THE EFFECTS OF RIGHTS ISSUE ANNOUNCEMENT ON STOCK RETURNS OF FIRMS LISTED IN NAIROBI SECURITIES EXCHANGE

OUMA DUNCAN OTIENO

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE MASTER OF BUSINESS ADMINISTRATION OF UNIVERSITY OF NAIROBI

NOVEMBER 2014

PROJECT DECLARATION

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

OUMA DUNCAN OTIENO

D61/76358/2012

SIGNED.……………..………………………DATE…………………………….

This Research Project has Been Submitted for Examination with My Approval as The University Supervisor

MR. HERICK ONDIGO

LECTURER, DEPARTMENT OF FINANCE AND ACCOUNTING

SCHOOL OF BUSINESS

UNIVERSITY OF NAIROBI

SIGNED………………………………………DATE……………………………

ACKNOWLEDGEMENT

I wish to appreciate all who assisted me to ensure the success of this project. This included the NSE that provided me with the data needed to undertake this study. Special thanks to my supervisor for the worthwhile comments and guidance throughout the preparation of this project.

DEDICATION

To my wife, my children, parents, friends for their prayers and moral support. To the University of Nairobi School of Business lecturers.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

CAAR	Cumulative Average Abnormal Returns
CAR	Cumulative Abnormal returns
CMA	Capital Markets Authority
EMH	Efficient Market Hypothesis
GARCH	Generalised Auto Regressive Conditional Heteroscedasticity
IDE	Indonesia Stock Exchange
IFC	International Finance Corporation
IPO	Initial Public Offer
JSE	Johannesburg Stock Exchange
NSE	Nairobi Securities Exchange
NYSE	New York Stock Exchange
OLS	Ordinary Least Square
SEI	Secondary Equity Issue

ABSTRACT

Rights issue is a secondary equity issue in which new additional shares are issued to the existing shareholders in exchange for cash (capital) needed by a publicly quoted company, either for expansion purposes or to finance company operations. The rights are issued to the shareholders in the proportion of their existing holdings. The few available studies give mixed results on the direction of stock returns upon a rights issue announcement. There has been no consensus on how capital markets generally respond to rights issue announcement. The objective of this study was to investigate the effect of rights issue announcement on stock returns of listed companies. This study adopted a descriptive research design and a sample of twelve listed companies, which issued rights between January 1, 2007 and August 31, 2014 were used to meet the objective. The required data for this study was collected from NSE and using event study model and Microsoft excel, descriptive statistics and statistical correlation was used to analyse the data and the significance of the findings tested using the two tailed t statistic at 95% significance level. This study found that stock prices and returns changed significantly in the post announcement period than in the preannouncement period. Analysis of mean abnormal return revealed that rights issue announcement result into either positive or negative stock return. The general conclusion of this study based on the generated CAAR is that rights issue announcement results into a negative abnormal stock return on listed firms. This study recommends that investment banks and listed companies to consider the negative abnormal stock price reactions and the subsequent negative abnormal stock return changes to the announcement of rights issue, when setting the discounted rights issue prices to ensure that during the issue period, the stock trading prices do not fall below the rights issue price, a fact that can lead to the collapse of the rights issue exercise.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Firms in the securities markets engage in rights issue as a means of generating more capital to finance their expansion plans and to finance internal operations (Ramirez, 2011). Companies have an option of using either debt or equity to finance their operations. The common long term means of raising capital available to companies include long-term debt (bonds), common stock, preferred stock and retained earnings. In most cases, companies prefer financing using equity since it forms a permanent source of funding that cannot be easily redeemed. Companies that are listed in the stock exchange markets around the world normally raise external equity capital in an initial public offer (IPO) where initial investors usually members of the public are invited to participate, or from existing shareholders in a secondary issue also known as rights issue. A rights issue offers an opportunity to the existing shareholders to buy additional securities in a corporation at a discounted price and are allotted based on the number of shares currently held (Lambrechts & Mostert, 1980).

Several empirical researches both in the global and local context have been done to investigate the effect of rights issue on stock returns. A number of the findings are consistent with the signalling theory indicating that capital markets react to new information, particularly when management announces offering of additional equity stock to the firms' existing shareholders. For instance, study done by Tsangarakis (1996) in Greece found a positive relationship between announcement of a rights issue and increase in returns.

Local study by Kithinji, Oluoch and Mugo (2014) on effect of rights issue on firms share performance also found that rights issue has effects on the share performance of the companies listed in NSE. Gatundu (2007) in a study on the effects of secondary equity offering on stock returns established that there are price movement in the periods preceding and after the date of announcement of secondary equity issue, and these movements result into increased abnormal returns for the shareholders.

1.1.1 Rights Issue Announcement

This is a secondary equity issue in which new additional shares are issued to the existing shareholders in exchange for cash (capital) needed by a publicly quoted company, either for expansion purposes or to finance company operations (Ramirez, 2011). The rights are issued to the shareholders in the proportion of their existing holdings (Prabina, Raghunathan & Raghunathan, 2007). In publicly quoted companies, it is legal that rights are issued to the existing shareholders before an IPO to the public. This is because the existing shareholders have pre-emption rights on the new shares, in which they can as well refuse. The pre-emption rights give the existing shareholders opportunity to uphold their existing percentage of ownership in the company, but can still choose to buy or waive the shares to be taken by others. This is done through a voting process by shareholders to either withdraw or uphold their pre-emption rights (Becket, 2012).

The share prices in a rights issue are typically set much lower than the prevailing market price for the shares. This discount can be as low as between 20-30% and is purposefully to make the offer reasonably attractive to existing shareholders, in order to either take up their rights, or sell them to others who also have the right to take up the new shares under same conditions as that of the seller (Becket, 2012).This strategy is employed by management to ensure full subscription for the shares in order to raise the required amount of capital. Equally, the discount price is also to cushion the shareholders in case the market share price falls before the rights issue period is completed (Lhabitant & Gregoriou, 2008). It is noted that if the market share price were to fall lower than the rights issue price, shareholders would prefer buying the shares directly from the market at a cheaper price instead of taking their rights at higher price. This would mean collapse of the rights issue exercise (Ramirez, 2011). Rights issue is also preferred by quoted companies because it is a relatively cheaper means of raising capital as compared to bonds or even initial offers. Usually, the costs of preparing a brochure, cost of press advertising and underwriting commission often involved in a new issue of shares or interests costs on bonds are fundamentally forfeited. Nevertheless, a few costs such as accountants and lawyers fees are incurred, though the percentage of their costs fall as the sum raised in the rights issue increases, making the overall cost much lower than in initial issue. In an analysis of the transaction costs involved in a rights issue the company is expected to contact all the shareholders and set up mechanism for the selling of rights (Kithinji, Oluoch & Mugo, 2014).

A rights issue is also beneficial to closed-end companies that are unable to retain earnings, as a result of distributing essentially all of their realized revenue and capital gains each year. However, it is imperative to note that shareholders may react negatively, especially in situation where firms repeatedly issue rights and shareholders are forced either to take up their rights or sell them (Ramirez, 2011). As a result, shareholders may opt to sell their shares, driving down the market price in the long run (Spiess, Katherine & Affleck-Graves, 1995).

