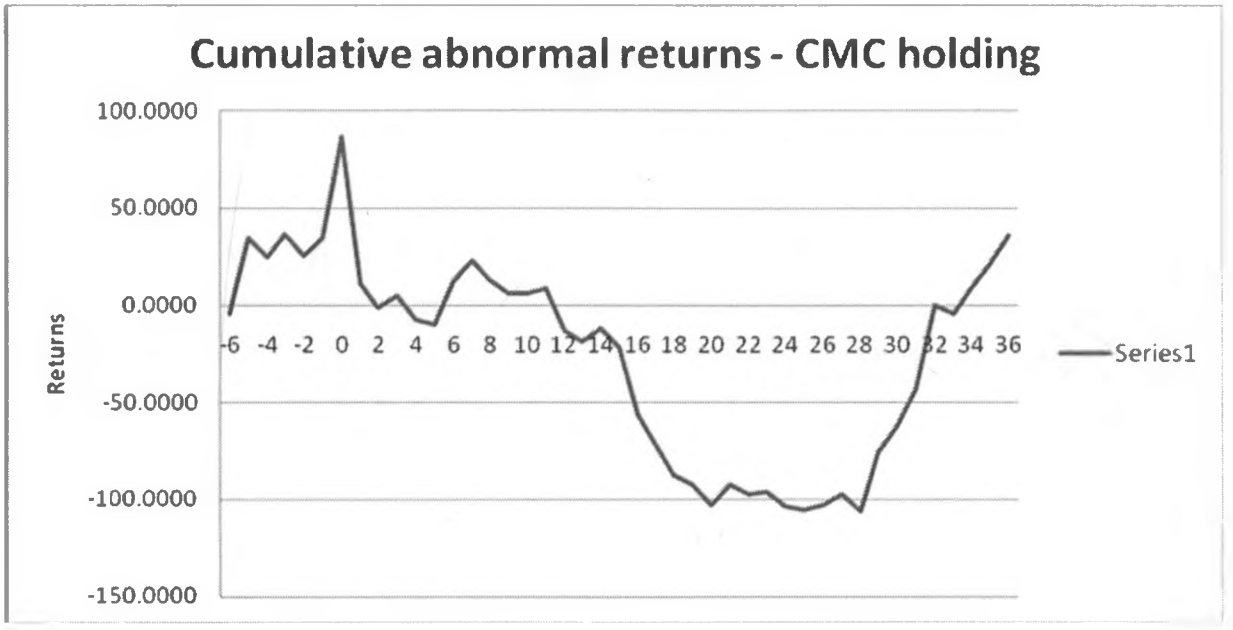
Figure 4.1 Cumulative abnomal returns for stock splitting companies for three years – 2000-2005



Source: Author

Figure 3 illustrates the long`–term abnormal performance of each company relative to the benchmarks portfolios performance over the three year period. As it can be seen, stock split firms performs much better than the benchmark portfolio around the announcement month. However, an obvious break point at the ex-date can be seen for the stock split company. The above-average performance drops almost immediately after the stock split ex-date. This performance is maintained until the twenty-fifth month when the performance is above the zero mark.

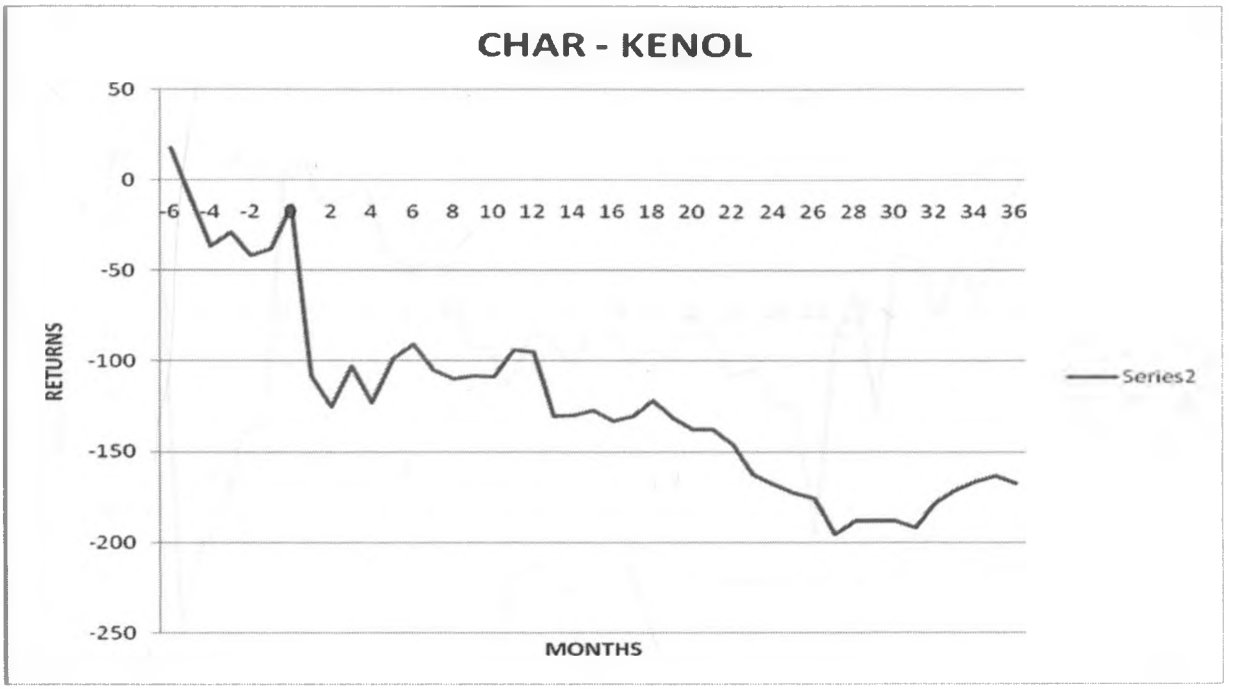
Figure 4.2: Cumulative abnormal returns – CMC Holding



Source: Author

As shown in figure 4.3, the abnormal returns around the announcement month were very significantly positive. However, this trend is lost in the first month after the announcement month. This illustrates that the market incorporated all the information on the prices of the stock as compared to those of the benchmark portfolio. The benchmark portfolios used to compare the CMC's returns includes Mumias sugar company, Kenya Oil Company limited and Firestone company limited whose returns were value weighed on the ratios of 0.3, 0.35 and 0.36 respectively.

Figure 4.3 Cumulative abnormal returns - KENOL



Source: Author

As shown in figure 4.4, the cumulative abnormal returns showed a sharp increase around the announcement month; however, this is does not last through the second month. A sharp decline in comparison with the benchmark portfolio was recorded from the first month ex- split onwards. The stock returns was being compare against the value weighted returns of benchmark portfolios. The returns of this stock were matched against those of its benchmark portfolios which included East African Portland cement ltd, Mumias Sugar Company limited and Kenya Airways limited at the value weighted ratios of 0.23, 0.24 and 0.32 respectively.

Figure 4.4 Cumulative abnormal return – East African Breweries Limited

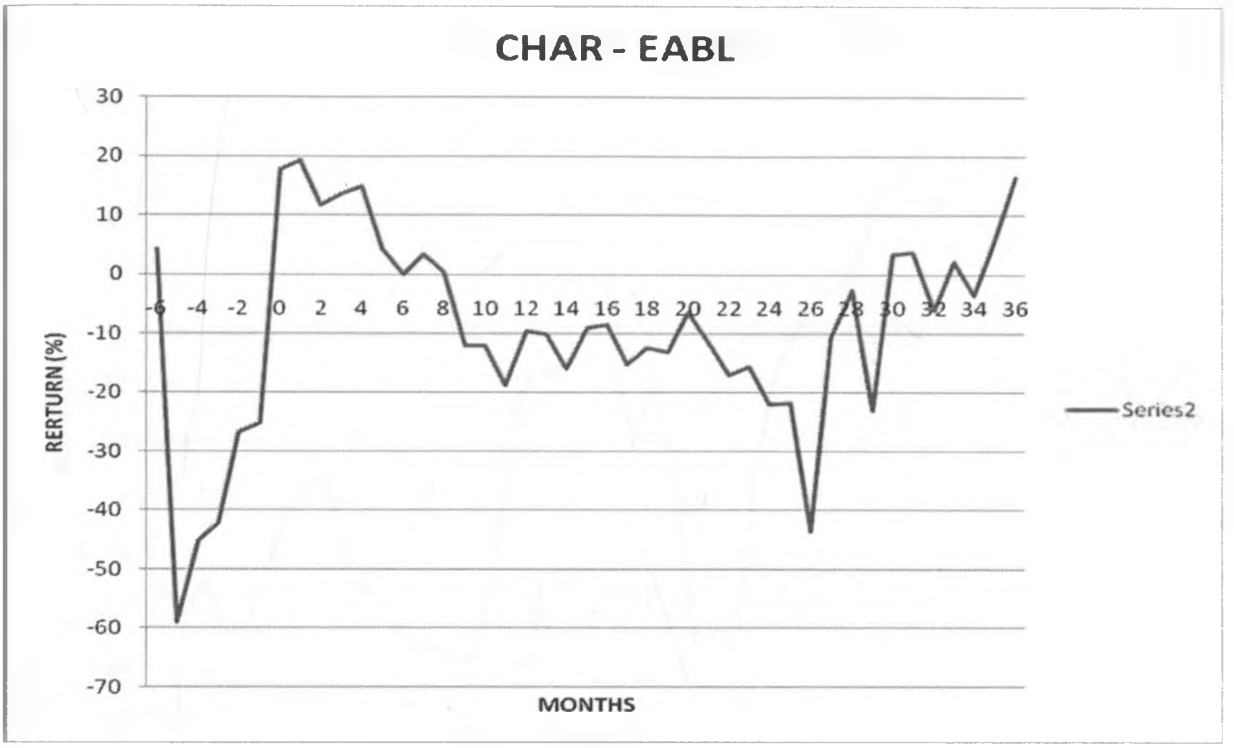
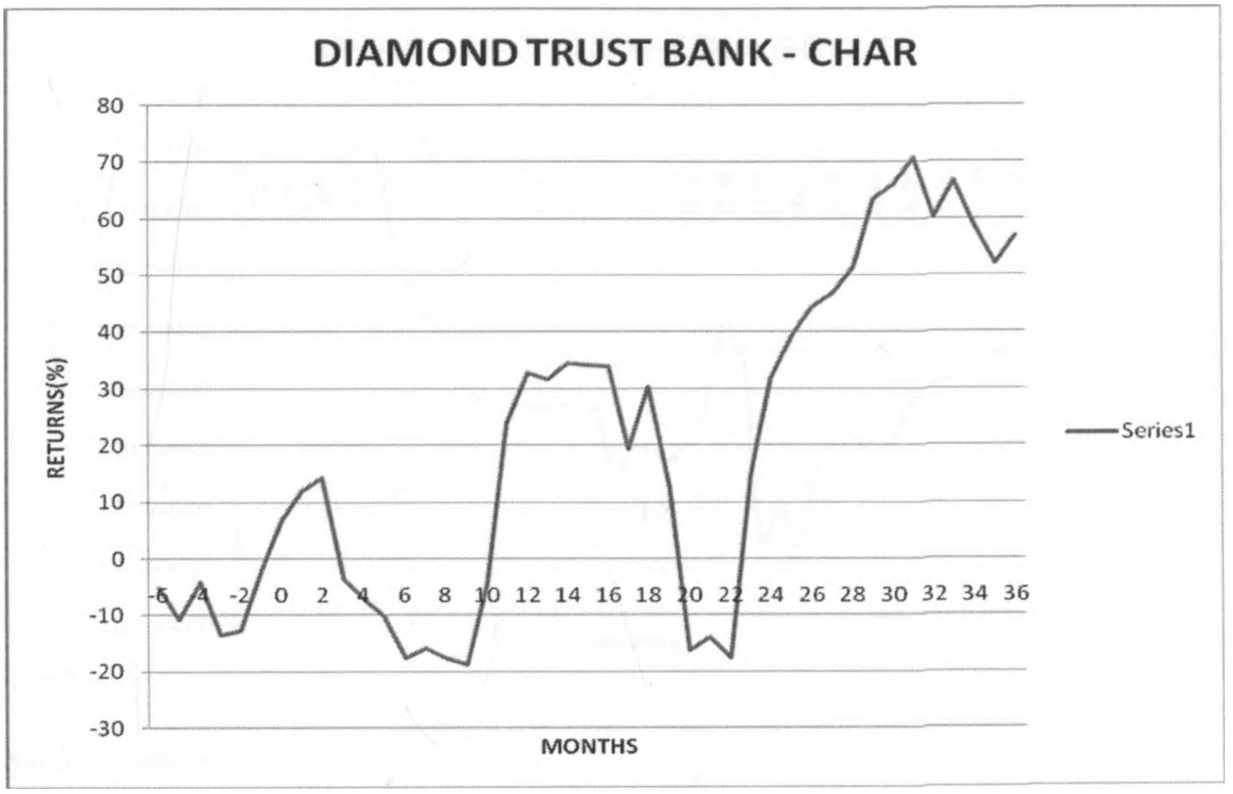


