THE EFFECTS OF SECONDARY EQUITY OFFERING ON STOCK RETURNS OF FIRMS QUOTED ON THE NAIROBI STOCK EXCHANGE

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A MANAGEMENT RESEARCH PROJECT AS A REQUIREMENT OF THE DEGREE OF MASTERS OF BUSINESS ADMINISTRATION,
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DECLARATION

I declare that this is my original work and has not been presented for a degree in any other University.

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D61/P/7124/04

SIGNED.....**DATE**11/11/2007

I confirm that I am the supervisor of this student and that I have read this final draft and I believe it to be the student's own original work.

Supervisor

MR. JAMES M. KARANJA
LECTURER

UNIVERSITY OF NAIROBI

SIGNED.....**DATE**NOV 7, 2007

DEDICATION

To my friends, family working colleagues and lecturers in the University of Nairobi staff at the school of business.

To my wife and children for their moral support.

ACKNOWLEDGEMENT

I would like to thank all those that helped me to ensure the success of this project. This included the NSE that provided me with the data needed to carry out research for this project.

I would also like to thank my supervisor for the useful comments that he gave to me in carrying out the research.

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ABSTRACT

Seasoned equity offerings are offerings of new shares in addition to a firm's already existing shares. As equity offerings are essentially the least preferable from management perspective (pecking order hypothesis) of attracting cash, companies will only be inclined to do so when the benefits outweigh the costs. Issue of secondary shares to the market may cause reactions in the market activity. This study therefore sought to determine the effects of secondary equity offering on stock returns of firms quoted on the Nairobi Stock Exchange.

The objectives of the study were to determine the effect of announcement of secondary equity offerings on stock prices of firms listed on the NSE as well as to investigate the impact of the announcement on trading volume before and after the secondary issue. The study adopted an event study methodology as its research design. This design was used to identify companies that had issued secondary shares to the market. This led to the involvement of ten companies that had been listed in the NSE and had issued secondary shares. Secondary data was used for this study and it was collected from the Nairobi Stock Exchange in Nairobi.

The result of the study showed that the direction of share price and abnormal returns after the announcement was inclusive. The market reacted differently for different types of stocks. The abnormal returns were however so small and this meant that the details of a secondary issue or rights issue does not shock the market in a significant way. However the amount of shares traded was more at the post announcement period than in the pre announcement period for most companies involved in the study. This provided an explanation that the announcement had an effect in increasing the volume of trade.

CHAPTER ONE: INTRODUCTION

1. 1 Background of the Study:

1.1.1 Purpose of Equity stock offering

Equity financing involves the raising of funds through the sale of company equity stock. The funds that a firm receives from investors can expand business transactions for many reasons. There are several reasons why firms issue stock: firstly to alter ownership structure- issuing stocks provide new investors to the firm and therefore may alter ownership structure. Secondly, to finance investments- a firm may issue stock in order to finance new investments for example to develop new products. Thirdly, to alter leverage- a firm may issue stock in order to alter leverage. Listed companies typically raise additional equity from existing shareholders or new investors. In issuing equity companies can choose between private placements and a public issue. There are two types of public issues; i.e. initial public offers and seasoned equity offerings.

1.1.2 Seasoned Equity Offerings

Seasoned (secondary) equity offerings (SEO) are offerings of new shares in addition to a firm's already existing shares. As equity offerings are essentially the least preferable of attracting cash, companies will only be inclined to do so when the benefits outweigh the costs (Bayless and Chaplinsky, 1996).

Event studies introduced by Fama et al. (1969) produce useful evidence on how stock prices respond to information. Several empirical studies have examined the effect of announcements of secondary equity offerings on stock price returns. It is well documented that investors react negatively to announcements of secondary equity offerings. One of the explanations for this

reaction is the Leland and Pyle (1977) signaling effect-sales of shares by better informed investors signal that they believe shares are overpriced. The other is that of Myers and Majluf (1984) adverse selection problem, that goes beyond the pure signaling effect. The mere act of issuing equity conveys a negative signal about the true value of the firm that leads to suboptimal investment decisions. These findings are consistent with several models in the literature that assume the existence of asymmetric information between the various participants in the capital markets. The implication of these models is that the unfavourable market reaction to equity offerings is the result of the release of unfavourable information regarding future earnings.

In the signaling model (also know as the asymmetric information model), managers possesses non public information about firm's true worth and act in the interests of current shareholders. They issue additional shares if and only if they consider the stock to be overvalued (Myers and Majluf, (1984)). Supporting this approach Masulis and Korwar (1986) report that firms tend to offer equity after a period of good performance.

The signaling approach interprets the finding that equity offerings tend to follow higher stock prices as evidence of exploitative market timing. While price exploitation may play a dominant role, this interpretation ignores the possibility that new investment opportunities may follow higher stock prices. Higher stock prices lower the cost of equity capital thus potentially increasing the number of projects with positive net present value.

In general. the typical results from event studies showed that security prices seemed to adjust to new information within a day of the event announcement. This is consistent with the efficient market hypotheses (EMH).

1.2 Statement of Problem.

Financial theory suggests that the financing by equity presents the most costly means of attracting capital. Decisions by the firms management to attract funds by issuing equity is therefore undertaken if funds cannot be attracted in any other way or if the shares of the firm are over valued such that the benefits of an issue outweigh the costs.

The government has also played a big part in its effort to divest from parastatals by off-loading its shares through the NSE either through IPO or through secondary equity offering. It is very clear that many changes have taken place in the stock exchange market. Shareholders and investors have become increasingly aware of the operations of the NSE. They are now more vigilant and informed on the companies they either are shareholders or wish to invest in. In Kenya stock offerings (primary or secondary) are not only influenced by corporations financing needs but also by the Kenyan government privatization program where all the monies raised goes directly to the Exchequer. Examples include Kenya Commercial Bank, National Bank, and Mumias.

Several empirical studies have found out that when management announces an offering of additional equity stock, the firms existing shares typically lose value. This is consistent with the signaling theory. However, these studies have not been done in the Kenyan stock market. There is a need to investigate whether there was an abnormal increase in share trading activity and how

prices were affected before, during and after the secondary equity issues that have taken place in the NSE.

Local studies in the area of public offerings have been undertaken by such researchers as Jumba (2002) on the initial public offer performance in Kenya , Njogu (2003) on the price impact of commercial paper issue announcements, Njoroge (2003) on the impact of rights issues on stock prices of companies listed on the NSE and Maina (2004) on the analysis of performance of IPOs at the NSE. This study will investigate the applicability of the signaling theory to the firms quoted in the Nairobi stock exchange. In this study, attempts were made to evaluate the performance of seasoned equity offerings over the period and how the announcement of the equity offering affected the stock prices of the issuing firms. There is no notable research that has been undertaken to date on this context. This therefore serves as a springboard for this study to investigate the effect of secondary equity offering on stock prices of firms quoted in the NSE

1.3 The Objectives of the study

The research will address the following two major objectives:

a) To determine the effect of the announcement of secondary equity offerings on stock returns of the firms quoted at the NSE.

b) To investigate the impact of the announcement on trading volume before and after the secondary issue.

1.4 Importance of the study

This study will be beneficial to the firms listed and trading at NSE as well as firms planning to be listed at NSE. Specifically it will be beneficial to the following;

a) Quoted firms.

These firms will be able to know how it will affect the prices at NSE when they want to issue secondary stock through the Nairobi stock exchange. Hence, will be able to plan on the correct price.

b) Current and prospective investors.

The study will also benefit them by helping them understand the effects of seasoned equity issues on the stock prices and thus help them make informed investment decisions.

c) Regulatory bodies and government.

Other government parastatals planning to privatize can also use the information to its advantage. The capital markets authority will be able to make decisions and formulation of policies for future secondary stock offerings.

d) Scholars and academic Researchers

The study information obtained will be of great help to scholars and academic researchers who will find the findings of this study important to enhance their understanding of the NSE.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

2.1.1 The MM Capital Structure Irrelevant Theory

According to MM (1958) capital structure irrelevance theory the total cash flows company makes for all investors (debt holders and shareholders) are the same regardless of capital structure. Changing the capital structure does not change the total cash flows. Therefore the total value of the assets that give ownership of these cash flows should not change. The cash flows will be divided up differently so the total value of each class of security (e.g. shares and bonds) will change, but not the total of both added together.

Looking at this another way, if you wanted to buy a company free of its debt, you would have to buy the equity and buy, or pay off, the debt. Regardless of the capital structure you would end up owning the same streams of cash flows. Therefore the cost of acquiring the company free of debt should be the same regardless of capital structure.

Furthermore, it is possible for investors to mimic the effect of the company having a different capital structure. For example, if an investor would prefer a company to be more highly geared this can be simulated by buying shares and borrowing against them. An investor who would prefer the company to be less highly geared can simulate this by buying a combination of its debt and equity.

MM (1958) theory depends on simplifying assumptions such as ignoring the effects of taxes. However, it does provide a starting point that helps understand what is, and is not, relevant to why capital structure does seem to matter to an extent. The different tax treatments of debt and equity

are part of the answer, as are agency problems (conflicts of interest between shareholders, debt holders and management).

There are extensions to MM (1963) theory which suggest that the actions of market forces, together with the tax treatment of debt and equity income in the hands of investors, means that for most companies the gains that can be made by adjusting capital structure will be fairly small.

Given that companies would not deliberately adopt inefficient capital structures, we can assume that all companies have roughly equivalently good capital structures - so from a valuation point of view we can reasonably assume that capital structure is irrelevant

2.1.2 Asymmetric Information and Security Prices

Several information-based models of security issuance explain the consistently negative announcement-period stock price reaction. These models are based on the hypothesis that the information sets of managers and insiders do not perfectly overlap with those of investors. For example, Miller and Rock (1985) argue that since the firm's investment policy is fixed, the decision to issue equity signals poor earnings and cash flow. They predict a negative equity price reaction to the announcement of an equity issue. Similarly, Myers and Majluf (1984) contend that managers have superior information about the true value of the firm's assets in place and its future growth opportunities. They show that when managers believe their firm's equity is undervalued, they do not issue new equity. The decision not to issue maintains the value of existing shareholders' wealth. Therefore, managers issue equity when their firm's stock is overpriced, resulting in a wealth transfer from new to current shareholders. Myers (1984) notes that in the strict asymmetry model, a firm would issue equity only if it was overpriced or if it had exhausted its "safe" borrowing capacity.

The different reasons why a company issues equity predict a negative impact on the price level of the firm's shares. This is explained by the asymmetry in information between management of the firm and the shareholders.

Empirical evidence, such as that of Asquith and Mullins (1986), indicates that information asymmetry between managers and outside investors is a robust explanation for the pattern of announcement-period returns around a new equity offering. Bayless and Chaplinsky (1996) find that when there are low levels of information asymmetry (i.e., in hot markets) the announcement-period returns are significantly higher than in cold markets. They conclude that firms try to take advantage of these "windows of opportunity" as they decide when to schedule a new equity issue. Jensen (1986) free cash flow theory predicts that announcement of equity offerings has a negative impact on stock prices. This is because the proportion of management ownership gets diluted and increases the resources available for any negative investment opportunities that managers may choose to undertake.

Jung et al (1996) argues that since managers are aware of negative stock price reactions to the announcement of a seasoned equity offering, they will time new offerings in order to reduce the information asymmetry which often coincides with periods of superior stock price performance. This period is referred to as the window of opportunity (Loughran and Ritter, 1995). The negative stock price performance at time of equity offerings announcement has also been linked to a shortage of cash within the firm. This originates from the Miller and Rock (1985) dividend policy theory. When a firm makes a dividend announcement, investors will infer a change in implied net operating cash flow. When this is generalized to seasoned equity offerings announcements, a

larger than expected cash in-flow through an equity offering implies there is a lower than expected implied net operating cash flow and therefore signals bad news to investors.

Loughran and Ritter (1995) and Spiess and Affleck-Graves (1995) show that Seasoned Equity Offering (SEO) firms experience poor post issue stock performance. SEO stocks under perform various benchmarks by about 30 % on average over a 5 year period. Loughran and Ritter (1995) suggest that their findings of post-issue underperformance is consistent with managers taking advantage of information and issuing equity when the firm is overvalued. They also suggest that their results regarding long run underperformance of SEO firms are consistent with equity markets in which misevaluations are important determinants of market prices and corporate financing choices.

Lee (1997) re-examines this hypothesis of managers taking advantage of information and after not finding support for this hypothesis, concludes that post issue underperformance is more consistent with the free cash flow problem. He shows that top executive trading before mainly primary issues (including less than 50% secondary issues) does not predict underperformance.

The pecking order theory developed by Myers (1984) and Myers and Majluf (1984) is based on the idea that insiders know more about their firm's value and future projects than outside investors and maximize the wealth of old shareholders. The insiders/managers avoid issuing equity when they believe the firm to be undervalued. Consequently, new equity issue conveys unfavourable information. Lucas and McDonald (1990) show that a firm with undervalued stock tends to delay issuing equity until its stock price raises to its fair value. Therefore, when managers have private information about the firm value, they will avoid issuing equity at times when the stock is undervalued.

2.1.3 Market efficiency

Traditionally, economists and finance professionals believed that stock prices are influenced by economic "fundamentals" Haubrich (1997). The fundamental approach contends that investors value the income from stock, especially dividend payouts. The value of the dividend stream which consists of two components (i.e. the dividend stream itself and the associated risk premium) thus reflects the value of the share (Haubrich, 1997). This view has however changed in the recent past due to the collapse of stock markets and overreaction of markets such as the Great Bull Market of 1996-97. Scholars now question whether stock prices are influenced by market fundamentals or speculative "bubbles" especially where principally rational market players are involved.

The efficient markets view postulates that prices follow a random walk, though prices fluctuate to extremes, they are brought back (regression to the mean) to equilibrium in time. It thus supports the fundamental approach. The behavioral finance view contends that investors push prices to unsustainable levels in both directions. Investor optimists are disappointed and pessimists are surprised. Stock prices are future estimates, a forecast of what investors expect tomorrow's price to be, rather than an estimate of the present value of future payments streams (www.behaviouralfinance.net).