1.1.2 Stock Returns

This is the gain or loss of a security in a particular period. The return consists of the income and the capital gains relative on an investment and is normally quoted as a percentage (Ilmanen, 2011). The stock return is a function of stock prices and trade volumes a particular stock In this case, capital gains occur when the securities sell at higher prices than the purchase price, while capital loss occurs when security prices sell at a lower price than the purchase price. In economics and financial theory, a random walk technique is used to model the behaviour of asset prices, particularly the share prices on security markets, commodity prices and currency exchange rates. This technique is based on the assumption that investors are rational and without biases, thus fairly estimate the value of asset or shares based on future expectations. In this case, all existing information impacts the price, and consequently the stock return. In such cases, technical analysis uses the historical data and the anomalies to extract information on future price movements (Padley, 2009). In a securities market, investors always want to maximise their returns, thus always interpret any information based on whether the information will positively influence their returns.

1.1.3 Effects of Rights Issue Announcement on Stock Returns

As indicated earlier, securities market responds randomly to the new information arriving in the market. This is based on the signalling theory that states that capital market responds efficiently to the information reaching it (Elton et al, 2009). Announcement of a rights issue usually elicits different responses among the investors. For instance, an announcement of a secondary equity issue (SEI) may send positive signals that the company is likely to perform better in future after additional investment, and this gives the investors' confidence to demand more investment in shares (Becket, 2012). This increase in demand for the company's shares based on the technical analysis of better future performance is likely to result in the increase in the share prices and consequently increase in stock returns (Musyoki, 2012).Conversely, persistent rights issue may make shareholders react negatively, since it may be an indicator that the firm's liquidity is always very low, thus limiting future return and capital gains. In such situation, shareholders may opt to sell their shares, driving down the share prices (Ramirez, 2011). Either way, it means that there is a relationship between the announcement of a rights issue and the firm's stock returns in the securities market.

Equally, the announcement of rights issue increases investors' confidence on the company's future performance, particularly for companies seeking capital for further expansion. This leads into temporary increase in demand for the firm's shares and consequently increases in volumes of trade. Announcement of secondary equity issue may also elicit reduced volumes of trade, especially when shareholders and investors respond negatively. This means that announcement of rights issue positively or negatively affects the stock returns (Ramirez, 2011).

1.1.4 Nairobi Securities Exchange

Nairobi Securities Exchange was established in 1954, then known as Nairobi Stock Exchange and was constituted as a voluntary association of stockbrokers registered under the Societies Act. The trade during this time were low since Africans and Asians were not allowed to trade in securities, until after 1963 after Kenya became an independent state. Over the decades, the performance of NSE gradually improved until it was rated the best performing market in the world with a return of 179% in dollar terms on February 18, 1994 after the NSE 20-Share Index recorded an all-record high of 5030 points by International Finance Corporation (IFC) (Nse.co.ke, 2014). Currently, the NSE operates on the Automated Trading System (ATS) for government bonds. This system was launched in November 2009, to create more depth in the capital markets by providing the necessary liquidity.

At present, 61 companies are listed in the NSE trading their stock and bonds daily. These companies are divided onto 12 main sectors of the economy. They include; agricultural, commercial and services, banking, insurance, investment services, telecommunication and technology, energy and petroleum, manufacturing and allied, investment, construction and allied, growth enterprise market segment and automobile and accessories (Appendix I). These listed companies occasionally engage in rights issue to raise more capital for expansion or to finance their operations. It is also noted that in June 27, 2014, the Capital Markets Authority proved the listing of the NSE stock through an IPO and subsequently self-list its shares on the main investment Market Segment. This approval and subsequent IPO made NSE be the second African stock exchange after JSE to be self-listed (Nse.co.ke, 2014).

1.2 Research Problem

Finance signalling theory asserts that capital markets react to information released into the market, and is based on the assumption that there is information asymmetry in the market. This means that corporate financial decisions such as rights issue act as signals that can either elicit positive or negative response, thus affecting the stock returns. Miller and Rock (1985) argue that unexpected equity issues signals bad news. Several studies, which give mixed results on the effect of rights issue on stock returns, have also been done. For instance, studies done by Suresha and Naidu (2012) in India, Cotterell (2011) in South Africa, and Roosenboom and Kabir (2002) in Netherlands found that stock market reacts negatively to the announcement of a rights issue, leading to abnormal negative stock returns. On the contrary, the study by Miglani (2011) also based in India found an increase in stock prices and consequently a positive abnormal stock returns.

The few available local studies also give mixed results on the effects of rights issue on stock returns. Studies by Njoroge (2003) and Olesaaya (2010) found that right issue announcements impacts stock prices negatively, leading to abnormal negative stock returns. These results are however inconsistent with the finding of Gatundu 2007, which concluded that the announcement of secondary equity issuing led to the increase in the stock prices and volume of trade, and consequently abnormal positive stock returns.

The inconsistent results therefore indicate that there is no agreement on the effect of rights issue announcement on stock returns. There has been no consensus on how capital markets generally respond to rights issue, thus not possible to generalize the direction of market reaction as instigated by the announcement of rights issue in the Kenyan market, hence there exists a gap. This study therefore seeks to fill the gap to understand the direction stock returns take when rights issue is announcement at NSE. The research question that guided this study is; what is the effect of rights issue announcement on stock returns of firms listed in Nairobi Securities Exchange?

1.3 Research Objective

To investigate the effect of rights issue announcement on stock returns of firms listed in Nairobi Securities Exchange.

1.4 Value of the Study

Stock prices and the amount of shares traded within a particular period in a securities market are influenced by a number of factors, announcement of rights issue being one of the factors. In this regard, understanding the impact of the announcement of rights issue on the share prices of the company and the volumes traded will help managers of the quoted firms to set correct rights issue prices whenever they intend to issue rights in future (Ramirez, 2011). This will also be applicable to companies based in Kenya, which are currently not listed. Current and potential investors will also benefit from the finding of this study, particularly by aiding their understanding on how share prices and market respond to the declaration of rights issue, thus making rational investment decisions based on the expected future returns.

Investment banks will also benefit from this study by understanding share price reactions to announcement of rights issue and the volumes traded after the announcement dates. This information will guide the banks on how to price and sell their securities. Finally, the findings will also inform the development of rights issue regulatory policies by the government and Kenyan Capital Market Authority (CMA), in order to protect the investors' interests, which is the core mandate of the Authority.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature related to rights issue and how it impacts share prices and volumes of shares traded in the securities markets. The chapter outlines the theories that show the relationship between announcement of a rights issue and share prices and volumes of shares traded, identify other variables that influence share prices and volumes traded in the stock exchange and outline the empirical studies that have been carried out by other researchers on the impact of rights issue share prices and volumes traded in a securities market both locally and at the global stage.

2.2 Theoretical Review

This section outlines three theories that give the foundation of this study. These include; random walk hypothesis, signalling theory and efficient market hypothesis.

2.2.1 Random Walk Hypothesis

This theory points that information reach the security market randomly and elicits random reactions of the security prices. Investors are assumed to rationally estimate the value of shares based on the expected future returns. Random walk theory states that the past movement or direction of the price of a particular security or of the whole market cannot be employed to forecast its future movement since information arrive randomly (Elton et al, 2009). This means that share prices are independent of each other and have similar probability distribution, thus take unpredictable path. This theory leads into efficient market hypothesis (EMH) in which security prices reflect both publicly and privately available information, and that one cannot rely on historical information to make arbitrary profits (Singal, 2003). This means that there is constant trading of securities through buying and selling and the prices are determined by a stochastic process in which price continuously changes as new information arrive. It is hard to predict the intrinsic value of a security but the price may simply revolve around a given intrinsic value. In this context, announcement of a rights issue may elicits random share price changes.

