

STOCK SPLITS AND THEIR EFFECT ON SHARE  
PRICES  
A STUDY OF FIRMS LISTED AT THE NAIROBI STOCK  
EXCHANGE.

BY

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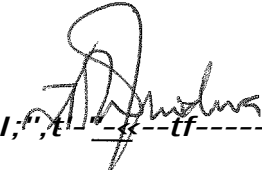
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## Dedication

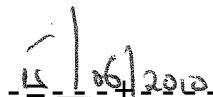
This study is dedicated to my wife Susan, for being there for me always.

## 2. Declaration

I, the undersigned, declare that this is my own original work. It has not been submitted for academic credit to any other college, institution or university other than Strathmore University in Nairobi.

Signed:  -----

John Mwendwa (ID foc/047S19/06)

Date:  -----

This project has been presented for examination with my approval as the appointed supervisor.

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## Abstract

The relationship between stock splits and stock prices has been the subject of continuing interest to economists and practitioners. The reaction occurring after the announcement, however, has not been fully understood and explained. Naidu (2008), states that theoretically, a stock split is merely a numerical change, which leaves investors no better or worse off than they were before the split. This implies that there must be some benefit, either real or perceived, that results from a firm splitting its stock.

The purpose of this research was to determine whether a stock split announcement had an impact on the related stock price with specific reference to companies listed at the Nairobi Stock Exchange. The specific objectives were to determine motivation behind stock splits within the Kenyan market; and to determine if stock splits have any effect on the share price.

Primary and secondary data was used to achieve the research objectives. Primary data was obtained by conducting interviews with key decision makers in companies that had split their stocks and were listed at the Nairobi stock exchange. Secondary data was collected from the database of the Nairobi stock exchange. Analysis was done using Microsoft Excel and SPSS computer programs and output presented using appropriate visual techniques, i.e., tables, graphs and charts.

Studies by various scholars like Lyroudi et al (2006) are consistent with findings of this research especially on the trading range hypothesis. Baker & Powell (1993) agree on the reason why stock splits occur. They agree that most splits occur so that shares prices are brought to an optimal range.

The study established that most companies undertook stock splits so as to bring the trading range of the share price to an optimum point. This was undertaken so that the majority of investors, both individual and institutional, could have access to the shares of the company. The study further established that other factors such as the split ratio employed, for instance the fact that most companies at the Nairobi stock exchange employed a 10 for 1 ratio could have an effect on the post split share price.

Key recommendations of this research were that Policy on stock splits in Kenya was found to be biased on forward splits and the Capital Markets Authority needed to review this to enable firms undertake reverse splits. For instance the legal framework needs to be amended to allow reverse splits that allow consolidation of shares. The Capital Markets Authority Act of June 2004 was identified as due for review to enable the market to practice reverse splits.

Review on laws governing the stock market needed to be more regular as the dynamism of the stock market needed to be allowed to come in to play sooner rather than later.

Areas of further research areas in which the factors affecting the post-split share price were also identified. These were split ratio factors and their impact on the post split price and the market perception of a firm with high split price.

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# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Problem

Lyrouti, Dasilas and Varnas (2006) state that the relationship between stock splits and stock prices has been subject of continuing interest to economists and practitioners. They note that stock splits have long been a puzzling phenomenon to financial economists and 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.

According to Baker and Gallagher (1980), in theory, a stock split is merely an arithmetic exercise. They state that a stock split results in a reduction of the par value and a consequent increase in the number of shares proportionate to the split while all other capital accounts remain unchanged. They continue to state that theoretically, shareholders receive no tangible benefits from a stock split, while there are some costs associated with it. In practice however, corporate managers may view stock splits as more than an arithmetic exercise and may have other reasons for issuing them.

Dennis and Strickland (2002) argue that the effects of stock splits are puzzling. In theory a stock split is merely an accounting change, which leaves investors no better or worse off than they were before the split. They further state that this implies that there must be some benefit, either real or perceived, that results from a firm splitting its stock.

Greenberg and Brooker (1999) shed some light on the origin of stock splits saying that they began as a Wall Street gimmick to help individual investors avoid a penalty that brokers used to charge for "odd lot" purchases (fewer than 100 shares of a given stock). They argued that companies like it when retail investors buy their stock, because individuals are generally considered more loyal than institutions, but the higher a company's stock price rises, the fewer individuals there are who can afford to buy a 100- share block. They quote veteran market pundit Bob Stovall, of Stovall/Twenty First

Advisers who said that American management discovered long ago that the individual investor likes to buy stocks that trade at \$40 per share, hence the urge to split.

Stock splits are distinguished by the split factor/ratio they employ. Harper (2000) explains the various kinds of splits. He states for example, in a 2-for-1 stock split, every shareholder with one stock is given an additional share. After the split, there will be two shares for every one pre-split share. (So it is called a "2-for-1 split").

Guo, Liu and Song (2005) explore the reasons why firms split their stocks. They quote extensive literature about the signaling theory and the trading-range hypothesis that have emerged as the leading explanations of stock splits. According to the signaling theory, managers declare stock splits to convey favorable private information about their firms' future earnings. They quote the works of Fama et al; Lakanishok and Lev (1987) who argue that stock splits are usually preceded by substantial increase in the firm's earnings and stock prices. By splitting the stock, the management conveys to the market that the increase in earnings and stock prices are permanent instead of transient.

Guo et al. (2005) discuss about the trading range hypothesis which suggests that stock splits bring share price to a preferred price range. Managers often justify stock splits on the basis that they improve liquidity and marketability. Guo et al quote Ikenberry et al. (1996) who conducted empirical research and had inconclusive results based on splits leading to improved liquidity and marketability. The optimal trading range may arise for other reasons such as a desire by firms to control the relative tick size at which their shares trade, a desire by managers to increase ownership by individual investors, and a desire by the brokerage firms to preserve commission income.

Different authors; Guo et al. (2005), Fama et al; Lakanishok and Lev (1987) and Harper (2000) support the reasons stated with others adding a number of reasons for the stock splits. One argument is that individual shareholders tend to be wealth constrained and, therefore, they cannot afford to acquire a round lot of a firm's stock if the price is too high. By splitting their stock, firms make their stock more attractive for the individual investor (Lakonishok and Lev (1987), Conroy and Harris (1999), Schultz (2000). With the lower post-split price, it is observed that there is a lower proportion of institutional ownership, and a higher proportion of individual ownership, after the split than before the

split. There is also the argument that is based on trading costs. Several studies (Conroy, Harris and Benet (1990), Gray, Smith and Whaley (1999) show that the percentage bid/offer spread increases following a split. The fact that institutions trade more frequently than individuals, and that the bid/offer spread is the primary component of their trading cost, implies that institutions should dislike splits unless some other benefit exists. Following a split, it is expected that the proportion of institutional ownership of a stock decreases, as institutions flock to equivalent stocks with lower relative bid/offer spreads.

Other authors offer a different notion regarding the relationship between abnormal returns and ownership structure at the announcement of a stock split. They find that the abnormal return is positive and is negatively related to the proportion of institutional ownership prior to the split. Several authors Grinblatt, Masulis and Titman (1984), Muscarella and Vetsuypens (1996), Larnoureaux and Poon (1987), Ikenberry, Rankine, and Stice (1996) have shown that there is a significantly positive abnormal return at the announcement of a stock split. One hypothesis for the positive abnormal return is that a split may be interpreted as a signal that the firm's managers are optimistic regarding its future prospects.

Most of the arguments discussed are why companies split their stocks. However, the Editorial, Drip Investor magazine (2007) gives some reasons as to why some companies opt not to split their stocks. Some of the reasons are:

- <sup>41</sup> A high stock price means a high-quality Company: This implies that investors give a certain cachet and prestige to high-priced stocks. Thus, many companies are willing to sport triple-digit stock prices.
- e The fear of a market correction: Companies may be reluctant to split their stock because they believe the stock market may be due for a significant market correction, one that could drop their post-split stock prices to uncomfortably low levels.
- <sup>41</sup> Individual investors do not really matter: Institutional investors and hedge funds drive the markets these days, and these investors, unlike individual investors, don't have any problem buying lots of shares of high priced stocks. To them, the absolute stock price is irrelevant.

In summary, to highlight ideas discussed in detail in the subsequent chapter, empirical evidence on stock splits supports both the trading range and signaling hypotheses, but is inconsistent on the notion that splits improve a stock's trading liquidity.

The evidence suggests that the main motive for stock splits is moving the stock price into a better trading range, followed by improving trading liquidity. As has already been stated stock splits are simply numerical changes that provide no tangible gains or losses to the investors or the companies that are undertaking the stock splits. However, empirical evidence reported by Masse, Hanrahan and Kushner (1997) and Arbel and Swanson (1993) show that there are economic gains achieved by the stock splits announcement and consequent implementation.

Theories discussed in the subsequent chapter such as EMH (efficient market hypothesis) provide a contrasting view. EMH (efficient market hypothesis), states that one cannot outperform the market and in one way or another it counters the signaling theory. Managerial entrenchment hypothesis is also discussed. The issue of split factor also discussed and the conclusion reached is that split factor alone cannot determine the share value but is used in tandem with the other theories in place. A large split factor greatly reduces the value of the share and hence signals something positive. The split factor thus ties into the trading range hypothesis and signaling theory and its effects are measure as a result of these.

## 1.2 Statement of the Problem

The definition of a stock split indicates that a shareholder would expect no tangible benefits from a stock split. This is because a stock split is seen to be of cosmetic value, not value adding i.e. like splitting a pie into a number of pieces - the volume and quantity of the pie remains the same.

Previous research has documented positive price performance subsequent to splits. Grinblatt et al. (1984) and Lamoureux and Poon (1987) support the signaling hypothesis that firms use stock splits to signal future positive earnings.

The alternative liquidity and trading range hypothesis comes from management claims that the motivation for split activities is to bring stock prices down to a preferred trading range and improve liquidity. However, existing empirical research, finds that the impact of split on liquidity is mixed Cope land (1979), Conroy and Harris (1999), and Desai et al (1998), find that bid-ask spreads, increase thus indicating worsened liquidity.

If stock splits of common shares are nothing more than a cosmetic change and have no impact on the value of the firm, then why do many companies split their stocks every year? This implies that there must be some benefit, either real or perceived, that results from a firm splitting its stock. This study therefore sought to determine if the splitting of stocks has any value adding associated with it. These views will form the basis of investigations to determine if indeed splitting stocks affects to stock price and consequently company value.

### 1.3 General Objective

The general objective of this study was to determine the relationship between stock split announcements and the share price thereafter; whether there was a positive, negative or neutral development with respect to share price. The study focused on the Kenyan market, specifically the Nairobi Stock Exchange.

### 1.4 Specific Objectives

The study was aimed at addressing the following objectives: -

- " To determine the reasons Kenyan firms undertake stock splits within the Kenyan market
- " To determine if stock splits have any effect on the share price

### 1.5 Importance of the Study

Although theoretically, shareholders receive no tangible benefit from a stock split and the company's market capitalization remains the same, many financial economists in the stock market feel that splitting the shares of a stock produces, for various reasons, a greater total market value for the shares outstanding. This implies that there must be some benefit, either real or perceived, that results from a firm splitting its stock. This study will

therefore seek to provide an understanding as to why stock splits seem to be more than just a numerical increase in shares. Additionally, this study is important to management of companies that are grappling with the thought of whether or not to split their stocks by providing relevant information. The study is also important to shareholders and potential shareholders by providing them with facts about stock splits and how lucrative a company's stocks are after the split. The study will also contribute to the existing empirical evidence on the impact of stock split announcement on stock prices with special reference to the Kenyan market. Being a new concept in the Kenyan capital markets and with the acrimony that was generated within the market after East African Cables announced their intention to split their shares, this research is timely and will inform the stock market participants on the share split benefits.

### 1.6 Scope of the Study

The study was limited to companies that are listed on the NSE (Nairobi Stock Exchange) and that had split their authorized shares during the period 2004 to 2009. This six year period was a period within the stock market that was characterized with rapid growth as evidenced in the rapid growth of the share index from a low range of 1500 to a high of 3000 (NSE Fact book 2006). It was also during this period that the split, which was a relatively new concept, was introduced in the NSE (Nairobi Stock Exchange), a market that is considered a fairly small emerging market characterized by thin trading.

In June 2004, the CMA (capital markets authority) Act was amended to allow companies listed at the Nairobi stock exchange to split their stocks hence the choice of the study period.

### 1.7 Limitations of the Study

There were a number of limitations to this study. One major limitation was the size of the Nairobi Stock Exchange and number of companies that constituted it. There had been only 10 stock splits in the period of 6 years and as a result the data may not have been sufficient to get conclusive results compared to other studies conducted in far more developed markets over longer time periods.

Another limitation was that some of the personnel interviewed in the various companies were not present at the time of the stock splits and hence could not give first hand information on the reasons for the splits. However, secondary evidence provided valuable insight to overcome this limitation since price behavior could be analyzed before and after the split.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter highlights literature related to works of other scholars and writers related to the topic of the study. The chapter is divided into sections covering the motivation of stock splits, the impact of split ratio/factor on share price and the effect of stock splits on share price.

#### 2.2 Motivation of Stock Splits

Many hypotheses may explain the persistence of splits and their associated effects. Explanations for stock splits can be classified broadly into three groups: trading range, signaling, and liquidity hypotheses.

##### 2.2.1 The Signaling Theory

According to Naidu (2008), signaling theory was proposed by Brennan and CopeJand in 1988. The theory assumed that managers have private information about the future prospects of their own firm. If a firm with good prospects splits its stock, then its percent spread (bid-ask) will increase temporarily. Eventually, the market will come to perceive the same good information that the managers knew, causing the firm's price to rise and the percent spread to return to an even range. However, Grinblatt, Masulis and Titman, in their 1984 document, come up with the concept but do not formally call it the signaling theory (Me Nichols and David,( 1990).