If the proponents of behavioural finance are correct, several implications concerning the behaviour of financial markets may emerge. These include the following: over or under-reaction to price changes or news, extrapolation of past trends into the future, lack of attention to fundamentals underlying a stock, Focus on popular stocks and seasonal price cycles. If such

patterns exist, there may be scope for investors to exploit the resulting pricing anomalies in order to obtain superior risk adjusted returns. On a theoretical level, if exploitable pricing anomalies exist, the current credibility of the Efficient Market Hypothesis is undermined (Brabazon, 2000).

The forces of demand and supply drive stock prices in financial markets. Market players create demand and supply. Key market players include domestic institutional investors, foreign institutional investors and the domestic general public. In Kenya, the domestic institutional investors are by far, the most influential investor group. They include banks, insurance or pension funds, fund management companies and wealthy individuals (www.galbithink.org/topics/ka/itypes.htm).

Since the inception of the Nairobi Stock Exchange, institutional investors have played an important role in the stock market and by extension, in determining equity prices.

2.1.4 Efficient Market Hypothesis and Capital Asset Pricing Model

Eugene Fama (1970) argued that in an efficient market, prices reflect the total information that relates to a share. Fama's efficient market hypothesis (EMH) was consequently refined to constitute three forms of informational efficiency as follows:

1. The weak form implies that one cannot take advantage of the knowledge of historical price movements to earn superior returns on investments. In other words, today's share price is a reflection of yesterday's share price.

2. The semi-strong form implies that today's share price incorporates all publicly available information.
3. The strong form implies that today's share price incorporates all information, whether public or private.

The Efficient Market Hypothesis transformed beliefs about the pricing and operation of capital markets. This is because it confirmed the belief that markets are a near-perfect allocational device i.e. markets are efficient (Frankfurter & McGoun, 1995). Accordingly, governments should not attempt to interfere with market operations, as this would create inefficiency in markets.

Sharpe (1964), Lintner (1965), and Black (1972) generated the capital asset pricing model (CAPM). This is a statistically testable model that describes the pricing mechanism of securities. CAPM postulates that "beta" determines the risk for which investors must be compensated. Beta represents the relationship between a firm's returns and market returns. The Capital Asset Pricing Model is used to test the Efficient Market Hypothesis.

2.1.5 The Signaling Model

Explanations of market reactions to equity issues often rely on models of asymmetric information. In these models, management's internal information about the prospects of the company is inferred by investors from observable management actions. Miller and Rock (1985) argue that an unexpected equity issues signals bad news.

Equity issues by financial institutions are considered more predictable because of capital requirements regulation, and therefore should cause a less negative reaction. However, the model

implies similar reactions to equity and debt financing decision that cannot be observed empirically. Abnormal stock returns are significant for announcements of eternal debt financing, according to results Mikkelson and Partch (1986)

The signaling theory states that the markets will be more efficient if sellers provide more information to the buyers. This theory can be applied in the financial markets too; a company increasing its dividends is signaling that its prospects are better. In short, signals help in better market efficiency. Signaling theory is based on the assumption that information is not equally available to all parties at the same time, and that information asymmetry is the rule. Information asymmetries can result in very low valuations or a sub-optimum investment policy. Signaling theory states that corporate financial decisions are signals sent by the company's managers to investors in order to shake up these asymmetries. These signals are the cornerstone of financial communications policy.

Under priced new issues allow the firms and insiders to sell future offerings at a higher price. This argument was formalized in signaling models by Allen & Faulhaber (1989), Welch (1989), and Grinblatt & Hwang (1989). In these models, issuing firms have private information about whether they have high or low values. They follow a dynamic issue strategy, in which the IPO will be followed by a seasoned offering. Depending on the parameters, high value firms may choose to under price their IPOs as a way of signaling that they are high value. In order for this to be worthwhile, they must benefit sufficiently at the time of the seasoned offering. Welch (1989) presents evidence that roughly one third of the firms going public conduct a seasoned equity issue within the next few years.

2.1.6 Behavioral models and post issue returns

According to Barberies, Sheifer, Vishny (1998) investor sentiment model, investors under react to news of low strength but significant statistical weight and they over-react to consistent sequence of good (or bad) news. The model is motivated by two psychological phenomena; conservatism and representativeness heuristic. Conservatism means that individuals are slow to change their belief when faced with new evidence.

2.1.7 Information and price pressure effects

Miller and Rock (1985) predict a negative stock price reaction to equity issues because they are perceived as releasing negative information about the firm's cash flows. In contrast to the negative information effect, equity issues can also be interpreted as favorable news about the firm's investment opportunities. In particular, since the additional capital must be committed by the existing shareholders, rights issues attest to the shareholders' confidence in their own firm's future. Rights issues are perceived as a signal that the firm has discovered new positive net present value projects, causing a positive re-evaluation of firm's shares. In addition to the extent that larger rights offerings are associated with larger net present value projects, the stock price reaction should be related to the size of the offerings. McConnell and Muscarella (1985) find that stock prices rise about 1% at the announcement of corporate investment increase. Masulis and Korwar (1986) conjecture that the negative stock price reaction to equity offering announcements of capital expenditure increases.

The price pressure argument assumes that at any given instant, the demand curve for a firm's share is downward- slopping and that an increased supply of shares decreases their price (Loderer

and Zimmermann. 1988). However, the predication conflicts with the classical view, which holds that in capital markets, near perfect substitute for a firm's securities are always available. According to the latter the issuing firm's shares and their substitute must sell at the same price, implying a horizontal demand curve for a firm's stock (Scholes, 1972).

2.1.8. Design of event studies

The event study methodology is well accepted and extensively used in finance. Researchers have long been interested in using the event study methodology to detect the effects of events on stock performance (Fama, Fisher, Jensen and Roll 1969). Fama (1998) and Kothari and Warner (1997) document many issues inherent in such techniques including risk adjustment, aggregation of security specific abnormal returns and testing of the statistical significance of abnormal returns.

The price of a stock reflects the time and risk discounted present value of all future cash flows that are expected to accrue to the holder of that stock. According to the semi-strong version of efficient market hypothesis, all publicly available information is reflected completely in an unbiased manner in the price of the stock, such that it is not possible to earn economic profits on the basis of this information. Therefore an unanticipated event can change the price of a stock. This change should equal the expected changes in the future cash flows of the firm or the riskiness of these cash flows. Thus an event is said to have an impact on financial performance of a firm if it produces an abnormal movement in the price of a stock. Broad market movements are usually subtracted from the stock's price movement in estimating the abnormal return.

An event study has four components: defining the event and announcement day, measuring the stock's return during the announcement period, estimating the expected return of the stock during

this announcement period in the absence of the announcement, and computing the abnormal return (actual return less expected return) and measuring its statistical and economic significance.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The chapter outlines the overall methodology used in the study. This includes the research design, population of the study, sample size, sample frame, data collection methods, research procedures and data analysis and presentation.

3.2 Research Design

The survey conducted an event study around the date of listing of seasoned equity issues and right issues of firms. Traditionally, event studies focus on outcomes of the firm affected by or initiating event. Event studies, introduced by Fama et al (1969) produce useful evidence on how stock prices respond to information. Many studies focus on returns in a short window around the event. The advantage of this approach is that because daily expected returns are close to zero, the model for expected returns does not have a big effect on inferences about expected return (any lag in the response of price to announcement is short lived).

In this study, the event window is defined as the day on which the announcement was made. Identification of the precise timing and thus use of one day event window makes it easier to detect any announcement related abnormal return. In order to capture any information about the equity issue that the market may have acquired before actual announcement, returns for an arbitrary 30 day period before the announcement was also computed. Similarly, the returns for the 30 day period following the announcement were also computed.

3.3 Population and Sample

The population of the study included all firms quoted in the NSE that have made equity issues. The sample was based on the 10 companies that have issued seasoned equity offerings and rights issues in the NSE between the period January 1996 through December 2006. These companies are:. Kenya Commercial Bank, EABL, ICDCI, Pan African Insurance, African Lakes, Unga Group, Standard Newspapers, Total Kenya, Uchumi Supermarkets, and CFC Group. For the purpose of this study rights issues offering were considered as secondary public equity offering.

3.4 Data collection

The data came from closing prices for stocks traded in the NSE exchange 30 days before and 30 days after announcement. These data relied on secondary data from published reports and figures from the Nairobi stock exchange from the 30 days before the issuing of the secondary offering or rights issue and 30 days after offering indicating that we undertook a short run performance of equity issues.

The data required for the purpose of the study was:

a) Price per share for all the firms quoted on the 30^{th} day before the announcement in the NSE.

b) Price per share for all the firms quoted on the 30^{th} day after the announcement in the NSE.

3.5 Data analysis

The study conducted an event study around the equity issue announcement by following the standard methodology of event studies. The study proceeded as follows:

i. A sample of firms quoted on the NSE that issued secondary equity offerings or rights issues for the period 1996 through 2006 were selected. The choice of quoted companies was because one could observe price changes since data was readily available.

ii. Announcement day was designated as day zero (t=0).

iii. Definition of period to be studied- These were sixty one days; thirty days before the event, the event day and thirty days after the event. The reason for this is because it was assumed that before the announcement date, there was likely to be some information leakage by those with access to it and after the announcement there was some delayed reaction.

iv. For each of the firms in the sample, the return on each of the days studied was computed. Return was measured by the sum of changes in market price of a security plus any income received over a holding period divided by the price of a security at the beginning of holding period (Elton and Gruber 1995). This was computed using the following model:

$$Rj = \frac{(P1-Po+D1)}{Po}$$

Where:

Rj = Return of security j

P1= Price at end of the holding period

Po = Price at beginning of period

D1= Any income received over a holding period

v. The abnormal return for each of the days being studied for each of the firms in the sample was computed. Abnormal return was defined as actual return less expected return. According to the market model the returns on security j are linearly related to returns on a

market portfolio (Copeland and Weston 1992). This model starts with simple linear relationship of returns and the market:

$$Ri = a\,i + biRm + ei$$

Where

Ri = expected return of the security in question

a i = the alpha (the intercept of the characteristic line on the vertical axis.

bi = Beta (slope characteristic line) – depicts the sensitivity of the security's excess returns to that of the market portfolio.

Rm = Market return.

ei = the unsystematic risk (avoidable risk).

The total risk of a portfolio is reduced by efficient diversification to the point where only systematic risk remains. Thus investors are only compensated for systematic risk, hence the equation is reduced to:

$$Ri = a\,i + biRm$$

The proportion of total risk explained by movements of the market is represented by r^2 for the regression of excess returns for a stock against excess returns for the market portfolio (r^2 measures the proportion of total variance of dependent variable that is explained by the independent variable). The proportion of systematic to total risk depends on the particular stock (Van Horne et. al 1995), hence there is no standard criteria for accepting the model.

The estimation period was to be 100 trading days prior to the announcement period in order to estimate the parameters used for calculating the normal returns in the absence of announcement. For the estimation period, expected return was calculated using the market model. Abnormal

returns were calculated as the difference between the market-model estimated daily stock returns and the actual returns on each day throughout the post-event period. Student t-tests were used to test the null of zero cross-sectional daily average cumulative abnormal return for the equally-weighted portfolio of these stocks each day in the post- event period.

vi. For each day in the event period, the average abnormal return for all firms in the sample was computed.

vii. The individual's day's abnormal return was added together to compute the cumulative abnormal return from the beginning of the period.

The average effect of the announcement was examined because other events were occurring and averaging across all firms, thus minimizing the effects of these other events thereby allowing a better examination of the events under study. Since tests with single event observation were not likely to be useful, the abnormal return observations were aggregated over the event window and across observations to obtain cumulative abnormal returns (CAR's).

viii. To determine whether the average abnormal returns were statistically different from zero, a t-test statistic was used with a significance level of 95%.

The results of this study as well as recommendations are indicated in chapter four and five.

CHAPTER FOUR: DATA ANALYSIS AND FINDINGS

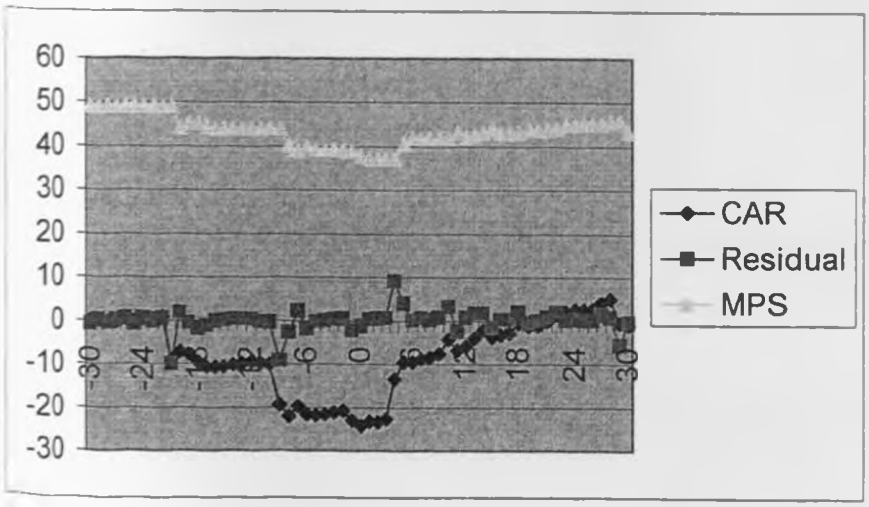
4.1 Introduction

The objective of the study were to determine the effect of secondary equity offerings announcement on stock return of firms at the NSE as well as determine the announcement on trading volume before and after the secondary issue.

This led to the collection of data from ten firms that had listed seasoned equity issues and right issues. There was the need to determine the precise day of the announcement of seasoned shares issue or right issues. The magnitude of the equity issue was expected to vary across firm since the announcements were made by firms in different industries and at different times. Thus it is important to examine individual firm behavior. The pattern of abnormal returns around the announcement date and whether there were abnormal returns after the announcement were examined. The results of the data analysis are summarized below as well as carried in appendix 1.