2.2.2 Signalling Theory

This theory states that corporate financial decisions and communications are signals sent by company managers to investors in order to minimise information asymmetry and to facilitate rational investment decisions (Elton et al, 2009). These signals are the basis of financial communications policy. The theory is constructed on the premise that information is not evenly available to all parties at the same time. Usually, managers are privy to consistent, accurate and relevant private information that inform their decisions, which in turn signals the market. For instance, company announcements of an increase in dividend pay-outs act as an indicator of the firm having strong future prospects. Having that investor's intention is to maximise their returns, they will be willing to invest only in a company projected to have stable future performance (Quiry et al, 2011).

Similarly, manager having good investment opportunities are more likely to signal the market through announcement of future, plans than those with no investment opportunities. In this respect, announcement of a rights issue to raise capital for additional investment and for company expansion sends signal to the investors that such a company has better future prospects, hence positive investors and market response.

2.2.3 Efficient Market Hypothesis

This is an investment theory developed by Fama (1970), outlining that financial markets respond efficiently to information reaching it. This means that market prices fully reflect all the available information. This means that a single investor cannot consistently achieve returns in excess of average market returns on a risk-adjusted basis, given the information available at the time the investment is made (Fama et al, 1969).

EMH has three types; weak EMH, semi-strong EMH, and strong EMH. The weak form of the EMH states that that prices on traded assets such as stocks, bonds, or property reflect all past publicly available information, hence an individual cannot make arbitrage returns. This means that the prices share prices today is a reflection of yesterday's price (Fama, (1970). Semi-strong EMH states that prices reflect all publicly available information and that prices promptly adjust to reflect new public information. Strong EMH on the other hand claims that prices instantly reflect both public and private information. This means that today's price is determined by both public and private information.

2.3 Determinants of Stock Returns

Other than the announcement of rights issue, there are other factors that influence stock returns. These determinants are discussed below.

2.3.1 Liquidity

Liquidity is defined as the ease to buy or sell stock in a stock market. Thus presence of volume or its lack has a direct impact on the liquidity in the market. If there is low transaction of stocks from one hand to other, the stock is termed as illiquid during a particular period. Similarly, if the number of stocks traded is high, then we call the stock as liquid. This relationship is not so direct because it is not yet defined as to how many shares when traded will lead to a liquid stock (Sapna & Dani, 2014). Liquidity depends on investors' ability to buy and sell shares with ease in the market and the more liquid stock is the higher the returns.

Liquidity is measured by annual turnover, which is simply the number of shares traded divided by the stock's outstanding shares. High-turnover stocks tend to have low bid-ask spreads, low price impact per dollar and high trading volume relative to the size of the firm (Dalgaard, 2009). A study by Swedroe (2012) that focused on the top 3,500 U.S. stocks by capitalization covering period between 1972 and 2010 found that liquidity substantially impact valuation and returns for different kinds of securities, and has a positive long-run effect on stock returns. This clearly indicates that liquidity determines the direction of stock returns.

2.3.2 Manipulation in the Market

Traders in order to make arbitrage higher profits sometimes indulge in unethical and artificial buying or selling of the stocks, which inflates or deflates the prices and volume and consequently affecting the stock returns. This kind of manipulation is unhealthy for the market and generates wrong sentiments from the investors (Sapna & Dani, 2014).

Market manipulation is likely to be done by potentially informed parties such as brokers, corporate insiders, large shareholders, underwriters, and market makers. Usually, more illiquid stocks are more likely to be manipulated in order to increase stock volatility (Aggarwal & Wu, 2003). It is noted that stock prices rise throughout the manipulation period, especially when the manipulator sells and then fall in the post-manipulation period when the manipulator buys. Similarly, the prices increase when liquidity is greater and when volatility is greater (Huang, Chen, & Cheng, 2007). This impacts stock returns.

2.3.3 Previous Returns and Portfolio

Investors base their investment decision on the portfolio they have and also their past experience as to what returns they got from a particular stock. This make them demand more or less of the security leading to higher or lower stock returns (Sapna & Dani, 2014).

Expected return on an investment is estimated by averaging the historical returns. For instance, a financial analyst may calculate percentage return on a stock for the last 10 years and use this to average future stock return (Ilmanen, 2011). This can be calculated by the formula below;

$$\overline{R_\iota} = \frac{1}{T} \sum_{t=1}^{T} r_{i,t}$$

Where;

$\overline{R_\iota}$ = The historical average of stock *i* (read "R-bar sub *i*)

T = Time period

$\sum_{t=1}^{T} r_{i,t}$ = Sum of returns for security *i* for the time period *t*

This means that previous stock returns influences the future stock returns.

2.3.4 News and Media Reports

Certain news, events or reports released by media have a huge impact on the investor sentiment. In case of such incident, trading volume and price generally show changed trends. Such information includes dividend declaration, previous returns, stock split announcements, stock breakouts and bid ask spread among others (Sapna & Dani, 2014).

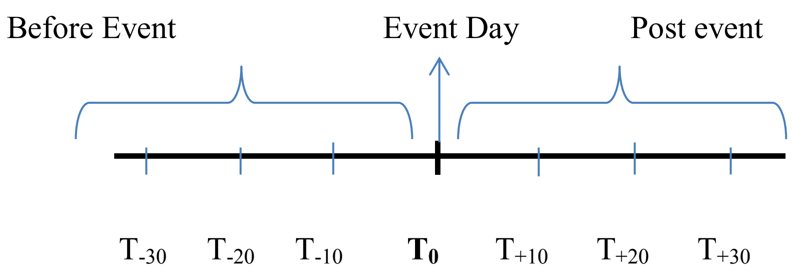
A study by Dulwich (2006), which analysed the impact of BBC news reports on the stock price volatility and returns for the FTSE 100 traded in NYSE found that 12.4% of major news events elicited extreme increase or decrease in stock price volatility. The study also found that 31 news reports resulted into an increase in daily return after the event day. Equally, from the 45 BBC news events that increased in volatility, 27 experienced a negative change in returns, while 28 events that recorded a decrease in volatility reported a similar amount of increases and decreases in average daily return (Dulwich, 2006). This clearly shows that news and media reports determine the stock returns.

2.4 Event Study Model

Event study model is a statistical method performed on a security that has experienced a significant catalyst occurrence, and has consequently changed dramatically in value as a result of that catalyst (McWilliams & Siegel, 1997). As the event methodology can be used to elicit the effects of any type of event on the direction and magnitude of stock price changes, it is very versatile. Event studies are thus common to various research areas, such as accounting and finance, marketing, management, economics, information technology, political science and law (MacKinlay, 1997).

Such events may include corporate event like company mergers, announcement of earnings, announcement of stock split, announcement of IPO, announcement of rights issue and announcement of planned capital investments among others (Serra, 2002). This is based on the fact that markets react and process the information as they arrive. Such announcements either have positive or negative effects on the security prices or may cause abnormal negative or positive return attributable to the event under study, and this is anchored on the assumption that markets process information about an event in an efficient and unbiased manner (Fama et al, 1969).

