EFFECT OF STOCK SPLITS ON STOCK LIQUIDITY OF COMPANIES QUOTED AT THE NAIROBI STOCK EXCHANGE

By

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A RESEARCH PAPER SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE MASTERS OF BUSINESS ADMINISTRATION.

DECLARATION

This research project is my original work and has not been presented to any other institution of higher learning for academic purposes.

Signed …… Date. …….

Omenda Christopher Odhiambo **D61/60024/2010**

Supervisor

This research project has been submitted for examination with my approval as the university supervisor.

Signed …… Date. …….

Dr. Josiah Aduda

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Last but not least I would like to thank the Almighty Father in heaven for the good health and wonderful opportunities he has provided me with.

DEDICATION

To my parents, through your patience I have endured, through your faith, I am a success, through your love, I have accomplished.

ABSTRACT

Several scholars have undertaken studies to understand the relationship between stock splits and stock liquidity using different liquidity proxies such as trading volume, share price volatility, number of trades per day and number of shares per trade, just but to mention a few. Most of these studies have established that stock splits result in increased stock liquidity.

This paper examined the effect of stock split to stock liquidity of firms quoted in the NSE. The liquidity proxy used was the Amivest Liquidity Ratio, which measured the volume traded resulting from a 1% change in stock price. The objective of the study was achieved by studying nine companies that had split their stock between 2005 and 2011. The study made use of share prices and trading volume data for the sample stock for the event window of 60 days consisting of 30 days before and 30 days after the split. A causal study with a trend analytical design was adapted to determine the relationship between the stock split event and any changes in the stock liquidity position.

The study found that generally the liquidity of stock was higher in the days before the stock split than in the days after the stock split. It was also found that liquidity tended to be lowest in the days just around the stock split. Generally the aggregate liquidity for the 30 days before the stock split was found to be higher than for the 30 days after the stock split.

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LIST OF ABBREVIATION

ASE	American Stock Exchange
C.M.C	Cooper Motor Corporation
CRSP	Center for Research in Security Prices
GDP	Gross Domestic Product
KCB	Kenya Commercial Bank
KPLC	Kenya Power and Lighting Company
NASDAQ	National Association of Security Dealers Automated Quotation
NSE	Nairobi Stock Exchange
NYSE	New York Stock Exchange

CHAPTER ONE

INTRODUCTION

1.1Background of the study

A stock split is a corporate action in which a publicly-traded company increases the number of outstanding shares while maintaining the same market capitalization, so that dilution does not occur. Although the number of shares outstanding increases by a specific multiple, the total shilling value of the shares remains the same compared to the pre-split amounts. In other words, a company engages in a stock split in order to decrease its share price by increasing the number of shares available. Current holders of the stock are given more shares so that they maintain the same percentage of ownership in the company. Lakonishok& Lev (1987) points out that it's just like "a finer slicing of a given cake".

According to Wooldridge and Chamber (1983) when a stock split occurs, the balance sheet items remain the same; except that the total number of outstanding shares of the company increases proportionately to the ratio of split. A stock split is usually done by companies that have seen their share price increase to levels that are either too high or are beyond the price levels of similar companies in their sector. The primary motive is to make shares seem more affordable to small investors even though the underlying value of the company has not changed. By reducing the price of stock, companies try to make their stock more affordable to investors. As a stock price skyrockets, some people will be psychologically unwilling to pay that `high price. So a stock split brings the shares down to a more "attractive" level. Though the intrinsic value has not changed the psychological effects may help the stock. Survey evidence indicates that managers split their stock to get the stock's price into some optimal trading range (Baker and Gallagher (1980)).

Managers believe this will attract small investors, which implies that managers believe that splitting their firm's stock has implications for the firm's ownership structure.

Markets tend to react favorably to announcements of stock splits. This is supported by two major hypotheses; the information signaling hypothesis and the optimal trading range hypothesis. The information signaling hypothesis suggests that investors will react positively to stock splits because this event reveals information about increases in future cash dividends or earnings or both. The trading range hypothesis suggests that firms split their stock to improve trading liquidity by moving the firms share price into an optimal trading range (Grinblatt, Masulis, and Titman, 1984).

Stock splits, if perceived by market participants as valid signals of the firm's future performance, could be a possible explanation for the abnormal returns associated with these operations. They are deemed to provide a signal to the market that the company's share price has been increasing and people assume this growth will continue in the future, and again, lift demand and prices. To test if stock splitting companies perform better than the rest of the market, Lakonishok and Lev (1987) compared their earnings and dividend growth to those of a control group. They concluded that the splitting group experienced higher growth rates for both variables, but this difference was larger before the announcement than after. A stock split generally occurs in the face of new highs for the stock. Thus, it is an event dripping with positive connotations and associations.

Some literature suggests that the motive for splitting stocks is to realign share prices to an "optimal" trading range, Lakonishok and Lev (1987). Realigning share price may draw more attention to a stock and hence lead to an improved liquidity. A survey research by Baker and Powell (1992) reports that moving the stock price into a better trading range and improving the stock's liquidity are the primary motives for firms to undertake a split.

According to Anshuman and Kalay (2002), firms split their stocks to create liquidity. They argue that because of price discreteness related commissions, liquidity traders will

time their trades based on stock price levels. Specifically, liquidity traders may defer their trades until stock prices drop to lower base levels to save transaction costs. Under this framework, a firm can enhance its stock's trading liquidity by resetting the stock price to an optimal level with a stock split.

Stock splits are also associated with positive abnormal returns either in the short run or in the long term. For instance, Maloney and Mulherin (1992) present evidence of a wealth increase effect around the announcement and execution dates, for their sample of NASDAQ stock splits that occurred between the beginning of 1985 and the end of 1989.

The NSE is the principal stock exchange of Kenya. It is a member of the African Stock Exchanges Association. It is Africa's fourth largest stock exchange in terms of trading volumes, and fifth in terms of market capitalization as a percentage of GDP. The Exchange works in cooperation with the Uganda Securities Exchange and the Dar es Salaam Stock Exchange, including the cross listing of various equities.

Between the year 2006 and 2011 several companies have split their stock in the NSE including, East African Cables in 2006 , Sasini, CMC Holdings and KCB in 2007, Nation Media Group in 2008, Equity Bank in 2009, Kenol Kobil and KPLC in 2010 and Barclays Bank in 2011. The table on appendix 1 shows the specific dates that these companies undertook stock split and their respective split ratio.

1.2 Statement of the problem

A stock split increases the number of shares of a company while decreasing the price per share. It is has been argued that a stock split is merely a cosmetic change yet stock splits are relatively common occurrences. This implies that there must be some benefit, either real or perceived, that results from a firm splitting its stock. While stock splits do not affect a firm's cash flows, the market tends to react to them positively. The literature suggests that one main motive for splitting stocks is to realign share prices to an "optimal" trading range Lakonishok and Lev (1987). Realigning share price may draw more attention to a stock and hence lead to an improved liquidity. A survey research by

Baker and Powell (1992) reports that moving the stock price into a better trading range and improving the stock's liquidity are the primary motives for firms to undertake a split. Baker and Gallagher (1980) surveyed 100 chief finance officers on their perceptions about stock splits. The conclusion drawn from the 63 responses received was that stock splits serve to keep the stock price in an optimal range, thereby, increasing liquidity and the number of shareholders. Muscarella and Vetsuypens (1996) suggested that liquidity improves after a stock split, which is accompanied by wealth gains to the investors. These findings are supported by an earlier model by Aminhudm and Mendelson (1986). The model predicted a positive relationship between value of the firm and liquidity.

On the other hand Critics would argue that a stock split is a non-event. They're convinced that a split is simply an accounting function with no relationship to stock performance. In fact, they think investors are "foolish" to believe there is any money to be made from something as unimportant as a stock split. In addition the negative effects of stock splits on liquidity have also been documented. In his paper, Copeland (1979) finds that turnover decreases following stock splits, which leads him to surmise that 'splits induce permanent reductions in liquidity. Bley (2002) examined 40 stock splits in the German stock market from 1994 to 1996. He found that, after stock splits, daily trading volume decreased significantly for the class of high market capitalization stocks. Murray (1985) finds the trade volume after stock splits to decreases in short term, but, does not change in long term.

Several studies on stock splits have been undertaken in the Kenyan financial markets. Aduda and Chemarum (2010) found that there was an average increase in trading volume and a positive abnormal return after the spilt announcement and event. The result of this study are agreement with most previous studies that find that stock splits help improve firm value and stock liquidity. Simbovo (2006) carried out a research on the Nairobi stock exchange to determine the effect of stock splits and large stock dividends. He study found out that in the case of splits, most managers in Kenya opt for stock splits to maintain an optimal trading range. Musau (2007) noted that after a stock split, the share

price is likely to start low and after sometime, appreciates tremendously for a short time. He also noted that at the post split time few corporate investors want to take positions due to the excess demand therefore leaving retail investors with unappreciating stock which generates no short-term gain thereby causing panic. Therefore to corporations, a split stock may affect the market activity because the low price attracts many small investors who operate on the rule of buy and dump.

1.3 Research Objective.

The objective of the study is to assess the effect of stock splits on stock liquidity of companies quoted at the Nairobi stock exchange.

1.4 Significance of the study

This study will be of great importance to:

Managers:

The study gives managers crucial insight with respect to how their firm's stock liquidity may be affected by a decision to undertake a stock split. It may also provide managers with suggestions on how they can use stock splits for confidence signaling, drawing attention back to the firm as well as increasing the shareholder base.

Investors:

Current and potential, institutional and individual investors need to know the impact a stock split will have on the liquidity of a firms stock as this will enable them to make rational decisions. It may help them in tracking stocks that have been split in an attempt to profit from the bullish nature of the split.

Scholars and Researchers:

The study will help in contributing to the intellectual knowledge and address various gaps left behind by previous researchers on the subject matter and try to resolve the inherent conflicts. It will analyze the impact of stock split on stock liquidity of firms quoted in the

Nairobi stock exchange. The study will shed more light on the subject and open more avenues for further research on the subject in addition it adds to the already existing findings.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter consists of previous studies, related data and report that are related to stock splits. The Importance of this section is that it provides support to the study being undertaken. It also provides a main reference point that is necessary to write this research paper. The source of the literature is mostly from related journal, articles, textbooks and the internet.

2.2 Review of Theories.

2.2.1 Trading range hypothesis

The trading range theory as developed by Copeland (1979) suggested that a split lowers the price, which makes trading more affordable. Eventually this leads to an increase in the base of traders in the firm. In turn, this increases the volume of trade. Firms that experience run up in their stock prices split their stock to improve trading liquidity by moving the firms share price into an optimum trading range, Tawatnuntachai and D'Mello (2002).

The optimal trading theory suggests that the underlying mechanism by which a stock split can increase the liquidity of the stock is by changing the price level itself. This implies that stock splits, by lowering the price level, can increase liquidity by bringing the stock price to an "optimal trading range", which induces more investors to enter the market for the security. This could result either from a constraint that small investors can face when the stock price is high, as small investors may not be able to afford stock when the stock price is too high, Baker and Gallagher (1980), or from a behavioral preference for certain stock prices, whereby investors prefer to buy stocks with a lower price and managers therefore split their stock to keep the nominal price constant, Benartzi et al. (2005). This

suggest that a stock's liquidity can be increased by achieving an optimal trading range and stock splits thereby should result in a short term price increase as future expected returns decline due to increased liquidity, Amihud and Mendelson (1986). Lakonishok and Lev (1987) also argue that splits help return stock prices to their 'normal' trading range. These views have often also been used by management to explain why their firms split their stock. Managers argue that conventional wisdom suggests that splitting of shares helps to keep the price of their shares within a customary trading range. A wider ownership base may also appeal to management as a means of job protection as unwelcome takeovers are made more difficult.