4.2 Unga Ltd

Figure 1: Share performance of Unga Ltd



Where

CAR is Cumulative Abnormal Return

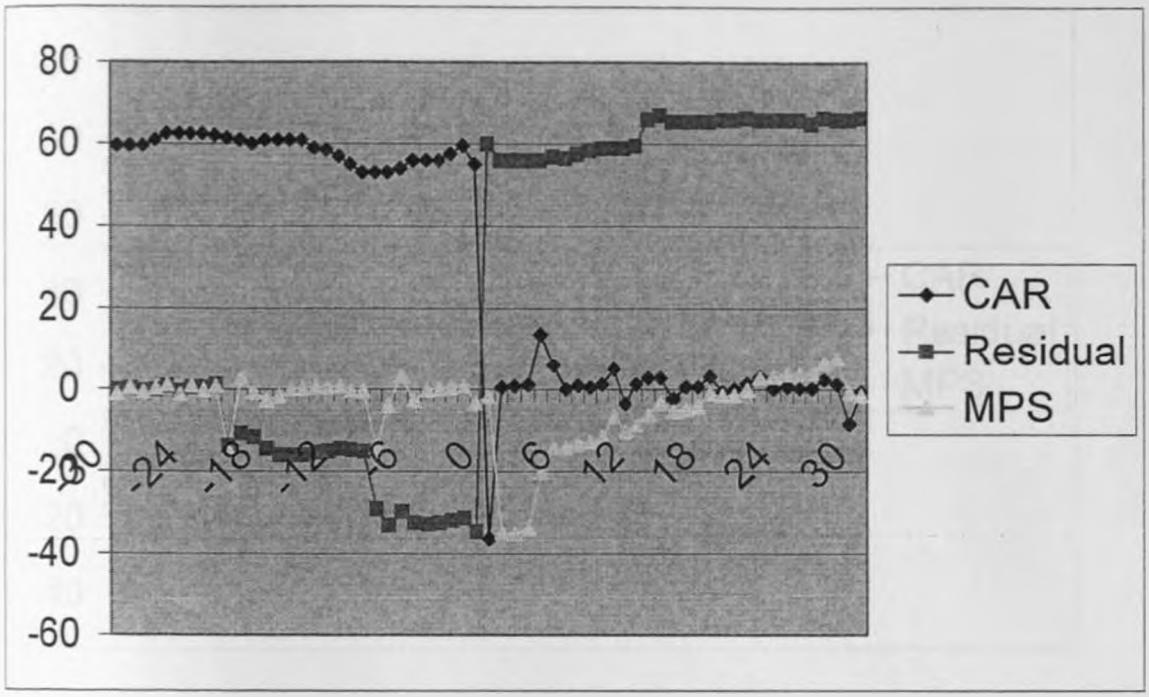
MPS is Market Price Per Share

The share price of the company was falling down in steps just before the announcement and hit the lowest mark just before the announcement. After the announcement the share price remained stagnant for a while before it started improving steadily though it did not reach the points achieved before the announcement period. In table 7 in the appendix I the average share price was lower in the post announcement period (42.68) than in the pre announcement period (44.52). The amount of shares traded in the post announcement period was less than those traded in the post announcement period. This goes ahead to show that the announcement had an effect on the volume of trade of shares for this company.

The t statistics in table 7 shows that the pre announcement period t statistic was -11.95 while in the post announcement it was 12.53 indicating that the announcement had an impact on the share price of the company. The cumulative returns are negative both in the pre-announcement and post-announcement period.

4.3 Kenya Commercial Bank

Figure 2: Share performance Of Kenya Commercial Bank

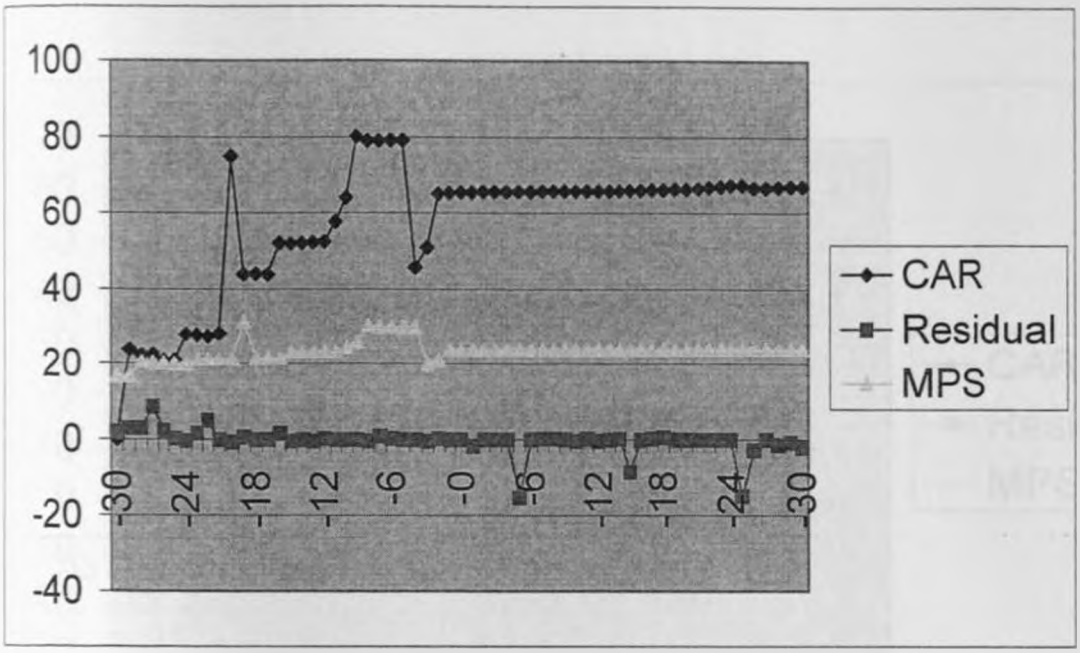


The share price movements show that the price of the share slightly fell before the announcement. After the announcement period the share price remained intact but then began to increase some 10 days after the announcement. The abnormal return is more pronounced in the pre announcement period than the post announcement period. For this company the volume of shares traded around the announcement period showed an improvement as compared to other periods.

The return of the company is positive (0.19), this is higher than the market returns. It can be seen that the returns for the 30 days before the announcement period was lower than the returns for the same period after the announcement. The residual return is almost zero for both the pre-announcement period and the post announcement period. On the other hand the t-statistic is negative for the whole period but the pre announcement period was more significant showing investor speculation.

4.4 Pan Africa Insurance

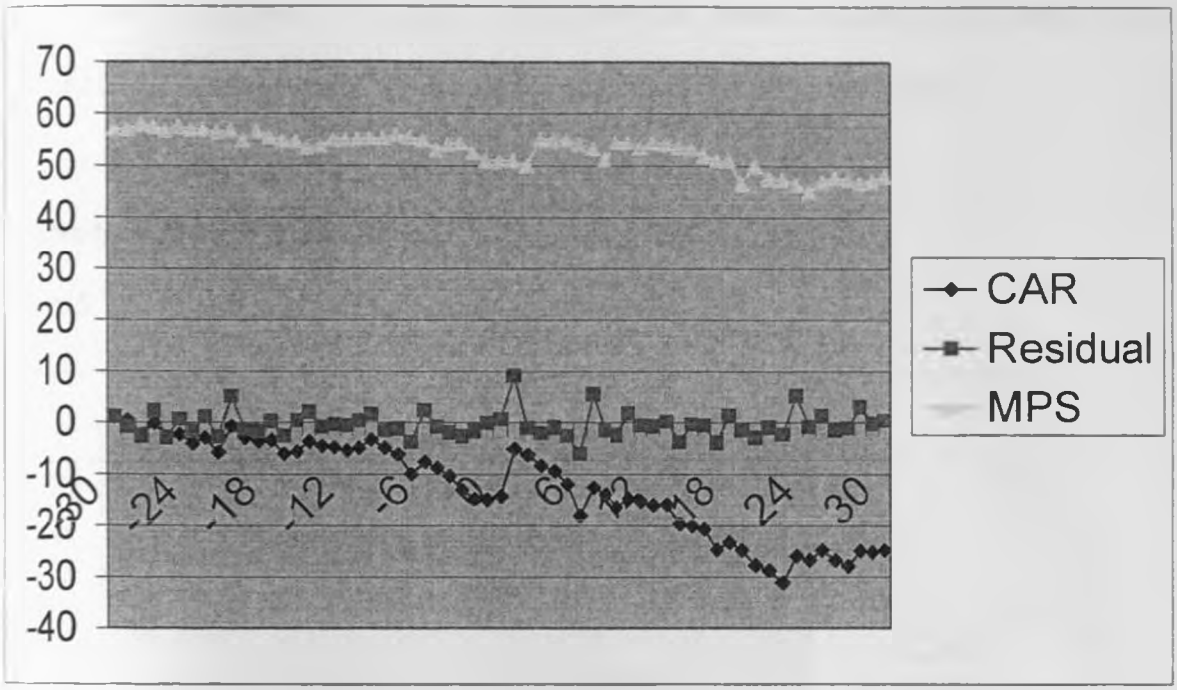
Figure 3: Share price movement of Pan Africa Insurance



From the above graph it can be seen that before the announcement was made the share price exhibited erratic movements but after the announcement was made that the share price stabilized. The company's shares experienced reduced activity for periods surrounding the announcement. This goes to show that the announcement did not have a major impact for most shareholders. The residual returns for this company can be seen to be largely zero. It can be seen in table 3 in the appendix I that the average price of (24.02) after the announcement (23.30) is greater than the price before the announcement. This may indicate lack of insider trading.

4.5 East African Breweries Ltd

Figure 4: Share price movement of East African Breweries Ltd



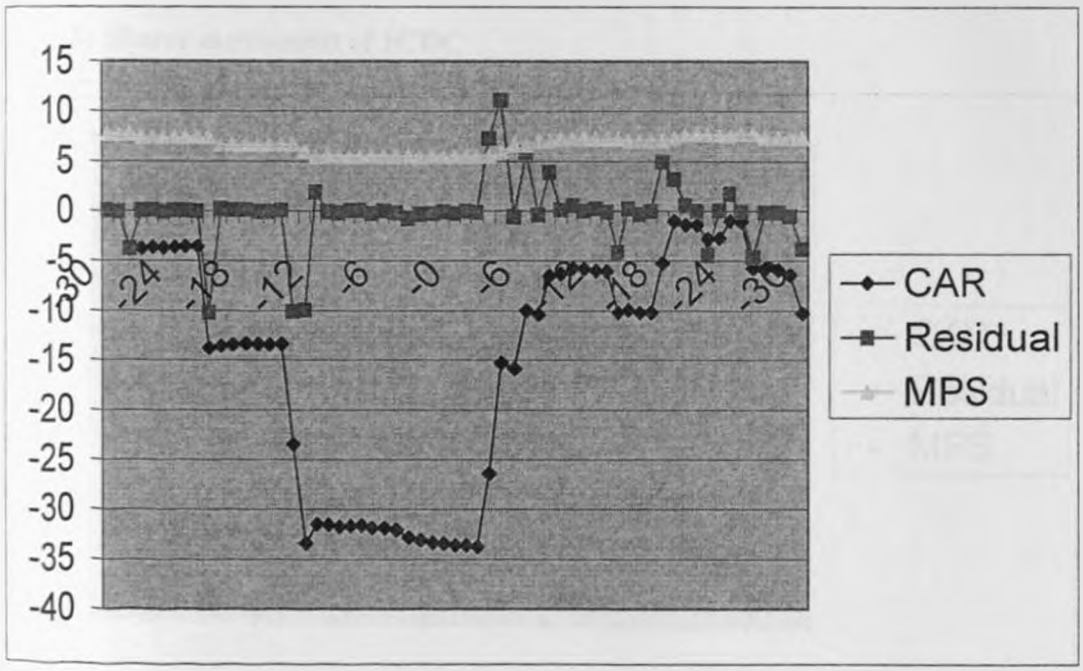
The share price movements show that the price of the share was stronger before the announcement period (55.41) than the post announcement period (50.85). This can be interpreted to mean that there could have been insider trading taking place for this company. The above graph shows that there was a decline in abnormal returns and share prices. The abnormal return is more pronounced in the pre announcement period than the post announcement period as indicated on table 2. The cumulative abnormal returns before the announcement (-5.28) was higher than the post-announcement period (-19.8) For this company the volume of trade showed improvements after the announcement of rights issue.

In table 2 in the appendix I we see that the return of the company is negative (-0.28), this is below the market returns. In the same table it can be seen that the returns for the 30 days before

the announcement period was below the performance after the returns period. The residual return is negative for both the pre-announcement period and the post announcement period. On the other hand the t-statistic is negative for the whole period and is significant. On consideration of excess returns there is evidence of negative effect over the entire announcement period. There is evidence of pre announcement effect but post announcement effect is lacking.

4.6 Standard Media Group

Figure 5: Share performance of Standard Media Group

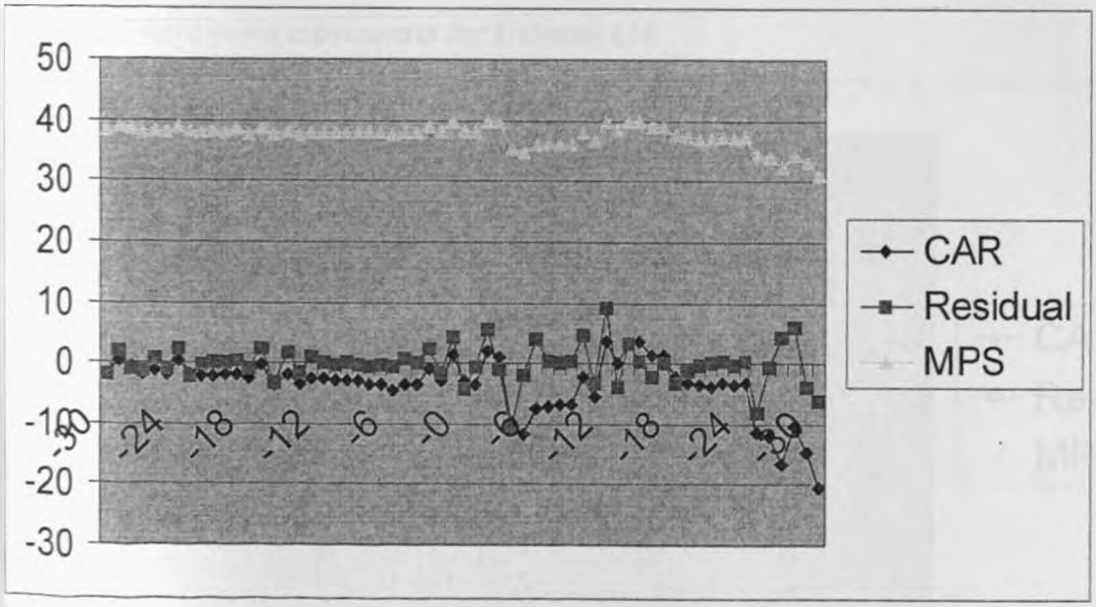


The above two graphs illustrate that the share price for the company started falling just before the announcement date, remained constant during the first few days of the announcement then it started peaking up slowly. The cumulative abnormal returns started falling just before the announcement period but continued picking up after the announcement period. The volume of shares traded after the announcement period was higher than in the pre announcement period.