Figure 4.5 illustrates the long-term abnormal performance of East African Breweries Limited against its benchmark portfolios. The benchmark companies which were found in the tenth decile of the market capitalization on the announcement month. The benchmark companies included British America Tobacco Kenya Ltd, Bamburi cement ltd, Standard Chartered bank Ltd and Barclays bank Ltd whose returns were weighted in the ratio of 0.14, 0.23, 0.3 and 0.33 respectively.

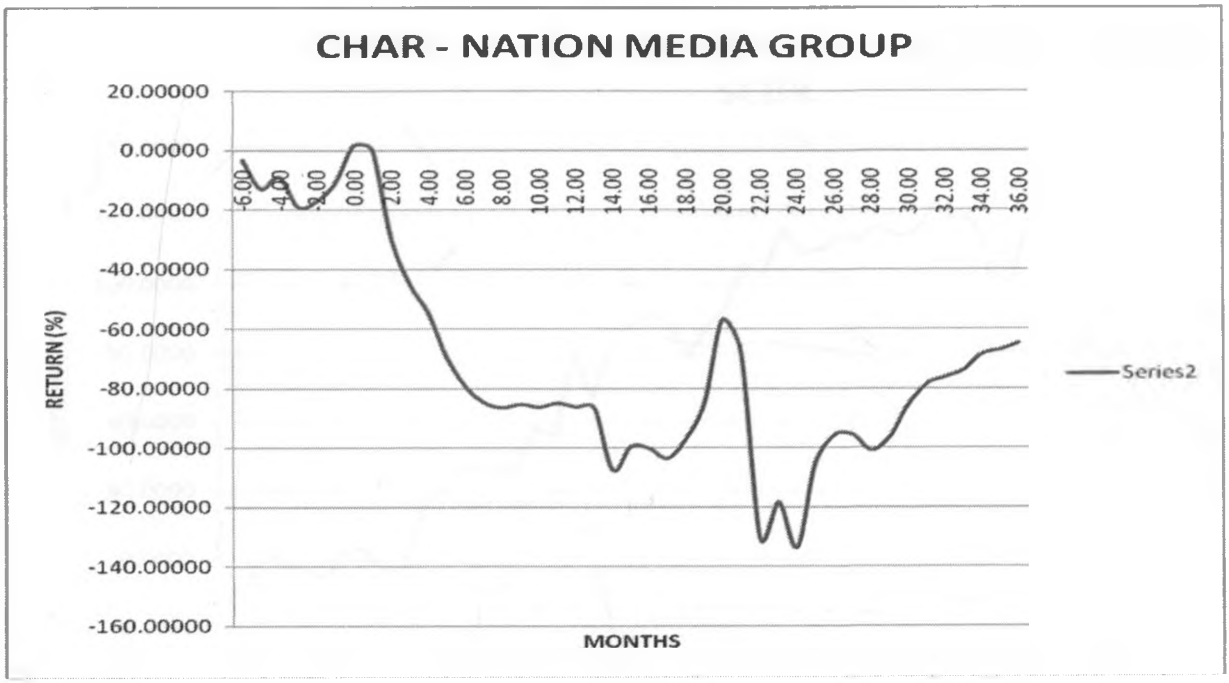
Figure 4.5 – cumulative Abnormal returns – DIAMOND TRUST BANK



Source: author

Figure 4.6 illustrates the long-term abnormal performance of Diamond trust bank against the benchmark portfolio. As it can be seen, stock split firm performed better than the benchmark portfolios around the announcement month as well as the after the tenth month and twenty second month. The benchmark portfolio used to compare the performance of this company were CMC Holding Limited, B.O.C Kenya Limited, Standard Newspapers Group and I.C.D.C Investment Company Limited whose returns were weighted using the ratios 0.22,0.23,0.23 and 0.31 respectively.

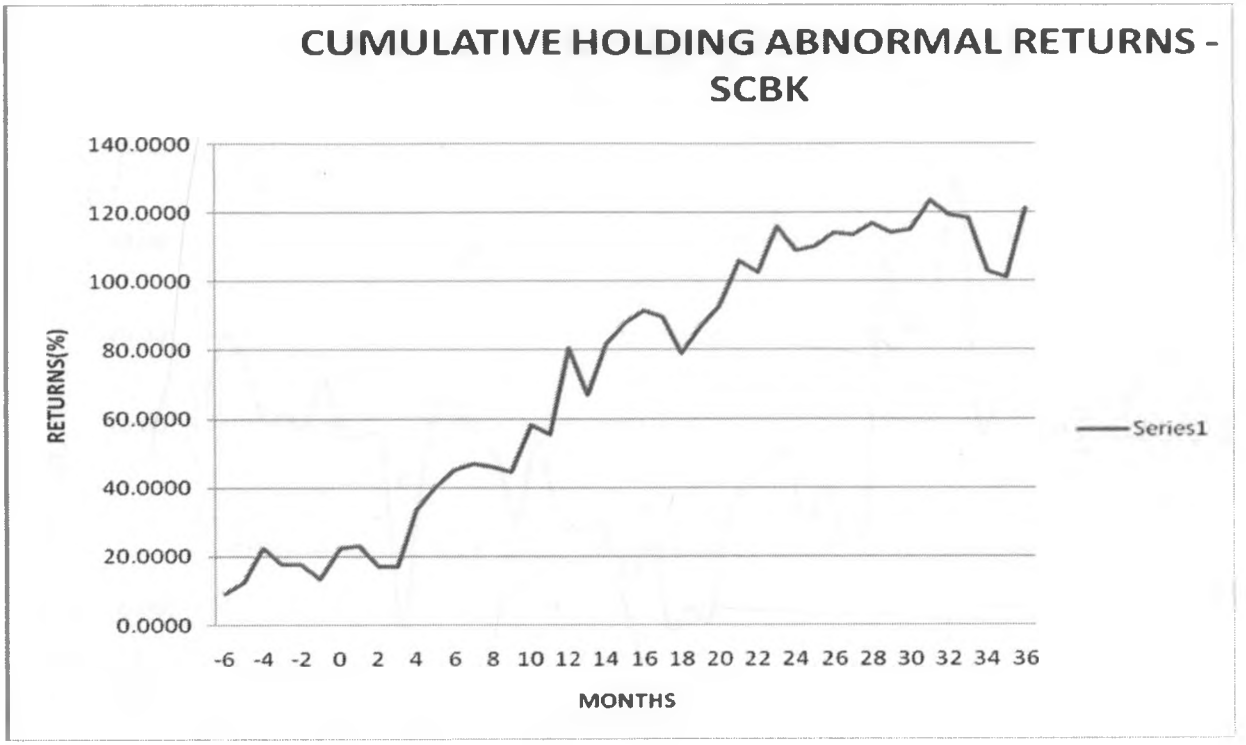
Figure 4.6 – Cumulative Abnormal Returns – Nation Media Group



Source: Author

As shown in figure 4.7, the cumulated abnormal returns around the announcement month are slightly above the benchmark returns. However, the returns drops after the ex- split month to as low as – 107.6% in the fourteenth month and -133.7% in the twenty fourth month. The benchmark portfolio was made up by companies from the ninth decile. They are Total Kenya Ltd, CFC Bank Limited, Kenya Airways Ltd and Kenya Commercial bank limited whose returns were weighted using the ratios 0.18, 0.21,0.29 and 0.32 respectively.