Based on this research, the event period covered 61 days, comprising 30 days before the announcement of the rights issue (t_{-30}) and 30 days after the announcement date of the rights issue (t_{+30}) and the event day (t=0) being the day of announcement of the rights issue. The study therefore, compares the stock returns as determined by the stock prices of shares traded before and after the announcement of a rights issue. This can be represented as below;



2.5 Empirical Review

This section will outline the empirical evidence of previous studies that looked at the effects of rights issue announcement on stock returns at the security exchange markets. This will comprise previous studies at the global and local levels.

2.5.1 International Evidence

An empirical study conducted by Roosenboom and Kabir (2002) looked at whether the stock market could anticipate future operating performance using equity rights issues in Netherlands, for a period covering 1984-1995. One of the objectives of the study was to examine the effect of stock market announcement, particularly rights issues on the stock prices. Similar to many other studies, this study also adopted a standard event study design and a sample of 58 firms listed in the Amsterdam Stock

Exchange that issued rights were analysed to measure the reaction of share prices to the announcement. The market model parameters were used to estimate over 200-trading days surrounding the event period, but the event period analysed limited to 60 days prior to the announcement to 30 days of post announcement. It was found that upon the announcement of a rights issue, stock prices significantly decline and there is gradual decline in stock return throughout the period of rights trading. This means that stock holders interpret secondary equity issue as negative news. Further analysis by the researchers revealed that rights are actively traded during the subscription period. The share price decline recorded in this finding is consistent with the finding by Cotterell (2011), though a different context

Cotterell (2011) did a study to investigate the impact of rights issues announcements on share price performance in South Africa. The study was conducted by analysing rights issue announcements occurring on the Johannesburg Stock Exchange (JSE) between January 1, 2001 and December 31, 2010. The study adopted a standard event study design to analyse 35 events that took place in that period and employed a market model and control portfolio to measure abnormal returns statistical analysis conducted to confirm significance. The study found that there was an average abnormal returns of -2.33% and -3.30% on the day of the announcement subject to the model used, and Cumulative Average Abnormal Returns (CAARs) for five days post the announcement ranging between -5% and -6%. Cotterell found share price reactions to differ with statistical significance, in respect to financial situation of the issuer. However, the firms that were categorised as healthy recovered from the initial decline to a CAAR of less than -1% twenty days post the rights issue announcement, while firms categorised as unhealthy and grouped in the grey zone deteriorated further to a CAARs of -9.17% and -8.06% respectively in the same period. Overall findings indicated share price decline on the announcement of a rights issue, but that this response is considerably worse for firms in a poor financial position, as measured by their Altman Z Score.

Miglani (2011) also explored the impact of right shares issued by Indian firms between year 2005 and 2010. The study was to investigate the reaction of stock prices to the information content of announced right issues, with a view of determining whether Indian stock market is semi-strong efficient or not. Using event study methodology and a sample of 32 right issues announced during the period of study (2005-2010), it was found that there is a statistically significant abnormal return of the stock on the announcement and the surrounding dates, attributed to the positive increase in share prices and increase in volumes of shares traded.

Suresha and Naidu (2012) undertook a similar study in India with an objective to explore the market reaction to rights issue announcement. The main purpose of this study was to assess if an investor can gain or lose an above normal return within the window period by relying on public information contained in the rights issue announcement. The study adopted the risk adjusted event study methodology, and using S&P Nifty Index as the sample. The study period was from 1995 to 2011 and also scrutinized neglected firm hypothesis, price pressure hypothesis. Abnormal returns were calculated by use of the market model and t-tests conducted to test the significance. This study found no evidence of existence of significant positive abnormal returns on the stock. On the contrary, the event resulted into a statistically insignificant negative ARR of -0.048. Equally, the analysis found that there no significant change in trade volume for during the event window. Overall conclusion of the study was that the Indian stock market reacts negatively to the announcement of a rights issue. This finding is inconsistent to the initial finding by Miglani (2011), which concluded that there is statistically significant abnormal return of the stock on the announcement and the surrounding dates.

Sugiana and Surya (2013) in their study that sought to understand the implication of right issue cum and ex-date announcement to the stock return in Indonesia also found significant response of stock returns to rights issue in the Indonesia Stock Exchange (IDX). The study period was 2009-2012 for a 30 day observation period. Using a sample of 74 issues and event study analysis, the study found that rights issue cum and ex-date events lower stock prices and stock returns around the announcement period. The study concluded that there is a significant abnormal negative return before and after the rights issue event.

2.5.2 Local Evidence

Njoroge (2003) did a study that investigated the impact of right issue announcements on share prices of firms quoted at the Nairobi Stock Exchange. The objective was also to examine whether the average abnormal returns associated to the declaration of rights issue was statistically different from zero. The study period was seven years between 1996 and 2002, using a sample of six companies that issued rights within the period. Njoroge used market model to deduce the expected returns and employed a t-test statistic to test the hypothesis. This study found that there were negative price changes for the firms that issued rights issue. The firms recorded an abnormal negative return immediately before the announcement day of the rights issue and a moderate negative return thereafter. The abnormal negative return prior to the announcement date indicate that there was information asymmetry and that the intended plan of announcement was leaked, thus rights issue announcement impacts prices and stock returns negatively.

Another empirical study done by Cheruiyot (2006) that focussed on the impact of rights issues on security Prices for firms trading at NSE also revealed that security prices respond based on the information content. This study involved 6 firms that issued rights in the period April 1, 1996 to December 31, 2002. Market model was employed to generate the excess returns and the parameters of the model were computed using GARCH model (Generalized Auto Regressive Conditional Heteroscedasticity). Least Squares method was used to compare findings and two tailed t statistic used to test the significance of the findings. The study found that rights issue impacts on the firm's security prices at NSE. However, the movement of the prices whether negative or positive is dependent on the content of information released to the market. The nature of the information may be negative but the extent is varied across the sample. This finding is similar to the finding by Ndua (2012) that found that stock returns after rights issue depends on information content. This means that firms intending to issue rights must release sufficient and relevant information for positive market interpretation.

Gatundu (2007) in an empirical study that investigated the effect of announcement of secondary equity offerings on stock prices of companies quoted at the NSE as well as to determine the impact of the announcement on trading volume before and after the secondary issue found that the announcements do not shock the market. The study adopted an event study research design and identified ten companies that had issued secondary shares to the market between 1996 and 2006 at Nairobi Stock exchange. The study found that the market responded differently for different types of stocks.

There were minimal abnormal returns realized showing that the information about rights issue does not shock the market in a significant way. Conversely, the analysis revealed that more shares were traded after the announcement of the secondary equity issue than in the pre-announcement period for most firms involved in the study. According to this study by Gatundu, it was concluded that the announcement of secondary equity issuing led to the increase in the volume of trade.

Olesaaya (2010) in an empirical study also examined the effects of rights issues on the stock returns of firms quoted at Nairobi stock exchange. The study adopted an event study research design as outlined by Brown and Warner (1985) and used market statistical model, which links the returns of any given security to the return of the market portfolio to measure and analyse the abnormal returns. The researcher noted that the abnormal returns are considered to indicate the stock market's reaction to the announcement of secondary equity issues. The analysis of the study found that there is a negative abnormal return prior to the announcement of rights issue, positive abnormal returns during the announcement and negative results after the rights issue period.