In table 4 in the appendix I, the average share price of 7.05 in the post announcement period is greater than the average share price in the preannouncement period (6.45). This shows evidence of post announcement effect. The standard error of residual for this company is almost zero. The t-ratio of residual return before and after the announcement period are both statistically significant. The daily returns for the pre-announcement period was negative while the daily returns for the post announcement period is positive. During the preannouncement period, the company shares were out performed by the market but the shares out performed the market in the post announcement period

4.7 ICDC

Figure 6: Shares movement of ICDC



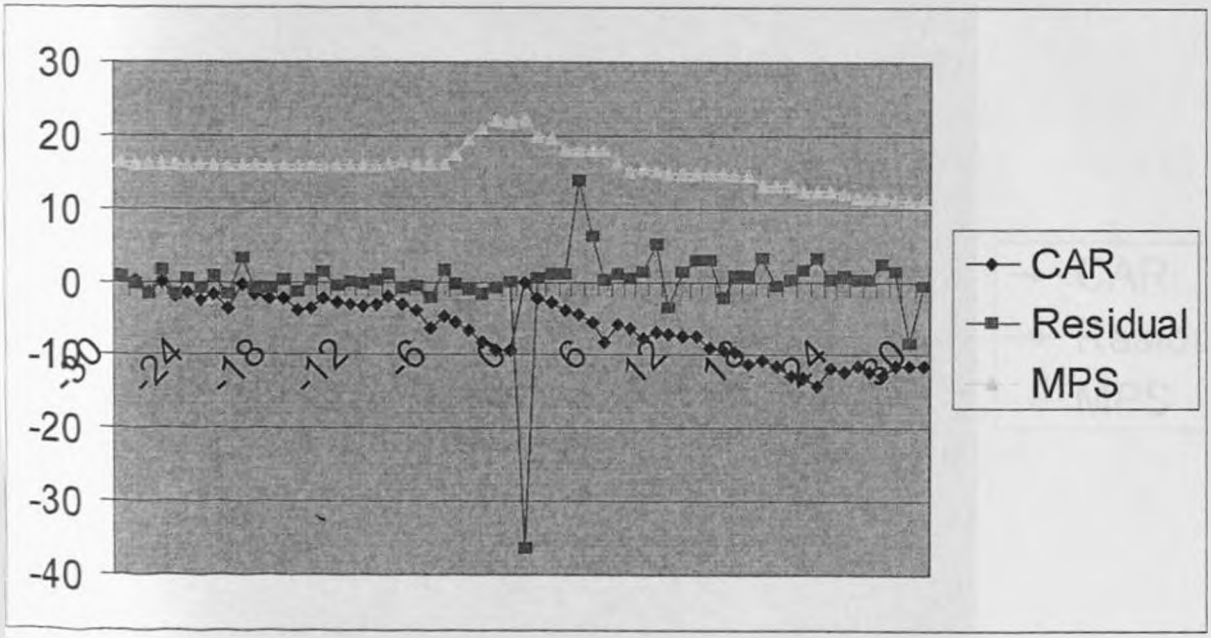
The above graph shows that the share price for this company improved for a short period before announcement before again falling down slightly just after announcement. It can also be seen after the announcement that the share price improved slightly then kept on varying slightly for the whole period. There was a slight improvement in the volume of activity for this company in terms

of shares traded after the announcement period. In table 5 in the appendix I, the share price just before announcement averaged 38.18 was higher than the post announcement average of 36.74.

The daily returns shows that the company performed better than the market in the pre announcement period but the market outperformed it in the post announcement period. The post announcement t statistic of -7.91 confirms that there was a high significance in the announcement in the movement of the share price. This is further confirmed by the t statistic of -0.55 during the pre announcement period that is not very significant.

4.8 Uchumi Ltd

Figure 7: Share price movements for Uchumi Ltd



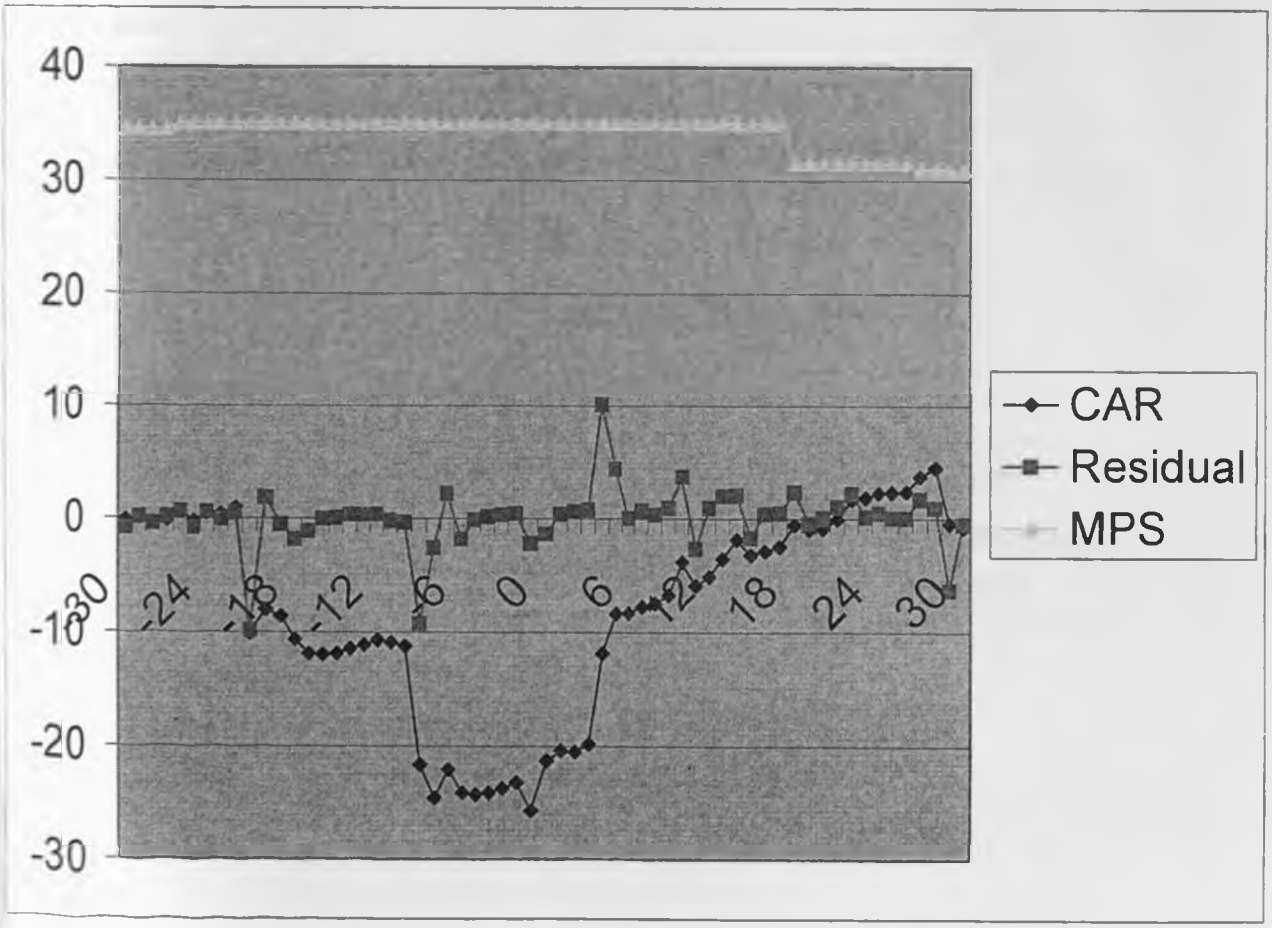
The share price for this company improved significantly for a short period before announcement and maintained it for a short while after the announcement. This can be a good indicator of insider trading. The company's average returns in the pre announcement period (-1.26) was less than the market returns (0.009) while in the post announcement period the returns were higher (0.769)

than the market returns (-0.32). There was increased activity for the number of shares traded just before the announcement period and just after the announcement period for this company.

As shown in table 10 in appendix I the t statistics for both the pre announcement period (-15.51) and the post announcement (-7.23) are significant, showing that there was significant effect of the announcement. The pre announcement t statistic is higher than the post announcement t statistics showing that the shareholders may have been speculative or had some inside information.

4.9 African Lakes

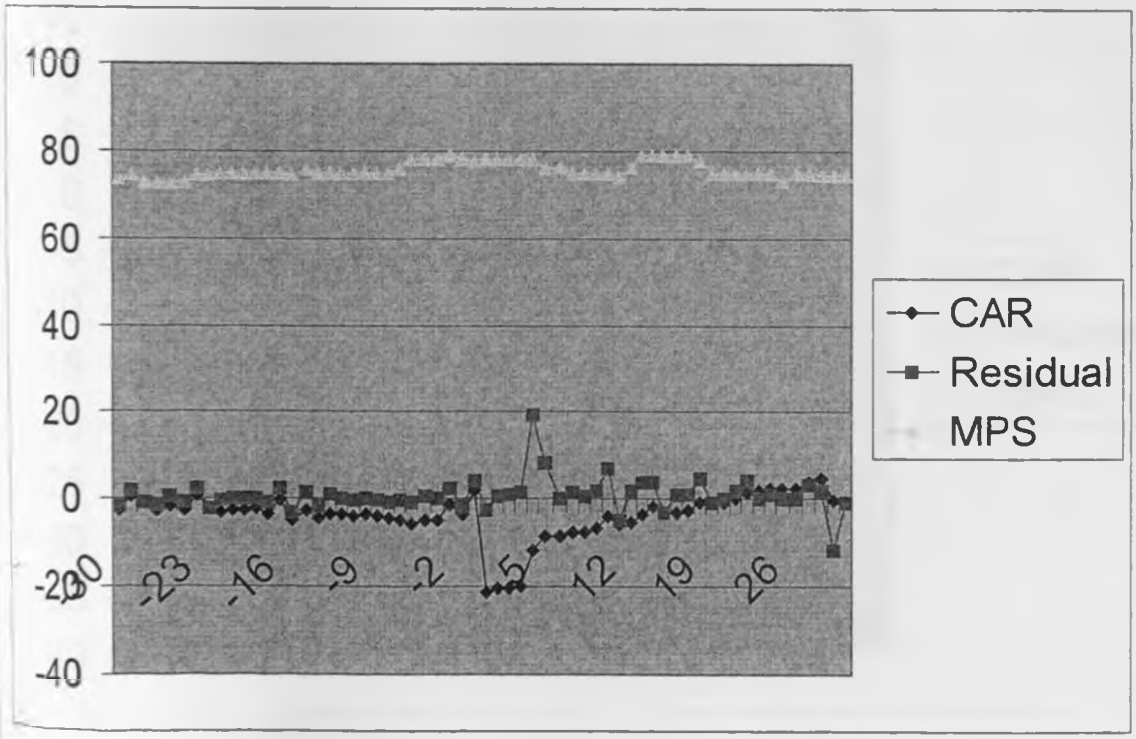
Figure 8: Share price Movement of African Lakes



The share price of the company remained constant for almost the entire period of the study. It took some days after the announcement for the price of the share to react and the price went down after some time. The average returns for the stock for this company for the pre-announcement period (-1.02) was lower than that of the market (0.007). In the post-announcement period the average returns was higher (0.623) than the market (-0.265). It can also be seen that t statistic for both the pre announcement period (-0.575) and the post announcement period (-5.899) was not that significant. The reason that may be attributed for this counter is that it did not trade so much during its whole period and thus there could be no significance attached to the announcement of issue of rights issue.

4.10 CFC Bank

Figure 9: Movement of share prices for CFC Bank

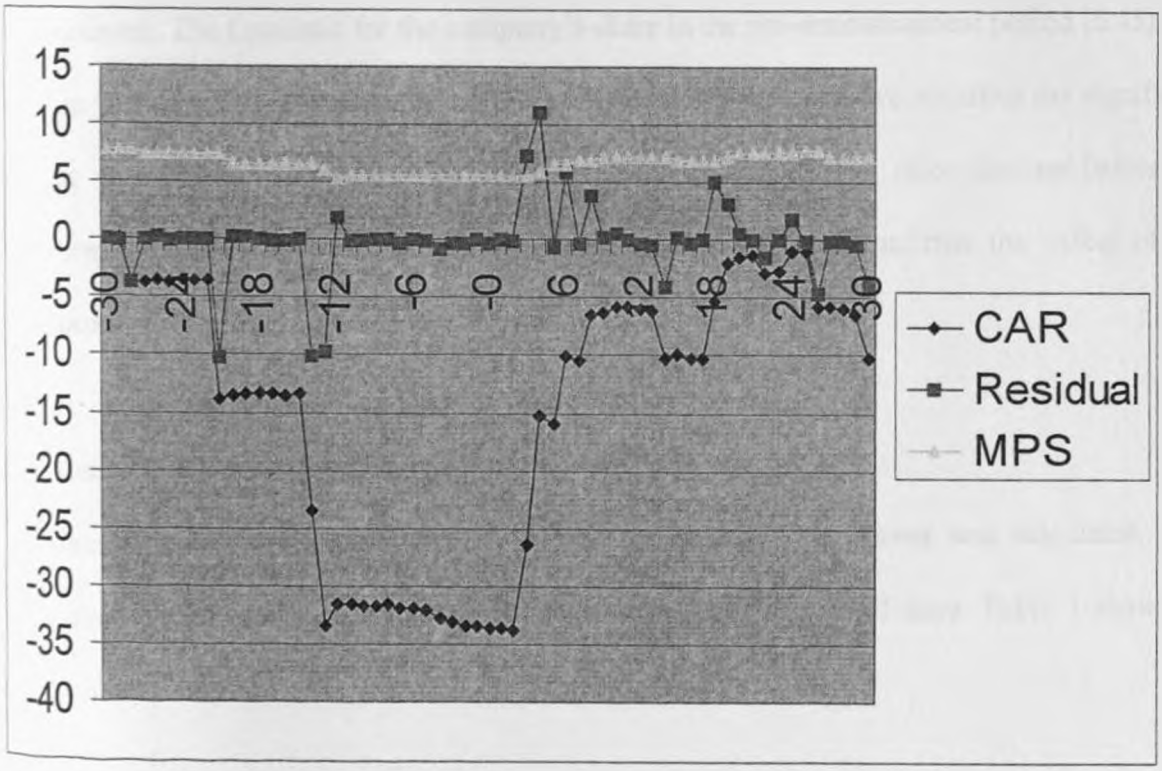


For a period just before the announcement period, the share price of the company improved slightly and remained at that after a few days after the announcement. This slight improvement

may be because a few shareholders might have gained privileged information that would enable them take advantage of it. In table 11 of appendix I it can be seen that the average returns of the company for the pre-announcement was lower (-1.314) than that of the market (-0.228). For the post-announcement period the average price was higher (1.088) than that of the market (0.031). The t ratio for the company's share in the pre-announcement period (-23.199) and post announcement (-11.277) are statistically relevant. This shows that the announcement had some effect on the price movement of the company.