One drawback to the 'trading range hypothesis' is that the managers of some overvalued firms might have little concern about the trading range of their firm's stock and split simply to obtain a temporary increase in its price (e.g. when the manager plans to reduce his stock or stock option holdings in the firm), Grinblatt, Masulis and Titman (1984).

2.2.2 Information Signaling Hypothesis

In an information-related theory, a stock split conveys managers' private information related to the fundamental performance of the firm. The market interprets the stock split as positive news of future firm performance resulting in abnormal returns on the stock split announcement. Fama, Fisher, Jensen and Roll (1969) suggest that the announcement of the split is viewed favorably by market participants because the participants experience changes in expectations of future cash dividends.

Ross (1977) suggests that managers possess more information than investors and have an incentive to convey favorable information to investors. This information concerns management's expectation about future earnings and cash dividends.

McNichols and Dravid (1990) found evidence supporting the hypothesis that the split factor itself conveys information. They presented and tested a model of management

choice of split factors. The higher the pre-split price the higher should be the split factor due to the need to restore the price to some optimal trading range. Firm size was also controlled because the authors believed that bigger firms might desire a higher price. Their results confirmed that the split factor was indeed affected by firm size and pre-split price but the explanatory power of their proxy of management's private information was also very strong.

Ikenberry et al (1996) present a combination of the trading range and the signaling hypotheses. They believe these two are not mutually exclusive. Given that managers have superior information about the firm's value, and that it is costly to trade shares below the optimal trading range, managers will split their stock to move their share price, conditional; on the favorable future information being revealed into the trading range.

The validity of Signaling theory as an explanation of stock splits is questionable. For a Signaling device to be valid under Signaling theory there must be an apparent cost associated with sending false signals. In other words, a firm with below-average expected performance must incur a cost for imitating the actions of an above-average firm. Stock splits do not have apparent costs associated with sending false signals, Kernerer (2010).

2.2.3 Neglected firm hypothesis

The Neglected firm's hypothesis suggests that a stock split is the way of drawing attention of the market by a firm which feels that they are undervalued in the market because of the negligence of the market participants, which means if there is little known about a firm, its shares trade at a discount. . Neglected firms are usually the smaller firms that analysts tend to ignore. Information available on these smaller companies tends to be limited to those items that are required by law. These smaller/neglected firms may have fewer announcements published in the financial press. The split announcement is expected to create greater market interest than it would be in case of larger firms. Arbel

and Swanson (1993) suggest that firms use the split to draw attention to ensure that information about the company is widely recognized than before. Therefore, many times the firm's managers use the stock split to attract attention to the stock in question.

2.3 Review of Empirical Studies

Dolley (1933) surveyed managers of eighty-eight companies issuing stock splits; the finding of the survey was that the main motive for issuing stock splits is to widen the distribution base among the shareholders. This leads to increased marketability of the share and enhanced advertising value of the company. Corporate managers believe that a wider distribution of shares leads to a steadier volume of trading. The other reasons for issuing stock splits are to receive higher effective dividend rates, to facilitate the sale of stocks, to permit listing of the stocks and to create goodwill in the stock market.

Baker and Gallagher (1980) surveyed 100 chief finance officers on their perceptions about stock splits. The conclusion drawn from the 63 responses received was that stock splits serve to keep the stock price in an optimal range, thereby, increasing liquidity and the number of shareholders.

Baker and Powell (1993) surveyed 251 NYSE and ASE firms that issued stock splits. The responses of 136 firms reveal that the primary motive for issuing a stock split is to move the share price to a better trading range, resulting in improved trading volumes. Some other important motives included signaling better future prospects to attract potential investors. The respondents also expressed the view that the preferred trading range for their stocks is $20 to $35.

Empirically, the market reaction to these decisions, in the form of changes in stock returns, trading volumes and volatility of stock prices, has been investigated by various researchers including Fama et al., 1969; Copeland, 1979; Grinblatt et al., 1984;

Lakonishok and Lev, 1987; Maloney and Mulherin 1992; Ikenberry et al., 1996; Desai and Jain 1997 just but to mention a few.

Grinblatt et al. (1984) conducted a study of stock dividends between the periods of 1967 to 1976. They examined 1762 announcement events and 1740 ex-date events in the NYSE. Two approaches were examined for dividing the sample into stock dividend and stock split categories. The split factor method defined all events with split factors in excess of 25% as splits, the remainder as 'stock dividends' (in accordance with the generally accepted accounting principles governing splits and stock dividends). The second method used the CRSP classification of splits and stock dividends. They found that on average there was a significant increase in a firm's stock price at the announcement and that, in general, this upward revision of the firm's value could not be attributed to any other contemporaneous announcements. This increase may have been partially due to forecasts of imminent increases in cash dividends, but a sub sample of stocks that paid no dividends in the three years prior to the announcement displayed similar price behavior. Thus, some of the information content of stock distributions appeared to be directly associated with firms' future cash flows. The findings of Desai and Jain (1997) point in the same direction. Covering 5596 stock splits from 1976 to 1991, their study reveals that, following stock splits, there was an excess return of 7.05% after a holding period of one year. After a holding period of three years, there was an excess return of 11.87%.

Ikenberry et al. (1996) examined 1275 two-for-one stock splits by NYSE and ASE firms from 1975 through 1990, obtained similar results. They observed excess returns of 7.93% in the first year after a stock split and 12.15% in the first three years following a split. These gains were preceded by excess returns of 3.38% on the announcement date. In an impressively comprehensive study, Byun and Rozeff (2003) examined the long-run consequences of 12 747 stock splits covering the period from 1927 to 1996. In contrast to most previous papers, they find that stock splits are essentially value-neutral transactions.

Fama, Fisher, Jensen, and Roll (1969) examine 940 stock splits in the NYSE between 1927 and 1959. They found that since in the past stock splits have often been associated with substantial dividend increases, the market uses the announcement of a split to re-evaluate the stream of expected income from the shares. On the average the market's judgments concerning the information implications of a split are fully reflected in the price of a share at least by the end of the split month but most probably almost immediately after the announcement date. Therefore in reacting to a split the market reacts only to its dividend implications. That is, the split causes price adjustments only, to the extent that it is associated with changes in the anticipated level of future dividends. Finally, there seems to be no way to use a split to increase one's expected returns, unless, of course, if inside information concerning the split or subsequent dividend behavior is available.

Maloney and Mulherin (1992) present evidence of a wealth increase effect around the announcement and execution dates, for their sample of NASDAQ stock splits that occurred between the beginning of 1985 and the end of 1989. Around the announcement date, they find an important price run-up in the ten days leading to this date. They also find price increases around the execution date, though of smaller magnitude than those recorded for the announcement date. The price increase is also significant for the three days starting on the execution date. Maloney and Mulherin (1992) argue that this positive reaction on the ex-date cannot be connected to informational content, since the split date is known well in advance. They try to find support for this price reaction in microstructure components of the stock market. Other authors studied the long-term implications of stock splits for abnormal stock returns.

2.4 Stock Splits and Firms Liquidity

Baker and Powell (1993) find that managers view liquidity improvements second only in importance to the trading range hypothesis. One interpretation of this reference to liquidity is that the number and diversity of shareholders increases following a stock split.

The trading range and liquidity hypotheses are not necessarily mutually exclusive explanations. However, Easley, O'Hara and Saar (2001) suggest that individuals may have a preference for a specific trading range because liquidity is higher in that price range. The tax-timing hypothesis offered by Lamoureux and Poon (1987) suggests that the trading volume will increase and the tax-option value of the stock will increase following a stock split.

One general definition of common stock liquidity is the "accommodation of trading with the least effect on price, O'Hara (1997). Using proxies for liquidity, empirical evidence on the impact of stock splits on liquidity is mixed. Proportional bid-ask spreads have been found to either increase, Copeland (1979), or stay the same, Murray (1985).

Using trading volume as a proxy for liquidity, Copeland (1979), report that there is a decrease in split-adjusted volume following a stock split while Lakonishok and Lev (1987) report no change in volume.

Share price volatility, as a measure of liquidity, has been shown to increase following a stock split Ohlson and Penman (1985). The number of trades per day has been found to increase following stock splits, Muscarella and Vetsuypens (1996). Moreover, Desai, Nimalendran and Venkataraman (1998) find that there is a significant decrease in the average number of shares per trade following a stock split and Lakonishok and Lev (1987) find an increase in the number of shares traded as a percentage of the outstanding shares following stock splits.

2.5 Stock splits and ownership structure

Survey evidence indicates that managers split their stock to get the stock's price into some optimal trading range, Baker and Gallagher (1980). Managers believe this will attract small investors, which implies that managers believe that splitting their firm's stock has implications for the firm's ownership structure. Why should a stock split affect ownership structure? One argument is that individual shareholders tend to be wealth constrained and, therefore, 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). With the lower post-split price, we should observe a lower proportion of institutional ownership, and a higher proportion of individual ownership, after the split than before the split. A second argument is based on trading costs. Several studies 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, we would expect the proportion of institutional ownership of a stock to decrease, as institutions flock to equivalent stocks with lower relative bid/offer spreads. In spite of their algebraic simplicity, stock splits have been tied to significant changes in corporate value. (Charles Amos Dice, 1928) notes that although a stock split merely divides share ownership into finer units.

Maloney and Mulherin (1992) present in fact evidence of a decrease in the relative spread in the period prior to the execution of the split. They also report an increasing level in daily volume traded (in dollars) until the ex-date that decreases immediately after. They also document a reduction in the average daily value per trade. This is accompanied by an increase in the number of shareholders. This statistically significant result is also characterized by an increase in the number of institutional shareholders and the percentage of the capital. The authors argue that the split allowed current small

shareholders to diversify their wealth by allowing them to sell the split shares in round lots.

Schultz (2000) also concludes that an increase in small trades occurs subsequent to the split. He reports a strong increase in trades that are smaller than the previous round lot trade. His conclusion is that a large number of small shareholders are added to the shareholder base after the split. This happens even though an increase in the effective spread occurs for all trade sizes considered (all statistically significant). The author claims that these increased spreads are a powerful incentive for market makers to promote the stock. In their study of Canadian stock splits, Kryzanowski and Zhang (1996) find evidence of an increase in trades conducted by small investors.

Lamoureux and Poon (1987) report an increase in the number of shareholders, but the authors did not explore this increase in order to analyze who the new “entrants” were (small investors or institutions).

2.6 Stock splits and earnings

Fama, Fisher, Jensen and Roll (1969) argue that a large price increase at the time of a stock split is due to altered expectations concerning future dividends rather than due to any intrinsic effects of the splits themselves. This 'dividend hypothesis' however, does not appear to fully explain the observed market reaction to stock split announcements. For example, Grinblatt, Masulis and Titman (1984), report a significant stock price reaction to the announcement of stock splits by firms that do not pay cash dividends in the three years prior to the split. They argue that the valuation changes associated with stock split announcements cannot be attributed totally to revised expectations about near-term dividend increases. Fama (1976) suggests that it is likely that the information revealed by stock splits concerns earnings rather than dividends. He argues that it is possible that

dividends are a passive variable in the whole process. That is to say companies tend to increase dividends when earnings increase and to decrease dividends when earnings decrease. In this view, the Fama, Fisher, Jensen and Roll data suggest that splits tend to occur when firms have experienced unusual increases in earnings, which accounts for the positive average residuals of splitting shares in the months preceding the split.

