

**EFFECTS OF STOCK SPLITS ON TRADING ACTIVITY OF SHARES OF
COMPANIES LISTED AT THE NAIROBI SECURITIES EXCHANGE**

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DECLARATION

This research project is my original work and has not been presented for any academic award in any academic institution.

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DEDICATION

To my Dear Parents

David Kyulle Nyenge

Jane Nthemba Nyenge

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This study would not have been successful had it not been for God's will and the invaluable support, understanding, assistance and guidance from colleagues, friends and family. I would therefore like to sincerely thank all those individuals and institutions for whose encouragement and support that made the completion of this study a success. Though I may not be possible to list all of them down, I feel obliged to mention a few names for their special contribution.

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Thirdly, this project was drawn from the works of a large number of researchers and authors in the field of finance and other disciplines. As far as possible, they have been fully acknowledged in this study and I express my gratitude to all of them. All sources are duly acknowledged, nonetheless any errors and omissions are mine.

ABSTRACT

Stock splits remain the most popular and least understood phenomena in equity markets (Njagi, 2010). That is why investors and borrowers are always concerned about the returns of stocks and thus seek to know the behavior of stock prices (Kothari and Warner, 2004). The Nairobi Securities Exchange in particular has been experiencing a noteworthy bullish market since 2000 with securities across all counters recording an upward trend in stock prices (Mbugua, 2004). Despite this optimistic view, it is still unclear why stock splits are necessary since there is no bound limiting stocks price level thus alternative signaling devices such as dividend increases are used to in a wide ranging way. A number of studies have been done regarding stock splits. However there is no rich literature available on the effect of stock splits on trading activities at the NSE. This shows that limited attention has been paid to the effect of stock splits on trading activities of companies. Thus, this study sought to fill this existing knowledge gap. The study adopted an event study of a descriptive nature. The target population of the study comprised 13 equity listed companies that have announced stock splits at the NSE between 2005 – 2014. Secondary data was obtained from the NSE handbook and also from the companies' daily trading activities at the NSE. The event methodology was used to evaluate the abnormal share price reaction of the corporate announcements of stock splits. The study findings indicated that there were no abnormal significant shares traded on the announcement dates, but there was significant trading within the range of ± 5 days before and after announcement dates and finally no significant trading volumes within the ± 15 days. The study found that stock splits are motivated by stock price movement and consequent low stock liquidity in the market. The study found that stock split announcements cause a general increase in trading activities of stocks. The effect of stock splits announcements on trading activity persists for an average period of one month. Stock split announcements affect trading activity almost immediately.

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ABBREVIATION AND ACRONYMS

CEO	Chief Executive Officer
CMA	Capital Markets Authority
EMH	Efficient Market Hypothesis
IPO	Initial Public Offering
NASI	Nairobi Stock Exchange All Index
NSE	Nairobi Securities Exchange

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Fama et al. (1969) defined a stock split as an exchange of shares in which at least five shares were distributed for every four formerly outstanding. This meant that stockholders got additional shares for every share previously held. Dhar and Chhaochharia (2008) found that splits occurred at any ratio; the most commonly used ones being 2:1, 3:2, and 5:4. After a two for one (2:1) split for instance, each shareholder had twice as many shares, but each represented a claim on only half as much of the corporation's assets and earnings. Investopedia Staff (2005) saw a stock split as a corporate action, which increased the number of a corporation's outstanding shares, achieved by dividing each share, which in turn diminished its price with the stock market capitalization remaining the same.

A number of explanations for stock splits have been proposed in the literature. The trading range hypothesis (Copeland (1979) argues that firms prefer to keep their stock price within a particular (lower) price range. This preference may be because of a specific clientele they wish to attract or a particular dispersion in ownership they wish to achieve, but in either case it reflects the view that greater liquidity for stocks may arise in certain price ranges than in others. The clientele preferring a lower price range is usually thought to be uninformed or small investors. Evidence of an enlarged ownership-base and an increase in the number of small trades, particularly small buy orders submitted by individuals, after a split is interpreted as lending support to this hypothesis.

Stock splits became a common feature in the Nairobi Stock Exchange during the second half of the decade of the 2000's. Whereas between 1990 and 2003 no pure stock split can be found from mid-2004 onwards fifteen companies listed on the Nairobi Stock Exchange have split their stock to date. This relatively low frequency in our market is a contrast to that observed in other markets such as the US market, where between 5-10% of companies listed on the New York Stock Exchange split their stock every year (Lakonishok and Lev, 1987). This proposal aims at providing additional insight into relative explanatory power of the existing theories about the effects of stock splits on trading activities for a continuous auction medium sized market with no difference between round and odd lots and where transaction costs do not depend on stock prices.

1.1.1 Stock Split

Leung et al. (2005) reiterated that a stock split was a decision by the company's board of directors, to increase the number of shares outstanding by issuing more shares to current shareholders. A stock split then increased the number of shares in a public company. Savitri and Martani (2008) noted that with a split, each old share was split into a number of new shares with a reduced par value, leaving the total share capital unchanged. By stock split, every stock holder got additional stock without paying to the issuing company.

According to Grinblatt et al. (1984), stock splits were widely believed to be purely cosmetic since the corporation's cash flows were unaffected directly. Theoretically, stock splits were thought to be cosmetic corporate events as they merely involved the breakup of one share into a certain number of shares and a reduction of a higher to a lower share

trading price without changing shareholders' wealth and relative shareholdings. However, although early empirical studies found no abnormal performance after stock splits, Fama et al. (1969) found a positively significant market reaction to stock split announcements. Stock splits then did not appear to be as cosmetic as they should be.

1.1.2 Trading Activities

A company's worth is its total value i.e. its market capitalization and it is represented by the company's stock price. Market capitalization is equal to the stock price multiplied by the number of shares outstanding. The stock price is a relative and proportional value of a company's worth and only represents percentage changes in market capitalization at any given point in time. Any percentage changes in a stock price will result in an equal percentage change in a company's value. This is the reason why investors are so concerned with stock prices and any changes that may occur since a \$0.10 drop in a \$5 stock can result in a \$100,000 loss for shareholders with one million shares.

In simple terms, the stock price of a company is calculated when a company goes public, an event called an initial public offering (IPO). Once trading starts, share prices are largely determined by the forces of supply and demand. A company that demonstrates long-term earnings potential may attract more buyers, thereby enjoying an increase in share prices. A company with a poor outlook, on the other hand, may attract more sellers than buyers, which can result in lower prices. In general, prices rise during periods of increased demand when there are more buyers than sellers. Prices fall during periods of increased supply when there are more sellers than buyers. A continuous rise in prices is

known as an uptrend, and a continuous drop in prices is called a downtrend. Sustained uptrends form a “bull” market while sustained downtrends form a “bear” market. Other factors can affect prices and cause sudden or temporary changes in price. Some examples of this include earnings reports, political events, financial reports and economic news. Not all news or reports affect all securities.

Stock prices can also be driven by what is known as herd instinct, which is the tendency for people to mimic the action of a larger group. For example, as more and more people buy a stock, pushing the price higher and higher, other people will jump on board, assuming that all the other investors must be right (or that they know something not everyone else knows). There may be no fundamental or technical support for the price increase, yet investors continue to buy because others are doing so and they are afraid of missing out. This is one of many phenomena studied under the umbrella of behavioral finance.

1.1.3 Effects of Stock Split on Trading Activities

Although stock splits seemed not to contribute to firm value, there were some hypotheses that supported stock split as a signaling device. Fama et al. (1969) suggested that splits acted as a means of passing information from managers to stockholders. By announcing splits, a company reduced any information asymmetries that might have existed between stockholders and management. Some hypotheses considered that there was an optimal trading range of stocks and stock splits helped adjust the stock prices to be within optimal range. Copeland (1979) noted that firms split their stock to keep stock prices within an optimal trading range; a price range within which trading was most liquid for stocks of a

company. Further, Copeland (1979) agreed that an increase in trading volume either from signaling or optimal trading range enhanced stock prices eventually.

In his study Musau (2007) noted that there was a Bull Run that kicked off in the Nairobi Stock Exchange in the year 2006, which made the market gain more than 50%. As earnings of companies increased, so did the demand for shares by the public. The price appreciation forced many companies to split shares owing to the nature of majority of the Kenyan investors. Companies such as Kenol/ Kobil (Kenya Oil Company Limited), East African Cables Limited, CMC Holdings Limited, ICDCI (Centum Investments Company Limited) and Barclays Bank Limited that were highly priced opted to split shares to make them affordable to the public, and to benefit the company as well as potential investors. Musau (2007) also noted that before the companies split their stock, two typical market conditions were witnessed. First, there was a high demand for companies' shares which propelled the prices upwards. Secondly, more retail investors took up positions so as to qualify from the split multiples.