4.11 Total Kenya

Figure 10: Share price performance before for Total Kenya



From the graph above it can be seen that for a period just before the announcement period, the share price of the company fell down and continued briefly after the announcement period but then started picking momentum some few days after the announcement. Table 15 in appendix II shows that the number of shares traded improved after the announcement period. Table 6 in appendix I shows the average returns of the company in the pre-announcement period (0.049) outperformed the market (-1.065), however in the announcement period it was lower (0.103) than the market returns (0.882). The average share price in the post announcement period was higher than the average share price in the pre announcement period.

The average cumulative abnormal return was -8.45 before the announcement and 6.34 after the announcement. The t statistic for the company's share in the pre-announcement period (6.45) was less than in the post-announcement period (7.05). However both the two statistics are significant showing significance of the announcement of the share issue. The price decline before the announcement and recovery just after the announcement period confirms the effect of the announcement on the effect of the share issue.

4.12 Analysis of Abnormal Returns

The cumulative average and residual for all the companies in the survey was calculated. The observation period extended from day -30 to 30 thus amounting to 61 days. Table 1 shows the results of this analysis.

Table 1: Analysis of Abnormal Returns (10 companies)

Day's	Residual	Cumulative Abnormal Returns	T- statistics
-30	-0.14806	-3.52933	0.325481
-29	0.61448	-0.83569	0.778014
-28	-1.1904	-1.73077	0.874896
-27	0.979	-0.2623	0.617794
-26	0.166	-0.61654	0.842049
-25	-0.23943	-0.43897	0.9935
-24	0.3703	0.592302	0.906637
-23	-0.0442	0.775396	0.781573
-22	0.1902	2.78668	0.346626
-21	-4.5795	-4.32205	0.869222
-20	-6.2577	2.207108	0.378327
-19	-1.407	-1.45726	0.969444
-18	-1.9309	-2.10187	0.986777
-17	-1.8286	-2.79821	0.905061
-16	-2.0203	-2.1461	0.996229
-15	-0.9754	-1.59821	0.975721
-14	-3.9655	-2.34818	0.346985
-13	-5.994	-5.17461	0.352336
-12	-1.082	-10.3473	0.333461
-11	-1.4907	-3.97578	0.798105
-10	-12.5462	-3.19573	0.624248
-9	-5.0641	-5.32037	0.990849
-8	-4.1529	-5.23288	0.951218
-7	-3.1585	-4.57006	0.932586
-6	-3.3709	-5.28049	0.899296
-5	-3.3102	-5.62637	0.875899
-4	-3.6851	-9.30386	0.553976
-3	-3.1824	-8.87683	0.561373
-2	-3.67434	-7.93012	0.68974
-1	-3.1204	-8.64516	0.606887
0	-4.772	-12.3081	0.604701
1	-2.5923	-7.10273	0.819434
2	-2.7533	-7.35513	0.813452
3	-1.8404	-7.05282	0.765517
4	4.2203	-1.40512	0.799848
5	-1.2441	-1.15178	0.85616
6	-0.4364	-10.03.49	0.347364
7	-0.4238	-0.38246	0.904825
8	-0.4432	0.248054	0.847047
9	-0.8708	0.673178	0.755533
10	1.958	2.000857	0.886219
11	-2.7517	1.334912	0.574922
12	0.4417	1.520455	0.818754
13	0.0205	2.524501	0.671456
14	-0.1027	1.693758	0.753996
15	-2.2192	0.564924	0.745754

16	-0.626	0.805508	0.81814
17	-0.5303	0.045416	0.907165
18	1.9593	1.980252	0.947395
19	-0.0373	-9.71225	0.360601
20	-0.37306	1.639496	0.788959
21	0.4129	1.941588	0.829356
22	0.6547	2.025256	0.842532
23	0.9082	2.626182	0.848175
24	0.9548	2.223247	0.888468
25	-1.773	2.407384	0.676217
26	-0.9773	0.700186	0.86224
27	1.838	1.775299	0.990003
28	1.9862	1.928479	0.970123
29	-3.922	-1.33684	0.86145
30	5.0168	-1.95628	0.040399

Table 1 shows that there were a total of 24 days that recorded positive abnormal returns. The other 37 days recorded negative returns with day 0 recording the highest negative returns. Most of the days in the preannouncement period recorded results that were statistically significant.

CHAPTER FIVE: SUMMARY AND CONCLUSIONS

5.1 Introduction

This chapter provides a summary of the findings, conclusions and recommendations into the effects of secondary equity offering on the stock returns of firms quoted on the Nairobi Stock Exchange.

5.2 Summary of findings and Conclusion

Though there was price change for most of the companies involved in the study just before announcement of a rights issue or a secondary issue, for some of the counters the price started reacting after the announcement either immediately or after a short delay. It was also established that the price movement in the periods prior to and after the announcement dates resulted in increased abnormal returns for the shareholders.

The direction of share price and abnormal returns after the announcement is inclusive. The market reacts differently for different types of stocks. The presence of information means that the price generally moves towards losing than gaining. The abnormal returns are however so small and this means that the details of a secondary issue or rights issue does not shock the market in a significant way. From the averages carried out the amount of shares traded was more at the post announcement period than in the pre announcement period for most companies involved in the study. This goes ahead to state the announcement had an effect in increasing the volume of trade.

5.3 Limitations of the study

Like any other studies this study experienced some limitations in conducting its research. The first limitation is that the number of companies involved in the study was too small. This means that with the small sample the study was subject to systematic bias that could distort the findings of the study. The NSE trading is limited to only a few companies unlike in developed nations where there are many companies trading.

The study also faced the limitations that the duration of study. The announcement day alone may not alone have a huge impact. There are other important days that were not involved in the study

like for example, the day of start of trading, the subscription day, cum rights and ex-rights day and so on.

5.4 Recommendations

Price movements are affected by the announcements made by a company. This may be the announcement of secondary issue, a rights issue, a dividend issue, merger and acquisitions, annual profits and so on. The leakage of sensitive information before time may cause distortion in the determination of prices and hence leading to some people gaining unfairly. There is need for stakeholders in the market mainly the NSE and the Capital Markets Authority to look into the issue of insider trading to ensure that it does not happen.

5.5 Recommendations for further research

There is need for future researchers to consider extending the duration of observation for any announcements made by companies quoted in the stock market. In this case extension of the duration will ensure any trend due to the announcement may clearly be seen. This is important since for example the announcement of a company for a rights issue may be delayed until some few days after and before the rights issue begin trading in the stock market. In that time the share price may start reacting to the demand and supply of shares.

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Appendix I Analysis for results after and before the announcement

Table 2

EABL ANALYSIS								
DATA RESULTS ANALYSIS FOR EABL FOR THE PERIOD 30 DAYS BEFORE AND AFTER THE RIGHTS ANNOUNCEMENT								
Date Re	Market Re	EABL Re	Fit	SE Fit	Residual	CAR	t-Statistic	MPS
Average For The Whole Period	0.02	-0.278	0.128	0.121	-0.407	-12.57	-2.93	53.09
Average For The 30 Days Period Before Announcement	0.032	-0.355	0.145	0.106	-0.5	-5.28	-5.07	55.41
Average For The 30 Days Period After Announcement	0.072	-0.145	0.202	0.131	-0.347	-19.8	-0.98	50.85
Standard Deviation For The Whole Period	0.837	2.451	1.172	0.043	2.517	9.28	22.65	3.40
Standard Deviation For The 30 Days Period Before Announcement	0.613	1.745	0.858	0.029	1.985	4.12	18.49	1.65
Standard Deviation For The 30 Days Period After Announcement	0.97	3.044	1.359	0.047	3.019	7.12	26.65	3.21

Table 3

PAN AFRICA INSURANCE ANALYSIS

DATA RESULTS ANALYSIS FOR PAN AFRICA INSURANCE FOR THE PERIOD 30 DAYS BEFORE AND AFTER THE RIGHTS ANNOUNCEMENT

Date	Market Re	PAN Re	Fit	SE Fit	Residual	CAR	t-Statistic	MPS
Average For The Whole Period	0.025	1.046	-0.053	0.08	1.098	57.14	8.04	23.66
Average For The 30 Days Period Before Announcement	0.04	2.126	-0.051	0.087	2.177	47.85	15.57	23.3
Average For The Whole Period After Announcement	0.016	-0.034	-0.054	0.074	0.054	66.14	0.74	24.02
Standard Deviation For The Whole Period	0.528	9.522	0.078	0.022	9.501	17.79	104.67	2.85
Standard Deviation For The 30 Days Period Before Announcement	0.675	13.608	0.1	0.029	13.578	21.89	150.15	4.06
Standard Deviation For The 30 Days period After Announcement	0.345	0.158	0.051	0.01	0.167	0.56	2.28	0.05

Table 4

STANDARD MEDIA ANALYSIS

DATA RESULTS ANALYSIS FOR STANDARD MEDIA FOR THE PERIOD 30 DAYS BEFORE AND AFTER THE RIGHTS ANNOUNCEMENT

DateRe	MarketRe	STDRe	Fit	SE Fit	Residual	CAR	t-. Statistic	MPS
Average For The Whole Period	-0.071	-0.09	0.078	0.151	-0.168	-14.29	-1.06	6.73
Average For The 30 Days Period Before Announcement	-0.185	-1.065	0.049	0.148	-10114	-18.8	-8.45	6.45
Average For the 30 Days Period After Announcemnt	0.025	0.882	0.103	0.156	0.174	-9.14	6.34	7.05
Standard Deviation For The Whole Period	0.812	3.3	0.21	0.062	0.731	12.1	25.51	0.83
Standard Deviation For The 30 Days Period Before Announcement	0.735	3.123	0.19	0.053	0.701	13.02	24.55	0.88
Standard Deviation For The 30 Days Period After Announcement	0.89	30290	0.23	0.071	0.722	8.49	25.12	0.64

Table 5
ICDC ANALYSIS

DATA RESULTS ANALYSIS FOR ICDC FOR THE PERIOD 30 DAYS BEFORE AND AFTER THE RIGHTS ANNOUNCEMENT

Date Re	Market Re	ICDC Re	Fit	SE Fit	Residual	CAR	t-Statistic	MPS
Average For the Whole Period	-0.063	-0.312	0.026	0.086	-0.339	-3.61	-5.14	**37.47**
Average For The 30 Days Period Before Announcement	0.033	0.117	0.07	0.085	0.046	-2.12	-0.55	**38.18**
Average For The 30 Days Period After Announcement	-0.169	-0.611	-0.022	0.087	-0.589	-5.12	-7.91	**36.74**
Standard Deviation For The Whole Period	0.563	3.172	0.257	0.025	3.141	4.66	41.02	**1.81**
Standard Deviation For The 30 Days Period Before Announcement	0.534	1.499	0.244	0.018	1.578	1.37	17.69	**0.47**
Standard Deviation For The 30 Days Period After Announcement	**0.59**	**4.215**	**0.269**	**0.031**	**4.14**	**6.19**	**55.09**	**2.34**

Table 6

TOTAL ANALYSIS

DATA RESULTS ANALYSIS FOR TOTAL LTD FOR THE PERIOD 30 DAYS BEFORE AND AFTER THE RIGHTS ANNOUNCEMENT

Date Re	Market Re	Total Re	Fit	SE Fit	Residual	Class	CAR	t-Statistic
Average For the Whole Period	-0.09	0.078	0.151	-0.168	-0.037	-14.29	-1.06	**6.73**
Average For The 30 Days Period Before Announcement	-1.065	0.049	0.148	-1.114	-0.248	-18.8	-8.45	**6.45**
Average For The 30 Days Period After Announcement	0.882	0.103	0.156	0.779	0.174	-9.14	6.34	**7.05**
Standard Deviation For The Whole Period	3.3	0.21	0.062	3.278	0.731	12.1	25.51	**0.83**
Standard Deviation For The 30 Days Period Before Announcement	3.123	0.19	0.053	3.145	0.701	13.02	24.55	**0.88**
Standard Deviation For The 30 Days Period After Announcement	**3.29**	**0.23**	**0.071**	**3.239**	**0.722**	**8.49**	**25.12**	**0.64**