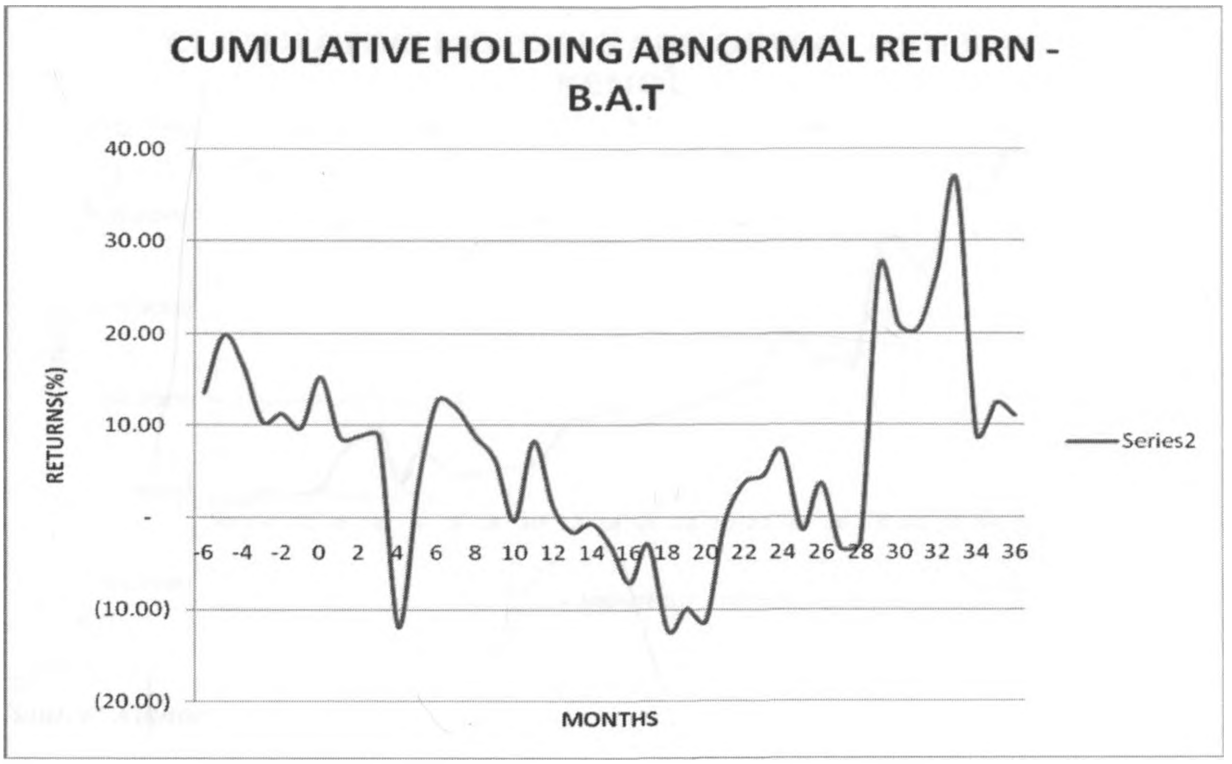
Figure 4.7 – Cumulative abnormal returns - SCBK



Source: Author

Figure 4.8 illustrates the cumulative abnormal returns for the standard Chartered bank limited against the benchmark portfolios of the same decile.The benchmark portfolios were drawn from the tenth decile. The companies which formed the portfolios include East Afrcan Breweries Limited, Kenya power & lighting company ltd, Bamburi cement ltd ,Africa lakes corporation PLC and Barclays Bank of kenya whose return were value weighted using the ratios 0.13 , 0.13, 0.19, 0.24 and 0.32 respectively. It is noticable that the returns for the company continued to rise even after the ex-split month. This finding however contradicts the earilier empirical works which normally notes that the large size companies registers near negligible abnormal returns over such a period of time.

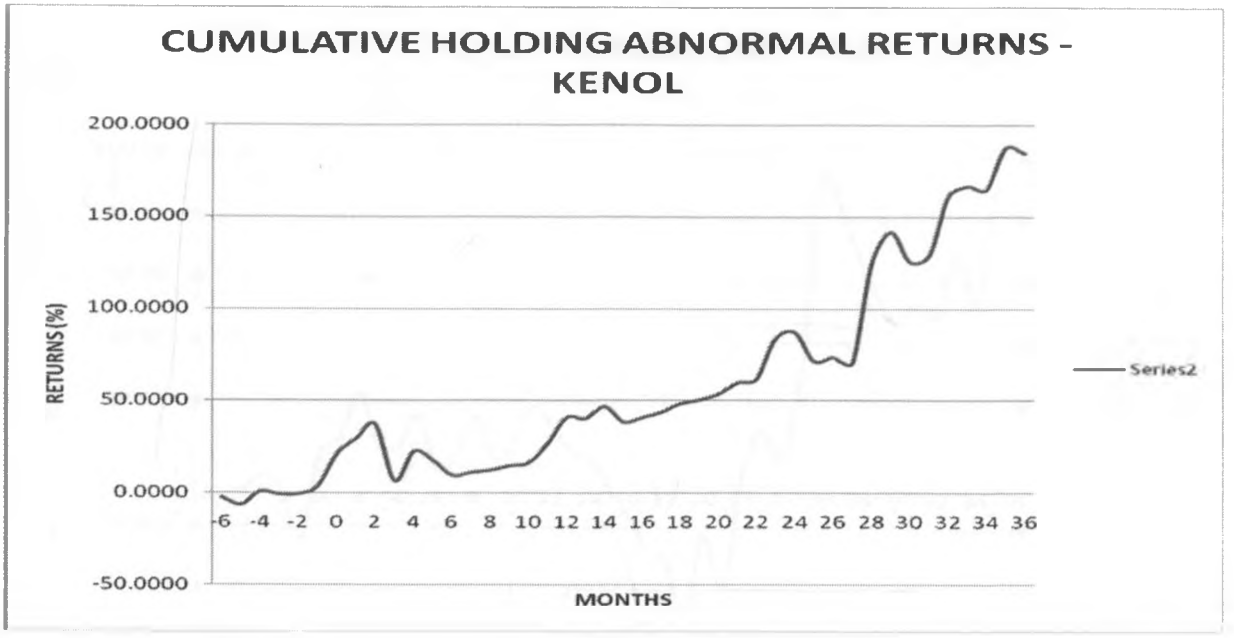
Figure 4.8 – Cumulative holding abnormal returns – B.A.T



Source: Author

Figure 4.9 illustrates the long term abnormal returns of the B.A.T company compared with the its benchmark portfolio. Noticeable on the chart is the fact that the stock recorded abnormal return around the split month. However a sharp decline is noted on the fourth month but at the twenty ninth month and the thirty third month the stock return showed some remarkable positive returns. The benchmark companies includes; Kenya airways limited, Firestone East Africa ltd, Brooke bond ltd and East african breweries limited whose returns were value weighted using the ratios as 0.2, 0.2, 0.24, and 0.37 respectively.

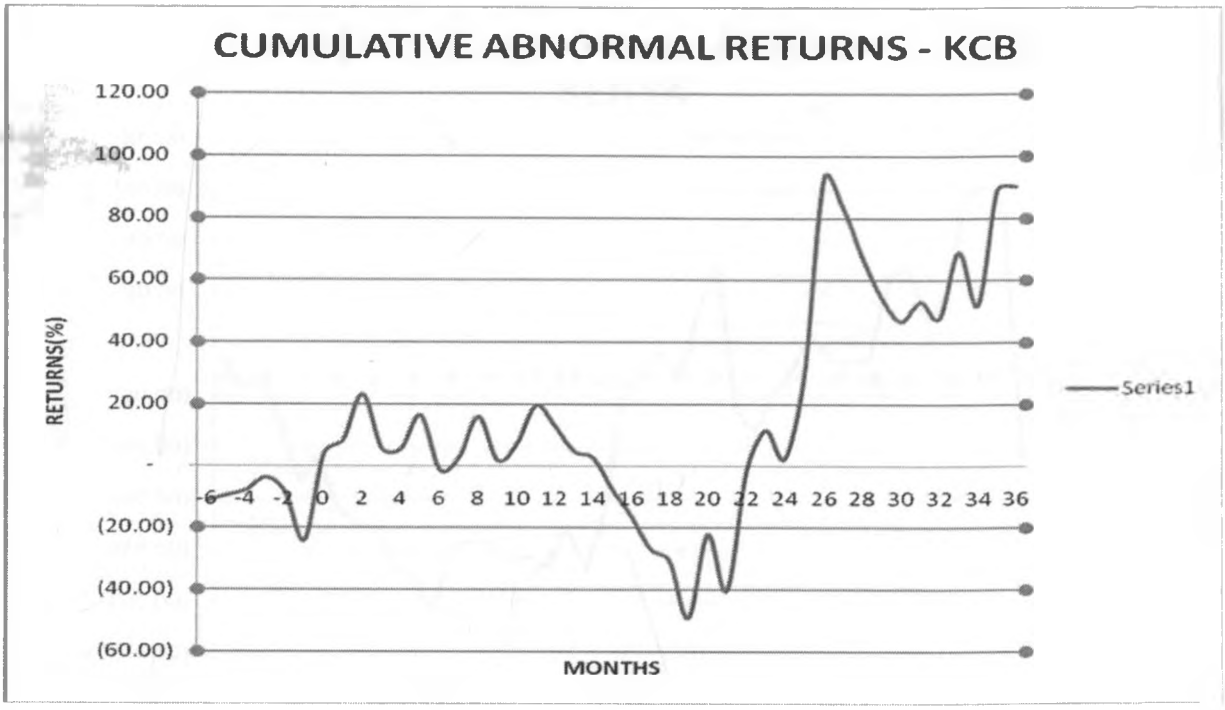
Figure 4.9 – Cumulative holding abnormal returns - KENOL



Source: Author

Figure 4.10 above shows that the abnormal returns of Kenol increasing over the months. The returns of this stock were matched against those of its benchmark portfolios which included Pan Africa insurance limited, Kapchorua tea co. limited and Tourism promotion services limited at the value weighted ratios of 0.28, 0.35 and 0.37 respectively.