1.1.4 Nairobi Securities Exchange

The NSE was constituted in 1954 as a voluntary association of stock brokers registered under the societies act. Since its inception the NSE has undergone various major changes. In the early 1980s the government began to focus more intensely on the country's financial system which was aimed at adopting reforms to foster competition and sustainable economic growth. These reforms gained momentum in the late 1980s with privatization program targeting state corporations such as Kenya Commercial Bank and

Kenya Airways. The NSE was chosen as the market in which shares of the government in these state corporations were floated to the public (Kihumba, 1992).

In line with the government's aim to re-emphasize its commitment to the financial reform process and further boost investors' confidence, a regulatory body to oversee NSE activities, was created through an act of parliament, the Capital Market Authority Act (Cap 485A) Laws of Kenya. The key objective of the Capital Markets Authority (CMA) was to promote and facilitate orderly, fair and efficient capital market in Kenya (Kihumba, 1992). NSE is an example of an emerging stock market that has been characterized by humble beginnings yet it has grown considerably over time and it's a reference point in terms of setting standards for other markets in the East Africa region (Kibuthu, 2005). Stock splits are a recent phenomenon at NSE compared to the more established markets where stock splits are more entrenched where firms intending to perform stock splits at the NSE must seek additional approval from CMA other than that of the shareholders. The first stock split implemented at NSE took place in June 2004 (Njagi, 2010). Fourteen other companies performed stock splits at NSE by the year 2014 (Appendix II)

1.2 Research Problem

Stock splits remain the most popular and least understood phenomena in equity markets (Njagi, 2010). That is why investors and borrowers are always concerned about the returns of stocks and thus seek to know the behavior of stock prices (Kothari and Warner, 2004). The Nairobi Securities Exchange in particular has been experiencing a noteworthy

bullish market since 2000 with securities across all counters recording an upward trend in stock prices (Mbugua, 2004). The traditional wisdom is that stock splits are good information meaning that companies split their stock when they are confident that the earnings momentum will continue to push the stock prices upward.

Despite this optimistic view, it is still unclear why stock splits are necessary since there is no bound limiting stocks price level thus alternative signaling devices such as dividend increases are used to in a wide ranging way. Moreover empirical research has documented a wide range of negative effects such as increased volatility, larger proportional spreads and greater transaction costs following splits. Splitting also increases the fees companies pay to have their shares listed on exchanges. In particular, NYSE exchange fees are assessed on “shares outstanding” so that doubling shares in a stock split has a direct cost to the company. In the balance sheet, it remains a puzzle why companies ever split their shares.

A number of studies have been done regarding stock splits. Onyango (1990) carried out a study to establish the reasons behind stock dividends and any gains derived from the bonus issues. From a sample of 62 dividend stocks made during period 1994 to 1998, the study found out that managers believed that stock dividends bring benefits to a firm and helps conserve a firm’s cash flows. Mbugua (2004) studied the impact of stock dividend announcement on share prices and the impact of stock dividend size on stock return. The study found that stock dividend announcement had an impact on stock returns and further results indicated the size of dividend has an effect on stock return. Simbovo (2006) conducted a study at the NSE and observed a positive correlation between stock splits

and liquidity. However there is no rich literature available on the effect of stock splits on trading activities at the NSE. This shows that limited attention has been paid to the effect of stock splits on trading activities of companies. Thus, this study sought to fill this existing knowledge gap.

1.3 Research Objectives

The objective of the study was to establish the effects of stock splits on trading activity on shares of companies listed at Nairobi Securities Exchange

1.4 Value of the Study

This study will contribute to the existing literature in numerous ways:

It will extend the international empirical evidence on stock splits to an important emerging market, the Nairobi Securities Exchange. There being no prior research on trading activities, the study will consequently provide knowledge to scholars in the field of financial theory and will assist future research work in the area.

Secondly, investment advisors are interested in corporate events because they play a key role in signalling the stock market. In addition, the advisors need to advise their clients on the importance of stock splits and making investment decisions around the split events.

Thirdly, the effects on trading activity on stocks has implications for financial managers who may possibly prefer equity to debt financing, the plan being to signal to the market the precise time to attract investor attention. As a result, finance managers will have a better understanding of effects of trading activities following stock splits.

Finally, the results of the study will provide feedback to the Capital Markets Authority (CMA) as a regulator of the capital market in Kenya. In acting as a watchdog for the entire capital market system, the CMA may utilize such findings in guarding against manipulation of share prices and insider trading.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews available theoretical and empirical literature on stock market efficiency. It comprises an overview of the stock exchange market, the concept of market efficiency, and the efficient market hypothesis and market response to new information.

2.2 Theoretical Review

Fama et al. (1969) defined a stock split as an exchange of shares in which at least five shares were distributed for every four formerly outstanding. This meant that stockholders got additional shares for every share previously held. Dhar and Chhaochharia (2008) found that splits occurred at any ratio; the most commonly used ones being 2:1, 3:2 and 5:4. After a two for one (2:1) split for instance, each shareholder had twice as many shares but each represented a claim on only half as much of the corporation's assets and earnings. According to Grinblatt et al. (1984), stock splits were widely believed to be purely cosmetic since the corporation's cash flows were unaffected directly.

Theoretically stock splits were thought to be cosmetic corporate events as they merely involved the breakup of one share into a certain number of shares and a reduction of a higher to a lower share trading price without changing shareholders' wealth and relative shareholdings. The seminal paper in stock split research is the study made by Fama, Fisher, Jensen & Roll (1969). They examined whether abnormal behavior exists in the return rates of a stock in the months surrounding the split. Residual analysis technique

introduced by the authors has been utilized in different kinds of event studies all over the world and is considered to be a ground-breaking innovation in financial analysis techniques.

Empirical results provided by the paper show that stock splits are usually preceded by a period during which the rates of returns are strangely high even though no information about the split has yet reached the market. The researchers suggested that the splitting companies have usually experienced remarkable increases in expected earnings and dividends during the pre-split period. The evidence supports such reasoning that the investors are searching any information available from the company to reduce the uncertainty concerning whether they can maintain the earnings at their new higher level. In other words the market interprets the splits as a greater possibility that the dividends will increase. Thus by reacting to the split the market actually just reacts to the dividend implications of the split. (Fama, 1969).

The evidence also suggested that on average the market reacts to new information very rapidly and the information concerning the split is fully included in the stock prices at least by the end of the split month, but usually almost immediately after the announcement. (Fama,1969) Maureen McNichols and Ajay Dravid (1990) were specifically examining the effect of split factor on the amount of returns around the announcement date. Their sample consisted of stock splits and dividends which occurred from 1976 – 1983. The day 0 of their event study was defined as the day when the splitting of the stock was announced in The Wall Street Journal. It also determined whether the stock announcement was made in conjunction with simultaneous disclosure

of company related events. The evidence suggested that investors' presumptions about firms future earnings corresponded with the managers split factor choice.

Robert Conroy and Robert Harris (1999) investigated stock splits by NYSE firms from 1925 to 1996. In their research 5264 splits were identified which were conducted by over 200 firms. Price responses were captured around split announcement dates and a three day cumulative abnormal return centred on the split announcement day was calculated. In addition they provided supplementary tests of split effects by looking at changes in analysts' forecasts of earnings per share before and after the announcement date. The conclusion of their research was that the equity market values of the stocks increased significantly around split announcement dates and also analysts' earnings forecasts increased significantly when the split factor was higher than anticipated.

Wulff (2002) investigated the market reaction to stock splits using German data. He used a sample of splits issued by firms listed on Frankfurt Stock Exchange during the period from 1994 to 1996. The sample for examining execution date effect consisted of 83 splits and the sample for examining announcement date effects consisted of 78 splits. The estimation period in his event study was over a period of 200 days and the event window was ± 30 days. He found statistically significant abnormal returns around both the announcement and execution day of German stock splits. However, the abnormal returns found in the study were consistently much lower than studies conducted on American data. The author explained this by the legal restrictions of German companies to use stock split for signaling.

Stock splits are a puzzling corporate phenomenon. Stocks splits occur frequently less often firms consolidate their outstanding common shares in a reverse stock split. It is widely believed those stock splits are purely cosmetic events because the corporation's cash flows are unaffected and each shareholder retains his proportionate ownership and the claims of other classes of security holders are unaltered. These results imply that if managers could increase share prices by splitting their firm's stock, both undervalued and overvalued firms would choose to split their shares thus eliminating the informational (favorable) content of the decision. However as the persisting positive market reaction to stock splits indicates splits must credibly signal such positive company specific information.

Simbovo (2006) found that the concept of stock split was relatively new in the Nairobi Securities Exchange with the first split ever having occurred in 2004. As such not much research had been done in the local market. While carrying out a research on the effects of stock splits and large stock dividends in the Kenyan stock market, two splits identified were those of Kenya Oil Company Limited (formerly Kenol/Kobil) and East African Breweries Limited both of which occurred in the year 2004. Simbovo (2006) found that stock splits and stock dividends affected liquidity being positive in the case of splits. These results were consistent with the trading range hypothesis where managers split their stock when they felt they were not affordable. A split was then found to lower prices as it made shares more affordable by avoiding odd lot trading costs.