Lakonishok and Lev (1987), examine both dividends and earnings growth surrounding stock split announcements and conclude that the evidence is consistent with "either stabilization of earnings growth subsequent to the abnormal presplit growth, improved cash dividends prospects, or both.

2.7 Chapter summary

Stock splits are a big event for both managers and traders. Managers may split their firms stock for a variety of reasons. Researchers have also developed a number of theories relating to both the merits and demerits of a firm engaging in stock splits. As a result stock split announcements have become common phenomena among firms. However stock splits still continues to be one of the least understood topics in finance. The above literature review examines the various literature by published authors - such as Fama, Fisher, Jensen and Roll (1969); Lakonishok and Lev (1987); Grinblatt, Masulis and Titman (1984); Copeland (1979) just but to mention a few - in an attempt to better understand the impact of stock splits on stock liquidity of a firm.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research methodology by giving a description about the source data, method of conducting the research, the population and sample, technique of collecting the data and technique of analyzing the data.

3.2 Research Design

The nature of the study will be a causal study intended at assessing the impact of stock splits on the firm's stock liquidity. The study will have a trend analytical design in an attempt to determine the relationship between the stock split event and any changes in the stock liquidity position as given by the liquidity proxy used. This method is appropriate since the study will attempt to achieve insights into the reaction of stock liquidity the stock split event.

3.3 Population and Sample

The population was made up of all the companies quoted on the Nairobi stock exchange. From this population companies which had split their stock between the years 2005 to 2011 were selected for the study. The list of the companies studied included KenolKobil, East African Cables, Sasini Ltd, Barclays Bank, CMC Holdings, KCB, Nation Media Group, Equity Bank. This represents all the companies that underwent a stock split in the period covered by the study.

3.4 Data Collection

The study will be based on secondary data. The data will be obtained from the Nairobi stock exchange.

3.5 Data Analysis

The research will cover a period of 30 days before the stock split and 30 days after the stock split so as to examine the changes in liquidity over this period. Hence time (t) will be gives as:

t = -30 to +30.

To measure the impact of stock splits on liquidity, the Amivest liquidity ratio (Cooper, Groth, and Avera (1985)) was used. This ratio was selected for the study because it is simple to calculate and, unlike other models that only incorporate one variable e.g. no. of shares traded per day, it incorporates two important variables that directly relate to stock liquidity i.e. the stock price and volume traded.

The Amivest daily liquidity ratio will be calculated as below;

- Calculate the volume of shares traded on each day (over the period). Call it $Vol_{(d)}$ ... for day (d)
- Pick some representative price for each day. Call it $P_{(d)}$ which will be the closing price for day (d).
- Calculate the Shilling Volume for each day. That's $VOLS_{(d)} = V_{(d)}P_{(d)}$ for day d.
- Next, calculate the percentage changes in daily stock prices $R_{(d)}$, whether it's up or down. this will be given by:

$$R_{(d)} = \frac{P2-P1}{P1}$$

Where: P1 is the Closing price for day d-1

P2 is the closing price for day d

- Finally calculate the Amivest daily liquidity ratio as given by the formulae:

$$\frac{\text{VOLS(d)}}{\text{R(d)}}$$

The Amivest monthly liquidity ratio for the two months in consideration will be calculated as below;

- Calculate the TotalShilling Volume for the month. That's :

$$VOLS_{(M)} = V_{(1)}P_{(1)} + V_{(2)}P_{(2)} + ...+ V_{(n)}P_{(n)}$$

- Next, calculate the percentage changes in daily stock prices (whether it's up or down) for the market days of month:

$$R_{(m)} = R_{(1)} + R_{(2)}…….+R_{(n)}$$

Note that the total of the magnitudes of the daily changes with r = 1.23 for a 1.23% change

Since the Amivest liquidity ratio represents the shilling volume for each 1% change in stock price, then the aggregate liquidity ratio will be calculated as;

$$\frac{1}{\text{N}}\sum\frac{\text{VOLS(M)}}{\text{R(m)}}$$

Where N represents the number of days for which data is available.

The data analysis package that will be used will the Microsoft Excel spread sheet. It will be used to analyze data from each of the companies and summarize the findings of the research and also prepare the presentations in the form of graphs.

CHAPTER FOUR

DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

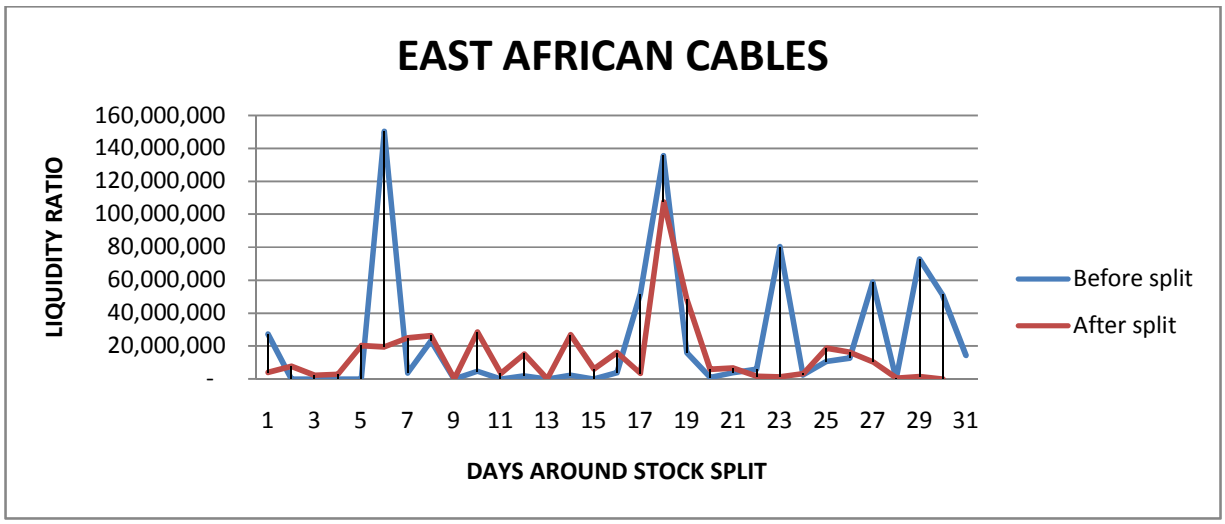
This chapter was aimed at conveying the results obtained from the research. It followed the layout of the research design in chapter 3 in an attempt to address the objective of the study.

4.2 The Daily Liquidity Ratio against Days around Stock Split

In order to undertake this analysis, tables and graphs were generated for each of the companies. The findings of this study have been presented in those tables and graphs.

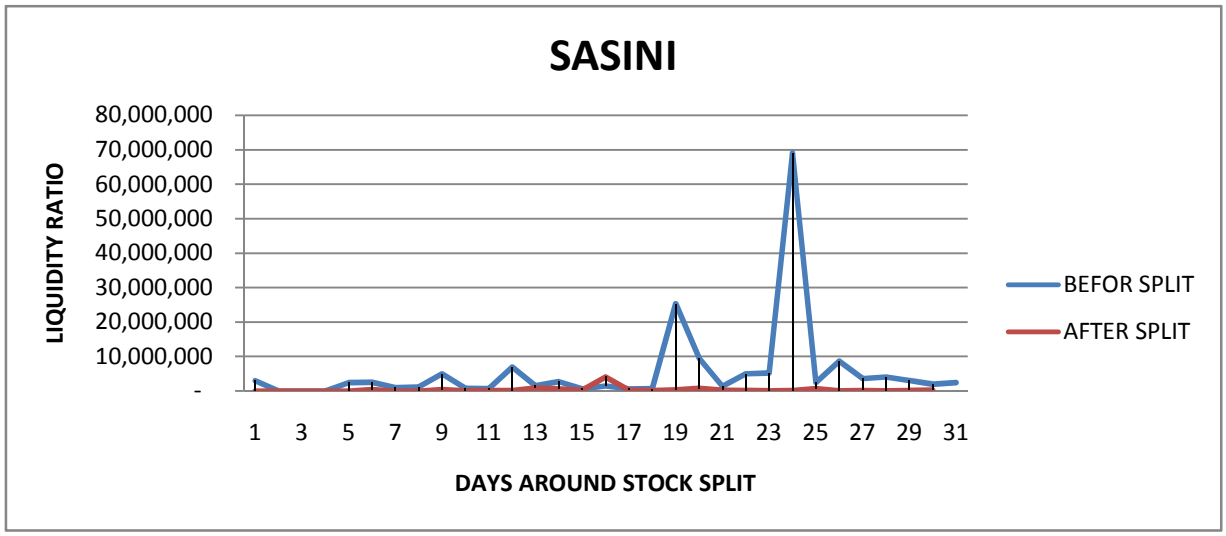
From the results presented on the volumes of shares traded and the percentage change in share price observed thirty days before and thirty days after the stock split by East African Cables, the Amivest daily liquidity ratio was calculated and this was plotted on graph 1.

Figure 1: Graph of Liquidity Ratio against Days around Stock Split for East African Cables



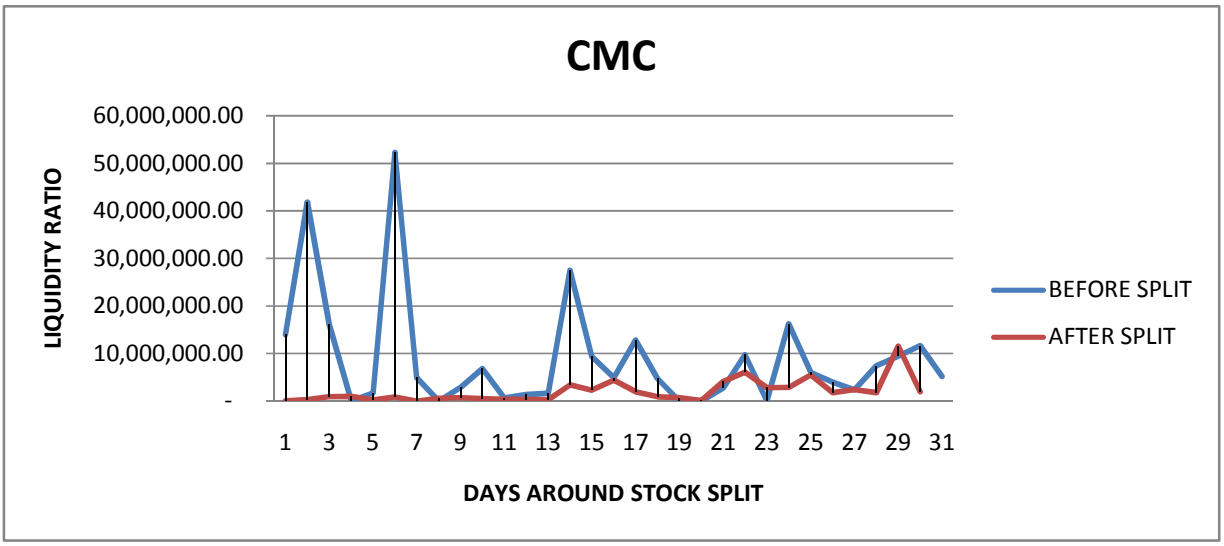
From the results presented on the volumes of shares traded and the percentage change in share price observed thirty days before and thirty days after the stock split by Sasini, the Amivest daily liquidity ratio was calculated and this was plotted on the graph represented by Figure 2.