Naidu (2008), further states that if a company with average or bad fundamentals splits, then its percent spread will increase permanently. This cost differential allows good firms to signal by splitting and prevents average or bad firms from emulating others. The signaling theory predicts that splitting firms should receive positive returns on the announcement of a split. The empirical evidence finds a positive abnormal return on a split announcement. An empirical challenge for signaling is that there is no evidence that

split firms actually experience a temporary increase in percent effective spread as compared to non-split firms.

Brennan and Hughes (1991) developed a model that showed higher commissions on stocks with lower prices serve as the cost for issuing the split. These higher commissions also provide the incentive for full service brokers to follow firms more closely that have their prices in an optimal trading range. Therefore, by issuing a split and lowering its stock price into a higher commission range, a firm makes its stock more attractive to full service brokers and draws the attention necessary to reveal favorable private information.

Klein and Peterson (1989) find that companies announcing splits experience greater earnings forecast revisions than similar non-splitting matched controlled companies. The difference in forecast revisions between split and control companies is significantly positively related to abnormal returns at the split announcement. These results, consistent with those found by Lakonishok et al., as reported by Baker and Powell(1993), suggest that split announcements convey information about future earnings and that this information may cause abnormal returns at the announcement. Baker and Powell (1993) report on Grinblatt et al. (1984) who also support the notion of informational signaling of stock distributions.

### 2.2.2 The Trading Range Hypothesis

Naidu (2008) further gives the origin of the trading range hypothesis. He notes that the originator of this was Cope land in his 1979 work. The idea is that a split lowers the price, which makes trading more affordable. 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.

Naidu (2008) further adds that splits keep stock prices within an optimal trading range, making it easier for small investors to buy round lots that 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.

Baker and Powell (1993) give another suggestion as to why stock splits occur. They state that stock splits restore stock prices to some preferred trading range. This presumes that shareholders prefer to purchase round lots but cannot afford to do so when the share price is high. Opponents argue that fees for odd lots are small and institutional investors, who purchase more stock than individuals, are indifferent to price levels, provided the expected returns are commensurate with the risk.

Researchers have examined hypotheses about stock splits using two divergent but complementary approaches--surveying managers and using market data. Few researchers have surveyed managers to get their views about stock splits. Most have used stock market data to make inferences about managerial motives and to explain real effects of stock splits. For example, Baker and Powell (1993) find that firms with an unusual growth in earnings and stock prices issue stock splits. They infer that the main objective of the split is to return the stock price to a normal range after an unusual growth period. The normal range is based on market and industry-wide price averages and possibly on some firm-specific prices. Their results partially support the signaling motive, but not the liquidity motive.

Arbel and Swanson (1993) find that splits are aimed primarily at restoring stock prices to a normal trading range; however, they also find some support for the signaling-based hypothesis.

### 2.2.3 The Liquidity Hypothesis

According to Dennis (2003) the origins of this hypothesis can be traced to the early studies of Muscarella and Vetsuypens (1996) and Schultz (2000) who found that volume, especially small-sized trades, increase following a split, while other studies, such as Lakonishok and Lev (1987) found that volume decreases following a split. Dennis (2003) notes that a problem arises in the interpretation of such a change in post-split liquidity. Post-split liquidity could be driven by the lower share price, which enables more investors to purchase the stock. However, post-split liquidity could also be driven by signaling.

Specifically, the public may interpret a share split as a signal of good news by the management of firms and subsequently increase their trading of the stock.

Baker and Powell (1993) give a third explanation for stock splits and this focuses on managements' desire to use splits to improve trading liquidity. Proponents of this view suggest that splitting firms can make shares more attractive to investors by lowering the stock price. By attracting attention, stock splits may affect both the number of trades and the number of stockholders. Increases in these two variables may serve to increase a stock's post-split liquidity. For example, if splits enable more individual investors to buy shares in round lots, the number of trades may increase, but the average size of the trades may decline. Empirical research is inconsistent on the effect of stock splits on trading liquidity.

There is an apparent inconsistency between managements' expressed belief that splits improve shareholder liquidity and empirical evidence that splits result in decreased liquidity. Several studies reporting a reduction in liquidity use trading volume and percentage bid-ask spreads as liquidity measures. Yet managers often do not view liquidity in these terms. Instead, they perceive liquidity in terms of increasing the number of shareholders and widening the ownership base. Empirical evidence supports the notion that stock splits result in an increase in these liquidity-related factors affecting liquidity. Hence, the findings lend some credence to managements' view that splits increase liquidity.

Glanz (2000) gives the example of Micro-strategy. He states that as revenue has grown, Micro-strategy's stock price has ballooned, putting it out of reach of some individual investors, analysts say, and that's the company's motivation for splitting its stock. But Glanz (2000) essentially puts its that the reason why they split the stock is to ensure that the stock is within range of the average investor to boost the number of trades on that stock that take place. This essentially makes the stock more liquid because more trades do in the eventuality boost the stock price.

#### 2.2.4 The Managerial Entrenchment Hypothesis

This hypothesis is based on agency costs and managers opportunistic behavior. Menendez and Gomez-Anson (2003) quote Mukherji et al., who proposed a new hypothesis with regards to stock splits. Mukherji state that managers use stock splits to alter the firm's ownership structure by increasing the number of individual investors and reducing the stake of the institutional shareholders. Menendez et al., also cite Lakonishok and Lev (1987) who give further insight to this hypothesis stating that organizations seek to increase the individual investors to deter any possibilities of takeovers from institutional investors who hold great percentage of shares. The proponents of this hypothesis state that one major result of stock splits based on this hypothesis is that the number of individual investors would increase and the institutional investors decrease.

The hypotheses so far proposed seem to be interrelated and drawing fine lines separating the individual hypotheses becomes difficult. The management entrenchment hypothesis seems to be closely related to the trading range hypothesis as well as signaling theory which all seem to emanate from a management perspective with their best interests at heart. A major result of the trading range hypothesis is that a new class of investors is attracted who are mainly individual investors (Mark, 1995).

Essentially one can propose that by management attempting to bring the share price within optimal range, they are indeed signaling to would-be potential investors of future gains of the company. The sheer volume of these individual investors "signaled to" would result in them buying numerous shares and subsequently diluting the hold of the institutional investors.

#### 2.2.5 Discussion

In light of the Brennan and Hughes (1991) work, the hypotheses about stock splits need not be conflicting. For example, the optimal trading range may be desirable because it is associated with higher commissions and trading costs. This makes the stock more desirable to brokers and draws attention to the stock. Thus, the trading range, signaling, and liquidity hypotheses are closely tied and complementary, not conflicting.

Baker and Powell (1993) examine the actual managerial behavior for small (Le less than~ 25 percent) and large (greater than or equal to 25 percent) stock distributions. A factor prompting management to issue small stock distributions appears to be the desire to signal optimistic expectations. The results of the analysis of large distributions suggest that a primary motivator is to reduce the per share price. Their findings also show that a desire to signal optimistic expectations may be a motivator.

In-depth telephone interviews conducted by Arbel and Swanson (1993) with a sample of five other managers provide additional insights into their rationale for issuing stock splits. These scholars perceive that lowering the share price attracts investors, especially individual investors, and therefore increases the ownership base. These managers want a wider distribution of shares because they believe that it enhances trading liquidity. A few believe that shifting the composition of shareholders toward a greater proportion of individuals could lessen the chance of an unfriendly takeover.

In summary, empirical evidence on stock splits supports both the trading range and signaling hypotheses, but is inconsistent on the notion that splits improve a stock's trading liquidity. Finally, evidence suggests that stock splits increase volatility. The evidence suggests that the main motive for stock splits is moving the stock price into a better trading range, followed by improving trading liquidity. Other important motives include signaling optimistic managerial expectations about the future and attracting investors. Comparing these results to prior survey research suggests that managements' motives for stock splits, especially trading range and liquidity, have endured for a long time.

### 2.3 The Impact of Split Ratio/Factor on Share Price

Stock splits are distinguished by the split factor/ratio they employ. Harper (2000) explains the various kinds of splits. He states for example, in a 2-for-1 stock split, every shareholder with one stock is given an additional share. After the split, there will be two shares for every one pre-split share. (So it is called a "2-for-1 split"). Thus, if a company has ten million shares outstanding before the split, it will have 20 million shares outstanding after a 2- for-1 split. Sometimes an ordinary split is referred to as a percent. A 2: 1 split is a 100% .stock split (or a 100% stock dividend). A 50% split would be a 3:2

split (or a 50% stock dividend). Each stockholder will get one more share of stock for every two shares owned.

Harper (2000) further states the price of a stock is also affected by a stock split. One share represents the value of the company's underlying assets plus its growth potential divided by the number of shares outstanding. After a stock split, the only value that changes is the denominator in this equation. After a split, the stock price is reduced since the number of shares that are outstanding is increased. In the example of a 2-for-1 split, the share price will be halved. If the stock price is Kshs. 500 per share before the split, each share is worth Kshs. 250 after the split since the company's net assets do not increase and only the number of shares outstanding changes.

Harper (2000) gives another version of a stock split which is the "reverse" split. He says that this is the opposite of an ordinary split. When a company engages in a reverse stock split, it exchanges one share of stock for a predetermined number of shares of stock. A reverse split does not increase the market capitalization of the company. This procedure is typically used by companies with low share prices who would like to increase their share prices to either gain more respectability in the market or to prevent the company from being de-listed from the exchange. Alternatively, a company may want to conduct a massive reverse split to eliminate small investors from its shareholder base. For instance, in a reverse 5-for-1 split, 10 million outstanding shares at Kshs. 50 cents each would be changed to only 2million shares outstanding at Kshs. 2.50 each. Both before and after the reverse split, the company is only worth 50 million. Just like the case of ordinary splits, following a reverse split, there is no theoretical reason to expect a change in the stock price beyond the adjustment for the split itself.

McNichols and Dravid (1990) link trading range hypothesis and split factor. They state that the two are intertwined and the optimal range that management wants will determine the split factor to be employed. They find that split factors are an increasing function of pre-split share prices which implies that managers have some preferred trading range in mind when issuing stock splits. McNichols and Dravid (1990) also find an inverse relationship between split factors and the market value of a firm's equity. This finding implies higher preferred trading ranges for larger firms. They suggest that a firm's desire to keep its stock price in a certain range may outweigh its desire to signal inside

information to investors. That is, a firm's pre-split price and market value of equity explain more of the variance of split factors than information-signaling variables.

Arben and Swanson (1993) report on Dubofsky who analyzed 1,856 NYSE and 696 AMEX stock splits with a split factor of two or greater from 1962 through 1987 and uncovered an increase in ex-split return variance for AMEX-listed stocks. The post-split increase in daily return volatility was less for AMEX stocks than for NYSE stocks. After controlling for price and firm size, exchange trading location was a significant factor in explaining post-split increased volatility.

Baker and Powell (1993) report on Klein et al., who linked the split factor and share price to signaling theory. They stated that the greater the split factor, then the more positive the signal was i.e. a greater split ratio meant that the price of the share was being significantly reduced and hence more investors would be able to afford it. This in turn would lead to increased trading on the stock and as a result better share value based on the split factor.

It is evident that split factor alone cannot determine the share value but is used in tandem with the other theories in place. A large split factors will greatly reduce the value of the share and hence signal something positive. The split factor thus ties into the trading range hypothesis and signaling theory and its effects are measure as a result of these.

## 2.4 Effect of Stock Split on Share Price

Dennis and Strickland (2002) argue that the effects of stock splits are puzzling. In theory a stock split is merely an accounting change, which leaves investors no better or worse off than they were before the split. Yet stock splits are relatively common occurrences. They further state that this implies that there must be some benefit, either real or perceived, that results from a firm splitting its stock.

Masse, Hanrahan and Kushner (1997) in report on a Canadian study undertaken by Charles investigating returns to stock splits, who found that that split stocks outperform the market by 59 percent in the 49 months prior to the announcement, match the market in the first year after the announcement, and under perform by 7 percent in the second year after the announcement. Masse et al.,(1997) cite Kryzanowski and Zhang, who using

daily data, found that there was a statistically positive abnormal return on the announcement date and a positive but not statistically significant return on the approval date. In their own study Masse et al.,(1997) use event date methodology to examine the market reaction to regular stock splits, reverse splits, and stock dividends. For regular stock splits they found that the market reacts positively with a cumulative abnormal return of 4.3 percent on the first trading day following the announcement. They also found that the market anticipates the stock split but underestimates the increase.

A study reported by Arbel and Swanson (1993) found that stocks listed on the New York Stock Exchange (NYSE) and American Stock Exchange (AMEX) react positively to stock split announcements that are not contaminated by other contemporaneous firmspecific news. Their analysis supported both the trading range and attention hypotheses.

There are other theories that come into play when focusing on share price and the market in general - the arena in which stock splits take place. The most common of these is Efficient Market Hypothesis which will be discussed here in. Relatively newer theories such as Adaptive Market Hypothesis and Incomplete Revelation Hypothesis are discussed in the subsequent section.

#### 2.4.1 The Efficient Market Hypothesis Theory (EMH).

Investopedia defines EMH as an investment theory that states it is impossible to "beat the market" because stock market efficiency causes existing share prices to always incorporate and reflect all relevant information. According to the EMH(Efficient Market Hypothesis), this means that stocks always trade at their fair value on stock exchanges, making it impossible for investors to either purchase undervalued stocks or sell stocks for inflated prices. As such, it should be impossible to outperform the overall market through expert stock selection or market timing, and that the only way an investor can possibly obtain higher returns is by purchasing riskier investments.

Back in the early 1960s, EMH (Efficient Market Hypothesis) was developed as an academic concept by Professor Eugene Fama at the University Of Chicago Graduate School Of Business. The theory has certain attractions. It suggests all stock market analysis and investment decisions can be reduced to mathematical formulae and it fits in

with the current belief in the all-powerful efficiency of free markets (The Birmingham Post, 2007).

The academic community is showing increasing dissatisfaction with the EMH (Efficient Market Hypothesis), swayed partly by evidence that prices under react to large earnings changes, ratios of prices to fundamentals, and other statistics derived from fundamental accounting analyses. However, the EMH (Efficient Market Hypothesis) is still influential because there is no alternative theory that explains why we observe the inefficiencies we do. For example, why should the market under-react to large earnings changes, rather than overreact? Without a theory predicting how and why markets are inefficient, studies showing mispricing can be viewed as statistical flukes resulting from fishing expeditions (Fama 1998; Kothari 2001).