Musau (2007) noted that there was a Bull Run that kicked off in the Nairobi Stock Exchange in the year 2006 which made the market gain more than 50%. As earnings of companies increased, so did the demand for shares by the public. The price appreciation forced many companies to split shares owing to the nature of majority of the Kenyan investors. Companies such as Kenol/ Kobil (Kenya Oil Company Limited), East African Cables Limited, CMC Holdings Limited, ICDC and Barclays Bank Limited that were highly priced opted to split shares to make them affordable to the public and to benefit the company as well as potential investors. Musau (2007) also noted that before the companies split their stock two typical market conditions were witnessed. First there was a high demand for companies' shares which propelled the prices upwards. Secondly more retail investors took up positions so as to qualify from the split multiples. Although stock splits seemed not to contribute to the firm's value there were some hypothesis that supported stock split as a signalling device. Since the publication of the classic paper by Fama, Fisher, Jensen and Roll (1969) the signaling hypothesis and the optimal trading range (tick size) hypothesis have emerged in the finance literature as the leading explanations of stock splits as well as the liquidity hypothesis as presented by Leung et al. (2006). The ensuing section discusses these main hypotheses.

2.2.1 The Optimal Price Range Hypothesis

Copeland (1979) came up with the notion that a stock split changed stock prices to a more optimal price, which in turn increased demand for the stock. Their hypothesis of the optimal price range stated that there was a price range within which trading was most liquid for stocks of a company. Firms were found to split their stock to keep prices within

an optimal trading range. Baker and Powell (1993) revealed that the main motivation for the executives to split stock was for improved liquidity. High-priced stocks were found to be illiquid due to the psychological reasons and transaction costs. Therefore, when the prices climbed up to a certain level, the executive split the stock to lower prices which facilitated trading, hence they enhanced liquidity.

Conroy and Harris (1999) agreed with the optimal price range hypothesis and noted that when a stock became too expensive, a split brought it back to the optimal price range. Lakonishok and Lev (1987) argued that there existed benchmark values regarding stock prices and managers were guided by these comparative figures. Lamoureux and Poon (1987) also in agreement with this hypothesis noted that the managers' expected stocks trading at lower prices to be generally more liquid and to attract a larger pool of potential investors. Managers were then found to make use of splits to extend their shareholder base, since the lower stock prices were more attractive to minority shareholders.

2.2.2 The Signaling Hypothesis

A signaling model for stock splits was first proposed by Brennan and Copeland (1988). According to the signaling theory splits acted as a means of passing information from managers to stockholders. The signaling model of stock splits showed that stock splits served as costly signals of managers' private information because trading costs increased as stock prices decreased. They built up the hypothesis from Fama et al. (1969) who suggested that by announcing splits a company could reduce any information asymmetries that might have existed between stockholders and management.

The stock price reduction resulting from a split then conveyed management's conviction of rising future earnings. Since a stock split usually required a significant cash outlay and because sending a false signal would punish the company with an unusually low stock price a stock split was often seen as a more credible form of information diffusion than road shows or press releases. Benartzi et al. (2005) argued that management split their stocks only if it considered the current level of stock price and earnings to be permanent. Brennan and Copeland (1988) saw the essence of the signaling argument as being that managers only split their stock if they were optimistic that the future share prices would increase or at the very least not decrease. If a manager believed that the future share prices would decrease they would not be willing to split stock due to the increased cost of trading lower priced stocks.

McNichols and Dravid (1990) noted that managers did not explicitly intend for the split to be a positive signal about future prospects of the firm but the split could still convey information to the market. Agreeing with the signaling hypothesis theory Conroy et al. (1999) found excess returns after stock splits were considerably higher when shareholders were surprised by a larger-than-expected split. Financial analysts were also found to increase their earnings forecast notably when the split factor was greater than expected. Excess returns earned by market participants then tended to be significantly higher when a company's management decided on a split factor that the stock price would fall below an expected level.

2.2.3 The Optimal Tick Size/Market Marker Hypothesis

Angel (1997) came up with the market maker hypothesis which suggested that companies strived for an optimal tick size. The tick size was the minimum change in share prices. They noted that if there was a constant absolute tick size the management of a company could influence the relative tick size through a stock split that being the tick size in relation to the stock price. Recently academics paid attention to the role of tick size on the decision of stock distributions. Most equity markets had rules on tick size or the minimum price variation. Therefore, the primary difference between equity markets was whether they used a single absolute tick size that applied to most stocks or a tick size set that was a function of stock prices.

Angel (1997) noted that the minimum price variation rules determined the minimum bid-ask spread that could be quoted. No quoted spread could then be less than the minimum price variation. Larger tick sizes were found to make trading expensive especially for smaller traders. Admanti et al. (1989) also noted that the relative tick size was more influential on trading decisions and could even affect stock variation. Schultz (2000) agreed with the optimal tick size hypothesis and suggested that if there was an absolute constant tick size on the stock exchange, a company's management could influence the relative tick size relative to the stock price through a split. The tick size was then important in that a high tick size was conducive for market making and it made it more profitable.

A further version of the optimal trading range hypothesis is the new theory of stock splits suggested by Angel (1997). According to Angel the new theory of stock splits highlights

the importance of creating incentives for brokers and dealers to market a firm's stock by focusing on brokerage commissions and the tick as a percentage of stock prices. Companies can modify the tick size for their firms relative to the stock price by splitting their stock. The tick provides an important role in simplifying the trading process.

2.3 Determinants of Trading Activity

Onyango (1999) noted that stock splits and bonus issues occurred when the board of directors authorized a distribution of common shares to existing shareholders of the company. Distribution was done proportionately; hence shareholders ended up with the same proportionate ownership they had before the split or bonus issue. Agreeing with this, Leung et al. (2005) reiterated that a stock split was a decision by the company's board of directors, to increase the number of shares outstanding by issuing more shares to current shareholders. A stock split then increased the number of shares in a public company.

Savitri and Martani (2008) noted that with a split, each old share was split into a number of new shares with a reduced par value, leaving the total share capital unchanged. By stock split, every stock holder got additional stock without paying to the issuer company. Wooldridge and Chamber (1983) noted that when a stock split occurred, the balance sheet items remained the same; except that the total number of outstanding shares of the company increased proportionately to the ratio of split. They also noted that a stock split was usually done by companies that had seen their share price increase to levels that were either too high, or beyond the price levels of similar companies in their sector. The

primary motive was then to make shares seem more affordable to small investors, even though the underlying value of the company had not changed.

According to Grinblatt et al. (1984), stock splits were widely believed to be purely cosmetic since the corporation's cash flows were unaffected directly. Theoretically, stock splits were thought to be cosmetic corporate events as they merely involved the breakup of one share into a certain number of shares and a reduction of a higher to a lower share trading price without changing shareholders' wealth and relative shareholdings. However, although early empirical studies found no abnormal performance after stock splits, Fama et al. (1969) found a positively significant market reaction to stock split announcements. Stock splits then did not appear to be as cosmetic as they should be.

Other hypotheses advocated for improved liquidity and the existence of an optimal tick size. Baker and Powell (1993) revealed that the main motivation for the executives to split stock was for improved liquidity. High-priced stocks tended to be illiquid due to the psychological reason and transaction costs. Therefore, when the prices climbed up to a certain level, the executives split the stock to lower prices to facilitate trading and hence enhance liquidity. Angel (1997) came up with the notion that companies strived for an optimal tick size, noting that the minimum price variation rules determined the minimum bid-ask spread that could be quoted. No quoted spread could then be less than the minimum price variation. Larger tick sizes made trading expensive, especially for smaller traders.

2.4 Conflict in Empirical Evidence

There were studies that found results to the contrary. Some studies found that markets reacted negatively. Goyonke et al. (2006) noted that firms that split their stock experienced worsening liquidity within the first 9 to 12 months. Lamoureux and Poon (1987) and Conroy et al. (1990) found declining trading volumes after stock splits. Others studies saw that there was no effect on the market when stock split announcements were made. Gupta and Kumar (2007) found that there was no effect on the market associated with stock splits. Byun and Rozeff (2003) found that stock split were essentially value-neutral transactions and did not cause any market reaction.

Leemakdej (2007) detected significantly negative returns in the 20 days before and 18 days after the effective date of the split with the most significant returns clustered around the event date. This was in contrast to other studies that noted positive returns around stock split dates. Boehme (2001) investigated long term effects from splits in the US market during 1950-2000 and found that an abnormal return was detected only in the first year and this subsided afterwards. It was also reported that the significant abnormal return only occurred during 1975-1987 period because of lower systematic risk. Goyonke et al. (2006) carried out a research on stock split and liquidity over an after-event window extending to six years and found that firms that split their stock initially experienced worse liquidity. They noted that the worsening liquidity was temporary and was experienced within the first 9 to 12 months.