A study done by Ndua (2012) on the effects of the rights issue on stock returns for companies traded as NSE also indicated that rights issue impacts on the returns. The study adopted a market model to generate the excess returns and the significance of the findings tested using two tailed t statistic. This study found that the response of the market to the announcement of a rights issue is significantly dependent on the content of information released. This means that market share prices and consequently stock returns react positively if comprehensive information is given leading to higher stock returns than realised during the preannouncement period, or negatively if adequate information is not given. Therefore, firms issuing rights at NSE need to release adequate and relevant information for proper interpretation of the issue.

Mutua (2013) also did a study that intended to determine the effect of rights issue on performance of firms quoted at NSE. The study used a sample of 14 companies that had issued rights within the period covering year 2000-2010. To estimate the financial performance, accounting measures were used, in which financial statements for the companies were extracted and determinants including profitability, Leverage, Growth, Size and Liquidity were analysed using three-year averages, both for post issue and pre-issue events. Further, correlation and regression analysis were also used in the study. This study found mixed results indicating that profitability, liquidity and growth of the firms improved after rights issue while the size and leverage declined in the post issue.

The researcher attributed the decline in size to the increase in assets in relation to sales, implying inefficient asset utilization. Further analysis indicated that leverage decreased as a result of the sufficient finances raised through the issue, thus decreasing firms' borrowing rate. The overall analysis of all the variables found that net profit margin improved from 11.132 realized during the pre-issue to 13.141 for post issue, thus indicating an improved performance. The study therefore, concluded that firms' performance increases as a result of rights issue.

A study by Kithinji, Oluoch and Mugo (2014) whose objective was to determine the effect of rights issue on firms share performance in the Nairobi Securities Exchange also found significant changes in share performance after the announcement. The study used a sample of 9 companies that form the NSE 20 share index and had issued rights between 2007 and 2012, with an event period of 20 days before and 20 days after the announcement. Using descriptive study design and market model to analyse the data, the study found that rights issue announcement has a significant impact on the share price performance of firms in which 100% of the results pointed a positive significance level.

2.6 Summary of Literature Review

This chapter outlined random walk hypothesis, signalling theory and efficient market hypothesis as theories that anchor this study. Four determinants of stock returns other than the rights issue were also identified. They include; liquidity, manipulation of the market, previous returns and portfolio and news and media reports. The chapter also discussed event study methodology adopted in the study. The review of global empirical evidences showed that there is significant impact of rights issue on the firm's returns. The study by Cotterell (2011) found that there was an average abnormal return on the stock as a result of the negative changes in the stock prices upon announcement of rights issue. This finding was consistent to the study by Roosenboom and Kabir (2002), Suresha and Naidu (2012) and Sugiana and Surya (2013). However, Miglani (2011) found positive stock price changes and consequently positive stock expected and total returns after announcement of rights issue.

Review of the local empirical evidence also revealed that there is an effect on rights issue announcement on stock returns. Njoroge (2003) found abnormal negative stock return immediately before the announcement day of the rights issue and a moderate negative return thereafter. Ndua (2012) and Cheruiyot (2006) found that the positive or negative return experiences are dependent on the information content issued. Having that the findings of the evidences reviewed both negative and positive impacts, this study will add into the knowledge on the response of stock returns when rights issue are announced.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines how the research was carried out. It identifies the research design, the population of the study, sample size, data collection process and highlighting how data will be analysed.

3.2 Research Design

This study adopted descriptive research design to investigate the general behaviour of stock returns whenever a rights issue was announced by companies listed at NSE. Descriptive design is defined as a scientific method which involves observing and describing the behaviour of a subject without manipulating it in any way (Christensen, Johnson & Turner, 2011). This design was preferred since the researcher used the realized data of stock returns before and after the announcement without influencing the subject, in order to judge the natural behaviour of stock returns around the event period.

3.3 Population

The study population in this case included the 61 companies listed in the Nairobi Securities Exchange as at August 31, 2014. This is because all publicly quoted companies are potential participants in a rights issue exercise, thus may significantly benefits from the findings of this study, particularly when considering whether or not to issue rights as a way of raising the additional needed funds for expansion of to finance internal operations.

3.4 Sample

This study used a sample of 12 companies listed at the Nairobi Securities Exchange which issued rights between January 1, 2007 and August 31, 2014 (Appendix II). This included repeat rights issues within the study period (January 1, 2007 – August 31, 2014). The movement of stock returns before and after announcement of a rights issue for the sample companies was analysed independently and then a general conclusion of the finding deduced.

3.5 Data Collection

The study utilized secondary data collected from publications and figures generated from the NSE reports and from the respective companies that engaged in secondary equity issue within the period under study (January 1, 2007 – August 31, 2014). The required data included equity rights issues at NSE, rights issue prospectus that revealed the announcement dates for the rights issue and the NSE daily price list for the highlighted companies that revealed the daily closing price per share for all the firms, particularly for 30 days before the announcement and 30 days after the announcement of rights issue. Finally, the data also included the volumes of shares traded by the highlighted companies 30 days into pre-announcement period and 30 days into post announcement period.

3.6 Data Analysis

Data analysis in this study involved determining any abnormal stock returns after the announcement of the event. This was achieved through the use of standard event study model (MacKinlay, 1997).

3.6.1 Analytical Model

This was done using the following steps;

Step one; involved determining the actual return (R_j) for each of the days studied. This was done by calculating price after the announcement date less price before announcement date plus any additional income received over the period, divided by the price of the security before the announcement date (Elton et al, 2009). This was computed using the following model;

$$R_i = \frac{(P_1 - P_0 + D_1)}{P_0} \quad \text{..................................Equation 1}$$

Where:

R_i = Return on security i

P_1 = Price after the announcement date

P_0 = Price before announcement date

D_1 = Any income received over the period

Step two; involved determining the abnormal stock returns for each of the days under study comprising 30 days before the announcement of rights issue (t_{-30}) and 30 days after the announcement of rights issue (t_{+30}). Abnormal return in this case is the actual return less expected return. This helped in determining any significant change in stock returns associated with the event (t_0).

The abnormal return was calculated using the market model below that first shows the linear relationship of returns and market;

$$ER_{it} = \alpha_{it} + \beta_i Rm + e_i \quad \text{..Equation 2}$$

Where;

ER_{it} = Expected return for security *i* at time *t*

α_{it} = Alpha (intercept of the characteristic line of y intercept)

β_{it} = Beta (gradient characteristic line that gave the sensitivity of stock excess return after the announcement)

Rm_t = Return on market portfolio at time t

e_{it} = Avoidable risk

Having that investors are only compensated for systematic risk due to efficient diversification, the equation for expected return becomes;

$ER_{it} = \alpha_{it} + \beta_i Rm$ ……………………………………Equation 3

Abnormal stock return was then calculated by actual return (R_i) less expected return (ER_{it}), computed as follows;

$AR_{it} = R_{it} - (\alpha_i + \beta_i Rm_t)$ …..……………………………..Equation 4

The parameters α_i and β_i in the model were estimated using the ordinary least square (OLS) regression over the estimation period of 30 days prior to the window period (t_{-60} to t_{-31}) in order to estimate the normal expected returns, which are not influenced by possible insider trading activities instigated by their knowledge of looming announcement of the rights issue. This short period was preferred to minimise exposure of the regression parameters to possible changes in risks. This is because longer estimation period may affect the regression parameters in case the risk of stock changes during the estimation period. For this period, the expected return was determined using the market model.