Efficient Market Hypothesis can be contradicted on a number of accounts. Opponents state that the efficient market hypothesis assumes that all investors perceive all available information in precisely the same manner. The numerous methods for analyzing and valuing stocks pose some problems for the validity of the Efficient Market Hypothesis. Since investors' value stocks differently, it is impossible to ascertain what a stock should be worth under an efficient market.

Secondly, under the efficient market hypothesis, no single investor is ever able to attain greater profitability than another with the same amount of invested funds: their equal possession of information means they can only achieve identical returns. Thirdly, under the efficient market hypothesis, no investor should ever be able to beat the market, or the average annual returns that all investors and funds are able to achieve using their best efforts. There are, however, many examples of investors who have consistently beat the market - you need look no further than Warren Buffett to find an example of someone who's managed to beat the averages year after year.

Although it is relatively easy to pour cold water on the efficient market hypothesis, its relevance may actually be growing. With the rise of computerized systems to analyze stock investments, trades and corporations, investments are becoming increasingly automated on the basis of strict mathematical or fundamental analytical methods. Given the right power and speed, some computers can immediately process any and all available

information, and even translate such analysis into an immediate trade execution.

Despite the increasing use of computers, however, most decision-making is still done by human beings and is therefore subject to human error. Even at an institutional level, the use of analytical machines is anything but universal. While the success of stock market investing is based mostly on the skill of individual or institutional investors, people will continually search for the sure fire method of achieving greater returns, than the market averages.

Van Bergen (2009) concludes that it is safe to say the market is not going to achieve perfect efficiency anytime soon. He notes that for greater efficiency to occur, the following criteria must be met: (1) universal access to high-speed and advanced systems of pricing analysis, (2) a universally accepted analysis system of pricing stocks, (3) an absolute absence of human emotion in investment decision-making, (4) the willingness of all investors to accept that their returns or losses will be exactly identical to all other market participants.

#### 2.4.2 Other Market Hypotheses

##### The Adaptive Market Hypothesis (AMH)

The Adaptive Market Hypothesis was proposed by Andrew Lo in 2004. The hypothesis reconciles theories that imply that the markets are efficient with behavioral alternatives, by applying the principles of evolution - competition, adaptation, and natural selection \_ to financial interactions.

Specifically, the Adaptive Markets Hypothesis can be viewed as a new version of the Efficient Market Hypothesis, derived from evolutionary principles. Prices reflect as much information as dictated by the combination of environmental conditions and the number and nature of "species" in the economy. Species refers to the distinct groups of market participants, each behaving in a common manner. For example, pension funds may be considered one species; retail investors another; market makers a third; and hedge fund managers a fourth. If multiple species (or the members of a single highly populous species) are competing for rather scarce resources within a single market, that market is

likely to be highly efficient, Market efficiency cannot be evaluated in a vacuum, but is highly context dependent and dynamic, just as insect populations advance and decline as a function of the seasons, the number of predators and prey they face, and their abilities to adapt to an ever-changing environment.

Lo (2004) states that the profit opportunities in any given market are akin to the amount of food and water in a particular local ecology-the more resources present, the less fierce the competition. As competition increases, either because of dwindling food supplies or an increase in the animal population, resources are depleted, which in turn causes a population decline, eventually reducing the level of competition and starting the cycle again. In some cases cycles converge to corner solutions; i.e., certain species become extinct, food sources are permanently exhausted or environmental conditions shift dramatically. By viewing economic profits as the ultimate food source on which market participants depend for their survival, the dynamics of market interactions and financial innovation can be readily derived. Lo (2004) further states that under the AMH, (Adaptive Market Hypothesis) behavioral biases abound. The origins of such biases are heuristics that are adapted to non-financial contexts, and their impact is determined by the size of the population with such biases versus the size of competing populations with more effective heuristics.

The Adaptive Market Hypothesis has several implications that differentiate it from the Efficient Market Hypothesis such as: To the extent that a relation between risk and reward exists, it is unlikely to be stable over time; Contrary to the classical Efficient Market Hypothesis, arbitrage opportunities do exist from time to time; Investment strategies will also wax and wane, performing well in certain environments and performing poorly in other environments. This includes quantitatively, fundamentally and technically-based methods; Survival is the only objective that matters while profit and utility maximization are secondary relevant aspects; and innovation is the key to survival because as risk/reward relation varies through time, the better way of achieving a consistent level of expected returns is to adapt to changing market conditions.

Therefore, under the Adaptive Market Hypothesis, investment strategies undergo cycles of profitability and loss in response to changing business conditions, the number of competitors entering and exiting the industry, and the type and magnitude of profit

opportunities available. As opportunities shift, so too will the affected populations. However, AMH(adaptive market Hypothesis) is still under development, and certainly requires much more research to render it "operationally meaningful" , Andrew, Lo (2004).

#### The Incomplete Revelation Hypothesis (IRH)

Bloomfield (2002) proposes the Incomplete Revelation Hypothesis (IRH). The IRH is based on equilibrium outcomes in "noisy rational expectations" models. In these models, rational agents choose whether to collect information about the value of an asset. Those who choose to collect the information then trade the asset in a market that also includes "noise" traders. Noise traders are so named because they trade randomly, in response to liquidity shocks, portfolio rebalancing needs, or even irrational whims. This noise keeps prices in the market from revealing information completely, because traders who observe only price cannot tell whether prices are high because informed traders have good news, or because noise traders happen to be buying heavily. This uncertainty allows the informed traders to profit from their information advantage.

A key result of noisy rational expectation models is that there is an equilibrium in which just enough traders collect information to make their trading gains equal to their collection costs. Assume for simplicity that all traders have the same amount of money to place at risk in the market, and the same limited tolerance for risk. In this case, the more traders who collect information, the more completely prices reveal information, and the lower the gain to collecting information. If too few traders collect information, then more prefer to do so, because the gains from informed trading outweigh the costs of collecting the information. If too many traders collect information, then some will regret this decision, because the gains from informed trading are too small to cover collection costs. The equilibrium outcome therefore requires that some but not all traders incur the costs to collect information. In equilibrium, fewer traders collect more costly information. The greater resulting inefficiency allows those who collect the information trading gains sufficient to cover the higher collection costs.

Those who believe markets are inefficient rarely provide a coherent and refutable alternative to the Efficiency Markets Hypothesis. The IRH extends the EMH by explicitly recognizing the costs of extracting statistics from public data. This extension does not alter the key qualitative predictions of the EMH that most accounting researchers rely on

in event studies and price-association studies. However, it converts many phenomena that are "anomalies" from the perspective of the EMH into natural predictions of the IRH. Unlike the EMH, the IRH predicts that investors devote resources to predicting price changes from public data and are able to do so successfully, that managers attempt to manipulate market prices by emphasizing good news and tucking bad news in footnotes, and that regulators attempt to thwart such behavior. Its ability to account for such behavior, while also providing a number of novel testable predictions, gives the IRH great potential as a foundation for financial reporting research, practice, and regulation.

#### 2.4.3 Discussion

From definitions given, stock splits are stated to be merely accounting changes that should provide no tangible gains or losses to the investors or the companies that are undertaking the stock splits. However, empirical evidence reported by Masse, Hanrahan and Kushner (1997) and Arbel and Swanson (1993) show that there are economic gains achieved by the stock splits announcement and consequent implementation.

However, theories such as EMH provide a contrasting view. EMH states that one cannot outperform the market and in one way or another it counters the signaling theory. Essentially, following from EMH (Efficient Market Hypothesis) theory, no tangible gains should be realized. AMH (Adaptive market Hypothesis) on the other hand presents a sort of "survival for the fittest" point of view when dealing with investments. Essentially, AMH (Adaptive market Hypothesis) would be in support of stock splits affecting stock prices because of its link to the investors' behaviour, such that one would invest only in what would benefit him/her i.e. the increased competition for greater profits to ensure survival. This competition would be presented via stock splits and information accompanying the same. Since IRH predicts that investors devote resources to predicting price changes from public data and are able to do so successfully, that managers attempt to manipulate market prices by emphasizing good news and tucking bad news in footnotes, it would be in favor of stock splits influencing the stock prices.

## 2.5 The Kenyan Stock Market

In Kenya, calls for share splits reached a crescendo at the height of the stock boom in the year 2004 that when stock prices rose by 100% as reported in the end of year NSE market publication. Among the leading lights pushing for the adoption of the concept in the Kenyan market was the current NSE chairman Mr. Jimnah Mbaru. His argument then was stock splits would allow more investors to enter the market in the midst of price exuberance. The concept was approved by the Capital Market Authority in June 2004 and entrenched in the NSE listing manual.

Musau (2009) states that in Kenya, the NSE is characterized by retail investors who mainly focus on capital gains and not income/dividend investing. Therefore, majority will look at their investment time-frame as ranging from a few weeks to say six months. This translates to small capital outlays.

Companies such as Kenol-Kobil, East African Cables, East African Breweries, ICDCI and Barclays Bank, with highly priced shares opted to split their shares to make them affordable to the public and benefit the company as well as potential investors. However, the extent to which this serves its goal is yet to be seen. Another company that also split its shares despite the fact that the price was not too high was Sasini Tea and Coffee (now Sasini Ltd). All counters other than Sasini Ltd were trading at over Ksh.200 prior to the announcement of the split. Sasini was at a high of Ksh. 185 prior to the announcement. Reverse stock splits have not been witnessed in the country as the market is still at infancy and the demand driven by few listing has only caused appreciations other than declines in very stable companies.

Stock splits in Kenya are carried out through the Nairobi Stock Exchange which in concurrence with the Capital Markets Authority sets out rules to be followed by the firms that intend to split their shares.

From a local point of view Musau argues why there is price appreciation after a split. He says that after the split, the share price is likely to start low and after sometime, appreciate tremendously for a short time. The sudden rise does not occur by chance. He argues that

once a split has been approved by the Capital Markets Authority (CMA), it takes the Central Depository and Settlement Corporation (CDSC) time to credit the split shares into the client's accounts. Prior to updating of the client's accounts with the shares, only the principal number of shares trade steering an artificial supply hitch. Once the crediting is finalized, the split shares flood the market creating excess demand.

There have been 10 companies that have split their stocks in the Nairobi Stock Exchange. These are: Barclays Bank of Kenya (5:1 stock split on 29<sup>th</sup> November 2006), Centum Investments (10: 1 stock split on 4<sup>th</sup> January 2007), CMC (10: 1 stock split on 26<sup>th</sup> February 2007), East African Breweries Limited (10: 1 stock split in November 2007), East African Cables (10:1 stock split on 4<sup>th</sup> September 2006), Equity Bank (10:1 stock split on 25<sup>th</sup> March 2009), Kenya Commercial Bank (10:1 stock split on 2<sup>nd</sup> February 2007), Kenol (20: 1 stock split in September 2004), Nation Media Group (2: 1 stock split on 25<sup>th</sup> July 2008) and Sasini Tea Limited (5: 1 stock split on 14<sup>th</sup> February 2007). Of the 10 stock splits that have been undertaken six have been 10: 1 stock splits, two have been 5: 1 stock splits while there have been one 20: 1 and 2: 1 stock splits respectively.

#### 2.5.1 The Nairobi Stock Exchange

In Kenya, dealing in shares and stocks started in the 1920's when the country was still a British colony. There was however no formal market, no rules and no regulations to govern stock broking activities. Trading took place on a gentleman's agreement in which standard commissions were charged with clients being obligated to honour their contractual commitments of making good delivery, and settling relevant costs. At that time, stock broking was a sideline business conducted by accountants, auctioneers, estate agents and lawyers who met to exchange prices over a cup of coffee. Because these firms were engaged in other areas of specialization, the need for association did not arise.

In 1954, The Nairobi Stock Exchange was constituted as a voluntary association of stockbrokers registered under the Societies Act. Since Africans and Asians were not permitted to trade in securities until after the attainment of independence in 1963, the business of dealing in shares was then confined to the resident European community. At the dawn of independence, stock market activity slumped due to uncertainty about the future of independent Kenya. The first three years of independence, were marked by

steady economic growth, rekindling confidence in the market. The exchange also handled a number of highly oversubscribed public issues.

In the year 2000, there was a notable achievement that thrust the stock exchange to the next level. The Central Depository System (CDS) Act and the amended CMA Act (which covered Collective Investment Schemes (CIS)) were passed by Parliament and received presidential assent, paving the way for the full implementation of the CDS and for the introduction of collective investment schemes in the Kenyan market.

#### 2.5.2 The Structure of the Stock Market

The Nairobi Stock Exchange was established in 1954. There are 59 listed companies (55 equities, 7 corporate bonds 3 of which have listed equities). There are over 60 Government of Kenya treasury bonds listed on the fixed income segment of the securities exchange.

The market regulator is the Capital Markets Authority of Kenya CMA (K). The Authority is a government body mooted in 1989, under the Ministry of Finance and through the Capital Markets Authority Act Cap 485A (the CMA Act). The Authority was established to regulate and oversee the orderly development of Kenya's capital markets.

The instruments traded are equities, preference shares, treasury bonds and corporate bonds. There are 2 indices used: NSE All Share Index (NASI) and NSE 20-Share Index. NASI is market capitalization weighted, while NSE 20 Share Index is geometric Mean of 20 Companies share prices. Delivery and settlement of shares is done via the Central Depository and Settlement Corporation (CDSC).

NSE has the following Three market Segments:

1. Main Investments Market Segment (MIMS)
2. Alternative Investments Market Segment (AIMS)
3. Fixed Income Securities Market Segment (FISMS)

The main difference between the market segments is the capitalization of the companies. Companies within the MIMS segment must have a minimum authorized, issued and fully paid up share capital of Kshs 50 million and net assets of Kshs 100 million before the public offering of shares. Companies in the AIMS segment must have a minimum

authorized, issued and fully paid up shares of Kshs 20 million and net assets of Kshs 20 million before seeking listing. Companies in the FISMS segment must must have a minimum authorized, issued and fully paid up share capital of Kshs 50 million and net assets of Kshs 100 million before the public offering of the securities. In the event that the issuer does not have net assets of Kshs 100 million, the issuer must obtain from a bank or any other approved institution a financial Guarantee to support the issue.