Figure 2: Graph of Liquidity Ratio against Days around Stock Split for Sasini



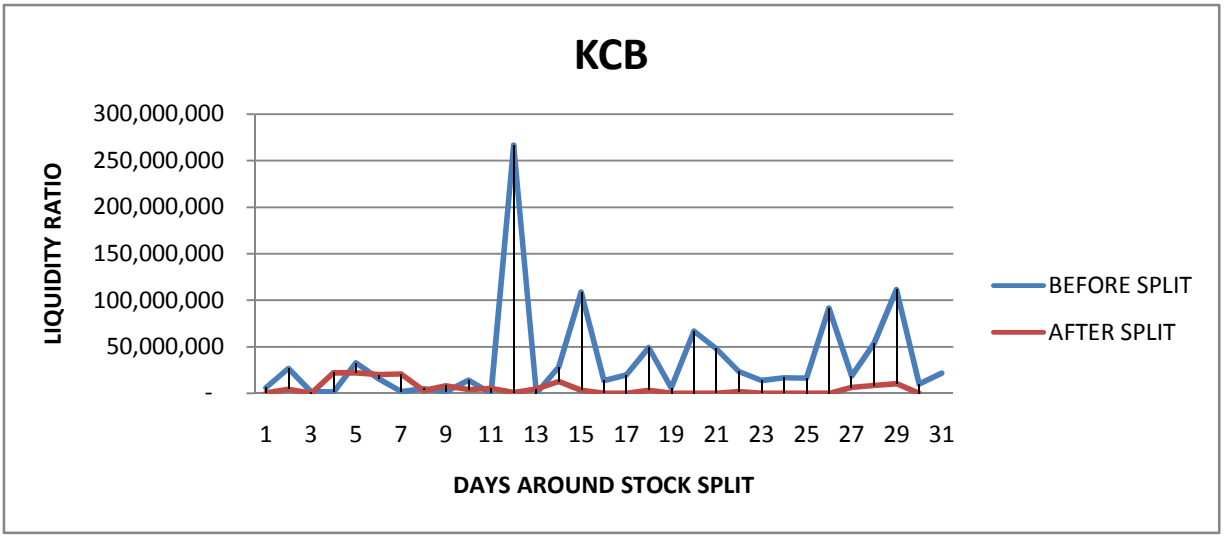
From the results presented on the volumes of shares traded and the percentage change in share price observed thirty days before and thirty days after the stock split by CMC Motors, the Amivest daily liquidity ratio was calculated and this was plotted on the graph represented by Figure 3.

Figure 3: Graph of Liquidity Ratio against Days around Stock Split for CMC Motors



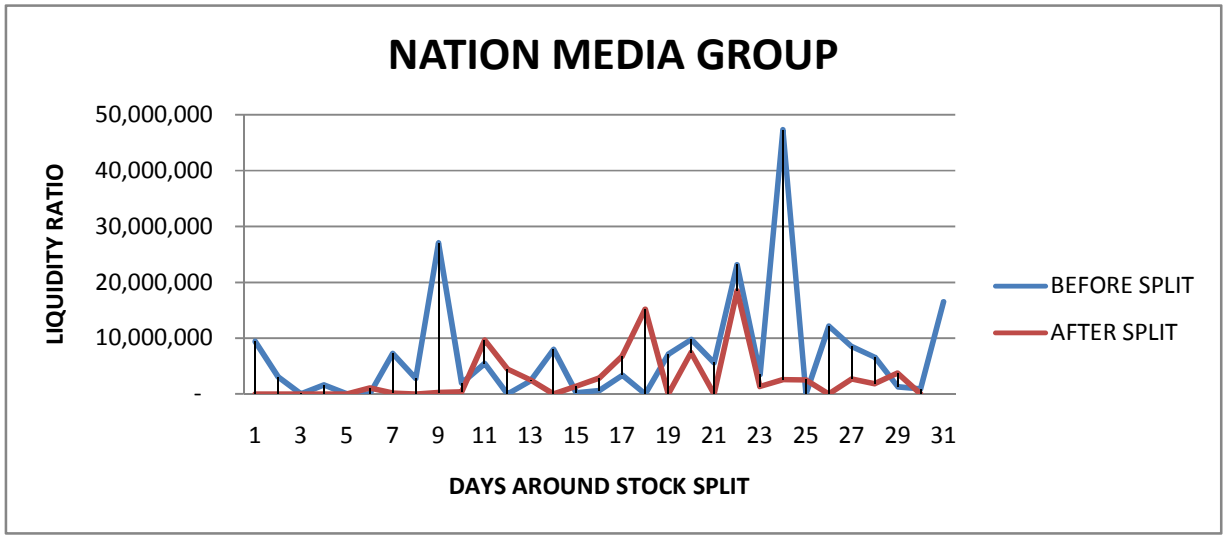
From the results presented on the volumes of shares traded and the percentage change in share price observed thirty days before and thirty days after the stock split by KCB, the Amivest daily liquidity ratio was calculated and this was plotted on the graph represented by Figure 4.

Figure 4: Graph of Liquidity Ratio against Days around Stock Split for KCB



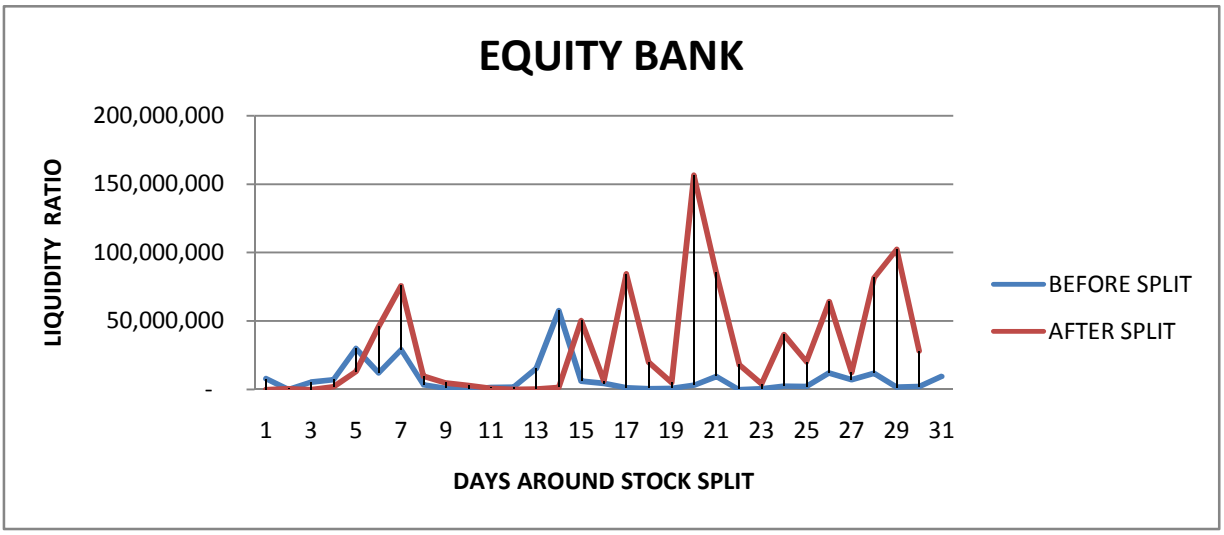
From the results presented on the volumes of shares traded and the percentage change in share price observed thirty days before and thirty days after the stock split by Nation Media Group, the Amivest daily liquidity ratio was calculated and this was plotted on the graph represented by Figure 5.

Figure 5: Graph of Liquidity Ratio against Days around Stock Split for Nation Media Group



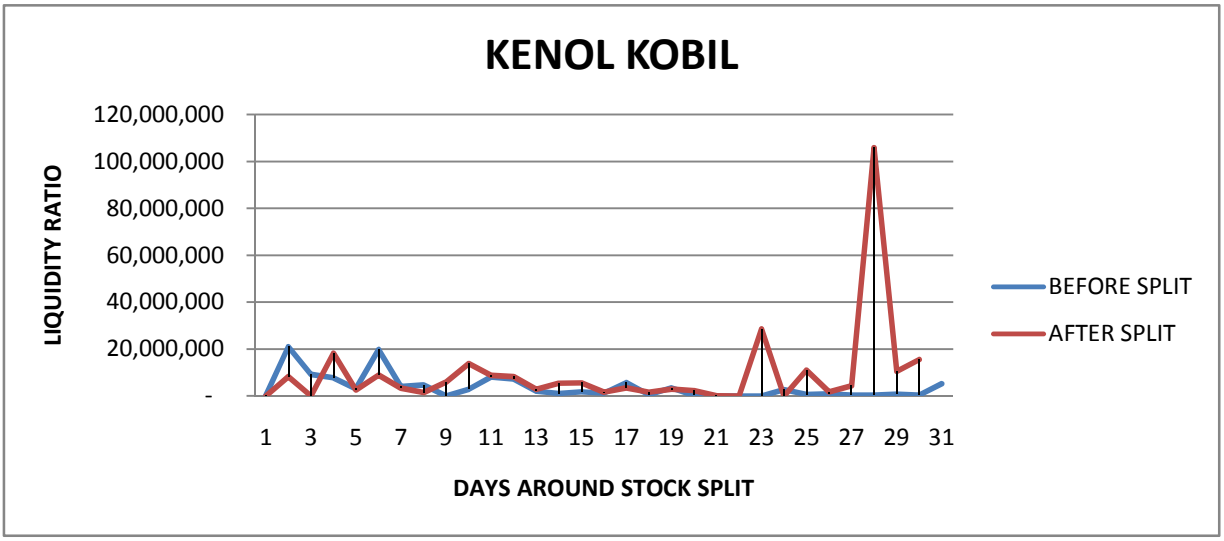
From the results presented on the volumes of shares traded and the percentage change in share price observed thirty days before and thirty days after the stock split by Equity Bank, the Amivest daily liquidity ratio was calculated and this was plotted on the graph represented by Figure 6.