For the sample of 12 securities, mean abnormal returns (MAR) on each of the days within the window period (t_{-30} to t_{+30}) was then calculated to determine the average abnormal returns of the companies that issued rights within the study period. This was calculated as;

$MAR_t = \frac{\sum AR_i}{N}$ …………………………………………..Equation 5

Where N is the number of sample (12)

Step three; this involved computing the cumulative abnormal returns for all the days studied. This was done by adding all the abnormal returns for the event window (t_{-30} to t_{+30}).

3.6.2 Test of Significance

Testing the significance of the cumulative abnormal return (CAR) and mean abnormal return (MAR) is the fourth step and was done using standard t-test statistic at 95% significance level.

Using these models, the researcher was able to determine the effects of the announcement of rights issue on the firm's share prices and volumes of trade for the companies listed at the NSE.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The objective of the study was to investigate the effects of rights issue announcement on stock returns of firms listed in Nairobi Securities Exchange. To meet this objective, data comprising adjusted share prices and volumes traded for twelve companies listed in Nairobi Stock Exchange that had issued rights between 2007 and August 31, 2014 were collected in order to analyse the movement of prices and volumes of shares within the window period of 61 days. This analysis also included firms that offered rights more than once, in which each issue was analysed independently. The precise announcement date was established and event study model was employed used to assess if there was any abnormal market reaction to announcement of rights issue. This section uses descriptive statistics to outline the movement of stock returns.

4.2 Descriptive Statistics

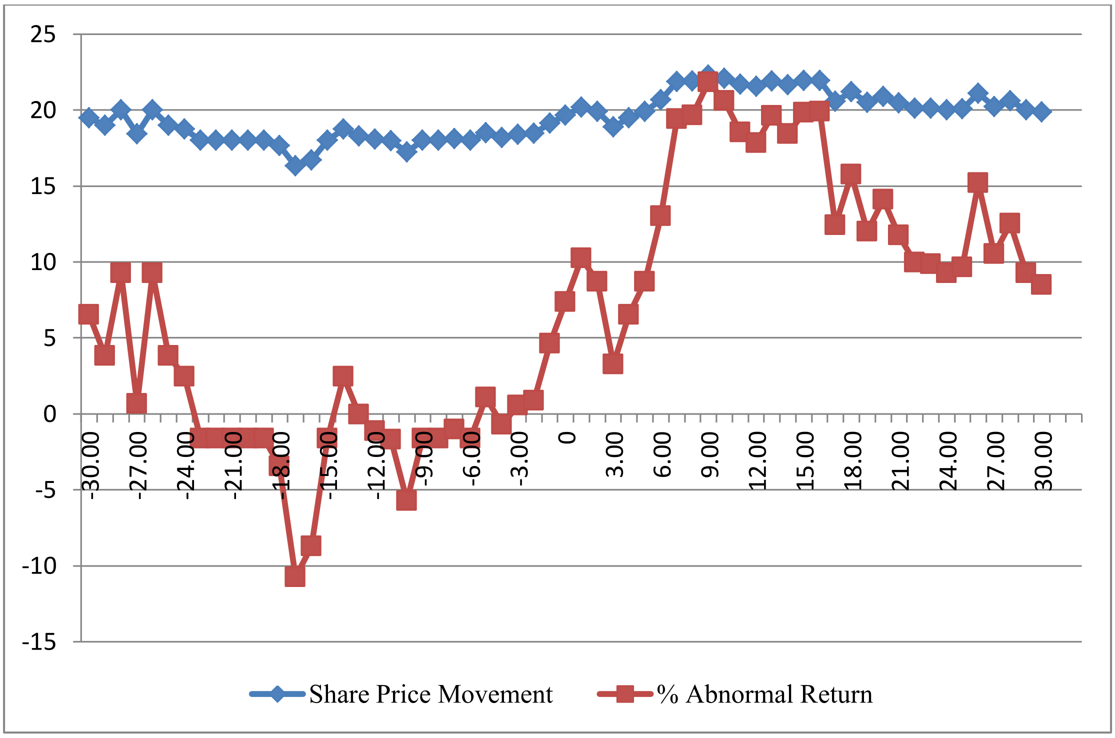
Analysis in this chapter has been done by determining the mean abnormal returns of the security returns for the study period of 30 days before and 30 days after the announcement of right issue. The significant difference between the mean abnormal return before announcement and mean abnormal return after the announcement as tested by t-statistic at 95% significance level helped to describe the reaction of stock return when information about rights issue officially reaches the security market. Cumulative abnormal average return is also used to describe the overall results. The results of the data analysis for each of the 12 companies are as are summarized below.

4.2.1 Olimpia Capital Holdings

Upon announcement of a rights issue by Olympia Capital, the trend of share prices increases from 19.65 on the announcement date to 20.18 on day one t_1 then stabilises to be above sh 21 per share from day 7 up to day 29. When compared to the 30 days before the announcement day, when prices were entirely below 20, it can be concluded that the announcement sent positive signals to the market and led to the increased trading. Similarly the increase in prices above the expected return rate calculated within the estimation period t_{-60} to t_{-31} results in higher rate of stock return for the post announcement period as represented in figure 1 below. Day 9 after the announcement recorded the highest rate of return at 21.85%.

The analysis also indicates that the rate of stock returns is associated with the share prices. For instance, when share prices increased from day 3 after the announcement, the rate of returns also rose and when the prices were on a downward trend from day 16 of post announcement, the stock returns also decreased. The stock recorded a positive mean abnormal return of 0.0675 and a t-test performed on the abnormal rate of return found a t-value of 5.65582E-10 which was smaller than the t-critical value of 1.699, thus falling within the rejection region. This means that there was a significant difference in mean of abnormal returns indicating that rights issue announcement has a significant effect on the stock returns of listed companies. This is represented in figure 1 below.