### 2.5.3 The Legal structure in Kenya on stock splits

#### 2.5.4

Its worth noting that according to the CMA (Capital Markets Authority) Act of June 2004, stock splits are allowed only in the 'forward' way, which means reverse splits which allow for consolidation of shares is not legal. This is the reason why the opposite of forward splits has not been allowed in the Nairobi stock Exchange. Reasons given in the Nairobi Stock exchange Newsletter of August 2004 state that the Kenyan Market is still a 'thin' market that can not yet handle the effects of a reverse split. Legal developments hence will provide a key research area.

## 2.6 Conclusion

This chapter has reviewed literature that has provided insights into reasons behind stock splits, split factors and how it affects share price and how stock splits affect share prices.

It was discussed that empirical evidence on stock splits supports both the trading range and signaling hypotheses, but is inconsistent on the notion that splits improve a stock's trading liquidity. Evidence suggests that stock splits increase volatility. The evidence suggests that the main motive for stock splits is moving the stock price into a better trading range, followed by improving trading liquidity. Other important motives include signaling optimistic managerial expectations about the future and attracting investors. Comparing these results to prior survey research suggests that managements' motives for stock splits, especially trading range and liquidity, have endured for a long time.

It was shown that split factor alone cannot determine the share value but is used in tandem with the other theories in place. A large split factors will greatly reduce the value

of the share and hence signal something positive. The split factor thus ties into the trading range hypothesis and signaling theory and its effects are measure as a result of these.

This study following from the studies cited in this review set out to determine how and why stock splits affect share prices, and what the main purposes of the splits were in the Kenyan context.

## CHAPTER THREE

### METHODOLOGY

#### 3.1 Introduction

This study was aimed at examining the effect stock splits have on the share price.

This chapter starts with a description of the research design followed by the definition of the population to be studied and the sampling design to be employed. The chapter also describes the data collection instruments as well as the method to be used. Also included in the chapter are the data analysis and presentations methods to be applied. The chapter ends with a summary of the research methodology.

#### 3.2 Research Design

The study adopted a descriptive research design where data concerning stock splits and their effects on stock prices was collected.

Kombo and Tromp (2006) state that the major purpose of descriptive research is to describe of the state of affairs as it exists. It is also used to identify why something is happening. The methods involved range from the survey which describes the status quo, the correlation study which investigates the relationship between variables, to developmental studies which seek to determine changes over time.

A descriptive design was therefore preferred because the study sought to determine the relationship between stock splits and share prices, if the former does indeed affect the latter.

### 3.3 Population and Sample

#### 3.3.1 Population

The population of interest was all the ten (10) listed companies that had split their stocks.

#### 3.3.2 Sampling Design

##### 3.3.2.1 *Sampling Frame*

According to Saunders et al (2003), a sampling frame relates to a probability sample and **in** this case that will be the listed companies. The criterion for inclusion of listed companies in the sampling frame was that they must have already undertaken a stock split.

##### 3.3.2.2 *Sampling Technique*

A census was conducted for the companies that had undertaken the stock split because the population size was quite small. As a result the period under study was thus between 2004-2009 because this was when stock splits had taken place in the Nairobi Stock Exchange, stock splits having been legally allowed in June 2004.

##### 3.3.2.3 *Sample Size*

All the companies that had undertaken the stock split in the Nairobi Stock Exchange were be used, IOin total

### 3.4 Data Collection Methods

As regards the second specific objective, documentary secondary sources of data were used to provide a great deal of the required information. Such sources included journals, relevant text on stock splits, company data, NSE trading data as well as previous studies.

With regards the first objective, persona! interviews were used to obtain data relevant to this objective. Personal interviews were used to solicit direct responses especially from relevant managers or high ranking employees of the companies who were present when the companies undertook their respective stock splits.

Sample interview questions are provided in appendix B.

### 3.5 Research Procedures

The research was conducted for a period of three months from January to March 2010. The first month included proposal development. The second was mainly for data collection. The last month was for analysis, presentation of data and finalization of the entire report.

### 3.6 Data Analysis Methods

The presentation of data incorporated the use of descriptive methods. Descriptions were developed from responses received through the questionnaires and the interview and were presented according to the research problem. The data has been presented in tables, graphs and charts. Microsoft Excel and SPSS programs were used to analyze the data.

Information from the interviews was analyzed by initially coding the data obtained so as to link the specific responses obtained to the analytical concepts and categories formulated from the literature. Analytical concepts were then chosen and compared with the interviewee data obtained.

Interview responses were recorded and ranked in order of managerial preference for the splits.

Primary data was analyzed through price range analysis over specific time periods to monitor price increases both before and after the splits.

### 3.7 Chapter Summary

The methodology of the research is organized in the presented way so as to acquire, present and analyze data with accuracy and hence resulting to meaningful information. The research design used will be a survey. The population, sample frame and size as well as the sampling technique employed has also been discussed. Data collection was via both secondary and primary (interview) sources. Data was analyzed using Microsoft Excel and SPSS programs and the findings presented via narratives, charts and graphs.

## CHAPTER FOUR

### RESULTS AND FINDINGS

#### 4.1 Introduction

The general objective of this study was to determine whether a stock split announcement had an impact on the related stock price with specific reference to the Kenyan market. The study sought to determine the motivation behind stock splits as well as determining **if** the splits had any impact on share price.

This chapter presents the finding of the study in narrative as well as tabulated form. The findings are given based on the two specific objectives of the study as explored using the response from the interviews as well as historical data on the NSE.

The first section of this chapter deals with the general profile of the respondent institutions in terms of the sector they represent, the extent to which the respondent institutions participate in capital market operations and their choice of participation. This section also details the responses from the interviews.

The second section looks in detail at the individual counters, showing the share prices before and after a split, as well as split adjusted prices before and after a split. The same is repeated taking into account 20-day moving averages.

In the study respondent profile of 10 respondents, 6 of the respondents or 60% of the targeted sample provided information relating to their reasons for the split i.e. they accepted the request for an interview. However, secondary information on all or 100% of the respondents was available with regards to share price before and after the splits.

#### 4.2 General Study Respondent Profile

##### 4.2.1 Study Respondents

This section relates to the companies that accepted to interview with the researcher for purposes of understanding the reasons behind stock splits and its effect on share prices. We see the percentage of companies that have split their stocks that duly participated in the study by providing necessary information on time.

Table 1: Study Respondents

| Category Of Institution                 | Selected Sample | Frequency | Percent |
|-----------------------------------------|-----------------|-----------|---------|
| Listed Companies that have split stocks | 10              | 6         | 60      |

60% of the listed companies responded to the survey, while the remaining 40% were not able to respond to the study citing lack of time or limits, of confidentiality, to company information.

The following companies provided information regarding reasons for their splits.

Sanini Ltd, Barclays Bank, Kenya Commercial Bank, CMC Ltd, Kenol Kobil and Nation Media Group.

Key personnel in these firms were interviewed and their responses recorded and tabulated to come up with reasons why they undertook splits.

#### 4.2.2 Study Respondent Market Segment

The institutions were categorized by market segment to which they belonged depending on their operations as grouped in the NSE. These categories were: agricultural sector; commercial and services sector; finance and investment sector; and industrial and allied sector. Table 2 shows the market segment sectors to which the different respondent institutions in the study belong.

Table 2: Market Segment Representation

| Market Segment Sector   | Frequency | Percentage |
|-------------------------|-----------|------------|
| Agricultural            | 1         | 17         |
| Commercial and Services | 1         | 17         |
| Finance and Investment  | 2         | 33         |
| Industrial and allied   | 2         | 33         |
| Total                   | 6         | 100        |

## 4.3 Interview Response

### 4.3.1 Motivation of the Stock Splits

Respondent companies were asked what their major motivation behind the stock splits was. Five respondents stated that their share prices had risen far beyond the range in which they wished their shares to trade at and hence split them to bring them back to a preferred optimal range. One respondent stated that the reason for the splits was to "give off" positive information to potential and current investors that the company was indeed doing well.

Table 3: Motivation of Stock Splits

| Respondent Motivation of Stock Splits: | Frequency | Percentage |
|----------------------------------------|-----------|------------|
| Optimal Trading Range of Share Price   | 5         | 83         |
| Signal Positive Information            | 1         | 17         |
| Total                                  | 6         | 100        |

At Kenol-kobil for instance, the Chief Finance Officer was candid that splitting their stock enable it to become affordable to vast majority of retail investors. This was so especially due to the rocket high share price that the company's share was trading at the Nairobi stock exchange.

On other motives for splitting the stock, Kenol-Kobil also wanted to signal the market that it was in deed a well performing company and thus was the pioneer in splitting stocks in Kenya. This was however not to a significant level as they key reason was bringing the share price to an acceptable trading range.

Barclays Bank, Sasini Ltd, CMC Ltd and Nation Media group provided similar results form the interviews with top management persons interviewed indicating that at the time of the splits the share prices were trading at abnormally high prices hence locking out potential retail investors from the firms' stocks.

Managers at Barclays and Kenya Commercial bank decried the tedious process enforced by the regulator( Capital Markets Authority) on the split process and the need to make it flexible to enable more firms spilt their stocks.

The legal framework was also said to be rigid in that it only enables forward splits and that it had not been reviewed since 2004. This was identified as a key policy area that needs review.

#### 4.3.2 Steps involved in undertaking a Stock Split

Those interviewed seemed to have similar steps whilst undertaking the stocks split. The initial decision to undertake the split was agreed upon by the Board of directors with the information being passed on to the share holders. A request is then put in to the Capital Markets Authority which has to approve the same. Once the request is approved the directive is then passed on to the Central Depository and Settlement Corporation (CDSC) to credit the CDS accounts of the share holders.

#### 4.3.3 The Impact of Share Split on Capitalization, Share Value and Company Ownership

Respondents were asked the impact the stock split had on market capitalization of the company as well as share value and company ownership.

Table 4: Impact on Capitalization

| Respondent Impact on Capitalization: | Frequency | Percentage |
|--------------------------------------|-----------|------------|
| Positive Impact                      | 4         | 67         |
| No change                            | 1         | 16         |
| Negative Impact                      | 1         | 17         |
| Total                                | 6         | 100        |

67% of the respondents said that the stock split had a positive impact on the capitalization of the company, with 17% saying it had a negative impact. 16% of the respondents stated that it had no impact whatsoever on market capitalization.

Table 5: Impact on Share Value

| Respondent Impact on Share Value: | Frequency | Percentage |
|-----------------------------------|-----------|------------|
| Positive Impact                   | 5         | 83         |
| No change                         | 1         | 17         |
| Negative Impact                   | 0         | 0          |
| Total                             | 6         | 100        |

83% of the respondents stated that the stock split did have a positive impact on the share price after the split. 17%, who was one respondent, stated that there was no change in share value after the split.

Table 6: Impact on Composition of Ownership

| Respondent Impact on Composition of Ownership: | Frequency | Percentage |
|------------------------------------------------|-----------|------------|
| Positive Impact                                | 6         | 100        |
| No change                                      | 0         | 0          |
| Negative Impact                                | 0         | 0          |
| Total                                          | 6         | 100        |

All the respondents stated that there was positive impact on the composition of the ownership structure, with more "small" investors acquiring the said stock. There was a greater variety of owners (institutional investors, medium and small investors) after the split.

#### 4.3.4 The Decision on Splitting a Stock

The respondents were asked whether in their opinion splitting the stock was a good decision.

Table 7: Decision on Splitting Stock

| Respondent Decision on Splitting Stock: | Frequency | Percentage |
|-----------------------------------------|-----------|------------|
| Good Decision                           | 5         | 83         |
| Bad Decision                            | 1         | 17         |
| Total                                   | 6         | 100        |

5 of the 6 respondents (83%) stated that splitting their stock was a good decision as it generally increased the share value after the split and that lower income investors were able to purchase their stock hence impacting On the ownership of the company. 1 respondent (17%) stated that splitting the stock wasn't a good decision because the postsplit value of the share was still the same, terming it a mere arithmetic change.

## 4.4 Secondary Data on Individual Companies

### 4.3.1 Barclays Bank

The company belongs to the Finance and Investment Segment of the Nairobi Stock Exchange. The company under took a 5:1 stock split on 29<sup>th</sup> November 2006. Prior to the split the stock was trading in the region of Ksh585-600 as shown in figure 7 below.

### Barclays (BBK)

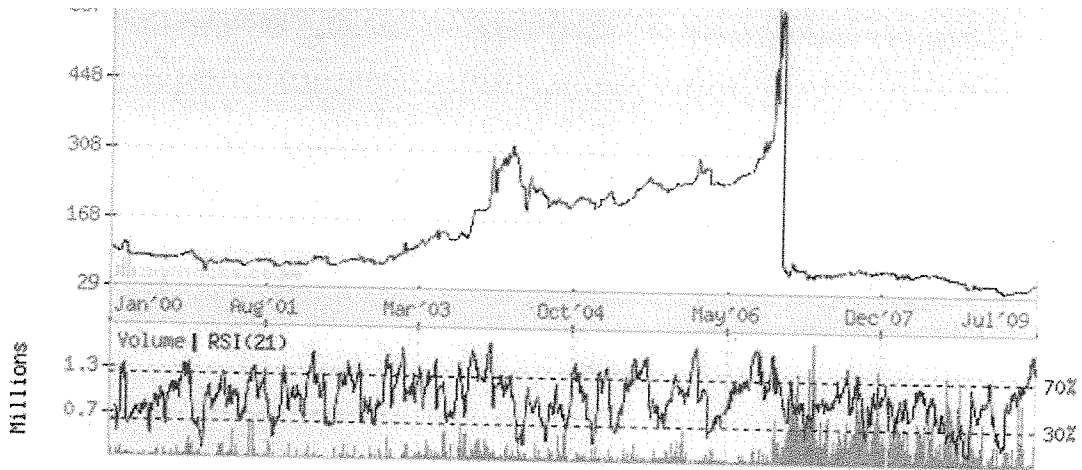


Figure 1: Barclays Bank Normal Share Price

Figure 2 below shows the split adjusted prices for easy comparison before and after the split and bonuses that were given. The split adjusted price shows that the value of the share price continues to perform better after the split. Figure 2 shows the 20-day Moving Averages of the split adjusted price.