Despite extensive studies some controversy surrounds the stock splits effects. Empirical evidence on stock splits supports both the trading range as presented by Lakonishok and Lev (1987), McNichols and Dravid (1990) and signaling hypothesis presented by Grinblatt et al. (1984) , and McNichols , Dravid (1990), but is inconsistent on the notion that splits improve a stock 's trading liquidity. Huang, Liano and Pan (2006) presented that stock splits are not useful signals of a firm's future earnings as they find little evidence that stock splits are positively related to future profitability. Investors, analysts and researchers often draw inferences from managerial decisions made by corporate managers but not many studies have tried to determine the motivation for stock splits by asking the corporate managers involved in these decisions. Baker and Gallagher (1980) surveyed public company CFOs and found that more than 80 percent of them believe stock splits make it easier for small investors to purchase shares and thus increase the number of shareholders.

2.5 Summary of the Literature and Gap

The performance of equities after stock split announcement in the long term has been subject to vigorous academic debate between the two schools of thought of behavioural finance and efficient markets. Previous studies reveal that stock split lead to share price volatility; there are diverse views when price drifts set in after the stock split announcement. Furthermore, evidence on trading activity of stock split for firms listed in emerging markets is generally lacking. Also, market reaction elicited by stock split announcements as shown by studies done in various economies cannot be generalized to the Kenyan market because of differences in stock market activity, varying economic

growth levels, diverse political environments, among others. By investigating the stock split behavior at the NSE, this study will consider more recent stock split events for the period between 2005 and 2014 hence contribute in addressing this knowledge gap.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research methodology that was used to carry out the study. The chapter consists of an outlay of the research design, population of the study, data sampling, data collection and data analysis.

3.2 Research Design

The study adopted an event study of a descriptive nature which is an empirical study that examines the behavior of firms' stock prices around corporate events (Kothari and Warner, 2004). An event study is preferred because the study utilized quantitative data to describe events and finds out 'what is' (Glass and Hopkins, 1984) as opposed to inferential statistics that determines 'cause effect'. The study used secondary data from the NSE. There were two estimation windows, with observations being made before the split and after the split. The results were compared to ascertain if any change in the trading activity was aroused with announcement. The fundamental assumption was that the capital market is efficient to evaluate the impact on trading activity following stock splits.

3.3 Population

The target population of the study comprised 15 equity listed companies that have announced stock splits at the NSE between 2005 - 2014 (Appendix II). Since the

population size was less than thirty ($N < 30$), a survey was done where all 15 companies was considered for the study.

3.4 Data Collection

Secondary data was obtained from the NSE handbook and also from the companies' daily trading activities at the NSE. The 120 days (before and after announcement of stock split), daily stock prices, daily market returns and stock split announcement dates for the individual sampled was collected from the NSE. The trading activities for each stock were recorded against the NSE 20 daily share index. Given that stock split announcements differ for each company, the data for the 13 companies was collected and tabulated separately.

3.5 Data Analysis

The event methodology was used to evaluate the abnormal share price reaction of the corporate announcements of stock splits (Njagi, 2010). The event date, $t=0$, is the announcement date in the corporate announcements data of the NSE database. Following a previous study by Leung et al. (2006) both the market model and control firm approaches will be used to estimate abnormal share price reactions to the announcement of stock splits. A histogram was constructed to plot stock prices before and after the stock split event to ascertain their behaviour. For the market model, returns on the NSE Index were used as proxy of the market returns. This was transformed into residuals following the single-index market model equation:

$$R_{it} = a_i + b_i R_{mt} + \mu_{it}$$

Where:

R_{it} = Daily return of stock i

R_{mt} = Daily value-weighted market returns (NSE 20 Index)

μ_{it} = Residual for stock i at time t

a and b = Regression coefficients and constants determined by simple regression using daily data for up to 120 days before the 21 days test period.

Using the above model, the residuals was estimated for each of the 21 days observation window (test periods). The residuals was transformed through division by company specific estimated standard deviations of the market model residuals (as a deflator) over the estimation period to help achieve some distributional comparability across firms. The residuals was aggregated across sample firms and then cumulated over the test period to determine the cumulative average abnormal returns (CAAR).

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the data findings on the establish the effects of stock splits on trading activity on shares of companies listed at Nairobi Securities Exchange by analyzing the share prices and trading volume of stocks after the split. These data were collected from the NSE offices and analyzed using Excel and SPSS (version 22). Analysis involved establishing the effects of stock splits on trading activity on shares of companies listed at Nairobi Securities Exchange. Within the 10 year period of the study, fifteen companies had done stock split.

4.2 Event Study Results

The event study analyzed the effects of financial result announcement on share price return and trading volume which was the objective of the study. The results of the event study analysis were as follows

4.2.1 Share Price Returns to Stock Split Announcement

The share price returns to stock price announcements was done for each of the sampled company listed at the securities exchange that had stock split for the year 2005 to 2014.

The share price returns to stock price announcement were as follows:

Table 4.1: Share Price Returns to Stock Split Announcement

Company	Log Share Price	Log NSE 20	Expected Return E(R)	AR	CAR	t-values
Kenya Commercial Bank	0.0226	0.0025195	0.0005074	0.0220924	0.0106181	4.869979
Equity Bank Limited	0	0.0025195	0.000778	-0.000778	- 0.0071694	-0.19234
Kenya Power	-0.06252	-0.0225582	-0.00205	-0.06047	-0.02765	-8.52111
Nation Media Group	-0.00617	0.00084432	-0.0001883	-0.0059846	0.0503235	-1.32941
Sasini Limited	-0.00557	0.002863	0.0003935	-0.005965	0.0221599	-1.46234
East Africa Cables	0.00316	-0.012352	0.0004921	0.0026675	0.0030761	0.567977
Barclays Bank of Kenya	-0.00712	0.00032426 7	0.0007059	-0.0078233	0.3869126	-1.71645
Athi River Mining	-0.01286	-0.00216	0.00129516	-0.0141571	0.00193456	-3.78406
Kenol Kobil	0.003884	0.002905	-0.0001654	0.0040489	0.0078998	1.230954
Family Bank	-0.104261	0.00387654	7.0921E-05	-0.1043319	-0.1641551	-29.8656

4.2.2 Trading Volume Reaction to Stock Split Announcement

The turnover reaction to stock split announcements was done for each of the sampled company listed at the securities exchange. The trading volume reactions to stock split announcement were as follows:

Table 4.2: Trading Volume Reaction to Stock Split Announcement

Company	Trading Volume (t=0)	Log Trading Volume	Average Trading Volume	Abnormal Turnover	Cumulative Abnormal Turnover (AR)
Kenya Commercial Bank	1,085,100	- 7.919424887	- 7.403762754	-0.5156621	9.76996E-15
Equity Bank Limited	2,933,000	- 7.140813378	- 7.544553157	0.4037398	-0.3222631
Kenya Power	313,100	- 8.740952331	-9.35751201	0.6165597	-1.2442839
Nation Media Group	126,300	- 7.308405436	- 9.443142576	2.134737141	-1.8E-15
Sasini Limited	131,300	- 8.235373566	- 8.887908465	0.652534899	-1.86517E-14
East Africa Cables	16,200	- 9.656607721	- 9.506022704	-0.15058502	5.862E-14
Barclays Bank of Kenya	50,500	- 7.550130134	- 8.457402536	0.9072724	-8E-15
Athi River Mining	871,500	- 7.503700072	- 9.527539274	2.023839202	6.83897E-14
Kenol Kobil	4,138,900	- 9.177839095	- 8.035085324	-1.1427538	4.79616E-14
Family Bank	1,255,600	-5.77690374	-6.6649019	0.88799816	4.17444E-14

The event study analysis for Kenya Commercial Bank in the 31-day window period indicated an abnormal return (AR) of 0.0220924 with a corresponding t-value of 4.869979 at day $t=0$, and a cumulative abnormal return (CAR) of 0.0433012. The result of the study showed that the abnormal return for Kenya Commercial Bank was less than the t-statistic value (4.869979) indicating that the share returns were significant to stock split announcement. The volume traded for KCB was 1,085,100 shares on the stock split announcement day, an abnormal turnover of -0.5156621 and a cumulative abnormal turnover of 9.76996E-15 in the 31 days around the stock split announcement day.

The event study analysis for Equity Bank in the 31-day window period indicated an abnormal return (AR) of -0.000778 with a corresponding t-value of -0.19234 at day $t=0$, and a cumulative abnormal return (CAR) of -0.0161722. The abnormal return, however, on the following day ($t=1$) was significant at 0.0068737 with a t-value of 1.699412. The result of the study showed that the abnormal return for Equity Bank was less than the t-statistic value (-0.19234) indicating that the share returns were significant to the announcement of stock split considering substantial increase in share return at day $t=1$. The volume of shares traded by Equity Bank was 2,933,000 on the year-end financial result announcement day, an abnormal turnover of 0.4037398 and a cumulative abnormal turnover of - 8.882E-15 in the 31 days around the announcement day.