Table 7

UNGA LTD. ANALYSIS

DATA RESULTS ANALYSIS FOR UNGA LTD FOR THE PERIOD 30 DAYS BEFORE AND AFTER THE RIGHTS ANNOUNCEMENT

Date Re	Market Re	UNGA Re	Fit	SE Fit	Residual	CAR	t-Statistic	MPS
Average For the Whole Period	-0.103	-0.182	-0.167	0.063	-0.015	-7.76	-0.08	43.5
Average For The 30 Days Period Before Announcement	0.006	-0.83	-0.062	0.065	-0.768	-10.19	-11.95	44.52
Average For The 30 Days Period After Announcement	-0.215	0.505	-0.274	0.063	0.779	-4.78	12.53	42.68
Standard Deviation For The Whole Period	0.366	2.538	0.351	0.009	2.554	8.72	41.31	3.4
Standard Deviation For The 30 Days Period Before Announcement	0.424	2.63	0.407	0.01	2.621	8.51	40.61	3.83
Standard Deviation For The 30 Days Period After Announcement	**0.268**	**2.323**	**0.257**	**0.008**	**2.311**	7.76	**39.44**	**2.53**

Table 8
KCB ANALYSIS

DATA RESULTS ANALYSIS FOR KCB FOR THE PERIOD 30 DAYS BEFORE AND AFTER THE RIGHTS ANNOUNCEMENT

Date Re	Market Re	KCBRe	Fit	SE Fit	CAR	t-Statistic	MPS
Average For The Whole Period	-0.423	0.195	0.184	-0.620	-19.141	-4.461	**60.62**
Average For The 30 Days Period Before Announcement	-0.541	0.220	0.161	-0.761	-8.040	-7.720	**58.68**
Average For The 30 Days Period After Announcement	-0.221	0.308	0.199	-0.528	-30.151	-1.492	**62.58**
Standard Deviation For The Whole Period	3.732	1.785	0.0655	3.832	14.131	34.490	**4.20**
Standard Deviation For The 30 Days Period Before Announcement	2.657	1.307	0.044	3.022	6.274	28.156	**3.14**
Standard Deviation For The 30 Days Period After Announcement	**4.635**	**2.069425**	**0.0716**	**4.597**	**10.842**	**40.581**	**4.33**

Table 9

AFRICAN LAKES ANALYSIS

DATA RESULTS ANALYSIS FOR AFRICAN LAKES FOR THE PERIOD 30 DAYS BEFORE AND AFTER THE RIGHTS ANNOUNCEMENT

Date Re	Market Re	AFRI Re	Fit	SE Fit	Residual	CAR	t-Statistic	MPS
Average For The Whole Period	-0.127	-0.225	-0.206	0.078	-0.019	-0.007	-0.576	34.19
Average For The 30 Days Period Before Announcement	0.0074	-1.024	-0.0765	0.080	-0.948	-0.404	-0.575	34.93
Average For The 30 Days Period After Announcement	-0.265	0.623	-0.338	0.078	0.961	0.412	-5.899	33.42
Standard Deviation For The Whole Period	0.452	3.132	0.433	0.011	3.151	1.348	10.760	1.50
Standard Deviation For The 30 Days Period Before Announcement	0.523	3.245	0.502	0.012	3.234	1.383	10.501	0.17
Standard Deviation For The 30 Days Period After Announcement	0.331	2.867	0.317	0.010	2.852	1.218	9.576	1.89

Table 10

UCHUMI SUPERMARKETS ANALYSIS

DATA RESULTS ANALYSIS FOR UCHUMI FOR THE PERIOD 30 DAYS BEFORE AND AFTER THE RIGHTS ANNOUNCEMENT

Date Re	Market Re	UNGA Re	Fit	SE Fit	Residual	CAR	t-Statistic	MPS
Average For The Whole Period	-0.157	-0.277	-0.254	0.0960	-0.023	-0.009	-11.817	**15.71**
Average For The 30 Days Period Before Announcement	0.009	-1.264	-0.094	0.099	-1.169	-0.498	-15.517	**16.77**
Average For The 30 Days Period After Announcement	-0.327	0.769	-0.417	0.096	1.186	0.509	-7.279	**14.44**
Standard Deviation For The Whole Period	0.557	3.865	0.534	0.014	3.889	1.663	13.278	**2.62**
Standard Deviation For The 30 Days Period Before Announcement	0.646	4.005	0.620	0.015	3.991	1.707	12.959	**1.77**
Standard Deviation For The 30 Days Period After Announcement	**0.408**	**3.537**	**0.391**	**0.012**	**3.519**	**1.503**	**11.817**	**2.61**

Table 11
CFC ANALYSIS

DATA RESULTS ANALYSIS FOR CFC FOR THE PERIOD 30 DAYS BEFORE AND AFTER THE RIGHTS ANNOUNCEMENT

Date Re	Market Re	UNGA Re	Fit	SE Fit	Residual	CAR	t-Statistic	MPS
Average For The Whole Period	-0.087	-0.111	0.096	0.186	-0.207	-0.046	-17.634	**75.72**
Average For The 30 Days Period Before Announcement	-0.228	-1.314	0.060	0.183	-1.375	-0.306	-23.199	**75.23**
Average For The 30 Days Period After Announcement	0.031	1.088	0.127	0.193	0.961	0.215	-11.277	**76.13**
Standard Deviation For The Whole Period	1.002	4.072	0.259	0.077	4.045	0.902	14.931	**1.82**
Standard Deviation For The 30 Days Period Before Announcement	0.907	3.854	0.234	0.065	3.880	0.865	16.067	**1.73**
Standard Deviation For The 30 Days Period After Announcement	**1.098**	**4.060**	**0.284**	**0.088**	**3.997**	**0.891**	**10.477**	**1.81**

Appendix II Summary of company's results

Table 12

PAN AFRICA INSURANCE ANALYSIS
SUMMARY OF ABNORMAL RETURNS AND CUMULATIVE ABNORMAL RETURNS FOR PAN AFRICA INSURANCE FOR THE PERIOD 30 DAYS BEFORE AND AFTER THE RIGHTS ANNOUNCEMENT.

Trade day	Car	Residual	MPS	No of shares						
-30	0.036	1.813	16.667	0		1	65.427	-1.647	24	5942
-29	23.954	2.868	16.667	1122		2	65.519	0.046	24	0
-28	22.609	3.025	20.633	30255		3	65.544	-0.153	24	0
-27	22.778	8.518	20.34	2500		4	65.564	-0.08	24	0
-26	21.112	2.37	20.34	0		5	65.598	-15.323	24	4974
-25	21.133	0.321	20	9750		6	65.657	-0.266	24	2700
-24	27.901	-0.35	20	0		7	65.686	0.126	24	30450
-23	27.843	1.65	21.333	750		8	65.742	0.15	24	525
-22	27.869	5.006	21.333	0		9	65.751	0.06	24	0
-21	28.181	-0.182	21.333	0		10	65.786	-0.362	24	0
-20	74.839	-617	21.333	0		11	65.683	0.114	24	0
-19	43.897	0.543	31.333	900		12	65.717	-0.279	24	3723
-18	43.955	-0.16	21.6	800		13	65.750	0.001	24	2835
-17	43.907	0.033	21.6	0		14	65.824	0.134	24	1800
-16	52.036	1.587	21.6	15975		15	65.976	-8.461	24	1500
-15	51.999	-0.472	23.333	56382		16	65.965	-0.111	24	0
-14	52.153	-0.264	23.333	10980		17	66.059	0.111	24	0
-13	52.214	-5958	23.333	40200		18	66.157	0.4	24	2400
-12	52.393	0.089	23.333	0		19	66.248	-0.237	24	2645
-11	57.708	-0.103	23.333	0		20	66.276	-0.183	24	8436
-10	64.019	-112	24.587	2450		21	66.365	-0.19	24	4500
-9	80.041	-0.182	26.167	1500		22	66.764	-0.024	24	0
-8	78.893	-0.303	30.333	1650		23	66.861	-0.011	24.1	34073
-7	78.925	0.856	30.007	11550		24	67.226	-0.034	24.1	0
-6	79.019	0.163	30	150		25	67.280	-14.954	24.1667	34073
-5	79.080	-0.049	30	0		26	66.608	-2.808	24.1667	3890
-4	45.770	-0.206	30	0		27	66.666	0.032	24	12266
-3	50.862	-0.552	20	11100		28	66.736	-1.563	24	8550
-2	65.149	0.17	21	6704		29	66.873	-0.813	24	18471
-1	65.297	-0.243	23.987	1200		30	67.004	-2.26	24	0
0	65.377	-0.075	24	4050						
AV	**47.8524**	**0.635607**	**23.29527**	**6863.933**			**66.14373**	**-1.6195**	**24.01778**	**6125.1**

Table 13

STANDARD MEDIA ANALYSIS
SUMMARY OF ABNORMAL RETURNS AND CUMULATIVE ABNORMAL RETURNS FOR PAN AFRICA INSURANCE FOR THE PERIOD 30 DAYS BEFORE AND AFTER THE RIGHTS ANNOUNCEMENT

Trade Day	Car	Residual	MPS	No of shares		Trade Day	Car	Residual	MPS	No of shares
-30	0.04	0.04	7.7	0		1	-33.611	0.027	5.5	0
-29	-0.036	-0.076	7.7	1720		2	-33.731	-0.12	5.51	9110
-28	-3.819	-3.783	7.7	0		3	-26.432	7.299	5.51	0
-27	-3.771	0.048	7.4	46391		4	-15.316	11.116	5.93	4605
-26	-3.619	0.152	7.4	0		5	-15.911	-0.595	6.6	7627
-25	-3.706	-0.087	7.4	0		6	-10.031	5.88	6.6	4140
-24	-3.629	0.077	7.4	14950		7	-10.388	-0.357	7	46690
-23	-3.561	0.068	7.4	0		8	-6.474	3.914	7	0
-22	-3.567	-0.006	7.4	1150		9	-6.34	0.134	7.29	805
-21	-13.797	-10.23	7.4	0		10	-5.763	0.577	7.29	0
-20	-13.578	0.219	6.65	1380		11	-5.781	-0.018	7.29	0
-19	-13.443	0.135	6.65	0		12	-6.013	0.232	7.3	5709
18	-13.329	0.114	6.65	0		13	-6.065	-0.052	7.3	4347
-17	-13.415	-0.086	6.65	0		14	-10.201	-4.136	7.3	2760
-16	-13.481	-0.066	6.65	244962		15	-9.919	0.238	7	2300
-15	-13.417	0.064	6.65	864529		16	-10.22	-0.301	7	0
-14	-23.467	-10.05	6.65	168360		17	-10.213	0.007	7	0
-13	-33.435	-9.968	6	0		18	-5.199	5.014	7	3680
-12	-31.524	1.911	5.4	61640		19	-992	3.207	7.35	4055
-11	-31.6	-0.076	5.5	3200		20	-1.419	0.573	7.6	12935
-10	-31.781	-0.181	5.5	0		21	-1.392	0.027	7.65	6900
-9	-31.686	0.095	5.5	0		22	-2.829	-4.37	7.65	0
-8	-31.628	0.058	5.5	0		23	-2.758	0.071	7.55	52245
-7	-31.893	-0.265	5.5	17710		24	-1.004	1.754	7.55	0
-6	-31.903	-0.01	5.5	230		25	-1.066	-0.062	7.7	5220
-5	-32.087	-0.184	5.5	0		26	-5.715	-4.649	7.7	5964
-4	-32.838	-0.751	5.5	0		27	-5.827	-0.112	7.32	18807
-3	-33.122	-0.284	5.5	17020		28	-5.941	-0.114	7.32	13110
-2	-33.384	-0.262	5.5	10279		29	-6.443	-0.502	7.32	28322
-1	-33.416	-0.032	5.5	1840		30	-10.275	-3.832	7.32	0
0	-33.638	-0.222	5.5	6210						
AV	-18.796	-1.1138	6.445	48512.03			-42.146	0.695	7.048333	7977.7

Table 14

ICDC ANALYSIS

SUMMARY OF ABNORMAL RETURNS AND CUMULATIVE ABNORMAL RETURNS FOR PAN AFRICA INSURANCE FOR THE PERIOD 30 DAYS BEFOR AND AFTER THE RIGHTS ANNOUNCEMENT.

Trade Day	CAR	Residual	MPS	No of shares
-30	-1.814	-1.814	38.11	115346
-29	0.315	2.129	38.81	93180
-28	-0.504	-0.819	38.50	2530
-27	-1.882	-1.378	38.00	0
-26	-1.134	0.748	38.16	2150
-25	-2.007	-0.8763	38.00	24976
-24	0.478	2.485	38.82	31089
-23	-1.785	-2.262	38.38	36576
-22	-2.169	-0.385	38.00	26443
-21	-2.140	0.029	38.11	2540
-20	-2.031	0.109	37.90	2340
-19	-1.794	0.237	38.73	39692
-18	-2.597	-0.803	37.62	2340
-17	-0.397	2.200	38.73	387405
-16	-3.546	-3.149	37.62	102532
-15	-1.966	1.581	38.25	6300
-14	-3.507	-1.542	37.60	2340
-13	-2.612	0.895	38.05	3200
-12	-2.690	-0.078	38.05	2240
-11	-2.834	-0.143	38.01	72182
-10	-2.795	0.039	38.01	112091
-9	-2.957	-0.162	38.00	24150
-8	-3.520	-0.563	37.91	3710
-7	-3.698	-0.178	37.89	2640
-6	-4.449	-0.751	37.74	2340
-5	-3.678	0.775	38.00	8995
-4	-3.566	0.108	38.03	13808
-3	-1.082	2.484	38.77	257666
-2	-2.776	-1.6944	38.25	204789
-1	1.388	4.164	40.00	298827
0	-2.969	-4.356	38.32	2630
AV	-2.1249	0.046177	38.20167	62813.9

Trade Day	CAR	Residual	MPS	No of shares
1	-3.522	-0.554	37.86	2100
2	2.01	5.528	39.99	116071
3	1.115	-0.891	39.59	15028
4	-9.625	-10.740	35.3	19209
5	-11.584	-1.959	34.63	2100
6	-7.486	4.098	36.07	1250
7	-7.0313	0.455	36.2	3510
8	-6.922	0.109	36	1240
9	-6.714	0.209	36.02	2170
10	-2.210	4.504	37.95	11585
11	-5.568	-3.358	36.54	1750
12	3.766	9.334	39.99	5065
13	-0.078	-3.843	38.5	5522
14	3.292	3.369	39.86	1230
15	3.501	0.209	40	2530
16	1.235	-2.266	39	39745
17	1.265	0.03	39	0
18	-2.118	-3.383	37.66	6090
19	-3.263	-1.145	37.25	2350
20	-3.689	-0.426	37	13109
21	-3.716	-0.027	37	0
22	-3.347	0.369	37.25	2350
23	-3.701	-0.354	37.09	1155
24	-3.267	0.435	37.25	2340
25	-11.515	-8.248	34.18	778
26	-12.156	-0.641	33.96	[redacted]
27	-16.488	4.332	32.5	[redacted]
28	-10.517	5.971	34.43	[redacted]
29	-14.553	-4.036	33.1	[redacted]
30	[redacted]	[redacted]	[redacted]	[redacted]

Table 20

AFRICAN LAKES

SUMMARY OF ABNORMAL RETURNS AND CUMULATIVE ABNORMAL RETURNS FOR PAN AFRICA INSURANCE FOR THE PERIOD 30 DAYS BEFOR AND AFTER THE RIGHTS ANNOUNCEMENT.