### Barclays (B8K)

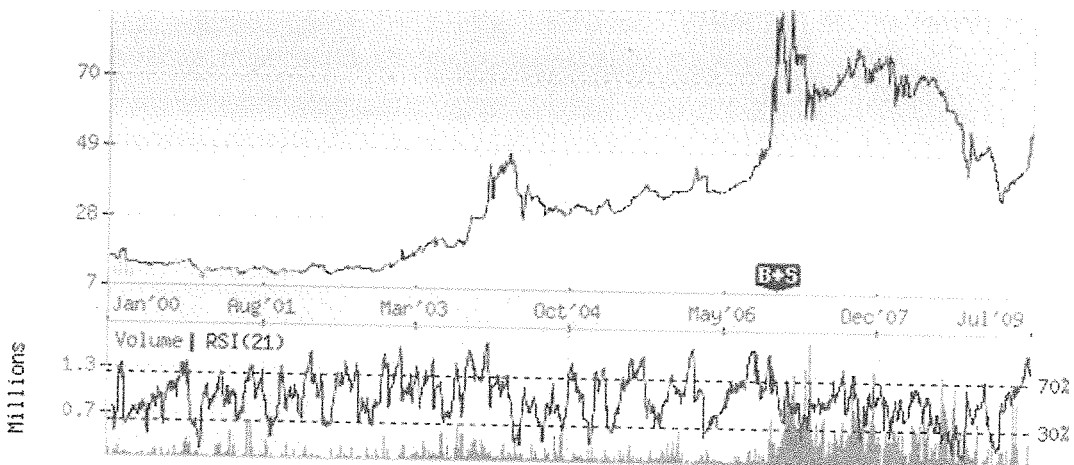


Figure 2: Barclays Bank Split Adjusted Price

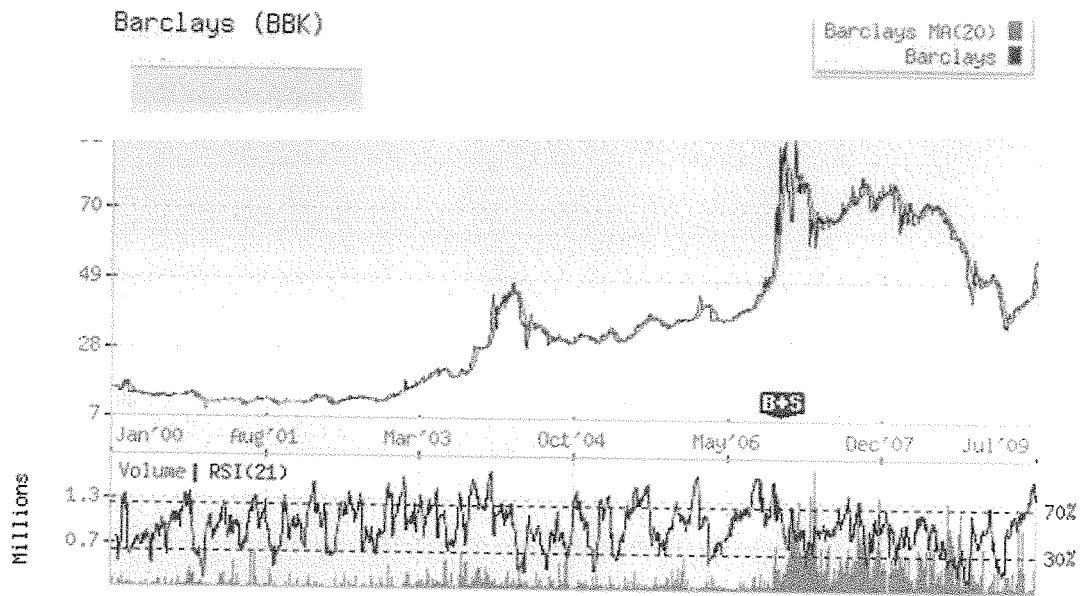


Figure 3: Barclays Bank Split Adjusted 20 day Moving Averages

#### 4.3.2 Centum Investments

The company belongs to the Finance and Investment Segment of the Nairobi Stock Exchange and was formerly ICDC. The company undertook a 10: 1 stock split on 4th January 2007. Prior to the split the stock was trading in the region of Ksh535-550 as shown in figure 4 below.

Centum (I CDC)

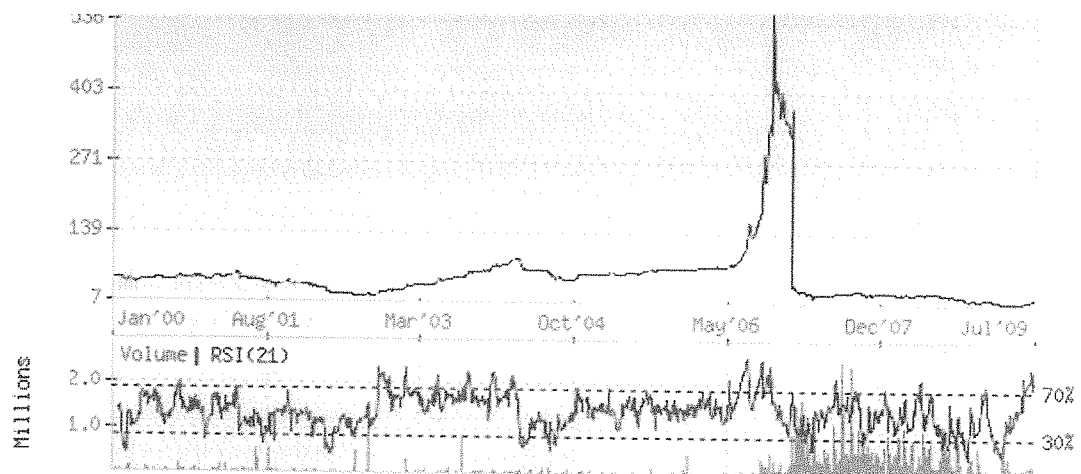


Figure 4: Centum Investment Normal Share Price

Figure 5 shows the split adjusted price while Figure 12 shows the 20-day moving averages for the normal share price.

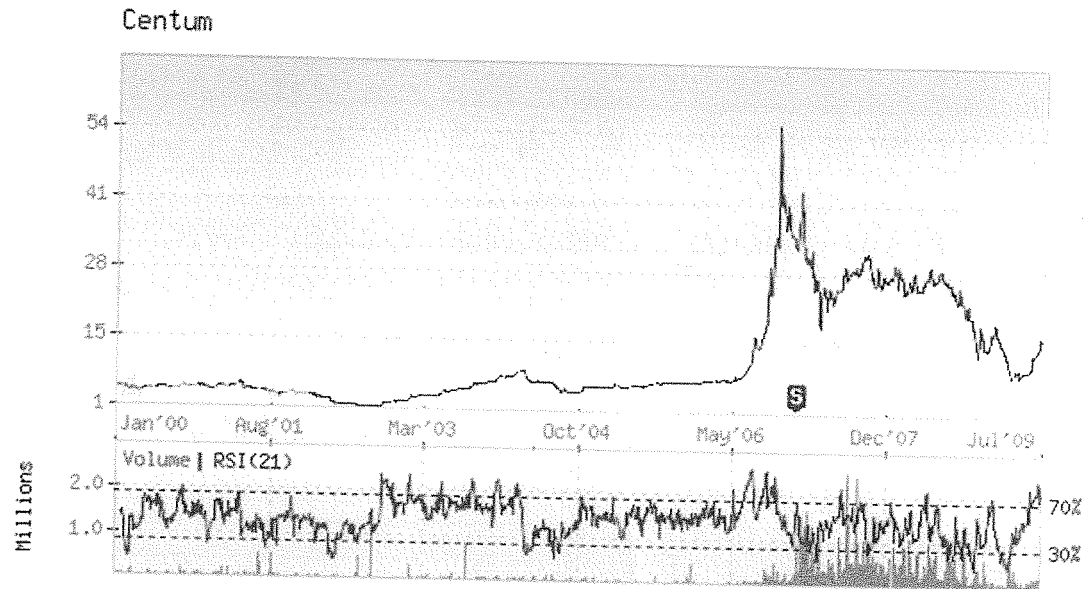


Figure 5: Centum Split Adjusted Price

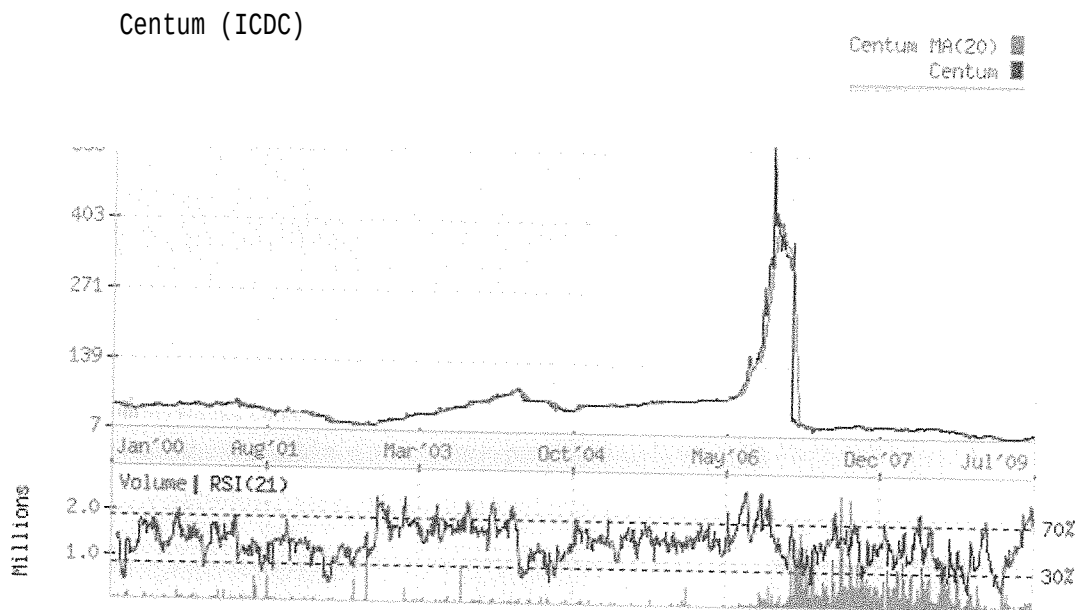


Figure 6: Centum 20-Day Moving Averages

#### 4.3.3 CMC

The company belongs to the Commercial and Services Segment of the Nairobi Stock Exchange. The company undertook a 10:1 stock split on 26<sup>th</sup> February 2007. Prior to the split the stock was trading in the region of Ksh280 as shown in figure 7 below.