Figure 6: Graph of Liquidity Ratio against Days around Stock Split for Equity



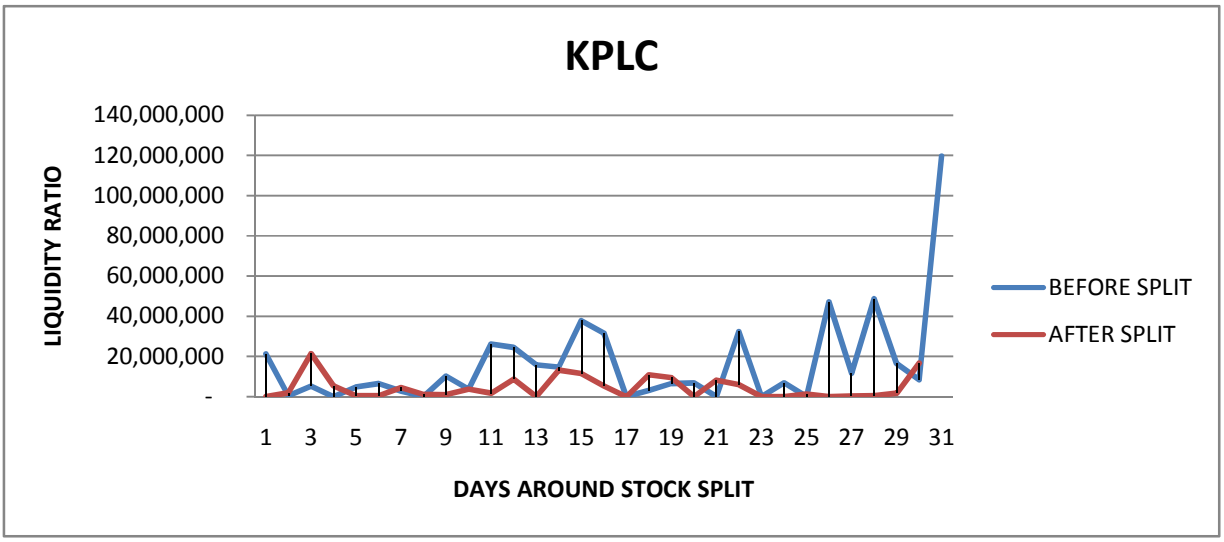
From the results presented on the volumes of shares traded and the percentage change in share price observed thirty days before and thirty days after the stock split by Kenol Kobil, the Amivest daily liquidity ratio was calculated and this was plotted on the graph represented by Figure 7.

Figure 7: Graph of Liquidity Ratio against Days around Stock Split for Kenol Kobil



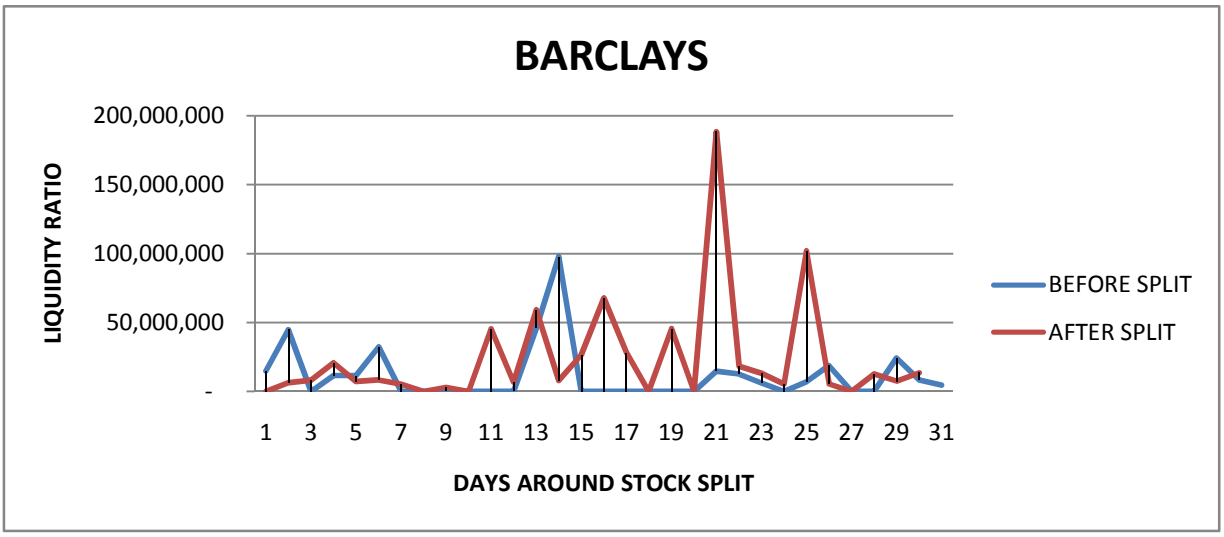
From the results presented on the volumes of shares traded and the percentage change in share price observed thirty days before and thirty days after the stock split by KPLC, the Amivest daily liquidity ratio was calculated and this was plotted on the graph represented by Figure 8.

Figure 8: Graph of Liquidity Ratio against Days around Stock Split for KPLC



From the results presented on the volumes of shares traded and the percentage change in share price observed thirty days before and thirty days after the stock split by Barclays Bank, the Amivest daily liquidity ratio was calculated and this was plotted on the graph represented by Figure 9.

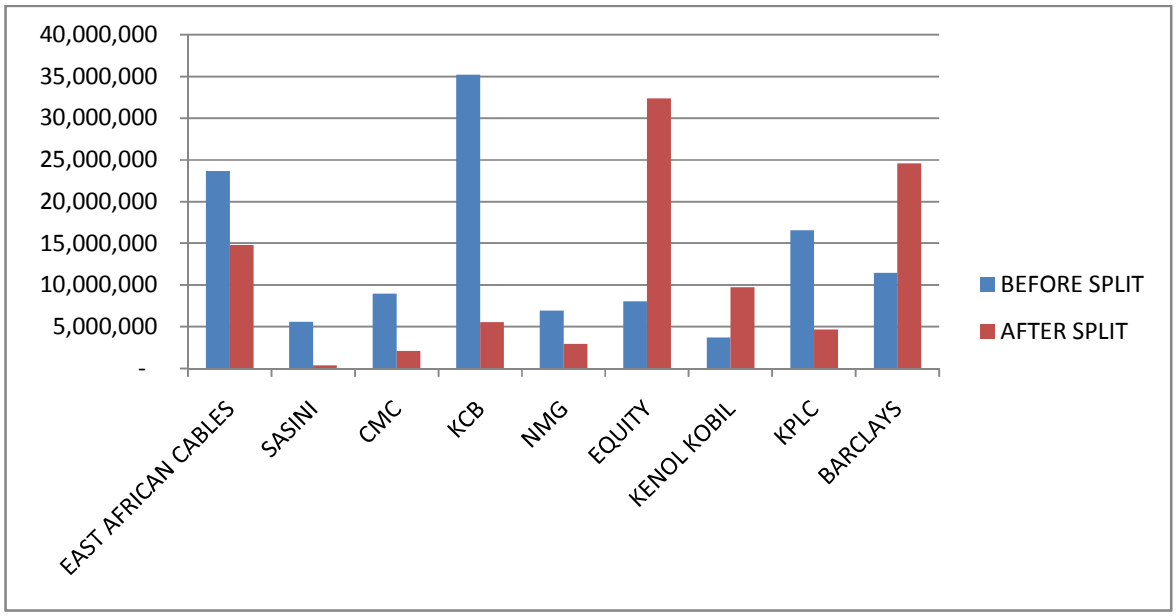
Figure 9: Graph of Liquidity Ratio against Days around Stock Split for Barclays Bank



4.3 The Aggregate Liquidity Ratio

The aggregate liquidity ratios were also calculated for both 30 trading days before and 30 trading days after the stock split date. The results were presented on the bar chart labeled figure 10

Figure 10: Graph of Aggregate Liquidity Ratios



4.4 Summary and Interpretation of Findings

Figure 1 shows how liquidity changed on days before and after the stock split. The graph shows that the liquidity ratio of stocks of East African Cables was relatively higher in days before the stock split as compared to the days after the split. This means that liquidity, as measured by the chosen proxy, was generally higher before the split as compared to after the split. This can also be confirmed by the fact that the aggregate Amivest liquidity ratio was higher for the 30 days period before the split as compared to the 30 days period after the spit as represented by figure 10.

According to figure 2 the liquidity ratio of stocks of Sasini was relatively higher in days before the stock split as compared to the days after the split. The aggregate Amivest liquidity ratio was higher before the split as compared to the spit as represented by figure 10. It also can be noted that the liquidity ratio was lowest just before and after the split date. This is an indication that liquidity for Sasini was generally higher in the days before the stock split than after the stock split and that as the stock split date drew close the liquidity of stock became lower. After the stock split the liquidity of the stock generally remained low.

The liquidity ratio of stocks of CMC Motors was relatively higher in days before the stock split as compared to the days after the split as evidenced by the presentation made on figure 3. This can also be evidenced by examining the aggregate liquidity ratio which shows that the liquidity in the 30 days before the stock split was higher as compared to the 30 days after the split. It can also be noted that the liquidity ratio was highest just before the split date and lowest after the split date. Therefore we can surmise that liquidity for CMC Motors was generally higher in the days before the stock split than after the stock split and that as the stock split date drew close the liquidity of stock became higher.

With regards to KCB the graph in figure 4 shows that the liquidity ratio of stocks was relatively higher in days before the stock split as compared to the days after the split.

Further evidence to this fact is provided in figure 10 where we can see that the aggregate liquidity ratio for KCB is higher in before the split as opposed to after the split. It can also be noted that the liquidity ratio was at its lowest on the split date.

The graph on Figure 5 shows liquidity ratio against days around stock split for Nation Media Group. The graph shows that the liquidity ratio of stocks of Nation Media Group was relatively higher in days before the stock split as compared to the days after the split. This can also be confirmed by the aggregate liquidity ratio which was higher before the split than after the split. It can also be noted that the liquidity ratio had a slight increase in the days immediately before the split date and was lowest immediately after the split date. This shows that the liquidity of Nation Media Group stock decreased after the stock split event.

Figure 6 shows a plotted graph of liquidity ratio against days around stock split for Equity Bank. It shows how liquidity changed on days before and after the stock split. The graph shows that the liquidity ratio of stocks of Equity Bank was relatively higher in days after the stock split as compared to the days before the split. This can further be confirmed by the aggregate liquidity ratio as presented by figure 10 which shows that the aggregate liquidity ratio before the stock split was higher than after the stock split. It can also be noted that the liquidity ratio was lowest immediately before and after the split date and that the liquidity ratio immediately before the stock split was higher than immediately after the stock split. Therefore, generally Equity Bank experienced higher liquidity after the stock split.

According to Figure 7 the liquidity ratio of stocks of Kenol Kobil was relatively higher in days after the stock split as compared to the days before the split. The aggregate liquidity ratio provides further proof to his by showing that the liquidity ratio before the split was higher than after the split. It can also be noted that the liquidity ratio before the split increases as the split date approaches. Therefore, generally Kenol Kobil experienced higher liquidity after the stock split.

Figure 8 shows a plotted graph of liquidity ratio against days around stock split for KPLC. It shows how liquidity changed on days before and after the stock split. The above graph shows that the liquidity ratio of stocks of KPLC was relatively higher in days before the stock split as compared to the days after the split. This can further be confirmed by the aggregate liquidity ratio as presented by figure 10 which shows that the aggregate liquidity ratio before the stock split was higher than after the stock split. Generally KPLC experienced higher liquidity before the stock split as compared to after the split.

The graph on Figure 9 shows a plotted graph of liquidity ratio against days around stock split for Barclays Bank. It shows that the liquidity ratio of stocks of Barclays Bank was relatively higher in days after the stock split as compared to the days before the split. The aggregate Amivest liquidity ratio was higher after the split as compared to before the spit as represented by figure 10. It can however be noted that the liquidity ratio immediately before the stock split was relatively higher than immediately after the stock split. Generally Barclays Bank experienced higher liquidity after the stock split as compared to before the split.