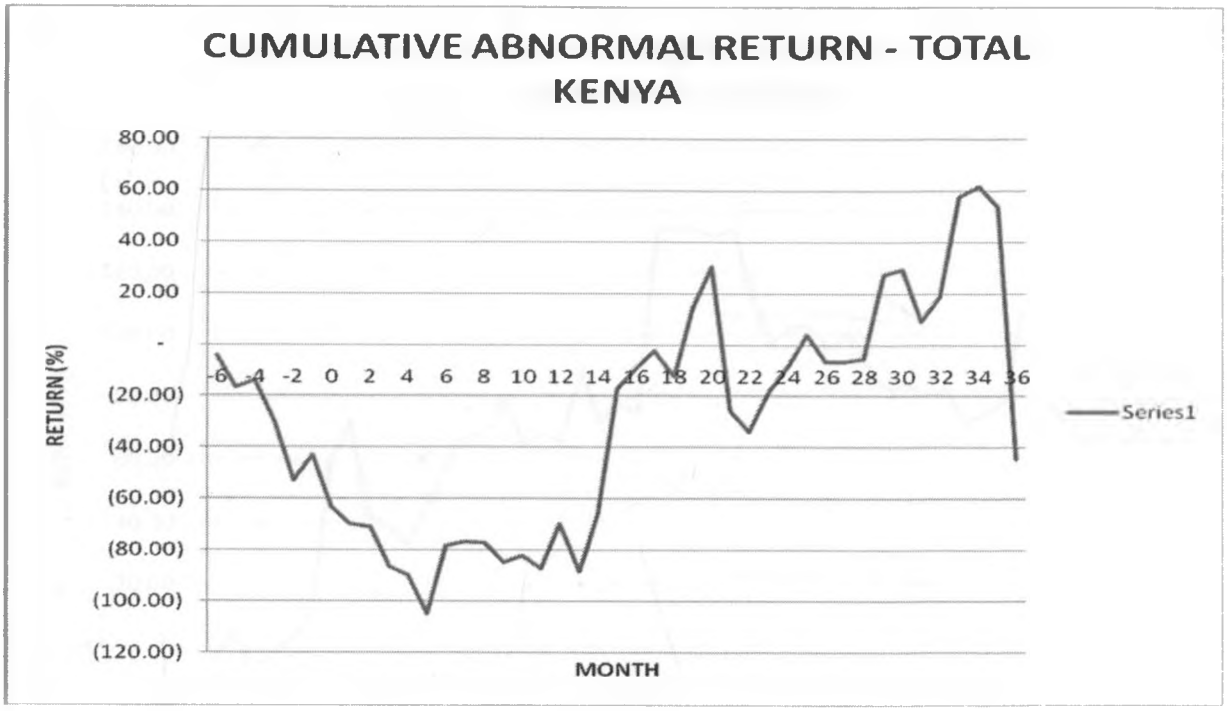
Figure 4.10- Cumulative holding abnormal returns - KCB



Source: author

Figure 4.11 illustrates that the abnormal returns that were experienced were felt in the first year after the split announcement month. However, a sharp decline was experienced from the twelveth month to the nineteenth month. Positive abnormal returns were recorded starting from the twenty second month onwards. The above stock was benchmarked against four stocks of the same decile. They included I.C.D.C investments co ltd, total kenya limited, Firestone East Africa limited company and nation media group whose returns were valued weighted using the ratios 0.22, 0.25,0.26 and 0.28 respectively.

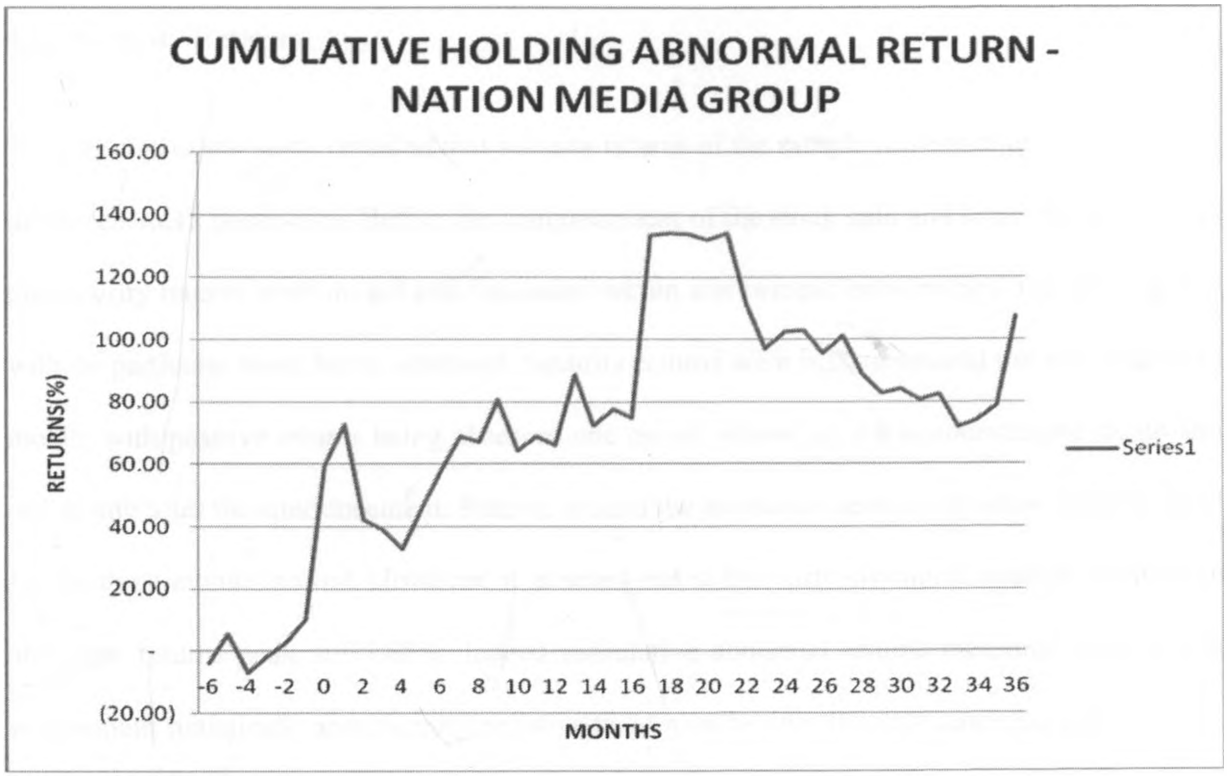
Figure 4.11 Cumulative holding abnormal returns – Total kenya



Source: Author

Figure 4.12 above, illustrates that the returns of the Total Kenya recorded a below average performance even before the split month as compared to the same sized benchmark portfolios. This trend is also visible even after the stock split.

Figure 4.12 – cumulative holding abnormal returns –Nation media group



Source:Author

As shown in Figure 4.13, above average return of the stock's return was recorded at the announcement month. This upward trend is maintained through out the thirty six months ex-split.This company's stock returns were benchmarked against those of the companies of almost the same size as the splitting firm. The companies included Total kenya ltd, C.F.C bank limited, Kenya airways limited and Kenya commmercial bank limited whose stock returns were value weighted using ratios of 0.18, 0.21, 0.29, and 0.32 respectively.

4.3. Discussion and Findings

4.3.1 Security Returns

The findings of the study revealed that security returns of the sample fluctuated less than those of the benchemark portfoilios. Before the announcement of the stock split and large stock dividend, the security returns were mixed and fluctuated within one percent between positive and negative with no particular trend being observed. Security returns were highest around the announcement month, with positive returns being observed one month before, on the announcement month and one month after the announcement. Returns around the announcement month show positive trend for the three months period. However, it is noted that at the thirty six-month marker, cumulative abnormal returns peak at 31.68%. Indeed cumulative abnormal returns measured from month zero remain statistically significantly negative to 24 months after the split announcement.

4.3.2 Effect of stock split on stock prices

Before the announcement of the bonus issue the stock price and the market capitalisation of the sample was one percent lower than expected, this is a negligible return considering that it covers a period of six month. This return suggests that there was no leakage of information about the upcoming stock split.

The announcement of the stock split positively affected the stock prices and market capitalisation by over fifteen percent on the announcement month. The change shows that the market treated this information favourably. The upward trend on the share prices seems to end after the ex-split month announcement and decreases to negative thirteen percent inthe first montrh after split. It is

therefore evident that an announcement of stock split announcement, causes a positive change on the stock prices and the market capitalisation of twenty percent.

Summary

The markets showed an overreaction of the market towards the stock split announcement. This was expressed by the mean reversion of prices in the first year of -1.49%, second year of -5.27% and -6.55% in the third year after the stock split announcement. This is among other studies that provide an evidence of overreaction or mean reversion in prices. These findings are consistent to earlier findings DeBondt and Thaler (1985, 1987) that show that firms that experience large returns over 3-5 years display mean reverting returns in subsequent years. Since firms making stock split announcement experience large positive returns before the announcement could provide evidence against the under reaction hypothesis.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusions

Stock splits have been of considerable interest to researchers and practioners for a long time. Among others, Brennan and Copeland (1988*b*) argue that stock splits serve as costly signals of managers' private information. Consistent with their arguments, for a sample of 11 stock split announcements during the period 2000–2005, the announcement month abnormal returns are 15.78%. However, the study found out that the market does incorporate the full effect of the stock split announcement in the month of the announcement. The average 1- and 3- year abnormal returns after the announcement month are -1.49 % and -6.55%, respectively.

That there seems to be no leakage of information to the NSE before the company officially makes the stock split and stock dividends announcements. Stock split announcement have a negative effect on stock prices in the long run and on the market capitalisation of firms in the NSE.

From the findings, it is possible to predict how the market will react following the announcement of stock split. From the findings, although limited to stock splits, provide a message of caution and skepticism toward the claim that long-run abnormal performance pervades financial markets in response to publically announced events. Before abandoning market efficiency in favour of long-run market under reaction (or overreaction) to various events, prudence demands several commonsense steps. These include evaluating evidence gathered over many, many years and kinds of markets and making efforts to evaluate the fallibilities of our methods of modeling, sampling, and measuring long-run abnormal returns. If we do conclude that long-run abnormal

performance exists after a given event, prudence demands, for several reasons, that we not rashly conclude that markets are so inefficient that prices are routinely biased by large amounts, such as 50 to 100 percent. First, if investor biases are at work, they are likely eventually to be followed by losses and learning. Second, a large amount of useful economic reasoning is based on rationality. Third, it is a fact that model errors and benchmark and sampling issues affect abnormal return measures. Fourth, even if market prices reflect the imperfections of humans as information processors, market imperfections such as arbitrage costs, default risks, and short-selling costs also may rationally limit how traders respond in their attempts to profit and by their actions to affect market prices.

5.2 Limitation of the Study.

Notwithstanding the researcher's determination to undertake the study to completion within the given time frame, a number of constraints were encountered. Initially the researcher intended to carry out the research for thirteen (13) companies over a period of six years (2000-2005) however, the researcher was informed that information for the alternative segment of the market was not easily available. It was not possible to tell if this was a deliberate refusal to divulge or there was no access to the information. There is likely to be a contaminating effect for stock price reaction to stock dividends and stock split for firms that also released simultaneous "contaminating announcements", for example the simultaneous release of past earnings or announcement of stock dividends.

5.3 Suggestions for further research.

1) A study to find out the long run performance after stock split using the Fama-French (1993) three factor model or Carhart (1997) four –factor model.

2) A study to try to isolate the dividends announced concurrently with stock split announcement due to the uncertainty about the dividend signal inherent in the stock split announcement.

3) A study to compare the long run reaction to anticipated and surprise information announcement using stock splits.