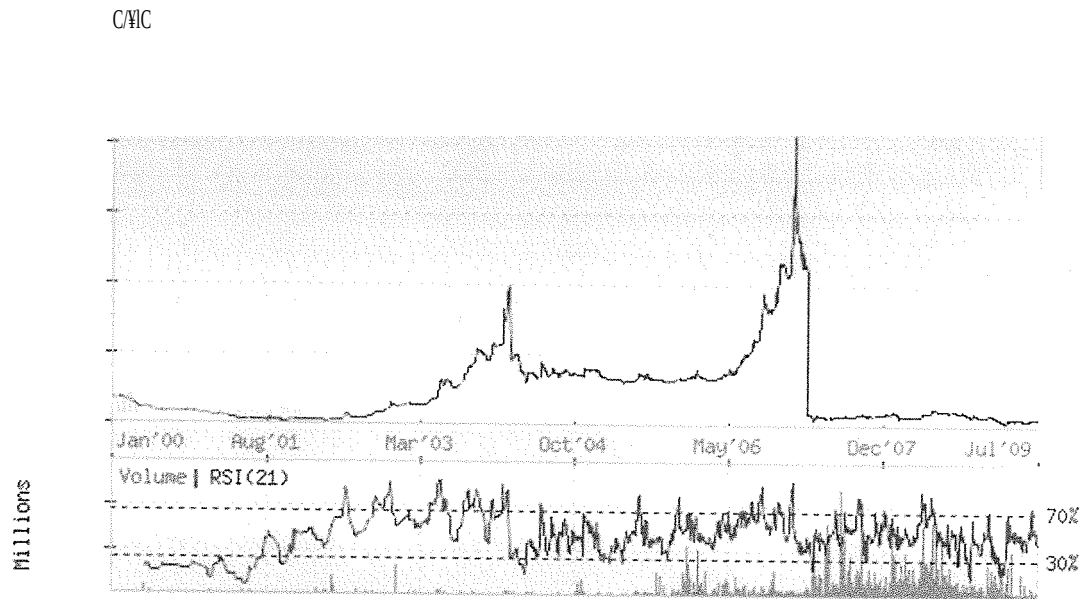


Figure 7: CMC Normal Share Price

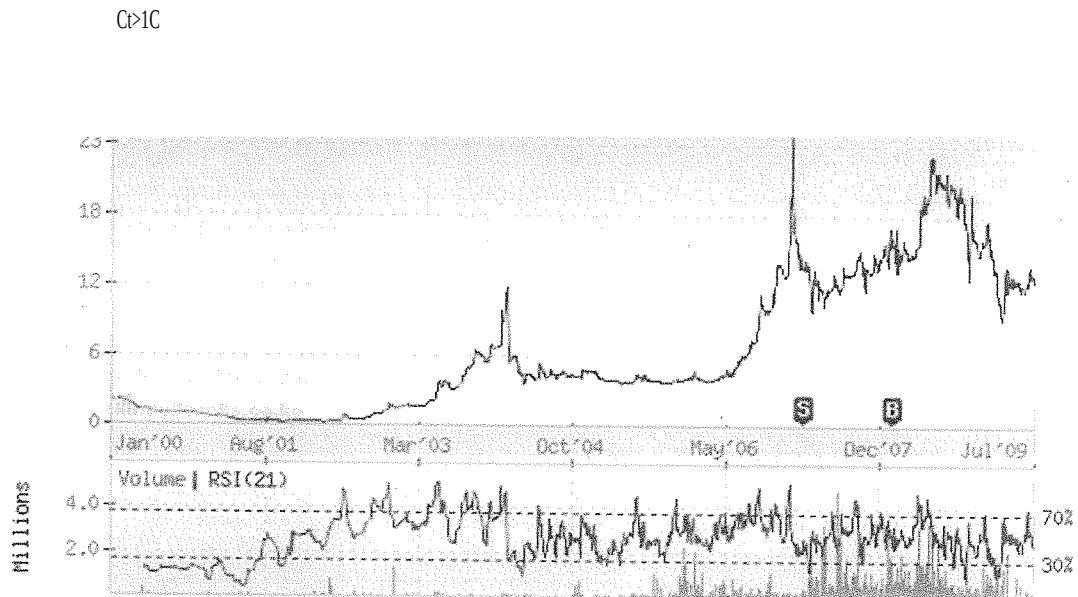


Figure 8: CMC Split Adjusted Price

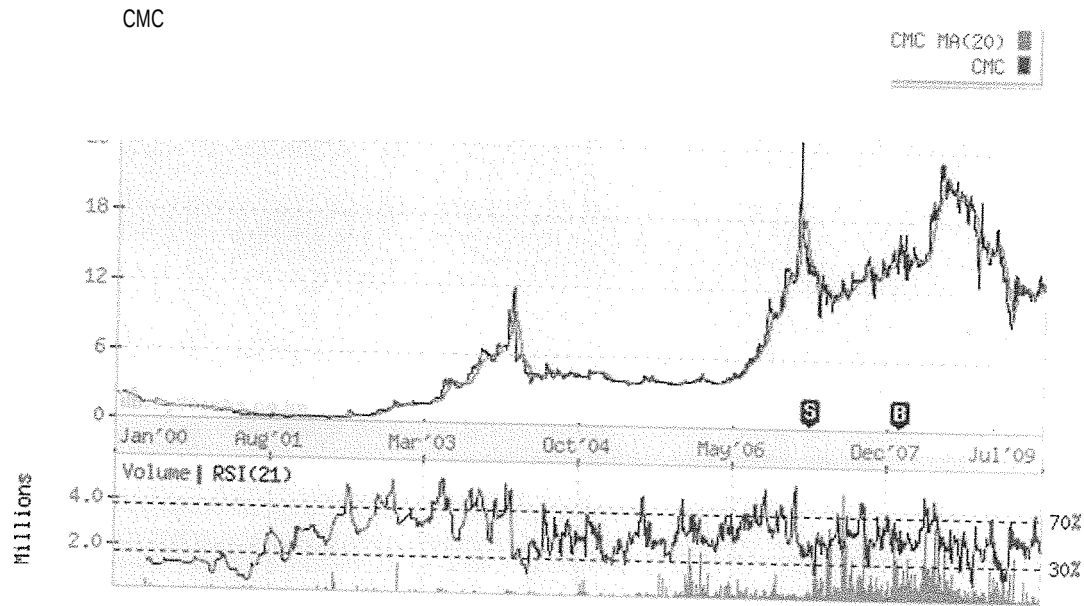


Figure 9: CMC Split Adjusted 20 day Moving Averages

Figure 8 above shows the split adjusted price and show growth in share price after the split. Figure 9 shows the 20-Day moving averages of the split adjusted prices.

#### 4.3.4 EABL

The company belongs to the Industrial and Allied Segment of the Nairobi Stock Exchange. The company under took a 10:1 stock split in November 2007. Prior to the split the stock was trading in the region above Ksh 540 as shown in figure 10 below. There was steady growth in share price after the split.

#### E.A.Breweries (EABL)

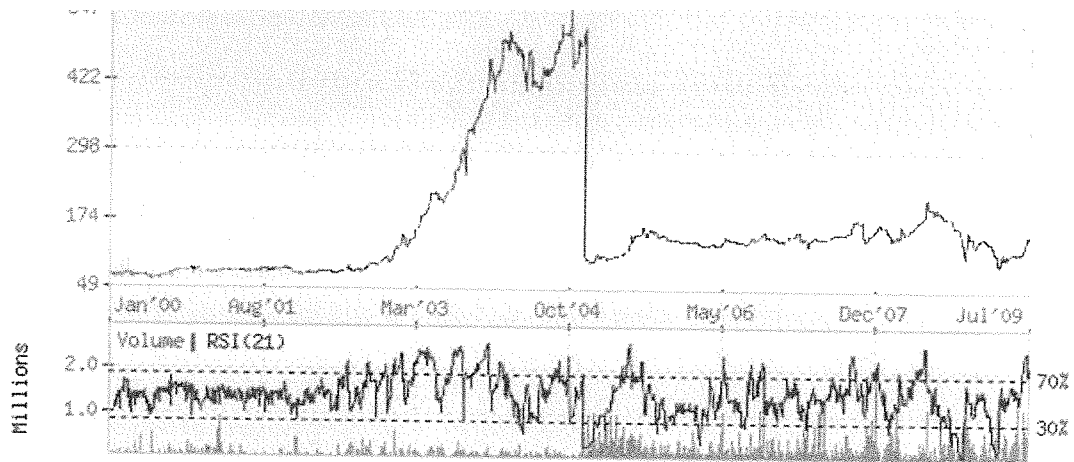


Figure 10: EABL Normal Share Price

#### 4.3.5 East African Cables

The company belongs to the Industrial and Allied Segment of the Nairobi Stock Exchange. The company undertook a 10:1 stock split on 4<sup>th</sup> September 2006. Prior to the split the stock was trading in the region above Ksh 600 as shown in figure 11 below. There was minimal growth in share price after the split and thereafter a plunge in the share price.

Figure 12 shows the split adjusted price of the shares and show the downward trend taken by the share after the split. Figure 13 shows the 20 day moving average price of the split adjusted price.

# E.A.Cables (CABL)

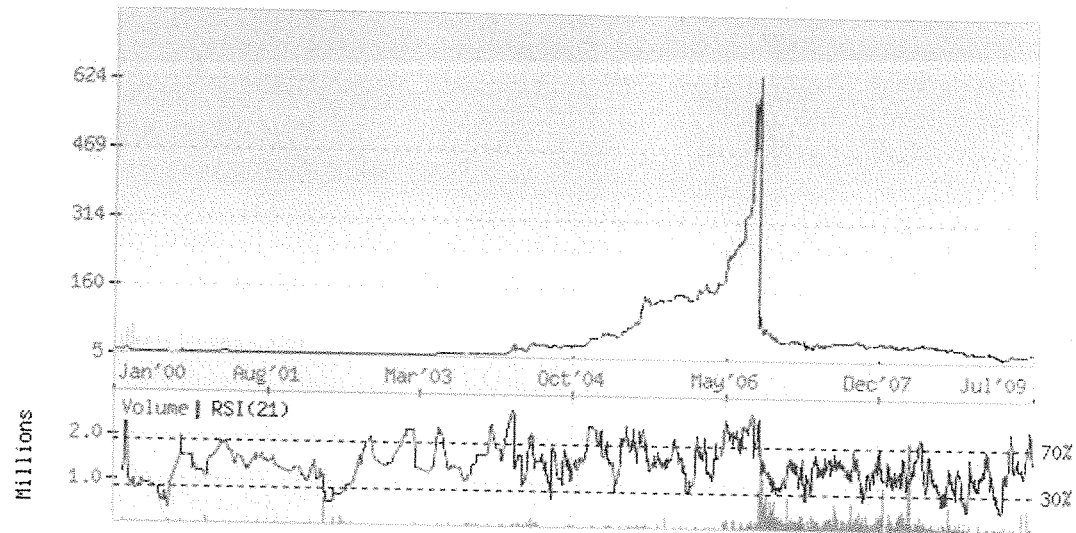


Figure 11: East African Cables Normal Share Price

# E.A.Cables (CABL)

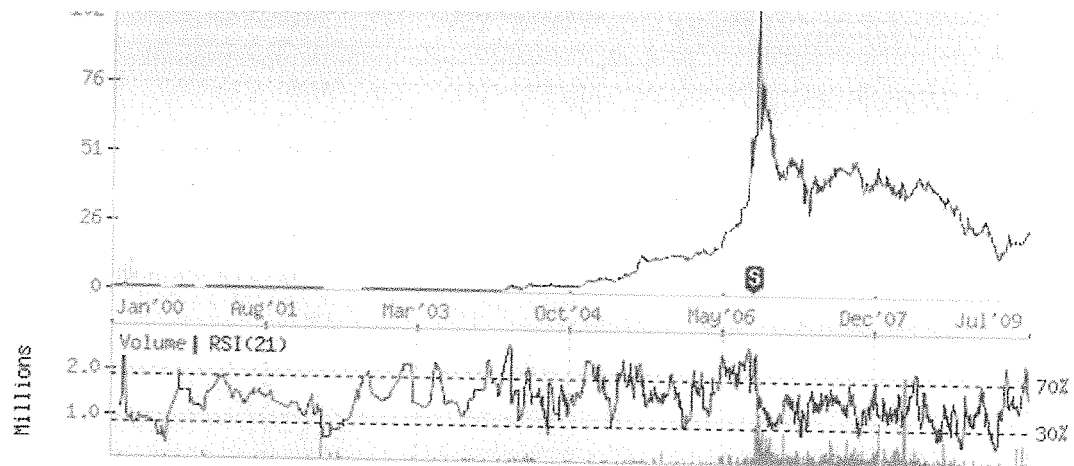


Figure 12: East African Cables Split Adjusted Price

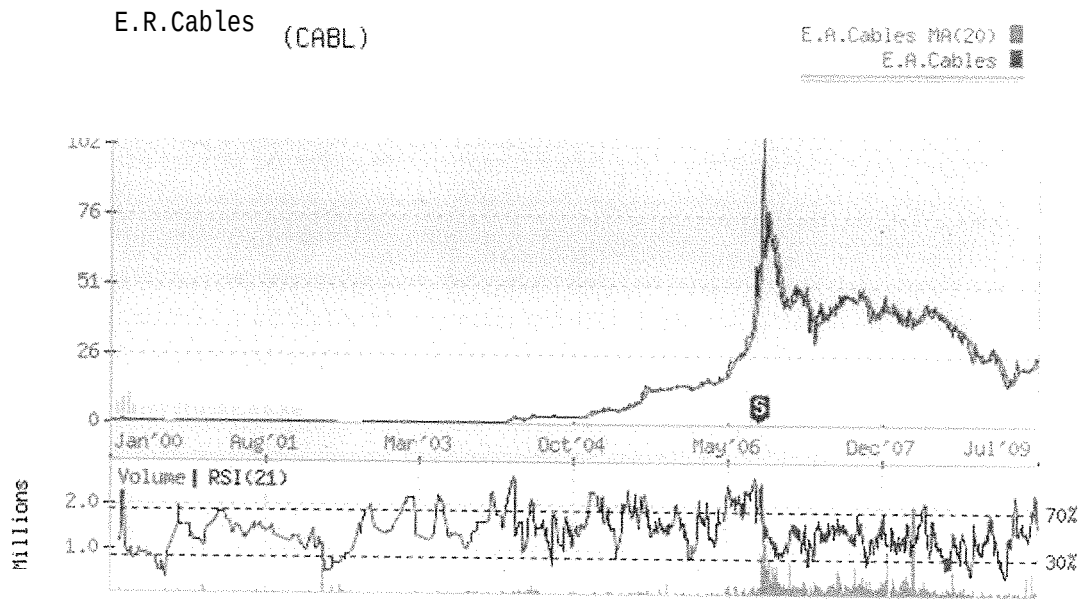


Figure 13: East African Cables Split Adjusted 20 day Moving Averages

#### 4.3.6 Equity Bank

The company belongs to the Finance and Investment Segment of the Nairobi Stock Exchange. The company undertook a 10:1 stock split on 25<sup>th</sup> March 2009. Prior to the split the stock was trading in the region above Ksh 160 as shown in figure 14 below. Figure 15 shows that the price before and after the split is constant.