Trade Day	CAR	Residual	MPS	No of shares
-30	-0.086	-0.772	34.5	0
-29	0.111	0.176	34.5	0
-28	-0.366	-0.425	34.5	0
-27	-0.147	0.195	34.5	0
-26	0.639	0.702	35	550
-25	-0.229	-0.774	35	0
-24	0.430	0.587	35	0
-23	0.368	-0.055	35	0
-22	0.935	0.506	35	0
-21	-10.114	-9.858	35	0
-20	-8.017	1.871	35	0
-19	-8.601	-0.521	35	0
-18	-10.682	-1.857	35	0
-17	-11.938	-1.120	35	0
-16	-11.945	-0.007	35	0
-15	-11.851	0.084	35	0
-14	-11.483	0.328	35	0
-13	-11.107	0.335	35	0
-12	-10.672	0.388	35	0
-11	-10.886	-0.191	35	0
-10	-11.257	-0.330	35	0
-9	-21.632	-9.257	35	0
-8	-24.533	-2.589	35	0
-7	-22.063	2.204	35	0
-6	-24.101	-1.818	35	0
-5	-24.254	-0.136	35	0
-4	-24.088	0.147	35	0
-3	-23.708	0.340	35	0
-2	-23.189	0.462	35	0
-1	-25.649	-2.194	35	0
AV	-11.33717	-0.78597	34.933	18.333333

0	-21.291	-1.372	35	
1	-20.409	0.389	35	
2	-20.487	0.631	35	
3	-19.859	0.797	35	
4	-11.879	10.127	35	
5	-8.3647	4.460	35	
6	-8.310	0.069	35	
7	-7.749	0.711	35	
8	-7.485	0.336	35	
9	-6.751	0.931	35	
10	-3.822	3.716	35	1
11	-5.882	-2.648	35	
12	-5.136	0.947	35	
13	-3.526	2.042	35	
14	-1.879	2.092	35	
15	-3.202	-1.679	35	
16	-2.8566	0.438	35	
17	-2.453	0.513	35	
18	-0.588	2.366	31.5	43,
19	-0.938	-0.444	31.5	
20	-0.904	0.0434	31.5	
21	-0.074	1.053	31.5	
22	1.686	2.233	31.5	
23	1.829	0.182	31.5	
24	2.231	0.509	31.5	
25	2.289	0.075	31.5	31
26	2.348	0.075	31.5	2,
27	3.724	1.747	31	1,
28	4.493	0.975	31	
29	-0.461	-6.286	31	
30	-0.794	-0.423	31	
	-4.173643	0.8659133	33.416667	1635.5

Table 16

UNGA LTD ANALYSIS

SUMMARY OF ABNORMAL RETURNS AND CUMULATIVE ABNORMAL RETURNS FOR PAN AFRICA INSURANCE FOR THE PERIOD 30 DAYS BEFOR AND AFTER THE RIGHTS ANNOUNCEMENT.

Trade Day	CAR	Residual	MPS	No of shares
-30	-0.078	-0.777	49	0
-29	0.100	0.178	49	0
-28	-0.328	-0.428	49	0
-27	-0.132	0.196	49	0
-26	0.574	0.707	49	825
-25	-0.205	-0.779	49	0
-24	0.386	0.592	49	0
-23	0.331	-0.055	49	0
-22	0.840	0.509	49	2450
-21	-9.087	-9.927	49	0
-20	-7.203	1.884	44.01	3210
-19	-7.728	-0.525	45.25	2560
-18	-9.598	-1.870	45.25	0
-17	-10.726	-1.128	44.31	2350
-16	-10.732	-0.007	44	4250
-15	-10.648	0.084	44	0
-14	-10.317	0.331	44	1650
-13	-9.980	0.338	44	0
-12	-9.589	0.391	44	0
-11	-9.781	-0.192	44	0
-10	-10.114	-0.332	44	0
-9	-19.436	-9.322	44	0
-8	-22.043	-2.607	40.12	2350
-7	-19.823	2.219	39	2100
-6	-21.654	-1.831	39.93	4265
-5	-21.791	-0.137	39.27	23450
-4	-21.643	0.148	39.07	2345
-3	-21.301	0.342	39.07	0
-2	-20.835	0.466	39	2500
-1	-23.045	-2.210	39	0
AV	-10.186	-0.7914	44.50933	1810.167

0	-24.277	-1.232	37.75	2350
1	-23.272	0.350	37.25	2400
2	-23.360	0.567	37.25	0
3	-22.644	0.716	37.25	0
4	-13.545	9.099	37.25	0
5	-9.538	4.007	40.62	750
6	-9.476	0.062	41.99	3650
7	-8.836	0.639	41.93	3260
8	-8.534	0.302	41.93	1500
9	-7.698	0.837	41.93	0
10	-4.359	3.339	41.93	0
11	-6.707	-2.379	43.25	4215
12	-5.857	0.851	42.14	3260
13	-4.021	1.835	42.59	4231
14	-2.142	1.880	43.25	2300
15	-3.651	-1.509	44	1200
16	-3.257	0.394	43.25	64889
17	-2.797	0.461	43.08	1235
18	-0.671	2.126	43.14	1000
19	-1.070	-0.399	44	2500
20	-1.031	0.039	43.77	2350
21	-0.085	0.946	43.75	4390
22	1.922	2.007	44.16	4250
23	2.086	0.164	45	4047
24	2.543	0.458	45.01	4091
25	2.610	0.067	45.25	2325
26	2.677	0.067	45.25	2500
27	4.247	1.569	45.25	42500
28	5.123	0.876	45.75	2670
29	-0.525	-5.648	46	4500
30	-0.905	-0.380	43.28	2540
	-4.7591	0.7781	42.68333	5751.767

Table 17 KCB ANALYSIS

SUMMARY OF ABNORMAL RETURNS AND CUMULATIVE ABNORMAL RETURNS FOR PAN AFRICA INSURANCE FOR THE PERIOD 30 DAYS BEFOR AND AFTER THE RIGHTS ANNOUNCEMENT.

Trade Day	MPS	Residual	CAR	No of shares
-30	59 5	-0.1166	-1.1655	0
-29	59 5	0.1498	0.2664	21,302
-28	59 5	-0.493	-0.6425	148,647
-27	61	-0.199	0.294	14,182
-26	62.5	0.861	1.05975	107,830
-25	62.5	-0.308	-1.1691	49,571
-24	62.5	0.579	0.88725	0
-23	62.5	0.496	-0.083	0
-22	62	1.26	0.76365	99,515
-21	61.5	-13.61	-14.891	108,398
-20	61	-10.805	2.8257	26,505
-19	60	-11.592	-0.7869	55,131
-18	61	-14.396	-2.8044	141,727
-17	61	-16.089	-1.6922	0
-16	61	-16.099	-0.0101	0
-15	61	-15.972	0.12675	63,812
-14	59	-15 476	0 4959	1,799
-13	58.5	-14.97	0.5064	4,705
-12	57	-14.383	0.5868	5,709
-11	55	-14.671	-0 2885	6,542
-10	53	-15.171	-0.498	7,097
-9	53	-29.154	-13.983	10,667
-8	53	-33.064	-3 9102	11,343
-7	54	-29.735	3.32895	7,568
-6	56	-32.481	-2.7465	68,472
-5	56	-32.687	-0 2052	68,472
-4	56	-32.464	0.2226	0
-3	57.5	-31.951	0.51315	99,456
-2	59 5	-31.252	0.69885	59,551
-1	54 98	-34.567	-3.3149	0
AV	58.682667	-15.27866	-1.18716	39600.033

0	-36.42	60	-1 849	No of shar
1	0.525	56	-34.908	1,26
2	0.851	56	-35.04	9,42
3	1.074	56	-33.966	37,81
4	13.649	56	-20.317	
5	6.010	57	-14.307	
6	0.093	56.5	-14.214	6,59
7	0.959	57.5	-13.254	14,51
8	0.453	58.5	-12.801	23,58
9	1.255	59	-11.546	44,28
10	5.008	59	-6.538	26,59
11	-3.568	59	-10.061	
12	1.276	59.5	-8.785	
13	2.7521	66	-6.032	22,56
14	2.819	67	-3.213	34,62
15	-2.263	65.5	-5.477	107,06
16	0.591	65.5	-4.886	39,28
17	0.691	65.5	-4.195	22,42
18	3 189	65.5	-1.006	
19	-0.599	66	-1.605	
20	0.059	66	-1.546	17,16
21	1 419	66.5	-0.127	34.62
22	3.010	66	2.883	51,06
23	0.245	66	3.129	42.46
24	0.6866	66	3.815	30,36
25	0.101	66	3.916	
26	0.101	65	4.016	
27	2.354	66.5	6.370	12,79
28	1.314	66	7 684	112,50
29	-8.472	66	-0.788	33,39
30	-0.570	66.5	-1.358	28,43
	1.16709	62.583333	-7.1385667	25095.26

Table 15

TOTAL (K) LTD ANALYSIS

SUMMARY OF ABNORMAL RETURNS AND CUMULATIVE ABNORMAL RETURNS FOR PAN AFRICA INSURANCE FOR THE PERIOD 30 DAYS BEFOR AND AFTER THE RIGHTS ANNOUNCEMENT.

Trade Day	CAR	Residual	MPS	No of shares
-30	0.04	0.04	7.7	0
-29	-0.036	-0.076	7.7	0
-28	-3.819	-3.783	7.7	0
-27	-3.771	0.048	7.4	1100
-26	-3.619	0.152	7.4	0
-25	-3.706	-0.087	7.4	0
-24	-3.629	0.077	7.4	0
-23	-3.561	0.068	7.4	0
-22	-3.567	-0.006	7.4	800
-21	-13.797	-10.23	7.4	0
-20	-13.578	0.219	6.65	1400
-19	-13.443	0.135	6.65	0
-18	-13.329	0.114	6.65	0
-17	-13.415	-0.086	6.65	0
-16	-13.481	-0.066	6.65	0
-15	-13.417	0.064	6.65	0
-14	-23467	-10.05	6.65	0
-13	-33.435	-9.68	6	0
-12	-31.524	1.911	5.4	2450
-11	-31.6	-0.076	5.5	0
-10	-31.781	-0.181	5.5	2600
-9	-31.686	0.095	5.5	0
-8	-31.628	0.058	5.5	0
-7	-31.893	-0.265	5.5	0
-6	-31.903	-0.01	5.5	0
-5	-32.087	-0.184	5.5	0
-4	-32.838	-0.751	5.5	2000
-3	-33.122	-0.284	5.5	0
-2	-33.384	-0.262	5.5	0
-1	-33.416	-0.032	5.5	0
AV	-800.24	-1.1042	6.445	345
0	-33.638	-0.222	5.5	0
1	-33.611	0.027	5.5	0
2	-33.731	-0.12	5.51	1000
3	-26.432	7.299	5.51	0
4	-15.316	11.116	5.93	2350
5	-15.911	-0.595	6.6	4521
6	-10.031	5.88	6.6	0
7	-10.388	-0.357	7	2000
8	-6.474	3.914	7	0
9	-6.34	0.134	7.29	2350
10	-5.763	0.57	7.29	0
11	-5.781	-0.018	7.29	0
12	-6.013	-0.232	7.3	4250
13	-6.065	-0.52	7.3	0
14	-10.201	-4.136	7.3	0
15	-9.919	0.282	7	86518
16	-10.22	-0.301	7	0
17	-10.213	0.007	7	0
18	-5.199	5.014	7	0
19	-1.992	3.207	7.35	2356
20	-1.419	0.573	7.6	2952
21	-1.392	0.027	7.65	3210
22	-2.829	-1.437	7.65	0
23	-2.758	0.071	7.55	5454
24	-1.004	1.754	7.55	0
25	-1.066	-0.062	7.7	3100
26	-5.715	-4.649	7.7	0
27	-5.827	-0.112	7.32	3560
28	-5.941	-0.114	7.32	0
29	-6.443	-0.502	7.32	0
30	-10.275	-3.832	7.32	0
	-9.1423	0.762933	7.048333	4120.7

Table 18

EAST AFRICAN BREWERIES LTD ANALYSIS

SUMMARY OF ABNORMAL RETURNS AND CUMULATIVE ABNORMAL RETURNS FOR PAN AFRICA INSURANCE FOR THE PERIOD 30 DAYS BEFOR AND AFTER THE RIGHTS ANNOUNCEMENT.