Figure 10 shows the aggregate liquidity ratios for the companies under study. It shows the aggregate liquidity positions both before and after the stock split date. From the above graph we note that 6 out of the 9 companies under study have a higher aggregate liquidity ratio before the split date as compared to after the split date. 3 out of the 9 companies under study have a higher aggregate liquidity ratio after the split date as compared to before the split date. Also noted was the fact that out of the 3 banks that have undertaken a stock split, 2 had a higher aggregate liquidity ratio after the split date as compared to before the split date.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECCOMENDATION

5.1 Summary

There are argument infers that a stock split is merely a cosmetic change. However despite this they still remain a common occurrence. This implies that there must be some benefit, either real or perceived, that results from a firm splitting its stock. A number of researchers have found a stock split is usually followed by either increased stock liquidity or positive abnormal returns or both. However other researchers such as Murray (1985) and Bley (2002) have found results that are contrary to this. The objective of this paper was to assess the effect of stock splits on stock liquidity of firms quoted at the NSE.

The research was a causal study with a trend analytical design aimed at determining the relationship between the stock split event and any changes in the stock liquidity position. The population consisted of companies quoted in the NSE that had undertaken a stock split between the years of 2005 and 2011. The data used was secondary data on daily volumes of stock traded and daily closing stock prices that was obtained from the NSE website. The model used for data analysis was the Amivest liquidity ratio which was developed by cooper Groth and Avera (1985). This model measured the shilling volume traded for each 1% change in stock price. The data analysis package used was Excel Spread Sheet.

The results obtained from the study found that generally the liquidity of stock, as measured by the Amivest liquidity ratio, is higher in the days before the stock split than in the days after the stock split. It was also found that generally liquidity tends to be lowest in the days immediately before and after the stock split. Generally the aggregate liquidity in the month before the stock split was found to be higher than in the month after the stock split.

5.2 Conclusion

The liquidity proxy used in this research was the Amivest liquidity ratio, which measured the total volume traded resulting from a 1% change in stock price The results indicated that generally there was a higher liquidity of stock in the days before the stock split as compared with the days after the stock split. A majority of the companies under study experienced the higher liquidity before the stock split, with the exception of Equity Bank, Kenol Kobil and Barclays Bank. It was also noted that stock liquidity tended to be the lowest in the days around the stock split with the exception of CMC Motors which recorded the highest liquidity immediately before the stock split event. The further indicate that liquidity was higher, for all the companies, one day before the stock split as compared to one day after the stock split.

The researcher also calculated the aggregate Amivest liquidity ratio for both thirty trading days before and after the stock split. The results indicated that generally the aggregate liquidity in the month before the stock split was higher than in the month after the stock split. This was with the exception of Equity Bank, Kenol Kobil and Barclays Bank.

The research was designed to meet the research objective which was to determine the impact of stock split on stock liquidity. The study found that generally there is higher liquidity recorded before a stock split than after a stock split and that as the stock split date approaches the liquidity of stock tend to be low. This is found to be inconsistent with several studies done by scholars such as Baker and Powell (1993), Ohlson and Penman(1985), Muscarella and Vetsuypens (1996), just but to mention a few, whose findings have recorded higher stock liquidity both around the stock split date and after a stock split as opposed to the period before the split. However this difference can be attributed to the fact that the liquidity proxy used in their studies differ from the one used in this study.

5.3 Policy recommendation

The results obtained from this study may be an indication of the inefficiencies in the stock exchange in Kenya and as so various recommendations based on this study have been made below.

Promotion of the stock exchange involves ensuring that the stock exchange works together with investors, regulators, and business to encourage the smooth flow of transactions in the exchange. This will help encourage more people to participate in the stock market and in turn help improve stock liquidity of firms in the stock exchanges.

Investor education will help provide the necessary enlightenment to promote the growth and development of the stock market. This can be done through public enlightenment programmes, seminars, workshops, symposiums and publications. This is necessary because many Kenyans still need to be educated about the prospect of investing in the stock market and in specific the benefits that have been documented with regards to stock splits in a bid to encourage them to participate in this important corporate event. Public dialogue on topical issues, initiation of policy changes and support for prudent innovation for growth of the stock market should also be encouraged.

Better dissemination of information helps ensure that all the players are well informed about the important events taking place in the stock exchange. This is key, especially to investors, with regards to helping them make informed decisions or to allow them the opportunity to participate in the different corporate events that may be announced in the stock market. Efforts to improve the communication infrastructure should be made so as to ensure information is disseminated as soon as it is made available as done in an efficient market. Better use of technology should be made to ensure information is disseminated as efficiently as possible. For example mobile alerts on the happenings in the stock exchange to help investors keep track of these changes etc.

Insider trading creates an imbalance in the stock exchange and contributes greatly to its inefficiencies. To discourage insider trading, there should be increased surveillance to help monitor the stock market activities. There should also exist a mechanism by which perpetrators of insider dealing are prosecuted and face severe punitive action to discourage the act.

5.4 Limitation of the study

The companies under study split their stocks at different times making it difficult to conclusively compare the results from the different companies. The major reason being because the market conditions that prevailed at these different times might have been different there by making it impractical to compare the results received from one company with that of another company. For valid comparison to have taken place the market condition needed to have been similar for all the companies at the time they were splitting their stock. It would have been more practical to compare the results of companies that had split their sock at around the same time. Unfortunately, none of the companies examined in the study undertook a stock split at the same time.

The split factor used by some of the companies under study differed. This might have contributed to some of the results obtained in the study. If this is the case it would be wrong to conclude that the results obtained from the study is representative of the causal relationship between the stock split event and any changes noted in the firm's stock liquidity. It has been noted by some authors that the split factor has an effect on variables such as price and trading volume. This study did not look into the effect that the split factor would have had on the results obtained there from.

The study did not examine the effect of other announcements made around the stock split date. Announcements such as dividend declaration or rights issue that might have been made around the stock split date might have had impact on the volume of stock traded or the price of stock. This in turn might have interfered with the validity of the results obtained from the study.

5.5 Suggestion for further study

This study has looked at liquidity using the Amivest model. However improvements can be made on the model to better measure liquidity. For instance, rather than using the total volume traded, we can have the change in total volume resulting from a 1% change in price. Therefore the new ratio would be given by:

$$\text{Liquidity Ratio} = \frac{\%\ \text{change in volume}}{\%\ \text{change in price}}$$

The research was done on the assumption that all other market conditions other than price and volume traded remained constant. However this may not be the case. Other market conditions could have arisen, which had effects on the general activity of shares in the market and on prices, hence affecting the viability of our model. Therefore there would be need to undertake a study that incorporates the different variables and events such as dividend declarations that may have occurred and that may have had an impact on the results of this study.

There is also a need to study what motivates Kenyan managers to engage in stock splits. Various theories have been put forward by various researchers. This research topic would help verify if these theories apply in the Kenyan scenario.

References

Aduda and Chemarum (2010), “Market Reaction to Stock Splits; Empirical Evidence from the Nairobi Stock Exchange” African Journal of Business & Management.

Amihud and Mendelson (1986), “Asset pricing and the bid ask spread”, Journal of Financial Economics.

Anshuman and Kalay (2002) “Can splits create market liquidity? Theory and evidence” Journal of Financial Markets.

Arbel and Strebel. (1982). “The Neglected and Small Firm Effects”. Financial Review, Vol. 17, No. 4.

Arbel and Swanson. (1993) “The role of information in stock split announcement effects,” Quarterly Journal of Business and Economics.

Baker and Gallagher (1980), "Management's View of Stock Splits," Financial Management.

Baker and Powell, (1993) “Further Evidence on Managerial Motives for Stock Splits” Quarterly Journal of Business and Economics.

Benartzi, Michaely, Thaler, and Weld, (2005), “The nominal price puzzle”, Working Paper, University of Chicago.

Bley (2002) “Stock Splits and Stock Return Behavior: How Germany tries to improve the attractiveness of its stock market,” Applied Financial Economics.

Cooper, Groth and Avera (1985), “Liquidity, exchange listing and common stock performance”, Journal of Economics and Business.

Copeland, "Liquidity Changes Following Stock Splits (1979)," Journal of Finance.

Dennis and Strickland (2002), “The effect of stock splits on liquidity and excess returns: Evidence from shareholder ownership composition”.

Dolley (1933), "Common Stock Split-Ups Motives and Effects," Harvard Business Review.

Easley, O’Hara and Saar (2001), “How Stock Splits Affect Trading: A Microstructure Approach”, Journal of Financial and Quantitative.

Fama, Fisher, Jensen and Roll (1969) “The Adjustment of Stock Prices to New Information” International Economic Review.

Grinblatt, Masulis, and Titman (1984), "The Valuation Effects of Stock Splits and Stock Dividends," Journal of Financial Economics.

Healy, Asquith and Falepu (19877), “Earnings and Stock Splits”.

Ikenberry, Rankine and Stice, (1996) “What do Stock Splits Really Signal?” Journal of Financial and Quantitative Analysis.

Kang and Diltz, (2000) “Dividend Announcements and the Valuation Effects of Corporate Divestiture” Journal of Financial and Strategic Decisions.

Lakonishok and Lev (1987), “Stock Splits and Stock Dividends: Why, Who and When,” The Journal of Finance.

Lamoureux and Poon (1987), “The Market Reaction to Stock Splits”, the Journal of Finance.

Maloney and Mulherin (1992), “The effect of splitting on the ex: microstructure reconciliation”, Financial Management.

McNichols and Dravid (1990), “Stock dividends, stock splits, and signaling”, Journal of Finance.

Murray (1985), “Further evidence on the liquidity effect of stock splits and stock dividends”, Journal of Financial Research.

Musau (2007), “Stock Splits: The Hidden Flaws.” The African Executive 14th-21st March 2007.

Muscarella and Vetsuypens (1996), “Stock splits: Signaling or liquidity? The case of ADR ‘Solo splits’”, Journal of Financial Economics Vol 25.

Ohlson and Penman (1985), “Volatility Increases Subsequent to Stock Splits: An Empirical Aberration,” Journal of Financial Economics.

Schultz (2000), “Stock Splits, Tick Size, and Sponsorship,” Journal of Finance.

Simbovo (2006), “The Effect of Stock Splits and Large Stock Dividends on Liquidity: Evidence from the Nairobi Stock Exchange”, Unpublished MBA Project, University of Nairobi.

Tawatnuntachai and D’Mello (2002), “Intra-Industry Reactions to Stock Split Announcements”, Journal of Financial Research.

Woolridge and Chambers (1983), “Reverse Splits and Shareholder Wealth,” Financial Management.