The event study analysis for Kenya Power in the 31-day window period indicated an abnormal return (AR) of -0.06047 with a corresponding t-value of -8.52111 at day $t=0$, and a cumulative abnormal return (CAR) of -0.099888. The result of the study showed that the abnormal return for Kenya Power was more than the t-statistic value (-8.52111) indicating that the share returns were not significant to the announcement of stock split. The trading volume for Kenya Power was 126,300 shares on the stock split announcement day, an abnormal turnover of 2.134737141 and a cumulative abnormal turnover of -1.7764E-15 in the 31 days around the announcement day of stock split.

The event study analysis for Nation Media in the 31-day window period indicated an abnormal return (AR) of -0.0059846 with a corresponding t-value of -1.32941 at day $t=0$, and a cumulative abnormal return (CAR) of 0.011031. The result of the study showed

that the abnormal return for Nation Media was less than the t-statistic value (-1.32941) indicating that the share returns were significant to the announcement of stock split. However, it can be seen there was a significant return on share price at day $t = -1$ indicating that the expectation of announcement may have triggered the share price increase. The trading volume for Nation Media was 126,300 shares on the stock split announcement day, an abnormal turnover of 2.134737141 and a cumulative abnormal turnover of $-1.7764E-15$ in the 31 days around the stock split announcement day.

The event study analysis for Sasini in the 31-day window period indicated an abnormal return (AR) of -0.005965 with a corresponding t-value of -1.46234 at day $t=0$, and a cumulative abnormal return (CAR) of -0.028402. The result of the study showed that the abnormal return for Sasini was more than the t-statistic value (-1.46234) indicating that the share returns were not significant to the announcement of stock split. The trading volume for Sasini was 131,300 shares on the stock split announcement day, an abnormal turnover of 0.652534899 and a cumulative abnormal turnover of $-7.99361E-15$ in the 31 days around the announcement day.

The event study analysis for East Africa Cable in the 31-day window period indicated an abnormal return (AR) of 0.0026675 with a corresponding t-value of 0.567977 at day $t=0$, and a cumulative abnormal return (CAR) of -0.0005615. The result of the study showed that the abnormal return for East Africa Cable was slightly less than the t-statistic value (0.567966) indicating that the share returns were slightly significant to the announcement

of stock split. The trading volume for East Africa Cable was 38,600 shares on the announcement day, an abnormal turnover of 0.717656016 and cumulative abnormal turnover of 5.862E-14 in the 31 days around the announcement day.

The event study analysis for Barclays Bank in the 31-day window period indicated an abnormal return (AR) of -0.0078233 with a corresponding t-value of -1.71645 at day $t=0$, and a cumulative abnormal return (CAR) of 0.17961. The result of the study showed that the abnormal return for Barclays Bank was more than the t-statistic value (-1.71645) indicating that the share returns were significant to the announcement of stock split. However, the CAR shows that in overall the share price returns were positively significant over the window period. The trading volume for Barclays Bank was 50,500 shares on stock split announcement day, an abnormal turnover of 0.9072724 and cumulative abnormal turnover of - 7.99361E-15 in the 31 days around the announcement day.

The event study analysis for Athi River mining in the 31-day window period indicated an abnormal return (AR) of -0.0141571 with a corresponding t-value of -3.78406 at day $t=0$, and a cumulative abnormal return (CAR) of -0.1216237. The result of the study showed that the abnormal return for Athi River Mining was more than the t-statistic value (5.126045). However, the returns for the two days prior to the announcement date ($t=1, 2$) had significant increase indicating that the share returns were significant as there was expected announcement of stock split. The trading volume for Athi River mining was 871,500 shares on the year-end financial result announcement day, an abnormal turnover

of 2.023839202 and cumulative abnormal turnover of 6.83897E-14 in the 31 days around the announcement day.

The event study analysis for Keno Kobil in the 31-day window period indicated an abnormal return (AR) of 0.0040489 with a corresponding t-value of 1.230954 at day $t=0$, and a cumulative abnormal return (CAR) of 0.005359. The result of the study showed that the abnormal return for Keno Kobil was less than the t-statistic value (1.230954) indicating that the share returns were significant to the announcement of stock split. The trading volume for Keno Kobil was 4, 138,900 shares on the year-end financial result announcement day, an abnormal turnover of 1.1427538 and cumulative abnormal turnover of 4.79616E-14 in the 31 days around the stock split announcement day.

The event study analysis for Family Bank in the 31-day window period indicated an abnormal return (AR) of -0.1043319 with a corresponding t-value of -29.8656 at day $t=0$, and a cumulative abnormal return (CAR) of -0.0228969. The result of the study showed that the abnormal return for Family Bank was more than the t-statistic value (-29.8656) indicating that the share returns were negatively significant to the announcement of stock split. The trading volume for Family Bank was 1,255,600 shares on stock split announcement day, an abnormal turnover of 0.88799816 and cumulative abnormal turnover of 4.17444E-14 in the 31 days around the announcement day.

4.3 Summary and Interpretation of the Findings

The analysis of the event study on the share returns and trading activity on the stock split announcement shows different outcomes. Ten companies were analyzed on the reaction of their stock split announcement and there were mixed results on the share results. With

regards to trading volume, Kenya Commercial Bank had significant turnover on the day before announcement, with Nation Media also having significant turnover on the announcement day. Athi River Mining and Family Bank also had significant share volume traded on the announcement day. Companies that had slightly significant trading volume on stock split announcement days were Equity Bank, Kenya Power, and Sasini, with Equity Bank not having significance over the window period while Kenya Power had a high trading significance over the event window period. Listed companies which had no significant change in trading volume on their announcement day were East Africa Cables, Barclays Banks and Kenol Kobil. However, Barclays Bank had significant share turnover on day $t = -2$. The trading volume reaction to stock split announcement was not significant especially for companies with high outstanding shares. This may be because of the number of shareholders in the market who are mostly institutional and they do not avail their shares for transaction during the stock split period. The supply of these shares may be low making the market illiquid, hence no significant change in trading volume.

In terms of the share returns, there was significant share price return on Kenya Commercial Bank, East Africa Cables, and Kenol Kobil. Barclays Bank, Athi River Mining, Equity Bank Limited and Nation Media had slight significant increase since the abnormal return was less than the corresponding t-values. Barclays Bank, however, had a significant cumulative abnormal return over the event window period. Kenya Power on the other hand had no significant change in the share return while Family Bank had a significant negative return on the share return on their year-end announcement. In overall, there was a slight abnormal positive return over the window period for stocks listed in the

Nairobi Securities Exchange. This shows that the Nairobi Stocks Exchange has a semi-strong market model where all public information is reflected in the stocks prices. There was reaction in the price adjustment but there were companies whose share prices changed as a result of anticipation of the announcement of stock split. This is partly because the market is not perfect hence information asymmetry.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter discusses the summary of the finding in chapter four. Conclusion and recommendations drawn from these findings are discussed in relation to the objectives of the study which was to establish the effects of stock splits on trading activity for companies listed at the Nairobi Securities Exchange.

5.2 Summary of Findings

The objective of the study was to establish the effects of stock splits on trading activity on shares of companies listed at Nairobi Securities Exchange. The study employed an event study methodology where the effect of stock split on trading activity was investigated for a period of 31 around the stock split announcement date. The study covered a period between 2005 and 2014. With regards to trading volume, Kenya Commercial Bank had significant turnover on the day before announcement, with Nation Media also having significant turnover on the announcement day. Arthi River Mining and Familiy Bank also had significant share volume traded on the announcement day. Companies that had slightly significant trading volume on stock split announcement days were Equity Bank, Kenya Power, and Sasini, with Equity Bank not having significance over the window period while Kenya Power had a high trading significance over the event window period. Listed companies which had no significant change in trading volume on their announcement day were East Africa Cables, Barclays Banks and Kenol

Kobil. However, Barclays Bank had significant share turnover on day $t = -2$. The trading volume reaction to stock split announcement was not significant especially for companies with high outstanding shares. This may be because of the number of shareholders in the market who are mostly institutional and they do not avail their shares for transaction during the stock split period. The supply of these shares may be low making the market illiquid, hence no significant change in trading volume. There was a slight abnormal positive return over the window period for stocks listed in the Nairobi Securities Exchange. This shows that the Nairobi Stocks Exchange has a semi-strong market model where all public information is reflected in the stocks prices. There was reaction in the price adjustment but there were companies whose share prices changed as a result of anticipation of the announcement of stock split. This is partly because the market is not perfect hence information asymmetry.

5.3 Conclusions

The objective of the study was to establish the effects of stock splits on trading activity on shares of companies listed at Nairobi Securities Exchange. The study findings indicated that there were no abnormal significant shares traded on the announcement dates, but there was significant trading within the range of ± 5 days before and after announcement dates and finally no significant trading volumes within the ± 15 days. This showed that in the long run the market follows a semi-strong EMH as there is no impetus to buy more shares at the market.