4) A study of the long run performance using the book-to-market quintiles (Value Vs Glamour Analysis). Fama and French (1992) show that value stock (high-book-to-market stocks) outperform glamour stocks (low-book-to-market stock) after controlling for the differences in size.

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Appendix I- Companies Listed at the Nairobi Stock Exchange

Agriculture

1. Unilever Tea (K) Ltd.
2. Rea Vipingo Ltd.
3. Sasini Tea & Coffee Ltd.
4. Kakuzi Ltd.

Commercial and Services

1. Access Kenya Group
2. Marshalls E.A. Ltd.
3. Car & General Ltd.
4. Kenya Airways Ltd.
5. CMC Holdings Ltd.
6. Nation Media Group Ltd.
7. TPS (Serena) Ltd.
8. ScanGroup Ltd.
9. Standard Group Ltd.

Finance and Investment

1. Barclays Bank of Kenya Ltd.
2. CFC Bank Ltd.
3. Housing Finance Company of Kenya Ltd.
4. ICDC Investment Company Ltd.
5. Kenya Commercial Bank Ltd.
6. National Bank of Kenya Ltd.
7. Pan Africa Insurance Holdings Co. Ltd
8. Diamond Trust Bank of Kenya Ltd.
9. Kenya Re-Insurance Corporation Ltd.
10. Jubilee Insurance Co. Ltd
11. Standard Chartered Bank Ltd.
12. National Industrial Credit Bank Ltd.
13. Equity Bank Ltd.

Industrial and Allied

1. Athi River Mining Ltd.
2. BOC Kenya Ltd.
3. British American Tobacco Kenya Ltd.
4. Carbacid Investments Ltd.
5. Olympia Capital Holdings Ltd.
6. E.A. Cables Ltd.
7. E.A. Breweries Ltd.
8. Sameer Africa Ltd.
9. Kenya Oil Ltd.
10. Mumias Sugar Company Ltd.
11. Unga Group Ltd.
12. Bamburi Cement Ltd.
13. Crown berger (K) Ltd.
14. E.A Portland Cement Co. Ltd.

15. Kenya Power & Lighting Co. Ltd.
16. Total Kenya Ltd.
17. Eveready East Africa Ltd.
18. Kengen Ltd.

ALTERNATIVE INVESTMENT MARKET

1. A.Baumann & Co.Ltd.
2. City Trust Ltd.
3. Eaagads Ltd.
4. Express Ltd.
5. Kapchorua Tea Co. Ltd.
6. Kenya Orchards Ltd.
7. Limuru Tea Co. Ltd.
8. Williamson Tea Kenya Ltd.

Appendix 11 – Cumulative Holding Abnormal Returns – CMC Holdings

Month		Stock Price (KES)	Div ann	returns	Rbt	HAR	CHAR
	Jun-03	44.75					
-6	Jul-03	42.50	0	-5.0279	-0.4568	-4.5711	-4.5711
-5	Aug 2003	59.00	0	38.8235	-0.5181	39.3416	34.7705
-4	Sep-03	62.00	0	5.0847	15.1327	-10.0480	24.7225
-3	Oct-03	74.00	0	19.3548	7.3563	11.9985	36.7210
-2	Nov-03	72.00	0	-2.7027	8.5929	-11.2956	25.4254
-1	Dec-03	82.00	0	13.8889	4.4203	9.4686	34.8940
0	Jan-04	140.00	1	71.9512	19.9528	51.9984	86.8924
1	Feb-04	72.50	0	-48.2143	27.7689	-75.9832	10.9093
2	Mar-04	53.00	0	-26.8966	-14.4764	-12.4202	-1.5109
3	Apr-04	55.00	0	3.7736	-2.6091	6.3827	4.8718
4	May-04	51.50	0	-6.3636	5.7604	-12.1241	-7.2523
5	Jun-04	51.00	0	-0.9709	1.9302	-2.9011	-10.1534
6	Jul-04	56.00	0	9.8039	-12.7369	22.5409	12.3875
7	Aug-04	58.00	0	3.5714	-7.1585	10.7299	23.1174
8	Sep-04	55.00	0	-5.1724	4.9769	-10.1493	12.9681
9	Oct-04	53.00	0	-3.6364	3.1816	-6.8180	6.1501
10	Nov-04	58.50	0	10.3774	10.3853	-0.0079	6.1422
11	Dec-04	60.00	0	2.5641	0.1670	2.3971	8.5393
12	Jan-05	50.00	1	-15.0000	6.7433	-21.7433	-13.2041
13	Feb-05	49.50	0	-1.0000	4.1622	-5.1622	-18.3663
14	Mar-05	49.00	0	-1.0101	-7.4113	6.4012	-11.9651
15	Apr-05	48.00	0	-2.0408	7.5646	-9.6054	-21.5705
16	May-05	48.00	0	0.0000	35.1132	-35.1132	-56.6837
17	Jun-05	51.00	0	6.2500	22.3519	-16.1019	-72.7856
18	Jul-05	49.75	0	-2.4510	12.0455	-14.4964	-87.2821
19	Aug-05	50.00	0	0.5025	5.5518	-5.0492	-92.3313
20	Sep-05	47.25	0	-5.5000	4.8478	-10.3478	-102.6791
21	Oct-05	49.75	0	5.2910	-4.8212	10.1122	-92.5670
22	Nov-05	50.00	0	0.5025	5.0561	-4.5535	-97.1205
23	Dec-05	54.00	0	8.0000	6.8943	1.1057	-96.0148
24	Jan-06	52.50	1.5	0.0000	7.8941	-7.8941	-103.9089
25	Feb-06	49.75	0	-5.2381	-3.7138	-1.5242	-105.4332
26	Mar-06	51.50	0	3.5176	0.9891	2.5285	-102.9047
27	Apr-06	54.50	0	5.8252	0.0905	5.7348	-97.1699
28	May-06	55.50	0	1.8349	10.7493	-8.9144	-106.0844
29	Jun-06	70.00	0	26.1261	-4.3373	30.4635	-75.6209
30	Jul-06	76.50	0	9.2857	-4.2743	13.5600	-62.0609
31	Aug-06	88.50	0	15.6863	-3.2964	18.9826	-43.0783
32	Sep-06	124.00	0	40.1130	-3.0539	43.1669	0.0887
33	Oct-06	136.00	0	9.6774	14.0242	-4.3468	-4.2581
34	Nov-06	162.00	0	19.1176	6.2903	12.8273	8.5692
35	Dec-06	176.00	0	8.6420	-3.6362	12.2782	20.8474
36	Jan-07	181.00	2.3	4.1477	-11.2322	15.3799	36.2273

Appendix III – Cumulative Holding Abnormal Returns – KENOL

Month	Month	Stock Price (KES)	Div	Rit	Rbt	HAR	CHAR
					11.63848		
Dec-03	-6	371.00	-	12.76596	-5.16176	17.92772	17.92772
Jan-04	-5	380.00	-	2.425876	30.11592	-27.69	-9.76232
Feb-04	-4	365.00	-	-3.94737	22.43524	-26.3826	-36.1449
Mar-04	-3	350.00	-	-4.10959	-11.6921	7.582528	-28.5624
Apr-04	-2	325.00	-	-7.14286	5.696968	-12.8398	-41.4022
May-04	-1	350.00	-	7.692308	3.939134	3.753174	-37.6491
Jun-04	0	420.00	-	20	-3.6147	23.6147	-14.0344
Jul-04	1	50.50	-	-87.9762	5.585257	-93.5614	-107.596
Aug-04	2	42.75	-	-15.3465	2.038476	-17.385	-124.981
Sep-04	3	52.00	-	21.63743	-0.88768	22.5251	-102.456
Oct-04	4	49.00	-	-5.76923	14.31258	-20.0818	-122.538
Nov-04	5	60.50	-	23.46939	-0.68755	24.15694	-98.3806
Dec-04	6	63.00	1.00	5.785124	-2.45541	8.240531	-90.14
Jan-05	7	62.00	-	-1.5873	13.00043	-14.5877	-104.728
Feb-05	8	62.00	-	0	4.480932	-4.48093	-109.209
Mar-05	9	65.00	-	4.83871	3.470232	1.368477	-107.84
Apr-05	10	66.50	-	2.307692	2.975042	-0.66735	-108.508
May-05	11	88.50	-	33.08271	17.92501	15.1577	-93.3499
Jun-05	12	115.00	-	29.9435	30.94671	-1.00321	-94.3531
Jul-05	13	107.00	-	-6.95652	28.88462	-35.8411	-130.194
Aug-05	14	114.00	-	6.542056	5.987705	0.554351	-129.64
Sep-05	15	126.00	-	10.52632	7.757983	2.768333	-126.872
Oct-05	16	120.00	-	-4.7619	1.094233	-5.85614	-132.728
Nov-05	17	123.00	-	2.5	-0.22391	2.723909	-130.004
Dec-05	18	135.00	-	9.756098	1.655534	8.100563	-121.903
Jan-06	19	136.00	2.25	2.407407	11.59318	-9.18578	-131.089
Feb-06	20	130.00	-	-4.41176	1.8742	-6.28596	-137.375
Mar-06	21	134.00	-	3.076923	3.363024	-0.2861	-137.661
Apr-06	22	129.00	-	-3.73134	4.846955	-8.5783	-146.239
May-06	23	131.00	-	1.550388	17.84382	-16.2934	-162.533
Jun-06	24	126.00	-	-3.81679	1.334796	-5.15159	-167.684
Jul-06	25	120.00	-	-4.7619	-0.1139	-4.64801	-172.332
Aug-06	26	119.00	-	-0.83333	2.350498	-3.18383	-175.516
Sep-06	27	101.00	-	-15.1261	4.76059	-19.8866	-195.403
Oct-06	28	109.00	-	7.920792	0.432381	7.488411	-187.914
Nov-06	29	107.00	-	-1.83486	-1.635	-0.19986	-188.114
Dec-06	30	108.00	-	0.934579	0.553704	0.380876	-187.733
Jan-07	31	98.00	2.25	-7.17593	-3.34748	-3.82844	-191.562
Feb-07	32	100.00	-	2.040816	-11.5234	13.56426	-177.998
Mar-07	33	100.00	-	0	-6.77631	6.776309	-171.221
Apr-07	34	99.00	-	-1	-5.74622	4.746223	-166.475
May-07	35	99.50	-	0.505051	-2.9864	3.491454	-162.984
Jun-07	36	99.00	-	-0.50251	3.64216	-4.14467	-167.128