Trade day	CAR	Residual	MPS	No of shares	Trade day	CAR	Residual	MPS	No of shares
-30	1.185	1.184	57.04	25600	1	-5.255	9.129	51.00	28928
-29	0.367	-0.818	57.00	24500	2	-6.329	-1.074	50.00	27685
-28	-2.358	-2.723	57.99	36500	3	-8.421	-2.092	54.99	41245
-27	-0.041	2.317	57.55	12458	4	-9.415	-0.994	54.97	14078
-26	-3.006	-2.965	56.65	10000	5	-12.021	-2.606	54.96	11300
-25	-2.345	0.662	57.63	1250	6	-18.117	-6.097	54.03	1413
-24	-4.090	-1.746	57.00	12350	7	-12.628	5.490	53.31	13956
-23	-2.913	1.177	57.00	0	8	-14.075	-1.447	51.28	12500
-22	-5.771	-2.857	56.53	12540	9	-16.565	-2.490	54.45	14170
-21	-0.687	5.084	56.97	6845	10	-14.855	1.711	54.61	7735
-20	-2.913	-1.3556	55.00	1250	11	-15.409	-0.555	53.50	1413
-19	-3.731	-1.688	56.75	3658	12	-16.135	-0.725	54.46	4134
-18	-3.515	0.215	55.58	1236	13	-15.990	0.145	54.26	1397
-17	-6.121	-2.606	54.78	4528	14	-19.798	-3.807	53.54	5117
-16	-5.667	0.454	54.87	1369	15	-20.14	-0.344	53.22	1547
-15	-3.653	2.014	53.65	4890	16	-20.791	-0.650	51.95	5526
-14	-4.523	-0.871	53.89	36250	17	-24.692	-3.901	51.15	40963
-13	-4.818	-0.295	54.94	12500	18	-23.311	1.381	51.00	14125
-12	-5.422	-0.604	55.00	123650	19	-24.826	-1.515	46.70	139725
-11	-4.996	0.427	55.11	12580	20	-27.77	-2.946	50.00	14215
-10	-3.347	1.649	55.17	36800	21	-28.77	-0.998	47.62	41584
-9	-4.958	-1.611	55.17	125800	22	-31.134	-2.364	47.24	142154
-8	-6.175	-1.217	55.90	13500	23	-25.89	5.239	46.40	15255
-7	-10.053	-3.878	55.37	13650	24	-26.823	-0.797	45.00	15425
-6	-7.708	2.345	55.00	12500	25	-24.800	1.295	47.03	14125
-5	-8.797	-0.789	52.91	36500	26	-26.8232	-1.427	47.75	41245
-4	-10.478	-1.981	54.03	1500	27	-27.9394	-1.116	47.40	1695
-3	-13.202	-2.724	54.4	18000	28	-24.9579	2.982	46.80	20340
-2	-14.872	-1.670	52.37	36800	29	-25.197	-0.239	46.70	41584
-1	-15.012	-0.14	51.00	15800	30	-24.7997	0.397	48.00	17854
0	-14.384	0.628	50.90	15800					
AV	-5.32066	-0.50035	55.4083	21826.8		-19.7892	-0.34716	50.77733	25081.1

Table 19

UCHUMI SUPERMARKET ANALYSIS
SUMMARY OF ABNORMAL RETURNS AND CUMULATIVE ABNORMAL RETURNS FOR PAN AFRICA INSURANCE FOR THE PERIOD 30 DAYS BEFOR AND AFTER THE RIGHTS ANNOUNCEMENT.

Trade Day	CAR	Residual	MPS	No of shares
-30	0.746	0.723	16.500	164,780
-29	0.231	-0.499	16.150	133,114
-28	-1.486	-1.662	16.150	0
-27	-0.026	1.413	16.150	0
-26	-1.894	-1.809	16.150	174,190
-25	-1.477	0.404	16.000	35,680
-24	-2.577	-1.065	16.050	44,413
-23	-1.835	0.718	16.000	52,252
-22	-3.635	-1.743	15.850	37,775
-21	-0.433	3.101	15.850	0
-20	-1.835	-0.827	15.850	0
-19	-2.350	-1.030	15.900	56,703
-18	-2.215	0.131	15.950	15,553
-17	-3.856	-1.589	16.000	553,435
-16	-3.570	0.277	16.000	146,474
-15	-2.301	1.229	16.000	9,000
-14	-2.850	-0.531	16.000	0
-13	-3.036	-0.180	16.000	0
-12	-3.416	-0.368	16.000	3,200
-11	-3.147	0.260	16.000	103,117
-10	-2.109	1.006	16.150	160.130
-9	-3.123	-0.982	16.500	34.500
-8	-3.890	-0.742	16.050	5.300
-7	-6.333	-2.366	16.050	0
-6	-4.856	1.430	16.050	0
-5	-5.542	-0.481	17.650	12,850
-4	-6.601	-1.208	19.400	19,725
-3	-8.317	-1.662	21.000	368,094
-2	-9.369	-1.019	22.000	292,556
-1	-9.457	-0.085	21.750	426,895
Av	-3.3519	-0.3052	16.771667	94991.2
0	0	-36.416	22.00	165.81
1	-2.417	0.525	19.95	21,46
2	-2.911	0.851	19.75	27,44
3	-3.874	1.074	17.95	3,00
4	-4.331	13.649	17.95	
5	-5.530	6.010	17.95	
6	-8.334	0.093	17.95	
7	-5.809	0.959	16.30	3,10
8	-6.474	0.453	15.20	16,55
9	-7.620	1.255	15.50	2,50
10	-6.833	5.008	15.05	7,23
11	-7.088	-3.568	14.90	7,88
12	-7.422	1.276	14.90	
13	-7.355	2.752	14.90	
14	-9.107	2.819	14.90	
15	-9.265	-2.263	14.90	56,77
16	-9.564	0.591	14.50	8,70
17	-11.358	0.691	14.50	
18	-10.723	3.189	13.10	18,72
19	-11.420	-0.599	13.10	
20	-12.775	0.059	13.10	
21	-13.234	1.419	12.50	1,65
22	-14.322	3.010	12.50	
23	-11.911	0.245	12.25	1,11
24	-12.339	0.687	12.20	55
25	-11.408	0.101	11.45	15,62
26	-12.339	0.101	11.45	
27	-12.852	2.354	11.45	
28	-11.481	1.314	11.10	39,54
29	-11.591	-8.472	11.00	1,78
30	-11.408	-0.570	11.00	3,00
	-9.10317	1.1671	14.441667	7888.333

Table 20

AFRICAN LAKES

SUMMARY OF ABNORMAL RETURNS AND CUMULATIVE ABNORMAL RETURNS FOR PAN AFRICA INSURANCE FOR THE PERIOD 30 DAYS BEFOR AND AFTER THE RIGHTS ANNOUNCEMENT.

Trade Day	CAR	Residual	MPS	No of shares
-30	-0.086	-0.772	34.5	0
-29	0.111	0.176	34.5	0
-28	-0.366	-0.425	34.5	0
-27	-0.147	0.195	34.5	0
-26	0.639	0.702	35	550
-25	-0.229	-0.774	35	0
-24	0.430	0.587	35	0
-23	0.368	-0.055	35	0
-22	0.935	0.506	35	0
-21	-10.114	-9.858	35	0
-20	-8.017	1.871	35	0
-19	-8.601	-0.521	35	0
-18	-10.682	-1.857	35	0
-17	-11.938	-1.120	35	0
-16	-11.945	-0.007	35	0
-15	-11.851	0.084	35	0
-14	-11.483	0.328	35	0
-13	-11.107	0.335	35	0
-12	-10.672	0.388	35	0
-11	-10.886	-0.191	35	0
-10	-11.257	-0.330	35	0
-9	-21.632	-9.257	35	0
-8	-24.533	-2.589	35	0
-7	-22.063	2.204	35	0
-6	-24.101	-1.818	35	0
-5	-24.254	-0.136	35	0
-4	-24.088	0.147	35	0
-3	-23.708	0.340	35	0
-2	-23.189	0.462	35	0
-1	-25.649	-2.194	35	0
AV	-11.33717	-0.78597	34.933	18.333333

0	-21.291	-1.372	35	
1	-20.409	0.389	35	
2	-20.487	0.631	35	
3	-19.859	0.797	35	
4	-11.879	10.127	35	
5	-8.3647	4.460	35	
6	-8.310	0.069	35	
7	-7.749	0.711	35	
8	-7.485	0.336	35	
9	-6.751	0.931	35	
10	-3.822	3.716	35	1
11	-5.882	-2.648	35	
12	-5.136	0.947	35	
13	-3.526	2.042	35	
14	-1.879	2.092	35	
15	-3.202	-1.679	35	
16	-2.8566	0.438	35	
17	-2.453	0.513	35	
18	-0.588	2.366	31.5	43,
19	-0.938	-0.444	31.5	
20	-0.904	0.0434	31.5	
21	-0.074	1.053	31.5	
22	1.686	2.233	31.5	
23	1.829	0.182	31.5	
24	2.231	0.509	31.5	
25	2.289	0.075	31.5	3
26	2.348	0.075	31.5	2,
27	3.724	1.747	31	1,
28	4.493	0.975	31	
29	-0.461	-6.286	31	
30	-0.794	-0.423	31	
	-4.173643	0.8659133	33.416667	1635.5

Table 21

CFC LTD ANALYSIS

SUMMARY OF ABNORMAL RETURNS AND CUMULATIVE ABNORMAL RETURNS FOR PAN AFRICA INSURANCE FOR THE PERIOD 30 DAYS BEFORE AND AFTER THE RIGHTS ANNOUNCEMENT

Trade Day	CAR	Residual	MPS	No of shares
-30	-2.399	-1.801	73.5	0
-29	0.417	2.113	74.5	748
-28	-0.666	-0.813	72.5	20,170
-27	-2.489	-1.368	72.5	0
-26	-1.501	0.742	72.5	0
-25	-2.655	-0.870	72.5	0
-24	0.632	2.467	74.5	6,500
-23	-2.361	-2.247	74.5	0
-22	-2.870	-0.382	75	500
-21	-2.832	0.028	75	0
-20	-2.688	0.109	75	600
-19	-2.373	0.236	75	0
-18	-3.436	-0.797	75	0
-17	-0.525	2.185	75	0
-16	-4.692	-3.127	74.5	106,505
-15	-2.601	1.570	76	375,882
-14	-4.640	-1.530	75	73,200
-13	-3.456	0.889	75	26,800
-12	-3.559	-0.077	75	0
-11	-3.749	-0.142	75	0
-10	-3.698	0.039	75	0
-9	-3.912	-0.161	75	0
-8	-4.657	-0.560	75	0
-7	-4.892	-0.177	76	7,700
-6	-5.887	-0.746	78	100
-5	-4.867	0.770	78	0
-4	-4.718	0.107	78	0
-3	-1.431	2.467	79	7,400
-2	-3.673	-1.682	78	4,469
-1	1.836	4.135	77.5	
0	-21.291	-2.604	78	
1	-20.410	0.739	78	
2	-20.487	1.198	78	
3	-19.859	1.513	78	3,31
4	-11.879	19.227	78	1,80
5	-8.365	8.467	76	20,30
6	-8.310	0.131	76.5	35
7	-7.749	1.350	75	
8	-7.485	0.638	75	
9	-6.751	1.768	75	
10	-3.822	7.055	75	2,482
11	-5.882	-5.026	74	1,890
12	-5.136	1.798	76.5	1,20
13	-3.526	3.877	79	1.00
14	-1.878	3.971	79	
15	-3.202	-3.188	79	
16	-2.857	0.832	79	1,600
17	-2.452	0.973	79	1.76
18	-0.588	4.492	77.5	5,62
19	-0.938	-0.843	75	3,00
20	-0.904	0.083	75	22,71
21	-0.074	1.999	75	
22	1.686	4.240	75	
23	1.829	0.346	75	22.71
24	2.231	0.967	75	2.59
25	2.290	0.142	73	8.17
26	2.348	0.142	75	5,70
27	3.724	3.316	75	12.31
28	4.493	1.851	74.5	
29	-0.461	-11.934	74.5	
30	-0.794	-0.803	74.5	

Appendix III: Regression Analysis

1. Regression Analysis for: Total
Returns = -0.0670+0.96 Mkt

Predictor	Coef	SE Coef	T	P
Constant	-0.067	0.0567	-1.18	0.237
Mkt	0.9615	0.0783	12.28	0.00

S = 2.34 r^2= 0.081

2. Regression Analysis for: Unga
Returns = 0.063+0.302 Mkt

Predictor	Coef	SE Coef	T	P
Constant	0.063	0.1447	0.43	0.664
Mkt	0.3025	0.1999	1.51	0.13

S = 5.97 r^2= 0.001

3. Regression Analysis for: EABL
Returns = 0.100 + 1.40 Mkt

Predictor	Coef	SE Coef	T	P
Constant	0.100	0.084	1.19	0.235
Mkt	1.399	0.1161	12.05	0.00

S = 3.46 r^2= 0.078

4. Regression Analysis for: Standard Media
Returns = 0.097+0.26 Mkt

Predictor	Coef	SE Coef	T	P
Constant	0.097	0.1089	0.89	0375
Mkt	0.2586	0.1504	1.72	0.086

S = 4.492 r^2= 0.002

5. Regression Analysis for: Pan African Insurance
Returns = -0.057+0.149 Mkt

Predictor	Coef	SE Coef	T	P
Constant	-0.057	0.067	-0.84	0.401
Mkt	0.1489	0.093	1.60	0.109
S = 2.78	r^2= 0.002			

6. Regression Analysis for: ICDC
Returns = -0.055+0.456 Mkt

Predictor	Coef	SE Coef	T	P
Constant	-0.055	0.0702	-0.78	0.436
Mkt	0.456	0.0969	4.70	0.00

S = 2.90 r^2= 0.01

7. Regression Analysis for: Uchumi Ltd
Returns = -0.065+0.364 Mkt

Predictor	Coef	SE Coef	T	P
Constant	-0.065	0.0802	-0.64	0.336
Mkt	0.364	0.0973	3.70	0.00

S = 4.90 r^2= 0.02

8. Regression Analysis for: African Lakes
Returns = 0.0563+0.402 Mkt

Predictor	Coef	SE Coef	T	P
Constant	0.0563	0.245	1.42	0.764
Mkt	0.402	0.268	0.53	0.23

S = 2.97 r^2= 0.0015

9. Regression Analysis for: KCB
Returns = 0.202 + 0.40 Mkt

Predictor	Coef	SE Coef	T	P
Constant	0.202	0.084	2.23	0.245
Mkt	0.353	0.2361	1.06	0.00

S = 2.46 r^2= 0.028

10. Regression Analysis for: CFC
Returns = 0.023+0.802 Mkt

Predictor	Coef	SE Coef	T	P
Constant	0.023	0.245	2.43	0.684
Mkt	0.8025	0.1999	4.51	0.126
S = 4.02	r^2= 0.021			