The study found that stock splits are motivated by stock price movement and consequent low stock liquidity in the market. When the stock prices are high, many investors would not be able to purchase them given wealth constraints and economic rationality that makes them prefer shares that trade at affordable price. Thus the study concludes that stock splits affects trading activity on shares of companies listed at Nairobi Securities Exchange

Stock splits announcements are informational events that cause increases in trading activities in the stock market. The study concludes that these events of stock split announcements cause a general increase in trading activities of stocks. The effect of stock splits announcements on trading activity persists for an average period of one month. Stock split announcements affect trading activity almost immediately.

The share price of companies in an efficient market should contain public information so that no investor will be able to earn abnormal return. The Nairobi Securities Exchange has undergone a transformation over the years from manual system to automated trading so as to enhance efficiency in the stock market. It is therefore in the interest of the increasing investors that a research gap was identified and enabled us to come up with the research objective which was the effects of financial results announcement on share price of companies listed at the Nairobi Securities Exchange.

5.4 Policy Recommendations

From the study findings, it was established that stock split positively impacts on the share prices and trading activities, therefore the policy on this event may need to be reviewed

by CMA to encourage firms to adopt stock splitting. Secondly, to reduce abnormal reaction of prices caused by speculative trading by retail investors, the public should be educated on the operations of NSE in a bid to encourage more long-term investments than short-term ones as well as impart knowledge on the public regarding stock market activity. NSE should maintain a record of the dates of various events and make the information available to encourage scholars to undertake research on these events. That way, they will gain from the research and researchers would have easy access to information regarding stock split CMA should ensure compliance with insider trading laws, guidelines, rules and regulations by effectively monitoring the market. This will eliminate incidences of collision between brokers and traders, inside trading and leaking information and hence boosting investor's confidence.

5.5 Limitation of the Study

The sample size used is not representative of the population of the study considering that there are over one thousand companies in Kenya. Inference from the finding would therefore be misleading for policy makers. The study was conducted spanning from the year 2005 to 2015 making a sample size of the time of ten years. However, in statistical analysis involving regression requires that the time period should be at least 30 years. This implies that some variables which are significant might not have been significant if a large sample size was used.

The study heavily relied on secondary data and research conducted in the developed countries for literature review since few studies have been carried out at the Nairobi

Securities exchange. There are also few number of splits that have taken place at the Nairobi Securities exchange. In addition to this, voluntary stock split is not the only factor that influences share prices of companies. Other important factors such as voluntary disclosure of the company information should be considered while assessing the level of companies share prices. Therefore this factors which were not considered might have influenced the findings. Investors can only gain if there is an assurance that other factors in the economy will remain unchanged

Voluntary stock split is not the only factor that influences share prices of companies. Other important factors such as voluntary disclosure of the company information should be considered while assessing the level of companies share prices. Therefore this factors which were not considered might have influenced the findings. Investors can only gain if there is an assurance that other factors in the economy will remain unchanged. The study used a sample of fifteen companies listed in Nairobi Securities Exchange in Kenya.

5.6 Suggestions for Further Research

This study recommends that further studies be done on the stock splits effect on dividend policies of firms. This owes to the fact that splits would increase the number of shares without a consequent increase in market capitalization and how the same affect dividend paid per the increased number of outstanding shares would augment this study in answering the question on whether stock splits practices are relevant or not.

The study recommends that a study should be done to examine if reaction to stock split has either short or long term effect on the financial performance of companies listed at the Nairobi securities exchange. The study recommends that a similar study can be done on other corporate events like bonus issue, merger and acquisitions, cross listing, rights issues so as to determine how the stock market reacts to these events. A similar study should be carried out with a large sample size to seek validity. In addition, this will enable organizations to benefit from knowing whether reaction to stock split differ even in similar contexts, thus, adding another perspective to the effect of stock split on share prices of companies listed at the Nairobi securities exchange literature on comparing the retention management practices.

REFERENCES

- Abeyratna, G., Bandara, W. M. G., and Colombage, S. R. N. (1999). Lead-Lag Relationships in Stock Returns: A test of market efficiency in Lanka. *Sri Lankan Journal of Management*.
- Aduda, J. O. & Cheramum, S. C. (2010). Market reaction to stock splits: Empirical evidence from the Nairobi Stock Exchange. *African Journal of Business & Management*, 1(2010), 165-184.
- Angel, J. (1997). Tick size, share prices, and stocks split. *Journal of Finance*, 2(23-27).
- Angel, J., Raymond B. M. & Prem M. G. (2004), "When Issued Shares, Small Trades, and the Variance of Returns around Stock Splits", *Journal of Financial Research*.
- Baker, H. & Powell, G. (1993). Further evidence on managerial motives for stock splits. *Quarterly Journal of Business and Economics*, 2(31-46).
- Benartzi, S., Michaely, R., Thaler, R. and Weld, W. (2005), "The Nominal Price Puzzle", *Working Paper, University of Chicago*, <http://ssrn.com/abstract=891213>
- Brennan, M. J. and Copeland, T. E. (1988). Stock splits, stock prices and transaction costs *Journal of Financial Economics*, 50(15), 63-69.
- Byun, J. and Rozeff, M. (2003), "Long-run Performance after Stock Splits", *Journal of Finance*
- Carlos, G. A., and Frank, B. W. (2009). "The impact of Stock Split Announcements on Stock Price: A Test of Market Efficiency", ASBBS Annual Conference, Vol. 16, No. 1
- Conroy, R., Harris, R. and Benet, B. (1990), "The Effects of Stock Splits on Bid-Ask Spreads". *The Journal of Finance*.
- Conroy, R., Harris, R. and Benet, B. (1999), "Stock Splits and Information: The Role of Share Price", *Finance Management*.
- Copeland, T. (1979). Liquidity changes following stock splits. *Journal of Finance*, 20, 51-68.
- Devos, E., Elliott, W. B. and Richard S. Warr, R. S. (2010). "The Role of CEO Compensation in Stock Splits"
- Dhar, S. and Chhaochharia, S. (2008), "Market Reactions around Stock Splits and Bonus Issues: Some Indian Evidence"

- Fama, E. F., Fisher, L., Jensen, M. and Roll, R.(1969), "The Adjustment of Stock Prices to New information", *International Economic Review*
- Grinblatt, M. S., Masulis, R. W. & Titman, S (1984). The valuation effect of stock splits and stock dividends. *Journal of Financial Economics*, 5: 25-27.
- Investopedia Staff, (2005). "Understanding Stock Splits" [Online] <http://www.investopedia.com>
- Kibuthu,(2005), "The capital Market in Emerging Economies: A case of Nairobi Stock Exchange", *Unpublished MBA Project, University of Nairobi*.
- Kihumba,(1992), "The Capital Market Authority as an Institution" Unpublished paper, Nairobi Stock Exchange Library.
- Lamoureux, C. and Poon, P. (1987), "The market Reaction to Stock Splits," *Journal of Finance*
- Leung, T.Y., Meng, O. & Shuye, W.S.(2005). "What Do stock splits really signal?" Retrieved from <http://www.efmaefm.org/efma2006/papers>
- McNichols, M. and Dravid, A. (1990), "Stock Dividends, Stock Splits and Signaling," *Journal of Finance*
- Musau, M. (2007), "Stock Splits: The Hidden Flaws." *The African Executive* 14th-21st March 2007. Website: www.africanexecutives.com/modules/magazine/articles.
- Njagi, T (2010), "Effects of Stock Splits on Securities Returns of Companies Listed in Nairobi Stock Exchange" *Unpublished MBA Project, University of Nairobi*.
- Nyamosi, D. (2011). An assessment of the pricing efficiency of the Nairobi Stock Exchange after earnings announcements *Unpublished master's project, Kenyatta University, Nairobi, Kenya*.
- Onyango, V. S. (1999), "A Study to Establish Factors Managers Consider before Declaring Bonus Issues and the Estimation of Benefits to Shareholders at the Nairobi Stock Exchange," *Unpublished MBA Project, University of Nairobi*.
- Savitri, M. and Martani, D. (2008). The analysis of impact of stock split on stock return and volume: The case of Jakarta Stock Exchange *Journal of Finance*, 2, 25-27
- Schultz, P. (2000), "Stock Splits, Tick Size, and Sponsorship," *Journal of Finance*

- Simbovo, H. (2006).The effect of stock splits and large stock dividends on liquidity: Evidence from the Nairobi Stock Exchange. Unpublished master's project, University of Nairobi, Nairobi, Kenya Retrieved from <http://archive.uonbi.ac.ke>
- Wooldridge, J. R. and Chambers, D. R. (1983),“Reverse Split and Shareholder Wealth,” *Financial Management*.
- Wulff, C. (2002).The Market Reaction to Stock Splits: Evidence from Germany. *Schmalenbach Business Review*, 6, 18-25.