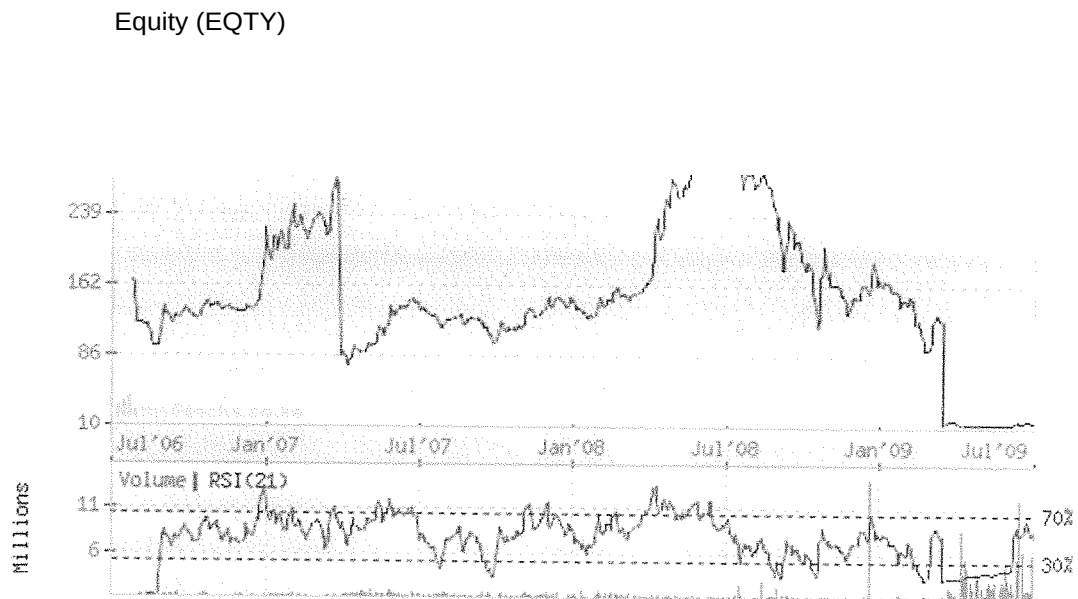


Figure 14: Equity Bank Normal Share Price

Equity (EQTY)

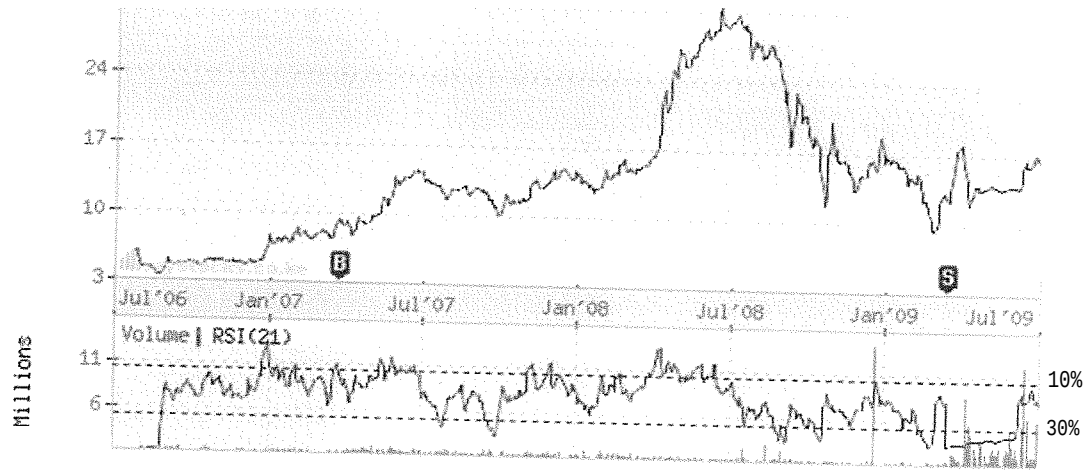


Figure 15: Equity Bank Split Adjusted Price

#### 4.3.7 KeB

The company belongs to the Finance and Investment Segment of the Nairobi Stock Exchange. The company undertook a 10:1 stock split on 2<sup>nd</sup> February 2007. Prior to the split the stock was trading in the region above Ksh 250 as shown in figure 16 below. Figure 17 shows that the price after the split grew significantly before falling.

KCB

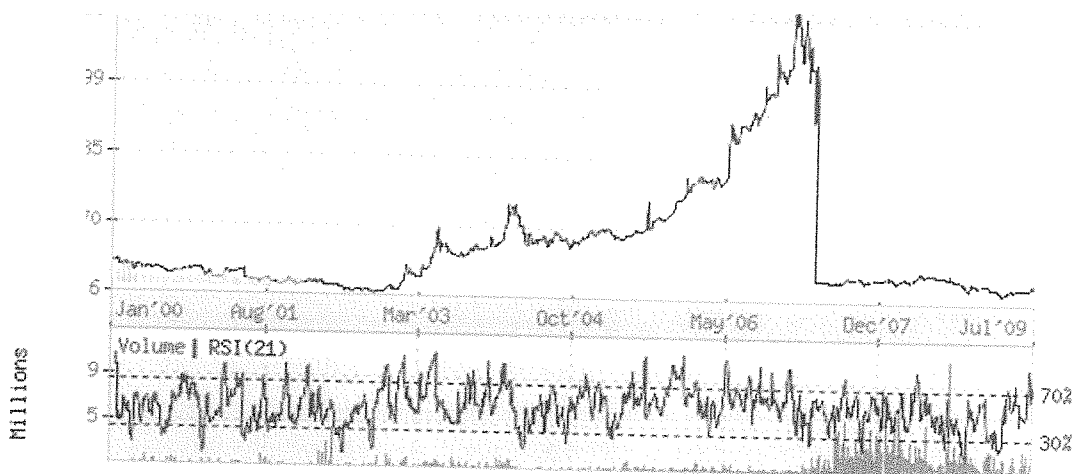


Figure 16: KCB Normal Share Price

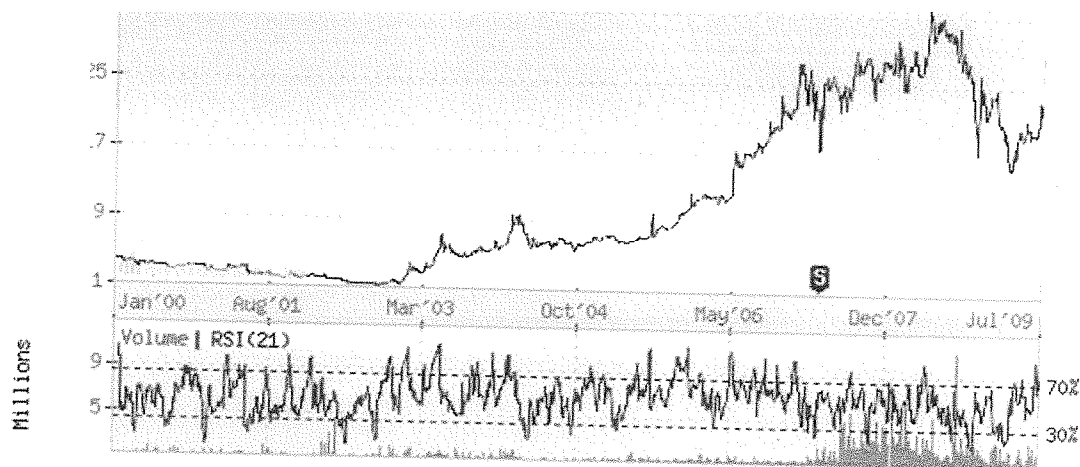


Figure 17: KCB Split Adjusted Price

#### 4.3.8 KENOL

The company belongs to the Industrial and Allied Segment of the Nairobi Stock Exchange. The company undertook a 20: 1 stock split in September 2004. Prior to the split the stock was trading in the region above Ksh 420 as shown in figure 18 below. The share price rose steadily for the next two years after the split.

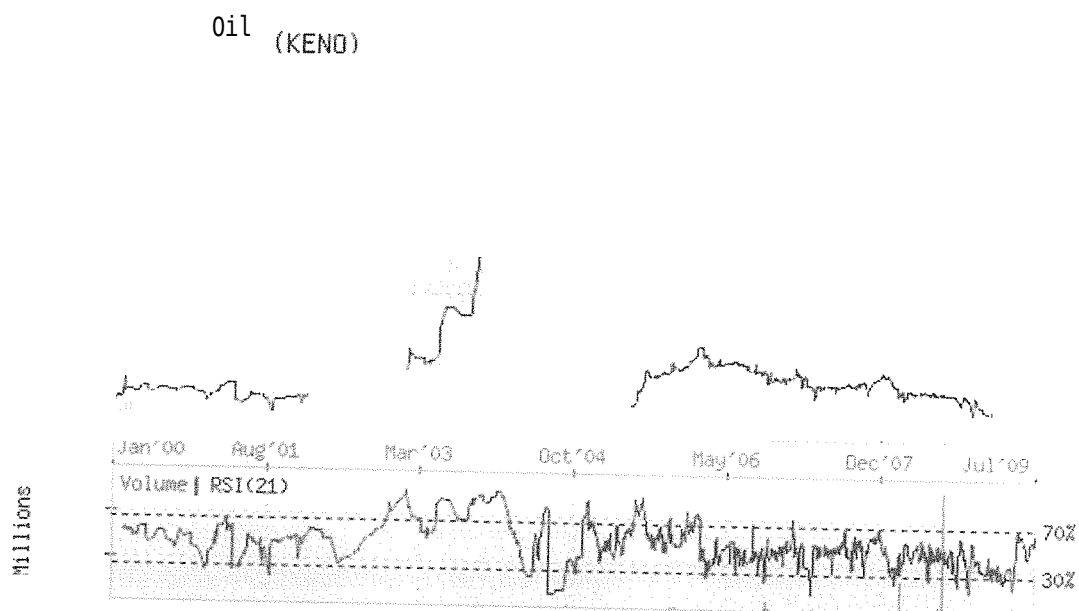


Figure 18: Kenol Normal Share Price

#### 4.3.9 Nation Media Group (NMG)

The company belongs to the Commercial and Services Segment of the Nairobi Stock Exchange. The company undertook a 2: 1 stock split on 25<sup>th</sup> July 2008. Prior to the split the stock was trading in the region above Ksh 320 as shown in figure 19 below. The share price remained constant after the split as shown in Figure 20 below.

Nation Media (NMG)

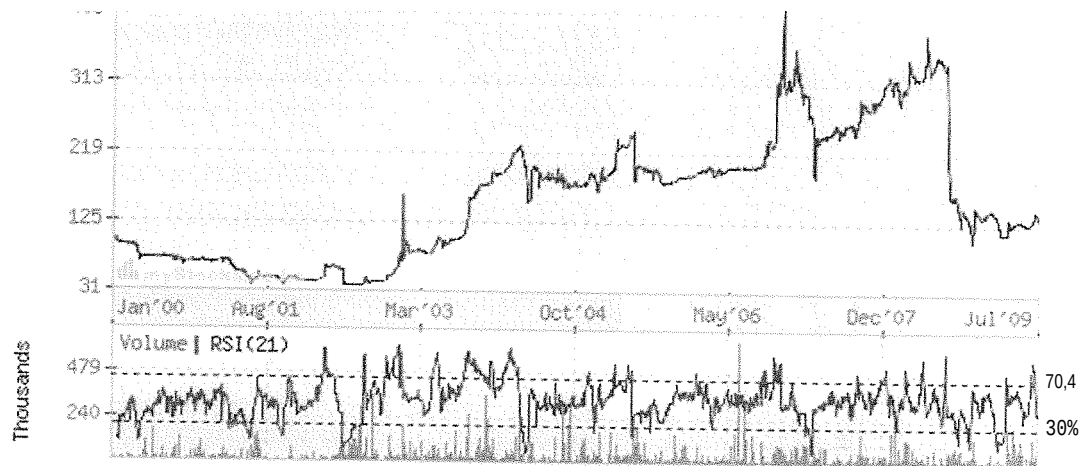


Figure 19: NMG Normal Share Price

Nation Media (NMG)

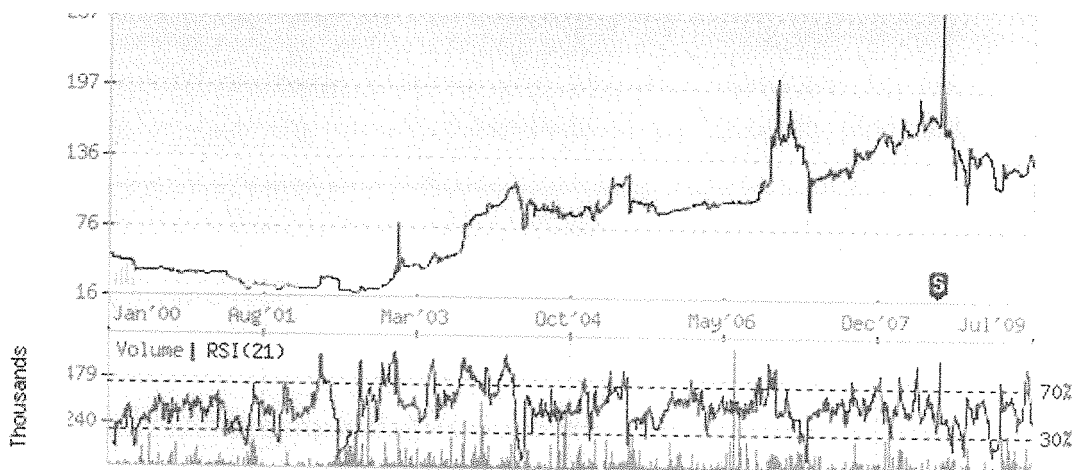


Figure 20: NMG Split Adjusted Price

#### 4.3.10 Sasini Tea

The company belongs to the Commercial and Services Segment of the Nairobi Stock Exchange. The company undertook a 5:1 stock split on 14th February 2007. Prior to the split the stock was trading in the region above Ksh 150 as shown in figure 21 below. The share price began dropping after the split as can be seen in the graph below.