Appendix IV – Cumulative Holding Abnormal Returns – EABL

Month	Stock pices (kes)	Month	Div	Rit	Rbt	HAR	CHAR
Feb-04	520.00	-6	3.75	10.72939	6.426346	4.303041	4.303041
Mar-04	100.00	-5	-	-80.7692	-17.4921	-63.2772	-58.9741
Apr-04	105.00	-4	-	5	-8.81121	13.81121	-45.1629
May-04	103.00	-3	-	-1.90476	-4.98982	3.085057	-42.0779
Jun-04	111.00	-2	-	7.76699	-7.5383	15.30529	-26.7726
Jul-04	114.00	-1	-	2.702703	1.077747	1.624956	-25.1476
Aug-04	148.00	0	14.25	42.32456	-0.6035	42.92806	17.78045
Sep-04	149.00	1	-	0.675676	-0.83302	1.508695	19.28915
Oct-04	153.00	2	-	2.684564	10.36695	-7.68239	11.60676
Nov-04	154.00	3	-	0.653595	-1.30311	1.956706	13.56347
Dec-04	146.00	4	-	-5.19481	-6.48277	1.28796	14.85143
Jan-05	138.00	5	-	-5.47945	5.076165	-10.5556	4.29581
Feb-05	138.00	6	1.50	1.086957	5.362323	-4.27537	0.020443
Mar-05	135.00	7	-	-2.17391	-5.57828	3.404367	3.42481
Apr-05	134.00	8	-	-0.74074	2.421434	-3.16217	0.262636
May-05	128.00	9	-	-4.47761	7.751309	-12.2289	-11.9663
Jun-05	133.00	10	-	3.90625	3.912026	-0.00578	-11.9721
Jul-05	131.00	11	-	-1.50376	5.29962	-6.80338	-18.7754
Aug-05	140.00	12	3.00	9.160305	-0.01752	9.17783	-9.59761
Sep-05	139.00	13	-	-0.71429	-0.23787	-0.47642	-10.074
Oct-05	134.00	14	-	-3.59712	2.224242	-5.82136	-15.8954
Nov-05	144.00	15	-	7.462687	0.681236	6.78145	-9.11394
Dec-05	146.00	16	-	1.388889	0.847509	0.54138	-8.57256
Jan-06	140.00	17	-	-4.10959	2.476451	-6.58604	-15.1586
Feb-06	140.00	18	1.75	1.25	-1.53034	2.780341	-12.3783
Mar-06	139.00	19	-	-0.71429	-0.00883	-0.70545	-13.0837
Apr-06	148.00	20	-	6.47482	-0.21429	6.689106	-6.39461
May-06	145.00	21	-	-2.02703	2.967519	-4.99455	-11.3892
Jun-06	140.00	22	-	-3.44828	2.131136	-5.57941	-16.9686
Jul-06	145.00	23	-	3.571429	2.140079	1.43135	-15.5372
Aug-06	144.00	24	4.15	2.172414	8.665611	-6.4932	-22.0304
Sep-06	154.00	25	-	6.944444	6.68282	0.261624	-21.7688
Oct-06	153.00	26	-	-0.64935	21.21438	-21.8637	-43.6325
Nov-06	166.00	27	-	8.496732	-24.4132	32.90996	-10.7226
Dec-06	171.00	28	-	3.012048	-5.03697	8.049017	-2.67355
Jan-07	143.00	29	-	-16.3743	3.961228	-20.3355	-23.009
Feb-07	163.00	30	2.15	15.48951	-10.9284	26.41787	3.40882
Mar-07	168.00	31	-	3.067485	2.768224	0.299261	3.70808
Apr-07	147.00	32	-	-12.5	-2.81321	-9.68679	-5.97871
May-07	155.00	33	-	5.442177	-2.66634	8.108514	2.129806
Jun-07	154.00	34	-	-0.64516	5.03124	-5.6764	-3.54659
Jul-07	171.00	35	-	11.03896	1.22084	9.818121	6.271526
Aug-07	185.00	36	5.55	11.43275	1.254968	10.17778	16.44931

Appendix V Cumulative Holding Abnormal Returns – Nation Media Group

MONTH	MONTH	Stock prices(Kes)	Div	Rit	Rbt	HAR	CHAR
-6	Sep-04	175.00	-	-1.8797	1.33015	-3.20985	-3.20985
-5	Oct-04	175.00	-	0	9.75981	-9.75981	-12.9697
-4	Nov-04	190.00	-	8.571429	4.58960	3.98182	-8.98783
-3	Dec-04	170.00	-	-10.5263	-0.57798	-9.94833	-18.9362
-2	Jan-05	185.00	-	8.823529	7.10859	1.71494	-17.2212
-1	Feb-05	199.00	-	7.567568	1.27301	6.29456	-10.9267
0	Mar-05	227.00	5.00	16.58291	4.03370	12.54922	1.62255
1	Apr-05	232.00	-	2.202643	3.53654	-1.33390	0.288649
2	May-05	201.00	-	-13.3621	16.28392	-29.64599	-29.3573
3	Jun-05	200.00	-	-0.49751	14.96770	-15.46521	-44.8226
4	Jul-05	197.00	1.00	-1	8.72703	-9.72703	-54.5496
5	Aug-05	184.00	-	-6.59898	8.41604	-15.01502	-69.5646
6	Sep-05	181.00	-	-1.63043	8.08319	-9.71363	-79.2782
7	Oct-05	185.00	-	2.209945	7.73078	-5.52084	-84.7991
8	Nov-05	186.00	-	0.540541	2.22494	-1.68440	-86.4835
9	Dec-05	190.00	-	2.150538	1.06522	1.08532	-85.3982
10	Jan-06	199.00	-	4.736842	5.67761	-0.94076	-86.3389
11	Feb-06	200.00	-	0.502513	-0.84899	1.35151	-84.9874
12	Mar-06	199.00	5.00	2	3.29167	-1.29167	-86.2791
13	Apr-06	197.00	-	-1.00503	-0.75733	-0.24770	-86.5268
14	May-06	200.00	-	1.522843	22.55776	-21.03492	-107.562
15	Jun-06	203.00	-	1.5	-6.40581	7.90581	-99.6559
16	Jul-06	202.00	-	-0.49261	0.15957	-0.65218	-100.308
17	Aug-06	204.00	2.00	1.980198	5.30880	-3.32860	-103.637
18	Sep-06	234.00	-	14.70588	8.08390	6.62199	-97.0147
19	Oct-06	266.00	-	13.67521	1.59000	12.08522	-84.9295
20	Nov-06	334.00	-	25.56391	-2.61220	28.17610	-56.7534
21	Dec-06	313.00	5.00	-4.79042	6.18842	-10.97884	-67.7322
22	Jan-07	309.00	-	-1.27796	61.56728	-62.84523	-130.577
23	Feb-07	278.00	-	-10.0324	-22.25808	12.22571	-118.352
24	Mar-07	244.00	5.00	-10.4317	4.87102	-15.30268	-133.654
25	Apr-07	241.00	-	-1.22951	-29.66108	28.43157	-105.223
26	May-07	248.00	-	2.904564	-6.37984	9.28440	-95.9384
27	Jun-07	248.00	-	0	-0.32836	0.32836	-95.6101
28	Jul-07	260.00	3.00	6.048387	11.32822	-5.27983	-100.89
29	Aug-07	259.00	-	-0.38462	-4.78240	4.39779	-96.4921
30	Sep-07	283.00	-	9.266409	-1.43830	10.70471	-85.7874
31	Oct-07	286.00	-	1.060071	-6.10010	7.16017	-78.6272
32	Nov-07	306.00	-	6.993007	4.58173	2.41128	-76.2159
33	Dec-07	326.00	-	6.535948	4.15479	2.38116	-73.8348
34	Jan-08	292.00	-	-10.4294	-15.78333	5.35388	-68.4809
35	Feb-08	319.00	-	9.246575	7.67653	1.57004	-66.9109
36	Mar-08	323.00	-	1.253918	-0.94293	2.19685	-64.714

Appendix VI – Cumulative Abnormal Returns – Standard Chartered Bank Kenya ltd

Month	Month	Stock prices (Kes)	div	Rit	Rbt	HAR	CHAR
-7	Jul-99	54.00					
-6	Aug-99	55.00	1.15	3.9815	-5.1711	9.1526	9.1526
-5	Sep-99	55.50	-	0.9091	-2.3793	3.2884	12.4410
-4	Oct-99	58.50	-	5.4054	-4.7624	10.1678	22.6088
-3	Nov-99	55.00	1.25	-3.8462	1.0247	-4.8709	17.7379
-2	Dec-99	56.50	-	2.7273	2.7910	-0.0637	17.6742
-1	Jan-00	53.00	-	-6.1947	-1.8475	-4.3472	13.3270
0	Feb-00	53.75	5.00	10.8491	1.6157	9.2333	22.5604
1	Mar-00	52.50	-	-2.3256	-2.9661	0.6405	23.2009
2	Apr-00	47.75	-	-9.0476	-2.7703	-6.2774	16.9235
3	May-00	47.75	-	0.0000	0.0000	0.0000	16.9235
4	Jun-00	48.00	-	0.5236	-16.3266	16.8502	33.7737
5	Jul-00	50.00	2.20	8.7500	2.3444	6.4056	40.1793
6	Aug-00	54.00	-	8.0000	2.9354	5.0646	45.2440
7	Sep-00	54.00	-	0.0000	-1.8623	1.8623	47.1063
8	Oct-00	55.00	-	1.8519	2.8460	-0.9942	46.1121
9	Nov-00	49.50	2.20	-6.0000	-4.3733	-1.6267	44.4854
10	Dec-00	49.50	-	0.0000	-13.5986	13.5986	58.0840
11	Jan-01	48.00	-	-3.0303	-0.3495	-2.6808	55.4032
12	Feb-01	58.00	6.60	34.5833	9.4093	25.1740	80.5772
13	Mar-01	46.25	-	-20.2586	-6.6646	-13.5940	66.9832
14	Apr-01	51.00	-	10.2703	-4.4743	14.7445	81.7277
15	May-01	52.00	-	1.9608	-4.0887	6.0495	87.7772
16	Jun-01	57.00	-	9.6154	6.0507	3.5647	91.3419
17	Jul-01	55.00	-	-3.5088	-1.9167	-1.5921	89.7499
18	Aug-01	46.25	2.00	-12.2727	-1.6400	-10.6327	79.1171
19	Sep-01	47.25	-	2.1622	-5.4196	7.5818	86.6989
20	Oct-01	49.50	-	4.7619	-1.0950	5.8569	92.5558
21	Nov-01	51.50	2.00	8.0808	-5.4818	13.5626	106.1184
22	Dec-01	47.50	-	-7.7670	-4.4582	-3.3088	102.8097
23	Jan-02	56.00	-	17.8947	4.6107	13.2841	116.0937
24	Feb-02	50.00	4.25	-3.1250	3.8703	-6.9953	109.0984
25	Mar-02	46.25	-	-7.5000	-8.5162	1.0162	110.1146
26	Apr-02	47.00	-	1.6216	-2.3035	3.9251	114.0397
27	May-02	49.50	-	5.3191	5.7465	-0.4273	113.6124
28	Jun-02	52.00	-	5.0505	1.6477	3.4028	117.0152
29	Jul-02	54.00	-	3.8462	6.8184	-2.9722	114.0430
30	Aug-02	51.00	2.20	-1.4815	-2.6649	1.1835	115.2264
31	Sep-02	55.00	-	7.8431	-0.5031	8.3462	123.5726
32	Oct-02	58.50	-	6.3636	10.7308	-4.3672	119.2054
33	Nov-02	57.00	2.20	1.1966	2.0039	-0.8074	118.3981
34	Dec-02	62.00	-	8.7719	24.1614	-15.3895	103.0086
35	Jan-03	67.00	-	8.0645	9.8134	-1.7489	101.2597
36	Feb-03	71.50	3.85	12.4627	-7.3159	19.7786	121.0383