APPENDICES

Appendix I: Companies Listed in the Nairobi Securities Exchange

AGRICULTURAL
Kakuzi Ltd
Kapchorua Tea Co. Ltd
The Limuru Tea Co. Ltd
Rea Vipingo Plantations Ltd
Sasini Ltd
Williamson Tea Kenya Ltd
AUTOMOBILE
Car & General (K) Ltd
CMC Holdings Ltd
Marshalls (E.A.) Ltd
Sameer Africa Ltd
BANKING
Barclays Bank of Kenya Ltd
CFC Stanbic of Kenya Holdings Ltd
Diamond Trust Bank Kenya Ltd
Equity Bank Ltd
Housing Finance Co. Kenya Ltd
I&M Holdings Ltd
Kenya Commercial Bank Ltd
National Bank of Kenya Ltd
NIC Bank Ltd
Standard Chartered Bank Kenya Ltd
The Co-operative Bank of Kenya Ltd
COMMERCIAL AND SERVICES
Express Kenya Ltd
Kenya Airways Ltd
Longhorn Kenya Ltd

Nation Media Group Ltd
Scangroup Ltd
Standard Group Ltd
TPS Eastern Africa Ltd
Uchumi Supermarket Ltd
CONSTRUCTION AND ALLIED
Athi River Mining Cement Ltd
Bamburi Cement Ltd
Crown Paints Kenya Ltd
E.A.Cables Ltd
E.A.Portland Cement Co. Ltd
ENERGY AND PETROLEUM
KenGen Co. Ltd
KenolKobil Ltd
Kenya Power & Lighting Co Ltd
Total Kenya Ltd
Umeme Ltd
INSURANCE
British-American Investments Co. (Kenya) Ltd
CIC Insurance Group Ltd
Jubilee Holdings Ltd
Kenya Re Insurance Corporation Ltd
Liberty Kenya Holdings Ltd
Pan Africa Insurance Holdings Ltd
INVESTMENT
Centum Investment Co Ltd
Olympia Capital Holdings Ltd
Trans-Century Ltd
MANUFACTURING AND ALLIED
A.Baumann& Co Ltd

B.O.C Kenya Ltd
British American Tobacco Kenya Ltd
Carbacid Investments Ltd
East African Breweries Ltd
Eveready East Africa Ltd
Kenya Orchards Ltd
Mumias Sugar Co. Ltd
Unga Group Ltd
TELECOMMUNICATION AND TECHNOLOGY
Access Kenya Group Ltd
Safaricom Ltd
GROWTH ENTERPRISE MARKET SEGMENT
Home Afrika Ltd

Appendix II: Companies Listed at the NSE that have undergone Stock Split

No	Company	Split announcement date	Split ratio
1.	East African Cables Limited	August 10, 2006	10:1
2.	I.C.D.C	October 19, 2006	10:1
3.	Barclays Bank of Kenya	November 8, 2006	5:1
4.	Sasini Limited	December 18, 2006	5:1
5.	CMC Holdings	January 11, 2007	10:1
6.	Kenya commercial Bank Limited	March 5, 2007	10:1
7.	Nation Media group Limited	March 18, 2008	2:1
8.	Equity Bank Limited	February 12, 2009	10:1
9.	Kenol Kobil	May 20, 2010	10:1
10.	Kenya Power and Lighting	October 7, 2010	8:1
11.	Barclays Bank of Kenya	February 22, 2011	4:1
12.	Athi River Mining	May 14, 2012	5:1
13.	Equity Bank Ltd.	February 12, 2013	1:10
14.	Kenol Kobil	May 20, 2013	10:1
15.	Family Bank	October 15 2014	1:5

Appendix III: Share Price Index between t-60 and t+60, average Abnormal Returns and Abnormal Returns

Days	AAR	t	Sig.
-60	4.52	1.8	0.126
-59	3.23	-2	0.125
-58	0.86	-3	0.04
-57	0.29	-2	0.158
-56	0.23	-1	0.236
-55	0.14	0.7	0.541
-54	0.06	-1	0.245
-53	0.13	0.4	0.73
-52	0.04	-2	0.163
-51	0.07	-1	0.226
-50	0.19	-0	0.901
-49	43	1	0.366
-48	1.52	0.2	0.871
-47	0.12	1	0.375
-46	0.25	-1	0.424
-45	1.14	-1	0.219
-44	2.33	-0	0.921
-43	0.79	-1	0.285
-42	0.28	-1	0.614
-41	0.24	0.8	0.483
-40	0.35	1	0.355
-39	0.2	0.4	0.68
-38	0.79	-2	0.116
-37	0.11	-1	0.304
-36	0.88	0.1	0.939
-35	0.07	-0	0.874
-34	0.91	-0	0.981
-33	0.41	-0	0.837
-32	1.27	1.9	0.121
-31	17.2	0.7	0.506
-30	0.22	-0	0.79
-29	0.44	0.8	0.451
-28	1.39	2.2	0.081
-27	0.59	1.3	0.237
-26	0.71	-1	0.363
-25	1.05	-0	0.8
-24	0.38	1	0.385
-23	0.26	1.4	0.218
-22	0.48	0.9	0.426
-21	0.37	-1	0.554
-20	0.38	-1	0.273
-19	0.62	0.4	0.733
-18	0.42	-1	0.623

-17	0.36	2.2	0.08
-16	0.43	1.2	0.28
-15	0.21	0.7	0.495
-14	0.17	0.3	0.805
-13	1.02	0.6	0.596
-12	1.76	1.1	0.335
-11	1.28	4.9	0.004
-10	0.38	2.4	0.063
-9	2.61	2.9	0.032
-8	0.58	3	0.029
-7	1.43	1.1	0.314
-6	0.53	2.5	0.053
-5	1.27	0.1	0.955
-4	0.35	0.3	0.804
-3	0.27	1.9	0.112
-2	0.83	1.4	0.223
-1	1.09	2.6	0.047
0	2.33	2	0.106
1	4.52	1.8	0.126
2	3.23	-2	0.125
3	0.86	-3	0.04
4	0.29	-2	0.158
5	0.23	-1	0.236
6	0.14	0.7	0.541
7	0.06	-1	0.245
8	0.13	0.4	0.73
9	0.04	-2	0.163
10	0.07	-1	0.226
11	0.19	-0	0.901
12	43	1	0.366
13	1.52	0.2	0.871
14	0.12	1	0.375
15	0.25	-1	0.424
16	1.14	-1	0.219
17	2.33	-0	0.921
18	0.79	-1	0.285
19	0.28	-1	0.614
20	0.24	0.8	0.483
21	0.35	1	0.355
22	0.2	0.4	0.68
23	0.79	-2	0.116
24	0.11	-1	0.304
25	0.88	0.1	0.939
26	0.07	-0	0.874
27	0.91	-0	0.981
28	0.41	-0	0.837
29	1.27	1.9	0.121
30	17.2	0.7	0.506
31	0.22	-0	0.79

32	0.44	0.8	0.451
33	1.39	2.2	0.081
34	0.59	1.3	0.237
35	0.71	-1	0.363
36	1.05	-0	0.8
37	0.38	1	0.385
38	0.26	1.4	0.218
39	0.48	0.9	0.426
40	0.37	-1	0.554
41	0.38	-1	0.273
42	0.62	0.4	0.733
43	0.42	-1	0.623
44	0.36	2.2	0.08
45	0.43	1.2	0.28
46	0.21	0.7	0.495
47	0.17	0.3	0.805
48	1.02	0.6	0.596
49	1.76	1.1	0.335
50	1.28	4.9	0.004
51	0.38	2.4	0.063
52	2.61	2.9	0.032
53	0.58	3	0.029
54	1.43	1.1	0.314
55	0.53	2.5	0.053
56	1.27	0.1	0.955
57	0.35	0.3	0.804
58	0.27	1.9	0.112
59	0.83	1.4	0.223
60	1.09	2.6	0.047