Figure 4.1: Share Price movement and % Stock Returns Rates OCH



Source: Research Findings

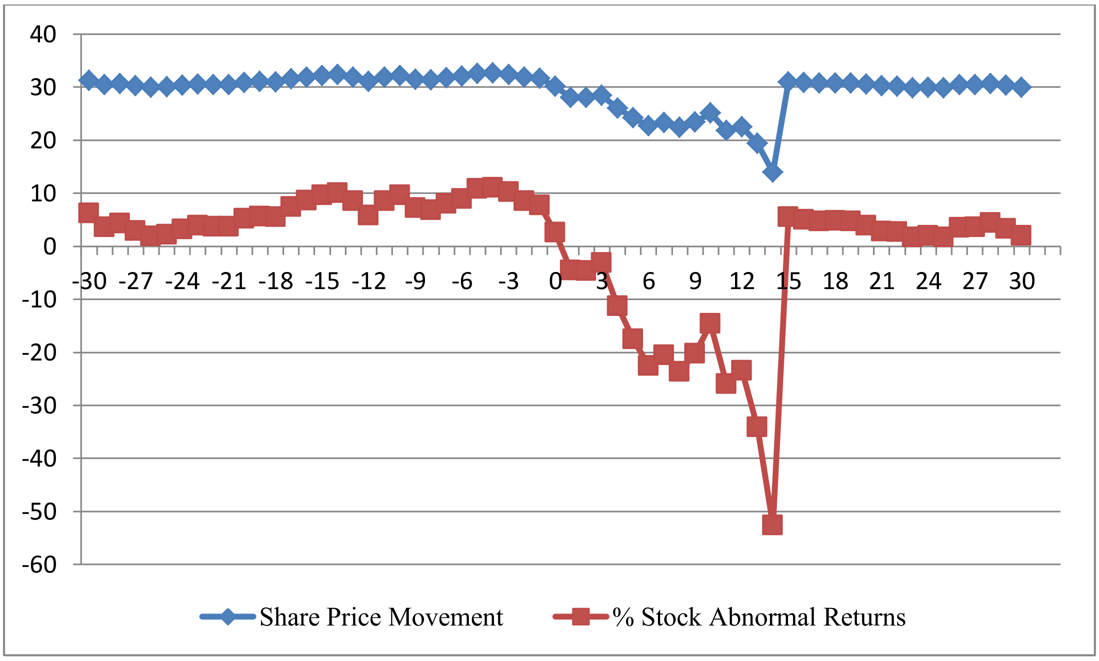
4.2.2 Kenya Commercial Bank 2008

The analysis of the behaviour of share prices for KCB after the rights issue announcement on June 23, 2008 indicate that share prices reduced significantly for the first 14 days after the announcement, from 30.14 per share on the announcement date to 13.90 on the fourteenth day. The prices then short up to 30.98 on the fifteenth day and maintained the momentum, closing at 29.96 on the 30th day after the rights issue announcement, especially when the issued rights began to trade. This is an indication that the announcement shocked the market, but later stabilized after the closure of the issue period. Prior to the announcement of a rights issue, prices were relatively stable, with the lowest being 29.94 on t_{-26} and maximum being 32.63 on t_{-4}.

The analysis of stock returns also found that from $t_{-3,}$ stock return reduced significantly from 0.10245 to -0.0459 on day one after announcement, and further to -

0.22566, -0.23655 and to -0.2597 on day t_{+6}, t_{+8} and t_{+11} respectively. Day 13 and 14 recorded the highest abnormal negative return of -0.34138 and -0.52688 respectively. This abnormal negative return led to a negative mean abnormal return (MARit) of -0.003496 for the event period, and a t-test performed on the abnormal rate of return data found a t-value of 3.14796E-06 which was smaller than the t-critical value of 1.699. This means that there was a significant mean in abnormal returns indicating that rights issue announcement has a significant effect on the stock returns of listed companies. The negative MAR indicate that rights issue announcement has a significant effect on the stock returns of listed companies.

Figure 4.2: Share price movement and % Stock Returns for KCB 2008



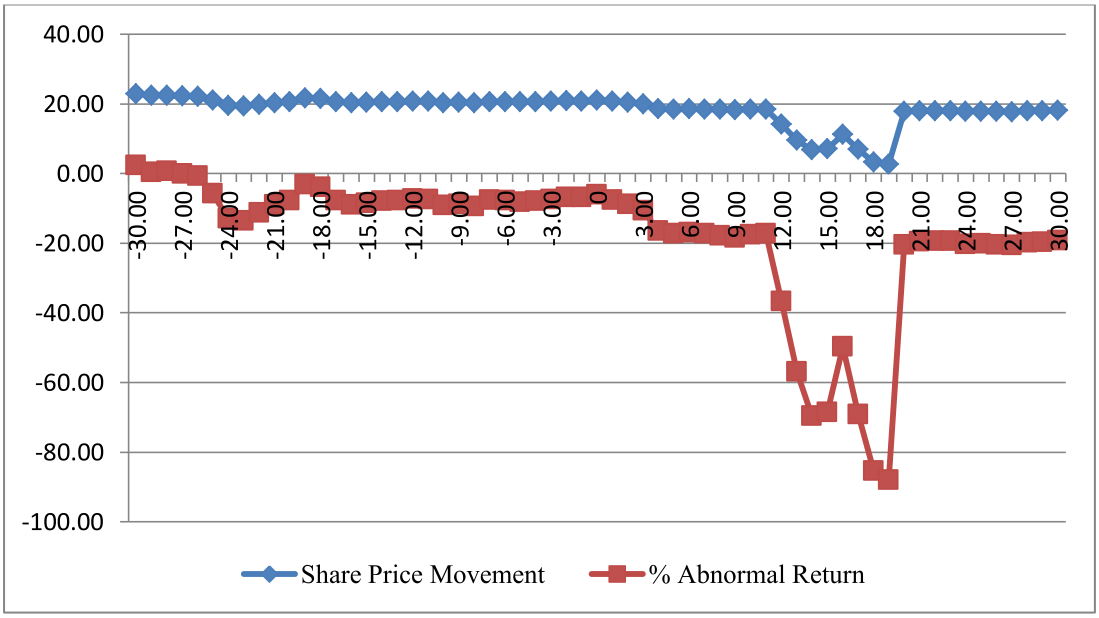
Source: Research Findings

4.2.3 Kenya Commercial Bank 2010

Analysis of the share price movement of after the 2010 rights issue announcement exhibits largely similar reaction as that of 2008. The share prices reduced from 20.95 per share on the announcement date to 20.63 on day one after announcement and reduced gradually to 7 per share on t_{+15} with the lowest price of 2.66 recorded on t_{+19} before the prices rose again sharply to 17.76 on day t_{+20}. For the event period, the share prices closed at 18.03 on t_{+30}. Comparison of the prices before and after event day indicate that prices before announcement were averagely higher than prices after t_0, with the highest being 22.85 on t_{-30} and the lowest being 19.41 on t_{-24}.

Stock returns reduced significantly upon the announcement of rights issue from -6.901 on t_0 to -69.714 on t_{+14} and further to -88.0839 on t_{+19}. This reduction in stock returns begun on t_{-27} and maintained a negative return the remaining period of the event window. This is an indication that there was leakage of information about the pending announcement of a rights issue. The stock recorded a negative mean abnormal return of -0.1832 for the event period and a t-test performed on the abnormal rate of return data found a t-value of 4.53967E-06 which was smaller than the t-critical value of 1.699. This means that there was significant effect of secondary equity issue announcement on stock returns. This is represented in figure 3 below.