Appendix VII – Cumulative Abnormal Returns – British American Tobacco Kenya Ltd

Month	Month	Stock prices (kes)	Div	Rit	Rbt	HAR	CBHAR
-7	Jul-99	76.00	-				
-6	Aug-99	80.00	2.50	8.5526	-5.03904	13.59168	13.59168
-5	Sep-99	83.50	-	4.3750	-1.91746	6.292463	19.88414
-4	Oct-99	77.00	-	-7.7844	-4.49479	-3.28964	16.5945
-3	Nov-99	75.00	-	-2.5974	3.507746	-6.10515	10.48935
-2	Dec-99	77.50	-	3.3333	2.505828	0.827506	11.31685
-1	Jan-00	74.00	-	-4.5161	-2.9929	-1.52323	9.793621
0	Feb-00	69.00	8.00	4.0541	-1.46382	5.517876	15.3115
1	Mar-00	63.50	-	-7.9710	-1.38662	-6.5844	8.727099
2	Apr-00	62.00	-	-2.3622	-2.51986	0.157655	8.884754
3	May-00	62.00	-	0.0000	0	0	8.884754
4	Jun-00	57.00	-	-8.0645	12.65934	-20.7239	-11.8391
5	Jul-00	60.00	3.75	11.8421	-3.3175	15.15961	3.320509
6	Aug-00	64.50	-	7.5000	-1.92968	9.42968	12.75019
7	Sep-00	70.00	-	8.5271	9.366277	-0.83914	11.91104
8	Oct-00	71.00	-	1.4286	4.569426	-3.14085	8.77019
9	Nov-00	67.00	2.50	-2.1127	0.408189	-2.52086	6.249325
10	Dec-00	60.50	-	-9.7015	-3.11281	-6.58868	-0.33935
11	Jan-01	65.00	-	7.4380	-1.25687	8.69489	8.355536
12	Feb-01	61.00	1.65	-3.6154	3.515882	-7.13127	1.22427
13	Mar-01	58.00	-	-4.9180	-2.13898	-2.77905	-1.55478
14	Apr-01	56.00	-	-3.4483	-4.38161	0.933338	-0.62145
15	May-01	55.00	-	-1.7857	0.626274	-2.41199	-3.03343
16	Jun-01	54.50	-	-0.9091	3.141177	-4.05027	-7.0837
17	Jul-01	55.00	3.50	7.3394	3.187311	4.152138	-2.93156
18	Aug-01	47.50	-	-13.6364	-4.30034	-9.33602	-12.2676
19	Sep-01	47.25	-	-0.5263	-2.94062	2.414303	-9.85328
20	Oct-01	49.00	-	3.7037	5.087423	-1.38372	-11.237
21	Nov-01	51.00	2.30	8.7755	-2.11237	10.88788	-0.34912
22	Dec-01	49.50	-	-2.9412	-7.03103	4.089856	3.740737
23	Jan-02	50.00	-	1.0101	0.173516	0.836585	4.577322
24	Feb-02	51.00	2.10	6.2000	3.524684	2.675316	7.252639
25	Mar-02	46.25	-	-9.3137	-0.73829	-8.57543	-1.32279
26	Apr-02	46.50	-	0.5405	-4.50529	5.045829	3.723036
27	May-02	46.25	-	-0.5376	6.578952	-7.11659	-3.39355
28	Jun-02	47.50	-	2.7027	2.115675	0.587027	-2.80652
29	Jul-02	53.50	8.00	29.4737	-0.48569	29.95938	27.15285
30	Aug-02	50.00	-	-6.5421	-0.41176	-6.13029	21.02256
31	Sep-02	50.00	-	0.0000	0.445731	-0.44573	20.57683
32	Oct-02	54.00	-	8.0000	1.675148	6.324852	26.90168
33	Nov-02	57.50	2.50	11.1111	1.491938	9.619173	36.52085
34	Dec-02	54.00	-	-6.0870	21.37387	-27.4608	9.060022
35	Jan-03	60.50	-	12.0370	8.620801	3.416236	12.47626
36	Feb-03	66.00	-	9.0909	10.45985	-1.36894	11.10731

Appendix VIII – Cumulative holding abnormal returns - KENOL

Month	Month	Stock price (kes)	Div	Rit	Rbt	HAR	CHAR
-7	Jun-00	82.00					
-6	Jul-00	80.00	0	-2.4390	-0.23401	-2.20501	-2.20501
-5	Aug-00	78.00	0	-2.5000	1.480459	-3.98046	-6.18547
-4	Sep-00	81.00	0	3.8462	-3.35673	7.202879	1.017408
-3	Oct-00	79.00	0	-2.4691	-0.95749	-1.51165	-0.49424
-2	Nov-00	78.00	0	-1.2658	-1.42282	0.156994	-0.33725
-1	Dec-00	73.00	0	-6.4103	-10.5331	4.122876	3.785631
0	Jan-01	82.00	6	20.5479	3.013809	17.53414	21.31977
1	Feb-01	90.00	0	9.7561	1.271875	8.484223	29.80399
2	Mar-01	93.00	0	3.3333	-4.24396	7.577291	37.38128
3	Apr-01	64.00	0	-31.1828	-0.54234	-30.6405	6.740824
4	May-01	77.00	0	20.3125	4.308675	16.00382	22.74465
5	Jun-01	73.50	0	-4.5455	0.366556	-4.91201	17.83264
6	Jul-01	70.00	0	-4.7619	3.266218	-8.02812	9.804516
7	Aug-01	70.00	0	0.0000	-1.49988	1.499882	11.3044
8	Sep-01	68.50	0	-2.1429	-3.3257	1.182844	12.48724
9	Oct-01	72.00	0	5.1095	2.65897	2.450519	14.93776
10	Nov-01	73.00	0	1.3889	-0.22062	1.609505	16.54726
11	Dec-01	74.00	7.5	11.6438	1.121212	10.52262	27.06989
12	Jan-02	85.00	0	14.8649	0.874495	13.99037	41.06026
13	Feb-02	84.00	0	-1.1765	-0.63429	-0.54218	40.51807
14	Mar-02	82.00	0	-2.3810	-8.8305	6.449549	46.96762
15	Apr-02	71.00	0	-13.4146	-5.07251	-8.34212	38.6255
16	May-02	72.00	0	1.4085	-0.94784	2.356295	40.9818
17	Jun-02	73.00	0	1.3889	-1.5509	2.939787	43.92158
18	Jul-02	76.50	0	4.7945	0.23125	4.563271	48.48485
19	Aug-02	79.50	0	3.9216	1.801285	2.120284	50.60514
20	Sep-02	81.00	0	1.8868	-1.22961	3.1164	53.72154
21	Oct-02	85.00	0	4.9383	-1.28854	6.226813	59.94835
22	Nov-02	92.00	0	8.2353	6.147692	2.087602	62.03595
23	Dec-02	103.00	9.5	22.2826	0.097625	22.18498	84.22094
24	Jan-03	130.00	0	26.2136	23.08421	3.129382	87.35032
25	Feb-03	130.00	0	0.0000	15.58497	-15.585	71.76534
26	Mar-03	126.00	0	-3.0769	-5.04362	1.966701	73.73204
27	Apr-03	130.00	0	3.1746	6.129482	-2.95488	70.77717
28	May-03	201.00	5	58.4615	4.330357	54.13118	124.9083
29	Jun-03	200.00	0	-0.4975	-17.695	17.19752	142.1059
30	Jul-03	190.00	0	-5.0000	11.41975	-16.4198	125.6861
31	Aug-03	191.00	0	0.5263	-2.78113	3.307448	128.9936
32	Sep-03	272.00	0	42.4084	10.0503	32.35807	161.3516
33	Oct-03	304.00	0	11.7647	6.22722	5.537486	166.8891
34	Nov-03	329.00	0	8.2237	9.74359	-1.51991	165.3692
35	Dec-03	371.00	5.5	14.4377	-7.86111	22.2988	187.668
36	Jan-04	380.00	0	2.4259	5.140152	-2.71428	184.9537