Appendix IV: Average Security Returns Variability

Days	Mean(ASRV)	STDEV	T-stat	Sig
-60	4.5166	3.9164	2.825	0.037
-59	3.2318	4.1131	1.925	0.112
-58	0.8559	0.5396	3.886	0.012
-57	0.2945	0.182	3.962	0.011
-56	0.2251	0.276	1.997	0.102
-55	0.1447	0.2029	1.747	0.141
-54	0.0607	0.0271	5.491	0.003
-53	0.1299	0.0981	3.244	0.023
-52	0.0411	0.0397	2.54	0.052
-51	0.0692	0.1027	1.651	0.16
-50	0.1885	0.1639	2.817	0.037
-49	43.0224	85.8135	1.228	0.274
-48	1.5179	2.3342	1.593	0.172
-47	0.116	0.1066	2.666	0.045
-46	0.2478	0.3888	1.561	0.179
-45	1.1385	1.5994	1.744	0.142
-44	2.3328	4.4154	1.294	0.252
-43	0.7888	0.6696	2.886	0.034
-42	0.2792	0.3248	2.105	0.089
-41	0.2432	0.2181	2.732	0.041
-40	0.3464	0.5638	1.505	0.193
-39	0.2046	0.0673	7.444	0.001
-38	0.7916	1.0715	1.81	0.13
-37	0.1092	0.0663	4.038	0.01
-36	0.8801	1.5974	1.35	0.235
-35	0.0676	0.047	3.521	0.017
-34	0.91	1.5537	1.435	0.211
-33	0.4095	0.4468	2.245	0.075
-32	1.2688	1.3201	2.354	0.065
-31	17.2388	33.5374	1.259	0.264
-30	0.2198	0.2115	2.546	0.052
-29	0.4375	0.5234	2.047	0.096
-28	1.3938	1.8582	1.837	0.126
-27	0.5875	0.6349	2.267	0.073
-26	0.7102	0.5702	3.051	0.028
-25	1.0529	1.1117	2.32	0.068
-24	0.3839	0.485	1.939	0.11
-23	0.2612	0.2629	2.434	0.059
-22	0.4774	0.4699	2.488	0.055
-21	0.3698	0.301	3.009	0.03
-20	0.3845	0.5874	1.603	0.17
-19	0.6196	0.738	2.057	0.095
-18	0.4158	0.5269	1.933	0.111
-17	0.3621	0.5936	1.494	0.195
-16	0.429	0.52	2.021	0.099

-15	0.2057	0.1282	3.932	0.011
-14	0.1673	0.1663	2.465	0.057
-13	1.0176	1.2111	2.058	0.095
-12	1.7646	3.4017	1.271	0.26
-11	1.2849	2.0187	1.559	0.18
-10	0.3819	0.681	1.374	0.228
-9	2.6129	3.4394	1.861	0.122
-8	0.5799	0.5939	2.392	0.062
-7	1.4308	1.4331	2.446	0.058
-6	0.5264	0.5191	2.484	0.056
-5	1.2743	1.7801	1.754	0.14
-4	0.349	0.3457	2.473	0.056
-3	0.2696	0.4164	1.586	0.174
-2	0.8296	0.7799	2.605	0.048
-1	1.0894	0.8281	3.222	0.023
0	2.3329	2.7111	2.108	0.089
1	4.5166	3.9164	2.825	0.037
2	3.2318	4.1131	1.925	0.112
3	0.8559	0.5396	3.886	0.012
4	0.2945	0.182	3.962	0.011
5	0.2251	0.276	1.997	0.102
6	0.1447	0.2029	1.747	0.141
7	0.0607	0.0271	5.491	0.003
8	0.1299	0.0981	3.244	0.023
9	0.0411	0.0397	2.54	0.052
10	0.0692	0.1027	1.651	0.16
11	0.1885	0.1639	2.817	0.037
12	43.0224	85.8135	1.228	0.274
13	1.5179	2.3342	1.593	0.172
14	0.116	0.1066	2.666	0.045
15	0.2478	0.3888	1.561	0.179
16	1.1385	1.5994	1.744	0.142
17	2.3328	4.4154	1.294	0.252
18	0.7888	0.6696	2.886	0.034
19	0.2792	0.3248	2.105	0.089
20	0.2432	0.2181	2.732	0.041
21	0.3464	0.5638	1.505	0.193
22	0.2046	0.0673	7.444	0.001
23	0.7916	1.0715	1.81	0.13
24	0.1092	0.0663	4.038	0.01
25	0.8801	1.5974	1.35	0.235
26	0.0676	0.047	3.521	0.017
27	0.91	1.5537	1.435	0.211
28	0.4095	0.4468	2.245	0.075
29	1.2688	1.3201	2.354	0.065
30	17.2388	33.5374	1.259	0.264
31	0.2198	0.2115	2.546	0.052
32	0.4375	0.5234	2.047	0.096
33	1.3938	1.8582	1.837	0.126

34	0.5875	0.6349	2.267	0.073
35	0.7102	0.5702	3.051	0.028
36	1.0529	1.1117	2.32	0.068
37	0.3839	0.485	1.939	0.11
38	0.2612	0.2629	2.434	0.059
39	0.4774	0.4699	2.488	0.055
40	0.3698	0.301	3.009	0.03
41	0.3845	0.5874	1.603	0.17
42	0.6196	0.738	2.057	0.095
43	0.4158	0.5269	1.933	0.111
44	0.3621	0.5936	1.494	0.195
45	0.429	0.52	2.021	0.099
46	0.2057	0.1282	3.932	0.011
47	0.1673	0.1663	2.465	0.057
48	1.0176	1.2111	2.058	0.095
49	1.7646	3.4017	1.271	0.26
50	1.2849	2.0187	1.559	0.18
51	0.3819	0.681	1.374	0.228
52	2.6129	3.4394	1.861	0.122
53	0.5799	0.5939	2.392	0.062
54	1.4308	1.4331	2.446	0.058
55	0.5264	0.5191	2.484	0.056
56	1.2743	1.7801	1.754	0.14
57	0.349	0.3457	2.473	0.056
58	0.2696	0.4164	1.586	0.174
59	0.8296	0.7799	2.605	0.048
60	1.0894	0.8281	3.222	0.023

Appendix V: Cumulative Average Abnormal Returns

Days	Average	
	AAR	CAR
-60	-3.526	-12.16
-59	1.764	-10.396
-58	1.617	-8.779
-57	0.886	-7.893
-56	0.433	-7.46
-55	-0.644	-8.104
-54	-0.522	-8.626
-53	0.678	-7.948
-52	0.229	-7.719
-51	-0.335	-8.054
-50	1.12	-6.934
-49	0.591	-6.344
-48	1.829	-4.515
-47	0.07	-4.445
-46	0.215	-4.23
-45	0.492	-3.738
-44	-0.263	-4.001
-43	0.976	-3.026
-42	0.772	-2.254
-41	-0.053	-2.307
-40	0.353	-1.954
-39	-0.619	-2.572
-38	-0.922	-3.494
-37	-0.615	-4.109
-36	0.897	-3.212
-35	0.534	-2.678
-34	-0.168	-2.847
-33	-0.586	-3.433
-32	-3.036	-6.469
-31	-1.789	-8.259
-30	-0.942	-9.2
-29	0.045	0.045
-28	-4.013	-3.969
-27	-2.409	-6.377
-26	0.453	-5.925
-25	3.046	-2.879
-24	-0.461	-3.339
-23	1.524	-1.815
-22	0.004	-1.811
-21	0.767	-1.044
-20	-2.227	-3.271
-19	1.844	-1.427
-18	0.72	-0.707
-17	0.212	-0.495
-16	-0.772	-1.267
-15	0.835	-0.432

-14	-0.473	-0.905
-13	-1.707	-2.612
-12	-5.237	-7.849
-11	4.094	-3.755
-10	-2.361	-6.116
-9	-0.257	-6.373
-8	0.618	-5.755
-7	2.822	-2.933
-6	-0.938	-3.871
-5	-0.402	-4.274
-4	-0.922	-5.196
-3	-0.286	-5.482
-2	-0.781	-6.263
-1	2.593	-3.67
0	-4.965	-8.634
1	-3.526	-12.16
2	1.764	-10.396
3	1.617	-8.779
4	0.886	-7.893
5	0.433	-7.46
6	-0.644	-8.104
7	-0.522	-8.626
8	0.678	-7.948
9	0.229	-7.719
10	-0.335	-8.054
11	1.12	-6.934
12	0.591	-6.344
13	1.829	-4.515
14	0.07	-4.445
15	0.215	-4.23
16	0.492	-3.738
17	-0.263	-4.001
18	0.976	-3.026
19	0.772	-2.254
20	-0.053	-2.307
21	0.353	-1.954
22	-0.619	-2.572
23	-0.922	-3.494
24	-0.615	-4.109
25	0.897	-3.212
26	0.534	-2.678
27	-0.168	-2.847
28	-0.586	-3.433
29	-3.036	-6.469
30	-1.789	-8.259
31	-0.942	-9.2
32	0.045	0.045
33	-4.013	-3.969
34	-2.409	-6.377

35	0.453	-5.925
36	3.046	-2.879
37	-0.461	-3.339
38	1.524	-1.815
39	0.004	-1.811
40	0.767	-1.044
41	-2.227	-3.271
42	1.844	-1.427
43	0.72	-0.707
44	0.212	-0.495
45	-0.772	-1.267
46	0.835	-0.432
47	-0.473	-0.905
48	-1.707	-2.612
49	-5.237	-7.849
50	4.094	-3.755
51	-2.361	-6.116
52	-0.257	-6.373
53	0.618	-5.755
54	2.822	-2.933
55	-0.938	-3.871
56	-0.402	-4.274
57	-0.922	-5.196
58	-0.286	-5.482
59	-0.781	-6.263
60	2.593	-3.67