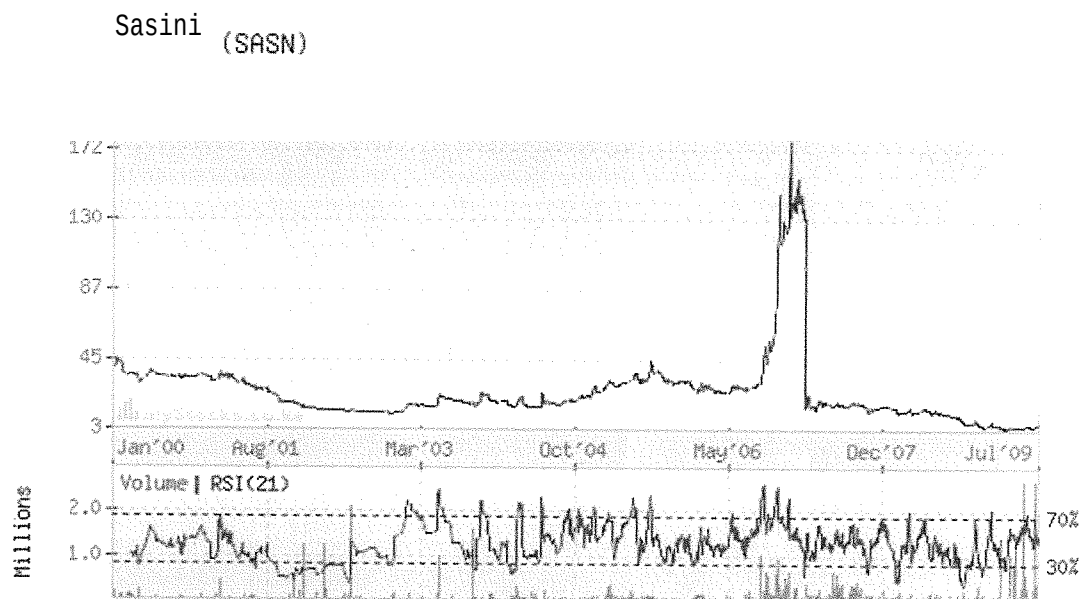


Figure 21: Sasini Normal Share Price



Figure 22: Sasini Split Adjusted Price

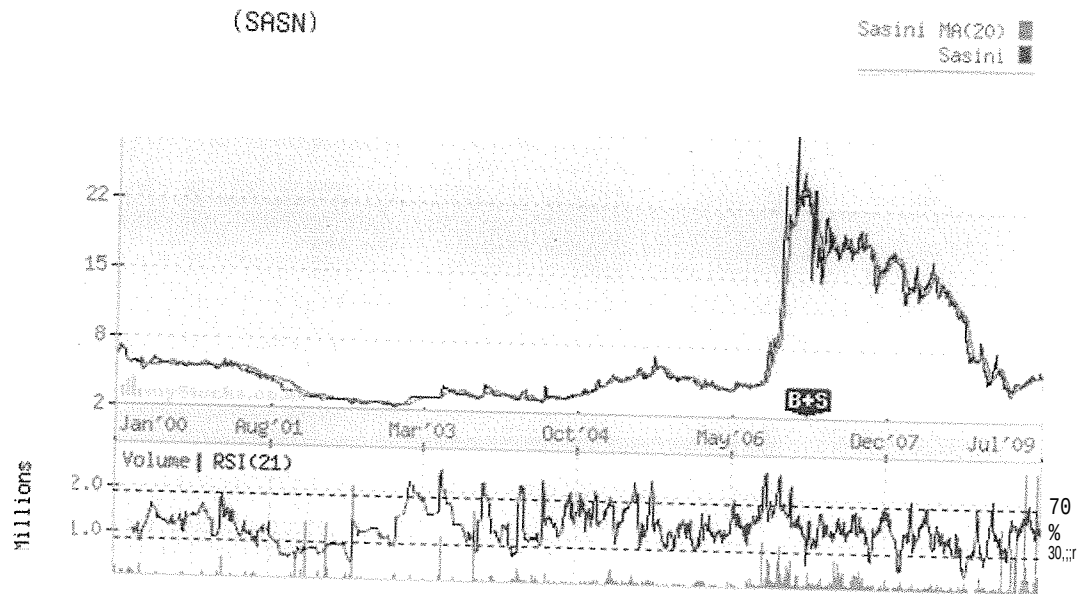


Figure 23: Sasini Split Adjusted 20 day Moving Averages

#### 4.5 Other Findings

The research also tried to find out what other factors may have influenced the post-split share price by looking at the data available on political effects, financial results and economic performance indicators like inflation and growth domestic product (GDP).

Findings were inconsistent to draw analysis and conclusions as no single factor was present in more than one company at the time of the split. This was mainly due to the period under which splits have taken place and the number of splits that have happened over the same period being only 10.

#### 4.6 Chapter Summary

This chapter presented the findings of the study respondent institutions based on the personal interviews that were undertaken and secondary data on the NSE that was obtained. The Chapter began by looking at the respondent institutions profile and then went on to present detailed findings based on the specific objectives and using responses from the interviews. The next chapter discusses the major findings of the study, major conclusions drawn from the study and finally the recommendations for further research in a related field.

## CHAPTER FIVE

### DISCUSSION, CONCLUSIONS & RECOMMENDATIONS

#### 5.1 Introduction

This chapter focuses on four key areas. It presents a summary of the findings of the important elements of the study, the discussions of the major findings of the study, major conclusions drawn from the study and finally the recommendations for further research.

#### 5.2 Summary

The general objective of this study is to determine whether a stock split announcement has an impact on the related stock price with specific reference to the Kenyan market. The study period was from 2004-2009 targeting the listed companies that had undertaken stock splits. The specific objectives were to:

3. Determine the reasons Kenyan firms undertake stock splits within the Kenyan market
2. Determine if stock splits have any effect on share price

The study used' descriptive and an element of exploratory research design and more specifically employed the survey method. This was considered to be an ideal research design for the study as it had a qualitative approach to data collection and analysis. Personal interviews were used to collect primary data. Relevant secondary data was also used and all the data was analyzed and presented in the form of tables, charts, graphs and descriptive narrative.

The first major finding was that most companies undertook stock splits so as to bring the trading range of the share price to an optimum point. This was undertaken so that majority of investors, both individual and institutional, could have access to the stock. If the stocks were left at the lofty prices they were attaining then it would lock out a great number of individual investors as such prices would only favor the institutional investors.

The second major finding is that there must be other factors at play that determine the share price after a stock split. This was drawn from the inconclusive results obtained from the secondary data in terms of the share price for up to a period of two years, save for the stocks which haven't attained such a time frame after their split.

## 5.3 Discussion

### 5.3.1 The Motivation behind Stock Splits

The research findings revealed that the major reason why companies do undertake stock splits is to bring the price to an optimum trading range. This is in line with the work put forth by Copeland in 1979 (Naidu, 2008) whose idea was that a split lowers the price, which makes trading more affordable. This leads to an increase in the base of traders in the firm. In turn, this eventually increases the volume of trade. Mack (1995) says stock splits occur when the board feels that the share is overvalued and the company is missing out on the numerous mid-level investors. Baker and Powell (1993) give another suggestion as to why stock splits occur. They state that stock splits restore stock prices to some preferred trading range. Arbel and Swanson (1993) find that splits are aimed primarily at restoring stock prices to a normal trading range. This study follows the above mentioned studies with the findings that splitting stocks keeps the price in an optimal trading range making it easier for small investors to 'own' part of the company. In essence, such firms don't want to be associated only with the upper and middle classes but also want the common *mwana nchi* to feel that they are part and parcel of the ownership of such an organization.

Another finding was companies also split prices in order to give off a positive outlook that the company is doing well, and that future prospects were, bright and positive. This is in line with the signaling hypothesis which was proposed by Brennan and Copeland in 1988 (Naidu, 2008). Considering that there is information asymmetry between the management of the company and the investors, stock splits act as informative signals of favorable information from the managers to the investors. Other studies that have similar findings include those of Baker and Powell (1993) who state that a major explanation to stock splits is the signaling or information asymmetry hypothesis which states that stock splits are informative signals of favorable future prospects for the firm. Brennan and

Copeland (1988) show that stock splits serve as costly signals of managers' private information because stock trading costs depend on stock prices. Additionally, Klein and Peterson (1989) find that companies announcing splits experience greater earnings forecast revisions than similar non-splitting matched controlled companies.

Essentially the two theories supporting the reasons for stock splits are somewhat related. For example, the optimal trading range may be desirable because it is associated with higher commissions and trading costs. This makes the stock more desirable for full service brokers and draws attention to the stock. Lowering the share price attracts investors, especially individual investors, and therefore increases the ownership base. Additionally, shifting the composition of shareholders toward a greater proportion of individuals could lessen the chance of an unfriendly takeover.

### 5.3.2 Effect of Stock Splits on Share Price

The secondary data obtained by the study indicate that other factors are at play in determining the post-split price of a stock. This is because for a two year period after split some stocks went up and others went down. Eight of the 10 companies undertook their stock splits more than two years ago, and of these, the adjusted share price of one company remained constant, three companies saw their stock price dwindle and four saw steady increases in their share price over the period. The one company that split its stock in 2008 has seen its price remain fairly constant after the split. The other company that split its stock in early 2009 has seen the price also remain constant for the three months after the split. Such results are fairly consistent with the findings of Arbel and Swanson (1993) who found that stocks listed on the New York Stock Exchange (NYSE) and American Stock Exchange (AMEX) react positively to stock split announcements that are not contaminated by other contemporaneous firm-specific news.

Essentially, these findings are in line with both the definitions of stock splits given, i.e. accounting changes that should provide no tangible gains or losses to the investors or the companies that are undertaking the stock splits and theories such as EMH which state that one cannot outperform the market. This study's finding contradict EMH mainly because prices under react to large earnings changes, ratios of prices to fundamentals, and other

statistics derived from fundamental accounting analyses. The Efficient Market Hypothesis can be discredited on a number of accounts. It assumes that all investors perceive all available information in precisely the same manner. The numerous methods for analyzing and valuing stocks pose some problems for the validity of the Efficient Market Hypothesis.

However the results are in line with AMH (Adaptive Market Hypothesis) theory which supports stock splits affecting share prices because of its link to the investors' behavior, such that one would invest only in what would benefit him/her i.e. the increased competition for greater profits to ensure survival. This competition would be presented via stock splits and information accompanying the same. Lo (2004) states that the profit opportunities in any given market are akin to the amount of food and water in a particular local ecology-the more resources present, the less fierce the competition. Therefore, under the AMH (Adaptive Market Hypothesis), investment strategies undergo cycles of profitability and loss in response to changing business conditions, the number of competitors entering and exiting the industry, and the type and magnitude of profit opportunities available. As opportunities shift, so too will the affected populations. Such results are consistent with this research's findings.

Other factors that affect the post-split share price are recommendations for further research areas.

#### 5.4 Conclusion.

From the research findings it was deduced that the major reasons why companies in Kenya undertake stock splits is to bring the price down to an optimal range, which in turn increases and diversifies the ownership base to the liking of management.

The research findings also deduced that stock splits do not have a direct impact on the post-split share price on its own but that there must be other factors involved in determining the post share split price, which as per this study is basis for further research.

## 5.5 Recommendations

### 5.5.1 Policy on stock splits and Legal framework

Policy on stock splits in Kenya was found to be biased on forward splits and recommendations from this study was that the Capital Markets Authority needed to review this to enable firms undertake reverse splits.

Review on laws governing the stock market need to be more regular as the dynamism of the stock market needed to allowed to come in to play sooner rather than later. No review had been done to the Act of June 2004, 5 years down the line whereas numerous strides such as growth of the NSE(Nairobi Stock Exchange) share index had been made and an increase in the number of firms listed at the stock exchange.

The process leading to a stock split was also found to be cumbersome to listed companies grappling on whether to split their stocks or not. It was recommended that this needed a review to enable more firms to undertake stock splits.

### 5.5.2 Research Studies on Factors Affecting the Post-Split Share Price

The study found that splitting stocks does not have a constant effect on the post split share as some stocks went up after the split, while others dwindled, while yet others remained constant taking into account the split adjusted share price. Even analyzing the normal share prices before and after the split still yields similar results. Further study in the area of factors affecting the post-split share price can be looked into.

### 5.5.3 Research Studies on the Split Factor Affects the Share Price

In the Kenyan markets, the most common split factor / ration is the 10: 1 split factor with 60% of the firms that have undertaken stock splits implementing this ratio. This can be the basis of further research to determine if implementing a greater split ratio has a different effect from implementing a lesser split ratio.

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## Appendix A: Definition of Terms

The definitions of the following terms were obtained from the dictionary facility in [www.investopedia.com](http://www.investopedia.com), which is a member of the group of Forbes Digital Companies.

### Stock Splits

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 cash 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. Stock splits are also referred to as a "scrip issue", "bonus issue", "capitalization issue" or "free issue".

### Reverse stock split

A reduction in the number of a corporation's shares outstanding that increases the par value of its stock or its earnings per share. The market value of the total number of shares (market capitalization) remains the same.

### Split Adjusted

A modification made to a security's price that takes into consideration the effect of a split on the total number of shares or units outstanding, in order to compare the security's current price to its historical price in a consistent form of valuation. In order to adjust a security's price, the post split price would be multiplied by the split ratio (or ratios if multiple splits had occurred) in order to get a split-adjusted price.

### Bid-Ask Spread

The amount by which the ask price exceeds the bid. This is essentially the difference in price between the highest price that a buyer is willing to pay for an asset and the lowest price for which a seller is willing to sell it.

### Outstanding shares

Stock currently held by investors, including restricted shares owned by the company's officers and insiders, as well as those held by the public. Shares that have been repurchased by the company are not considered outstanding stock.

Also referred to as "issued and outstanding" if all repurchased shares have been retired.

## Appendix B: Interview Questions

The following interview questions will be asked to the relevant managers (Chief Financial Officer) and high ranking employees in the companies who were present when the stock splits were undertaken.

1. What was your main motivation to undertake a split in your stocks?
  - a. To signal future profitability 1 2 3 4 5
  - b. To return the share prices to an optima range 1 2 3 4 5
  - c. To alter the firm's ownership structure i.e. reduce the proportion of institutional investors 1 2 3 4 5

( 1- Very Likely; 2 - Likely; 3 - Neutral; 4 - Unlikely; 5 - Very Unlikely)
2. To what degree was the motivation for the stock split achieved?
3. What problems were encountered?
4. How will a stock split reduce the proportion of institutional messes?
5. What were the steps involved in implementing the stock split?
6. What was the share price level leading up to the stock split?
  - a. Lower than normal
  - b. Average
  - c. Higher than normal
7. What was the share price level after the stock split?
  - a. Lower than normal
  - b. Average
  - c. Higher than normal
8. How has the stock split impacted on the following:
  - a. Company capitalization and liquidity?
  - b. Share value?
  - c. Composition of company ownership?
9. In your opinion, was splitting the stocks a good and valid option for your company?
  - a. Yes
  - b. No

## Appendix C: Implementation Schedule

|                          | Month January | February | March |
|--------------------------|---------------|----------|-------|
| Activity                 |               |          |       |
| <u>Proposal Handover</u> |               |          |       |
| Booking                  |               |          |       |
| Appointments             |               |          |       |
| Data Collection          |               |          |       |
| Data Analysis            |               |          |       |
| Report Writing           |               |          |       |
| Report Submission        |               |          |       |