Appendix IX –Cumulative holding abnormal returns – Kenya Commercial bank limited

MONTHS	MONTH END	STOCK PRICES(KES)	Div ann	Rit	Rbt	HAR	CHAR
-7	Jul-00	28.00	0				
-6	Aug-00	25.00	0	-10.7143	0.564585	-11.2789	-11.2789
-5	Sep-00	26.00	0	4	2.269497	1.730503	-9.54837
-4	Oct-00	27.00	0	3.846154	2.116996	1.729157	-7.81921
-3	Nov-00	28.00	0	3.703704	-0.33036	4.034061	-3.78515
-2	Dec-00	25.50	0	-8.92857	-4.32715	-4.60142	-8.38657
-1	Jan-01	20.75	0	-18.6275	-2.84321	-15.7842	-24.1708
0	Feb-01	25.00	0	20.48193	-7.52338	28.0053	3.834499
1	Mar-01	25.50	0	2	-2.39217	4.392168	8.226667
2	Apr-01	26.00	0	1.960784	-12.8841	14.84487	23.07153
3	May-01	19.00	0	-26.9231	-9.44286	-17.4802	5.591312
4	Jun-01	19.05	0	0.263158	0.431119	-0.16796	5.423351
5	Jul-01	20.95	0	9.973753	-0.92462	10.89837	16.32173
6	Aug-01	16.70	0	-20.2864	-2.62424	-17.6622	-1.34043
7	Sep-01	15.25	0	-8.68263	-12.7448	4.062153	2.721724
8	Oct-01	19.60	0	28.52459	15.44419	13.0804	15.80213
9	Nov-01	15.25	0	-22.1939	-8.15596	-14.0379	1.764211
10	Dec-01	16.00	0	4.918033	-0.29386	5.211892	6.976104
11	Jan-02	17.50	0	9.375	-3.1635	12.5385	19.5146
12	Feb-02	17.00	0	-2.85714	3.933544	-6.79069	12.72392
13	Mar-02	15.10	0	-11.1765	-3.10216	-8.07431	4.649603
14	Apr-02	14.00	0	-7.28477	-5.1869	-2.09787	2.55173
15	May-02	10.50	0	-25	-14.8396	-10.1604	-7.60868
16	Jun-02	10.15	0	-3.33333	5.226367	-8.5597	-16.1684
17	Jul-02	10.30	0	1.477833	12.13154	-10.6537	-26.8221
18	Aug-02	10.00	0	-2.91262	1.026887	-3.93951	-30.7616
19	Sep-02	9.20	0	-8	10.40494	-18.4049	-49.1665
20	Oct-02	12.20	0	32.6087	5.632844	26.97585	-22.1907
21	Nov-02	12.00	0	-1.63934	16.46516	-18.1045	-40.2952
22	Dec-02	18.70	0	55.83333	17.61701	38.21633	-2.07886
23	Jan-03	24.00	0	28.34225	14.81161	13.53064	11.45178
24	Feb-03	23.00	0	-4.16667	4.928859	-9.09553	2.356253
25	Mar-03	29.25	0	27.17391	-0.08784	27.26175	29.61801
26	Apr-03	49.50	0	69.23077	5.971798	63.25897	92.87698
27	May-03	55.00	0	11.11111	20.91769	-9.80658	83.0704
28	Jun-03	47.25	0	-14.0909	1.740808	-15.8317	67.23868
29	Jul-03	43.00	0	-8.99471	3.905903	-12.9006	54.33807
30	Aug-03	44.00	0	2.325581	9.908452	-7.58287	46.7552
31	Sep-03	51.00	0	15.90909	9.602868	6.306223	53.06142
32	Oct-03	49.00	0	-3.92157	1.26292	-5.18449	47.87693
33	Nov-03	61.50	0	25.5102	4.425346	21.08486	68.96179
34	Dec-03	54.00	0	-12.1951	4.764035	-16.9592	52.00263
35	Jan-04	83.50	0	54.62963	17.64207	36.98756	88.99019
36	Feb-04	87.50	1	5.988024	4.85148	1.136544	90.12674

Appendix X – Cumulative holding abnormal returns – Total kenya ltd

MONTH	MONTH	MPS	Div	Rit	Rbt	BHAR	CBHAR
-7	Aug-00	56.50	0	0			
-6	Sep-00	56.50	0	-0.88496	3.192742	-4.29405	-4.29405
-5	Oct-00	56.00	0	2.678571	6.59136	-12.2665	-16.5605
-4	Nov-00	57.50	0	-4.34783	-2.94857	2.652174	-13.9084
-3	Dec-00	55.00	0	-10.9091	-1.54396	-16.2854	-30.1938
-2	Jan-01	49.00	0	-18.3673	1.296954	-22.449	-52.6428
-1	Feb-01	40.00	0	8.125	-3.3512	10.08578	-42.557
0	Mar-01	43.25	0	-26.5896	-5.31648	-20.7896	-63.3466
1	Apr-01	31.75	0	-11.811	-7.26459	-6.43468	-69.7813
2	May-01	28.00	0	-3.57143	-6.09112	-1.2987	-71.08
3	Jun-01	27.00	0	-9.25926	2.790385	-15.0732	-86.1532
4	Jul-01	24.50	0	-7.14286	-1.37476	-3.84615	-89.9993
5	Aug-01	22.75	0	-23.956	-3.42341	-14.8651	-104.864
6	Sep-01	17.30	0	18.49711	-8.2229	26.62211	-78.2424
7	Oct-01	20.50	0	-2.43902	8.093133	1.642608	-76.5997
8	Nov-01	20.00	0	-5	-7.88516	-0.62044	-77.2202
9	Dec-01	19.00	0	-11.3158	-0.30795	-7.499	-84.7192
10	Jan-02	16.85	0	0.890208	-1.02702	2.477509	-82.2417
11	Feb-02	17.00	0	-14.7059	0.237961	-5.02846	-87.2701
12	Mar-02	14.50	0	-5.86207	-8.07991	17.35222	-69.9179
13	Apr-02	13.65	0	-34.7985	-8.39994	-18.2869	-88.2048
14	May-02	8.90	0	16.29213	-6.63073	22.69882	-65.506
15	Jun-02	10.35	0	46.8599	0.622857	48.05038	-17.4556
16	Jul-02	15.20	0	-1.31579	-2.43589	8.322765	-9.13286
17	Aug-02	15.00	0	6.666667	0.384401	7	-2.13286
18	Sep-02	16.00	0	-6.25	9.652552	-9.92893	-12.0618
19	Oct-02	15.00	0	23.33333	5.30489	26.66667	14.60488
20	Nov-02	18.50	0	22.97297	11.61682	16.07642	30.6813
21	Dec-02	22.75	0	9.89011	29.72326	-56.2389	-25.5576
22	Jan-03	25.00	0	13	18.21606	-8.35922	-33.9168
23	Feb-03	28.25	0	8.672566	-0.71177	15.87257	-18.0443
24	Mar-03	29.00	1.7	7.758621	-2.31868	9.482759	-8.56152
25	Apr-03	31.25	0	17.6	4.77984	12.33684	3.77532
26	May-03	36.75	0	-2.72109	17.55669	-10.2211	-6.44577
27	Jun-03	35.75	0	-1.3986	2.047201	0.151786	-6.29398
28	Jul-03	35.25	0	-1.41844	3.127007	0.943765	-5.35022
29	Aug-03	34.75	0	13.66906	2.442342	33.0239	27.67369
30	Sep-03	39.50	0	-4.43038	4.001519	1.56962	29.24331
31	Oct-03	37.75	0	-0.66225	7.739601	-19.8112	9.432119
32	Nov-03	37.50	0	6	2.939935	9.571429	19.00355
33	Dec-03	39.75	0	42.13836	4.365497	38.43466	57.43821
34	Jan-04	56.50	0	7.079646	7.244941	4.401075	61.83928
35	Feb-04	58.00	2.5	-22.8448	-1.65397	-8.06222	53.77706
36	Mar-04	44.75	0	-100	-11.5278	-97.9592	-44.1821

Appendix XI – Cumulative holding abnormal returns – Nation Media Group

MONTH	MONTH	Share prices(Kes)	Div	Rit	Rbt	HAR	CHAR
-7	Aug-01	48.50	-				
-6	Sep-01	41.00		-15.4639	-11.6081	-3.85585	-3.85585
-5	Oct-01	50.50	-	23.1707	14.01512	9.155608	5.299759
-4	Nov-01	42.00	-	-16.8317	-4.3988	-12.4329	-7.13312
-3	Dec-01	43.25	-	2.9762	-2.22841	5.204599	-1.92852
-2	Jan-02	44.00	-	1.7341	-2.89096	4.625061	2.696539
-1	Feb-02	46.50	-	5.6818	-1.97362	7.655434	10.35197
0	Mar-02	62.50	1.60	37.8495	-11.3946	49.2441	59.59607
1	Apr-02	61.00	-	-2.4000	-15.6134	13.21338	72.80944
2	May-02	40.00	-	-34.4262	-3.84501	-30.5812	42.22823
3	Jun-02	40.00	-	0.0000	2.972235	-2.97223	39.25599
4	Jul-02	39.00	-	-2.5000	3.770148	-6.27015	32.98584
5	Aug-02	42.00	0.76	9.6410	-3.07904	12.72007	45.70591
6	Sep-02	45.00	-	7.1429	-4.53851	11.68137	57.38728
7	Oct-02	52.00	-	15.5556	4.122998	11.43256	68.81984
8	Nov-02	60.50	-	16.3462	17.83284	-1.48669	67.33315
9	Dec-02	84.00	-	38.8430	25.44687	13.39611	80.72925
10	Jan-03	85.00	-	1.1905	17.34549	-16.155	64.57424
11	Feb-03	88.00	1.75	5.5882	1.049788	4.538448	69.11268
12	Mar-03	80.00	-	-9.0909	-6.02772	-3.06319	66.04949
13	Apr-03	96.50	-	20.6250	-2.14768	22.77268	88.82217
14	May-03	99.50	-	3.1088	19.43486	-16.326	72.49613
15	Jun-03	100.00	-	0.5025	-4.77171	5.274218	77.77034
16	Jul-03	104.00	1.00	5.0000	8.001027	-3.00103	74.76932
17	Aug-03	157.00	-	50.9615	-7.8512	58.81274	133.5821
18	Sep-03	162.00	-	3.1847	2.470219	0.714494	134.2966
19	Oct-03	176.00	-	8.6420	9.065049	-0.42307	133.8735
20	Nov-03	190.00	-	7.9545	9.743944	-1.7894	132.0841
21	Dec-03	190.00	-	0.0000	-2.17373	2.173732	134.2578
22	Jan-04	202.00	-	6.3158	28.9729	-22.6571	111.6007
23	Feb-04	225.00	-	11.3861	25.84161	-14.4555	97.14523
24	Mar-04	201.00	-	-10.6667	-16.0579	5.391276	102.5365
25	Apr-04	200.00	-	-0.4975	-0.97314	0.475631	103.0121
26	May-04	188.00	-	-6.0000	1.202711	-7.20271	95.80943
27	Jun-04	186.00	-	-1.0638	-6.43149	5.367655	101.1771
28	Jul-04	185.00	1.00	0.0000	12.22544	-12.2254	88.95164
29	Aug-04	180.00	-	-2.7027	3.290467	-5.99317	82.95847
30	Sep-04	175.00	-	-2.7778	-4.11506	1.33728	84.29575
31	Oct-04	175.00	-	0.0000	3.644129	-3.64413	80.65162
32	Nov-04	190.00	-	8.5714	6.740941	1.830488	82.48211
33	Dec-04	170.00	-	-10.5263	0.030027	-10.5563	71.92577
34	Jan-05	185.00	-	8.8235	6.469964	2.353566	74.27933
35	Feb-05	199.00	-	7.5676	2.828662	4.738906	79.01824
36	Mar-05	227.00	5.00	16.5829	-11.9882	28.57109	107.5893