Appendices

Appendix I: Companies Listed In the Nairobi Stock Exchange that have undergone a stock split

Company	Split	Split date
East African Cables	10:1	4/09/2006
Sasini	5:1	14/02/2007
CMC	10:1	26/02/2007
KCB	10:1	2/04/2007
Nation Media Group	2:1	25/07/2008
Equity Bank	10:1	25/03/2009
Kenol Kobil	10:1	1/06/2010
KPLC	8:1	19/11/2010
Barclays	4:1	30/05/2011

Appendix II: Data Table

East African Breweries

Date	Previous Deal	Weighted Average Price	Total Shares Traded
24/07/2006	330	331	24,953
25/07/2006	331	331	23,405
26/07/2006	331	331	34,280
27/07/2006	331	149	10,850
28/07/206	149	332	12,422
1/8/2006	332	331	136,770
2/8/2006	331	353	69,160
3/8/2006	353	363	179,940
4/8/2006	363	363	70,700
6/8/2006	363	384	70,700
7/8/2006	384	384	3,400
8/8/2006	384	399	19,332
9/8/2006	399	399	20,130

10/8/2006	399	524	136,636
11/8/2006	524	524	4,150
14/8/2006	524	571	60,548
15/8/2006	571	585	217,077
16/8/2006	585	586	39,569
17/8/2006	586	578	38,009
18/8/2006	578	525	15,649
21/8/2006	525	501	35,299
22/8/2006	501	478	56,728
23/8/2006	478	480	70,068
24/8/2006	480	527	45,765
25/8/2006	527	570	151,510
28/8/2006	570	587	64,043
29/8/2006	587	592	84,594
30/8/2006	592	592	103,643
31/8/2006	592	595	61,920
1/9/2006	595	602	99,649
4/9/2006	602	645	158,563
5/9/2006	645	77.5	36,000
6/9/2006	77.5	84.5	167,186
7/9/2006	84.5	92	54,336
8/9/2006	92	100	900,448
11/9/2006	100	103	471,636
12/9/2006	103	105	345,226
13/9/2006	105	94	356,142
14/9/2006	94	85	152,550
15/9/2006	85	77	198,915
18/9/2006	77	69.5	937,585
19/9/2006	69.5	63	876,900
20/9/2006	63	61.5	1,874,488
21/9/2006	61.5	61	1,430,336
22/9/2006	61	67.5	527,449
25/9/2006	67.5	71	1,167,700
26/9/2006	71	76.5	605,700
27/9/2006	76.5	78	675,354
28/9/2006	78	78	908,135
29/9/2006	78	76	512,560
2/10/2006	76	69	446,100
4/10/2006	69	70	589,270
5/10/2006	70	70	515,660

6/10/2006	70	68.5	821,100
9/10/2006	68.5	69	263,100
11/10/2006	69	68.5	205,766
12/10/2006	68.5	69	213,780
13/10/2006	69	64	328,940
16/10/2006	64	66.5	133,271
17/10/2006	66.5	68.5	337,290
18/10/2006	68.5	64.5	354,881

Sasini

Date	Previous Deal	Weighted Average Price	Total Shares Traded
3/1/2007	140	135	63800
4/1/2007	135	144	92955
5/1/2007	144	139	77800
8/1/2007	139	134	108151
9/1/2007	134	140	115200
10/1/2007	140	144	172100
11/1/2007	144	148	47600
12/1/2007	148	149	313200
15/01/2007	149	154	114000
16/01/2007	154	140	320500
17/01/2007	140	144	26400
18/01/2007	144	146	91400
19/01/2007	146	145	119594
22/01/2007	145	142	9900
23/01/2007	142	145	9050
24/01/2007	145	144	6979
25/01/2007	144	142	6050
26/1/2007	142	140	27000
29/1/2007	140	143	23600
30/1/2007	143	144	33900
31/1/2007	144	140	14275
1/2/2007	140	134	26100
2/2/2007	134	135	27464
5/2/2007	135	136	6643
6/2/2007	136	132	22300
7/2/2007	132	134	28400
8/2/2007	134	131	41300

9/2/2007	131	131	89280
12/2/2007	131	131	31300
13/2/2007	131	131	38800
14/2/2007	131	130	17500
15/02/2007	130	15.25	15100
16/02/2007	15.25	16.75	700
19/02/2007	16.75	18.4	1200
20/02/2007	18.4	20	3100
21/02/2007	20	22	2700
22/02/2007	22	24	173396
23/02/2007	24	24	375100
26/02/2007	24	24	148999
28/02/2007	24	22.5	122955
2/3/2007	22.5	20.25	49600
5/3/2007	20.25	18.25	106900
6/3/2007	18.25	16.45	114000
7/3/2010	16.45	16.75	97500
8/3/2007	16.75	16.55	44600
9/3/2007	16.55	17.1	52600
12/3/2007	17.1	17.05	69500
13/03/2007	17.05	17.6	47500
14/03/2007	17.6	18.45	46297
15/03/2007	18.45	17.5	102800
16/03/2010	17.5	17	134100
19/03/2007	17	17.55	44800
20/03/2007	17.55	16.1	70920
21/03/2007	16.1	15.7	15750
22/03/2007	15.7	14.8	77034
23/03/2007	14.8	15	65518
26/03/2007	15	15.8	38400
27/03/2007	15.8	16.3	36600
28/03/2007	16.3	17.2	35500
29/03/2007	17.2	19.9	120300
30/03/2007	19.9	18.3	118100

CMC

Date	Previous Deal	Weighted Average Price	Total Shares Traded
8/1/2007	226	238	115348

9/1/2007	238	246	158900
10/1/2007	246	264	261122
11/1/2007	264	287	225085
12/1/2007	287	224	231569
15/1/2007	224	211	109600
16/01/2007	211	204	97900
17/2/2007	204	199	200217
18/1/2007	199	199	53398
19/1/2007	199	196	75166
22/1/2007	196	190	44424
23/1/2007	190	190	70989
24/1/2007	190	190	70087
25/1/2007	190	185	67175
26/1/2007	185	184	37700
29/1/2007	184	187	42600
30/01/2007	187	183	109500
31/01/2007	183	181	165900
1/2/2007	181	173	41400
5/2/2007	173	164	44390
7/2/2007	164	176	28300
9/2/2007	176	170	136995
13/02/2007	170	166	40421
15/02/2007	166	166	22400
16/02/2007	166	160	111617
19/02/2007	160	159	205300
20/02/2007	159	162	19700
21/02/2007	162	162	260072
22/02/2007	162	159	188300
23/02/2007	159	160	164500
26/02/2007	160	157	166676
28/02/2007	157	16.05	203439
1/3/2007	16.05	16.8	85900
5/3/2007	16.8	16.4	137200
6/3/2007	16.4	16.15	90900
7/3/2007	16.15	15.7	51900
8/3/2007	15.7	16.1	136300
9/3/2007	16.1	16.1	316900
12/3/2007	16.1	15.6	118900
13/3/2007	15.6	16.2	165500
14/3/2007	16.2	15.5	155535

15/3/2007	15.5	15.65	23250
16/3/2007	15.65	15.1	87935
19/3/2007	15.1	13.75	189658
20/3/2007	13.75	13.5	458900
21/3/2007	13.5	12.95	725800
22/03/2007	12.95	12.7	672800
23/03/2007	12.7	11.95	966600
26/03/2007	11.95	11.6	228990
27/03/2007	11.6	12.05	225400
28/03/2007	12.05	13.25	118400
29/03/2007	13.25	14.5	2672500
30/3/2007	14.5	15	1409800
2/4/2007	15	15.45	547100
3/4/2007	15.45	15.95	589700
4/4/2007	15.95	15.7	551304
5/4/2007	15.7	14.45	978200
10/4/2007	14.45	14.9	503600
11/4/2007	14.9	14.65	206000
12/4/2007	14.65	14.7	268300
13/4/2007	14.7	14.55	138100

KCB

Date	Previous Deal	Weighted Average Price	Total Shares Traded
19/2/2007	258	260	222,319
20/2/2007	260	251	139,805
21/2/2007	251	252	176,206
22/2/2007	252	249	256,894
23/2/2007	249	245	122,239
26/2/2007	245	244	153,404
27/2/2007	244	238	168,847
28/2/2007	238	231	211,538
1/3/2007	231	224	186,120
2/3/2007	224	227	137,462
5/3/2007	227	239	1,061,616
6/3/2007	239	241	232,326
7/3/2007	241	223	196,746
8/3/2007	223	217	612,418
9/3/2007	217	223	245,880

12/3/2007	223	219	112,426
13/3/2007	219	220	225,797
14/3/2007	220	219	59,088
15/3/2007	219	219	311,364
16/3/2007	219	220	553,970
19/3/2007	220	220	183,284
20/3/2007	220	216	117,306
21/3/2007	216	198	63,499
22/3/2007	198	185	173,665
23/3/2007	185	169	97,775
26/3/2007	169	174	270,061
27/3/2007	174	179	524,348
28/3/2007	179	196	67,795
29/3/2007	196	215	73,241
30/3/2007	215	223	445,333
2/4/2007	223	208	199,224
3/4/2007	208	22.75	749,632
4/4/2007	22.75	25	1,758,000
5/4/2007	25	25	1,411,414
10/4/2007	25	24.75	888,891
11/4/2007	24.75	25	892,133
12/4/2007	25	24.75	809,600
13/4/2007	24.75	25	843,866
16/4/2007	25	25.5	225,912
17/4/2007	25.5	25	637,189
18/4/2007	25	24.5	329,789
19/4/2007	24.5	24	453,400
20/4/2007	24	25	170,324
22/4/2007	25	24	793,734
24/4/2007	24	24.75	1,596,450
25/4/2007	24.75	24	429,914
26/4/2007	24	24	310,200
27/4/2007	24	24	685,533
30/4/2007	24	25	556,535
2/5/2007	25	25	1,942,690
3/5/2007	25	25	496,452
4/5/2007	25	25	281,571
7/5/2007	25	25.75	197,562
8/5/2007	25.75	25.75	205,900
9/5/2007	25.75	25.75	397,500

10/5/2007	25.75	25.75	143,314
11/5/2007	25.75	25.75	263,566
14/5/2007	25.75	24.75	975,400
15/5/2007	24.75	24.5	344,131
16/5/2007	24.5	24.75	424,949
17/5/2007	24.75	24.75	536,100

NATION MEDIA GROUP

Date	Previous Deal	Weighted Average Price	Total Shares Traded
13/06/2008	341	340	14,248
16/06/2008	340	345	3,814
17/06/2008	345	350	5,400
18/06/2008	350	352	10,700
19/06/2008	352	354	13,600
20/06/2008	354	350	39,300
23/06/2008	350	350	14,000
24/06/2008	350	348	77,656
25/06/2008	348	346	5,800
26/06/2008	346	347	19,300
27/06/2008	347	351	18,281
30/06/2008	351	349	15,900
1/7/2008	349	350	5,800
2/7/2008	350	350	5,449
3/7/2008	350	347	8,290
4/7/2008	347	342	2,500
7/7/2008	342	346	800
8/7/2008	346	347	6,641
9/7/2008	347	345	3,900
10/7/2008	345	345	1,909
11/7/2008	345	344	4,599
14/07/2008	344	341	4,934
15/07/2008	341	339	46,775
16/07/2008	339	334	12,365
17/07/2008	334	333	6,500
18/07/2008	333	333	19,054
21/07/2008	333	333	8,199
22/07/2008	333	337	5,800
23/07/2008	337	337	10,890

24/07/2008	337	342	13,366
25/07/2008	342	339	24,395
28/07/2008	340	263	1,400
29/07/2008	263	237	200
30/07/2008	237	214	900
31/07/2008	214	205	500
1/8/2008	205	185	200
4/8/2008	185	169	52,968
5/8/2008	169	160	5,880
6/8/2008	160	160	32,793
7/8/2008	160	165	5,400
8/8/2008	165	162	4,121
11/8/2008	162	164	72,680
12/8/2008	164	160	67,768
13/8/2008	160	159	9,800
14/8/2008	159	159	20,100
15/8/2008	159	160	5,500
18/8/2008	160	164	43,554
19/8/2008	164	165	24,800
20/8/2008	165	166	55,300
22/8/2008	166	166	39,794
25/8/2008	166	165	26,974
26/8/2008	165	165	59,700
27/8/2008	165	164	68,100
28/8/2008	164	161	15,100
29/8/2008	161	160	9,900
1/9/2008	160	158	20,000
2/9/2008	158	158	92,300
3/9/2008	158	156	21,734
4/9/2008	156	155	7,600
5/9/2008	155	149	96,500
8/9/2008	149	149	6,300

EQUITY

Date	Previous Deal	Weighted Average Price	Total Shares Traded
11/2/2009	148	147	43,500
12/2/2009	147	145	21,500
13/02/2009	145	142	25,700

16/02/2009	142	145	173,700
17/02/2009	145	152	228,300
18/02/2009	152	150	104,900
19/02/2009	150	139	116,500
20/02/2009	139	135	53,200
23/02/2009	135	124	45,100
24/02/2009	124	124	20,500
25/02/2009	124	125	62,100
26/02/2009	125	121	84,100
27/02/2009	121	118	19,730
2/3/2009	118	113	29,400
3/3/2009	113	105	88,900
4/3/2009	105	96	404,123
5/3/2009	96	94	134,500
6/3/2009	94	93.5	327,040
9/3/2009	93.5	95	260,434
10/3/2009	95	99	77,700
11/3/2009	99	103	59,121
12/3/2009	103	113	20,500
13/03/2009	113	123	67,900
16/03/2009	123	130	148,790
17/03/2009	130	131	171,400
18/03/2009	131	132	71,100
19/03/2009	132	130	349,000
20/03/2009	130	128	86,950
23/03/2009	128	125	170,000
24/03/2009	125	123	113,200
25/03/2009	123	147	102,600
26/03/2009	147	13.7	374,400
27/03/2009	13.7	14.5	267,800
30/03/2009	14.5	15.95	103,200
31/03/2009	15.95	17.4	1,084,200
1/4/2009	17.4	17.75	1,489,000
2/4/2009	17.75	17.85	1,455,700
3/4/2009	17.85	17.8	1,194,400
6/4/2009	17.8	18.15	1,058,800
7/4/2009	18.15	18.45	443,000
8/4/2009	18.45	17.95	454,700
9/4/2009	17.95	16.2	645,400
14/4/2009	16.2	14.6	195,550

15/4/2009	14.6	13.15	355,700
16/4/2009	13.15	11.85	1,445,800
17/4/2009	11.85	12.1	8,764,800
20/4/2009	12.1	12.9	3,238,100
21/4/2009	12.9	13	5,034,400
22/4/2009	13	13.1	1,170,800
23/4/2009	13.1	14.05	2,650,400
24/4/2009	14.05	14	3,979,200
27/4/2009	14	14.05	2,167,300
28/4/2009	14.05	13.9	1,395,300
29/4/2009	13.9	13.5	905,500
30/4/2009	13.5	13.55	1,095,100
4/5/2009	13.55	13.65	1,099,500
5/5/2009	13.65	13.75	3,421,300
6/5/2009	13.75	13.9	991,400
7/5/2009	13.9	13.85	2,117,300
8/5/2009	13.85	13.9	2,661,500
11/5/2009	13.9	14	1,447,600

KENOL KOBIL

Date	Previous Deal	Weighted Average Price	Total Shares Traded
22/04/2010	76.5	78	131,000
23/04/2010	78	77.5	2,900
24/04/2010	77.5	78.5	13,200
25/04/2010	78.5	80	10,300
26/04/2010	80	82.5	15,900
27/04/2010	82.5	84.5	26,200
28/04/2010	84.5	82.5	20,400
29/04/2010	82.5	84	56,900
30/04/2010	84	84	15,600
3/5/2010	84	84	4,700
4/5/2010	84	84	58,400
5/5/2010	84	90.5	25,100
6/5/2010	90.5	93.5	123,100
7/5/2010	93.5	101	42,400
10/5/2010	101	103	108,700
11/5/2010	103	91	156,100
12/5/2010	91	95	78,900

13/5/2010	95	100	55,200
14/5/2010	100	106	113,800
17/5/2010	106	105	65,000
18/5/2010	105	106	73,200
19/5/2010	106	104	50,800
20/5/2010	104	104	287,800
21/5/2010	104	107	124,900
24/5/2010	107	102	185,300
25/5/2010	102	100	388,500
26/5/2010	100	99.5	15,100
27/5/2010	99.5	98	118,200
28/5/2010	98	99.5	140,200
31/5/2010	99.5	100	105,500
2/6/2010	100	10	935,900
3/6/2010	78	10	577,100
4/6/2010	10	9.95	413,900
7/6/2010	9.95	9.95	1,168,800
8/6/2010	9.95	9.9	924,000
9/6/2010	9.9	10	259,000
10/6/2010	10	9.9	892,800
11/6/2010	9.9	9.55	1,251,500
14/6/2010	9.55	9.85	485,100
15/6/2010	9.85	9.95	598,200
16/6/2010	9.95	9.9	698,700
17/6/2010	9.9	9.75	1,363,200
18/6/2010	9.75	9.8	430,100
21/6/2010	9.8	9.55	755,300
22/6/2010	9.55	9.7	882,000
23/6/2010	9.7	9.55	913,600
24/6/2010	9.55	9.7	255,500
25/6/2010	9.7	9.65	183,400
28/6/2010	9.65	9.85	341,500
29/6/2010	9.85	9.6	783,200
30/6/2010	9.6	9.15	1,181,300
1/7/2010	9.15	9.85	142,000
2/7/2010	9.85	9.85	900,100
5/7/2010	9.85	9.9	1,466,300
6/7/2010	9.9	9.9	358,800
7/7/2010	9.9	10	1,111,300
8/7/2010	10	10.4	665,400

9/7/2010	10.4	10.65	1,003,200
12/7/2010	10.65	10.75	9,242,200
13/7/2010	10.75	10.95	1,786,600
14/7/2010	10.95	10.9	653,400

KPLC

Date	Previous Deal	Weighted Average Price	Total Shares Traded
7/10/2010	237	242	1,042,800
8/10/2010	242	234	118,700
11/10/2010	234	236	60,200
12/10/2010	236	234	176,300
13/10/2010	234	232	42,700
14/10/2010	232	231	88,000
15/10/2010	231	231	107,300
18/10/2010	231	232	12,700
19/10/2010	232	232	61,000
21/10/2010	232	231	60,400
22/10/2010	231	231	16,200
25/10/2010	231	227	51,600
26/10/2010	227	229	25,200
27/10/2010	229	228	6,000
28/10/2010	228	228	12,700
29/10/2010	228	225	184,400
1/11/2010	225	223	150,800
2/11/2010	223	224	29,500
3/11/2010	224	223	31,700
4/11/2010	223	222	49,500
5/11/2010	222	220	107,200
8/11/2010	220	224	30,500
9/11/2010	224	218	125,700
10/11/2010	218	218	21,500
11/11/2010	218	214	23,500
12/11/2010	214	212	28,700
15/11/2010	212	211	10,900
16/11/2010	211	211	114,900
17/11/2010	211	214	35,000
18/11/2010	214	219	4,500
19/11/2010	219	225	257,700

22/11/2010	225	28	47,700
23/11/2010	28	29.5	325,300
24/11/2010	29.5	29.75	611,800
25/11/2010	29.75	27.75	1,334,500
26/11/2010	27.75	24	258,800
29/11/2010	24	22.75	103,900
30/11/2010	22.75	22.5	219,900
1/12/2010	22.5	23.25	150,700
2/12/2010	23.25	24.25	170,800
3/12/2010	24.25	23.75	321,700
6/12/2010	23.75	23	233,100
7/12/2010	23	22.75	413,600
8/12/2010	22.75	22.75	1,512,100
9/12/2010	22.75	23	633,500
14/12/2010	23	22.75	550,100
16/12/2010	22.75	22.25	520,600
17/12/2010	22.25	22.25	867,400
20/12/2010	22.25	22	555,000
21/12/2010	22	21.75	494,000
22/12/2010	21.75	21.75	754,400
23/12/2010	21.75	22	427,900
24/12/2010	22	22.25	301,000
27/12/2010	22.25	22.25	90,300
28/12/2010	22.25	22.25	213,600
29/12/2010	22.25	22.75	119,700
30/12/2010	22.75	22.75	390,900
31/12/2010	22.75	24	65,000
3/1/2011	24	25.75	154,200
4/1/2011	25.75	24.5	353,900
5/1/2011	24.5	24.75	693,700

BARCLAYS

Date	Previous Deal	Weighted Average Price	Total Shares Traded
13/4/2011	65	63.5	165,600
14/4/2011	63.5	62.5	211,800
15/4/2011	62.5	63	306,000
18/4/2011	63	63	55,500
19/4/2011	63	63	69,100

20/4/2011	63	63.5	235,000
21/4/2011	63.5	64.5	168,800
26/4/2011	64.5	64.5	92,100
27/4/2011	64.5	65	73,100
28/4/2011	65	65.5	148,900
29/4/2011	65.5	66	169,600
3/5/2011	66	66	116,400
4/5/2011	66	66	1,504,700
5/5/2011	66	66	571,700
6/5/2011	66	66	114,800
9/5/2011	66	66	204,700
10/5/2011	66	66	527,600
11/5/2011	66	65.5	1,131,900
12/5/2011	65.5	66	534,500
13/5/2011	66	66	208,300
16/5/2011	66	66	134,600
17/5/2011	66	66	242,300
18/5/2011	66	66	150,800
19/5/2011	66	66	342,000
20/5/2011	66	66	480,700
23/5/2011	66	66.5	368,800
24/5/2011	66.5	67.5	257,200
25/5/2011	67.5	69.5	489,100
26/5/2011	69.5	68	1,454,500
27/5/2011	69.5	69	465,700
30/5/2011	69	63.5	318,100
31/5/2011	63.5	17.85	250,800
2/6/2011	17.85	17.75	202,800
3/6/2011	17.75	17.65	256,700
6/6/2011	17.65	17.55	671,700
7/6/2011	17.55	17.4	351,600
8/6/2011	17.4	17.15	692,400
9/6/2011	17.15	16.9	450,200
10/6/2011	16.9	16.9	373,200
13/6/2011	16.9	16.35	587,100
14/6/2011	16.35	16.35	1,176,800
15/6/2011	16.35	16.4	846,000
16/6/2011	16.4	16.85	1,084,900
17/6/2011	16.85	16.9	1,039,600
20/6/2011	16.9	17.25	962,300

21/6/2011	17.25	17.4	1,320,800
22/6/2011	17.4	17.35	1,122,500
24/6/2011	17.35	17.45	929,000
27/6/2011	17.45	17.45	1,106,000
28/6/2011	17.45	17.4	752,500
29/6/2011	17.4	17.4	4,806,100
30/6/2011	17.4	17.35	3,119,100
1/7/2011	17.35	17.2	914,700
4/7/2011	17.2	17.1	448,100
5/7/2011	17.1	16.9	375,500
7/7/2011	16.9	16.95	1,776,200
8/7/2011	16.95	16.8	285,400
11/7/2011	16.8	16.8	1,096,800
12/7/2011	16.8	16.75	224,900
13/7/2011	16.75	16.6	403,300
14/7/2011	16.6	16.5	494,100