Figure 4.3: Share Price and % Stock Returns for KCB 2010



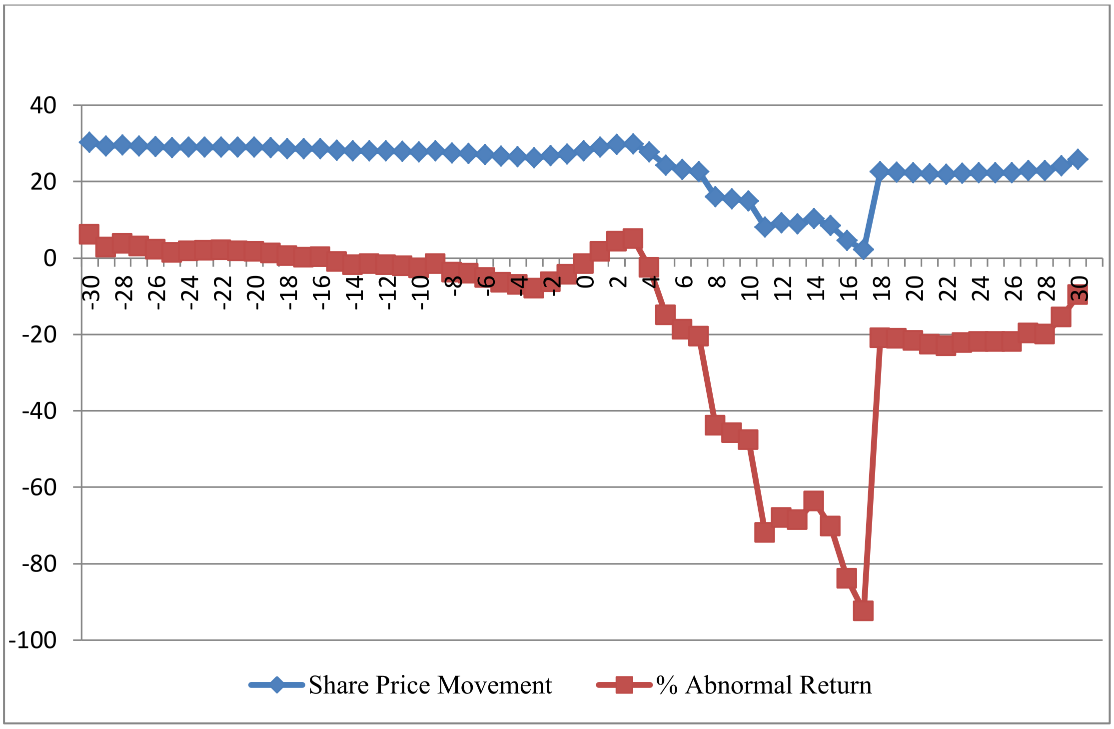
Source: Research Findings

4.2.4 Kenya Power (KPLC)

The rights issue announcement of Kenya Power formally known as KPLC coincided with the stock split of the company shares in which each share was split into eight. This reduced the value of each share from 224.29 to 28.04 on the event day. Analysis of the stock returns during the event period reveals a negative mean abnormal return of -0.16415. The share prices take a consistent downward trend throughout the pre-announcement event period from 30.22 on t_{-30} to 26.23 on t_{-3}. Two days to the announcement of rights issue, the prices increased marginally to 26.69 and further to 29.89 on t_{+3} before the prices took a significant downward trend from 27.76 on t_{+4} to an all-time low of 2.16 on t_{+17}. The sharp fall of the share prices on t_{+8} is attributed to the date when the rights issue was opened to the stockholders. Despite the fact that the downward trend of stock prices began before the announcement, the percentage decrease was significant after the announcement, hence indicating that rights issue announcement has significant effect of the prices and return.

Stock returns also took the downward direction of the share prices. As indicated in figure 4, the abnormal stock returns fell from 6.0785 percent on t_{-30} to -7.939 percent on $t_{-3.}$ However, the stock returns fell substantially from 4.907 on t_{+3} to -92.425 on t_{+17}. This led to the negative mean abnormal return of -0.159436 for the event period and t-test conducted found the t-value of 7.37395E-07, which was much smaller than the t-critical value of 1.699. This means that there is a significant change in the stock returns upon the announcement of rights issue among the companies listed in NSE.

Figure 4.4: Share Price Movement and % Stock Returns for Kenya Power



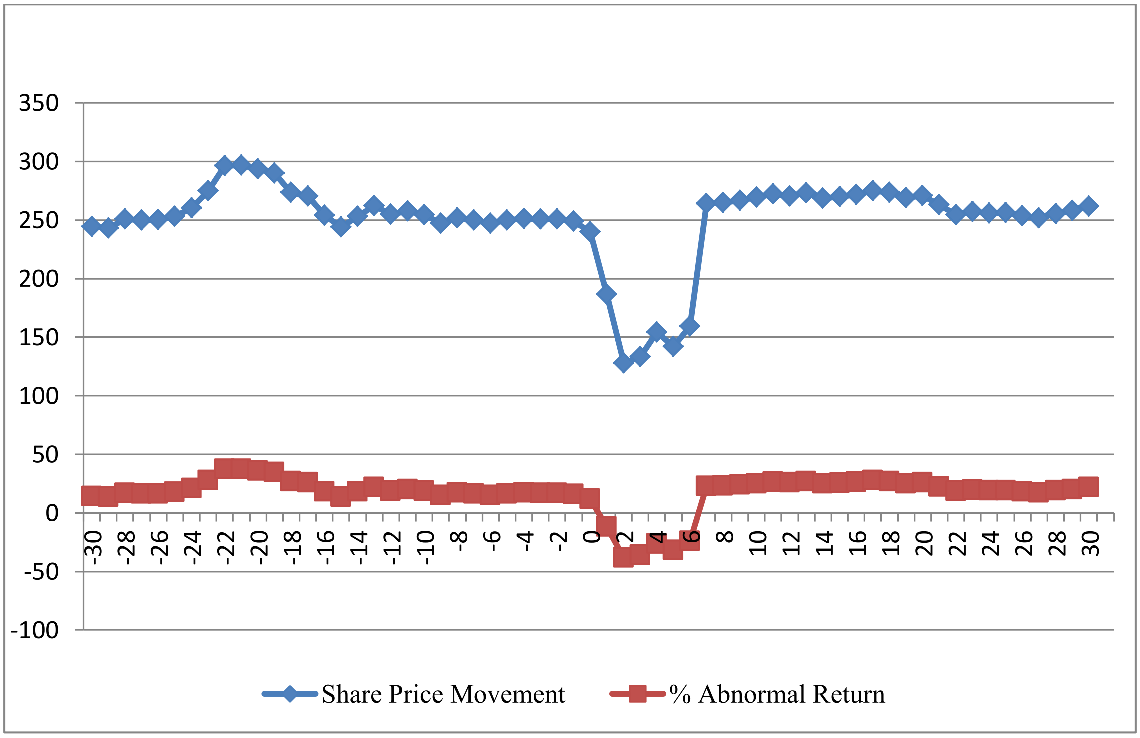
Source: Research Findings

4.2.5 Standard Chartered Bank of Kenya 2010 Issue

Figure 5 shows the movement of share prices and the percentage stock return around the rights issue announcement. Data analysis reveals that share prices fell by 22.1% on day one after the announcement from 239.95 per share on t_0 to 186.82 on t_{+1}. This negative reduction continued for six days after the announcement, after which the share prices maintained a positive trend, closing at 261.59 on t_{+30}. Prior to the announcement the prices exhibited an upward trend from 244.56 on t_{-30} to 296.67 on t_{-21} then followed by downward trend to 247.10 on t_{-6}.

Analysis of stock returns also show the same trend as the prices, in which return for the first six days from 0.11949 on the event day t_0 to -0.24194 on t_6. The stock then recorded positive return from day seven to the last day of the event period. Analysis revealed a positive mean abnormal return of 0.16569 and a t-test conducted found a t-value of 0.037459, which is greater that the critical value of 1.699. This reveal that rights issue announcement has a positive effect on the stock returns of Standard Chartered bank. This is represented by the diagram below. The graph on percentage stock return in figure 5 show a dip around the announcement date but stabilizes soon after to record positive return throughout the remaining event period.

Figure 4.5: Share Price Movement and % Stock Returns for SCBK



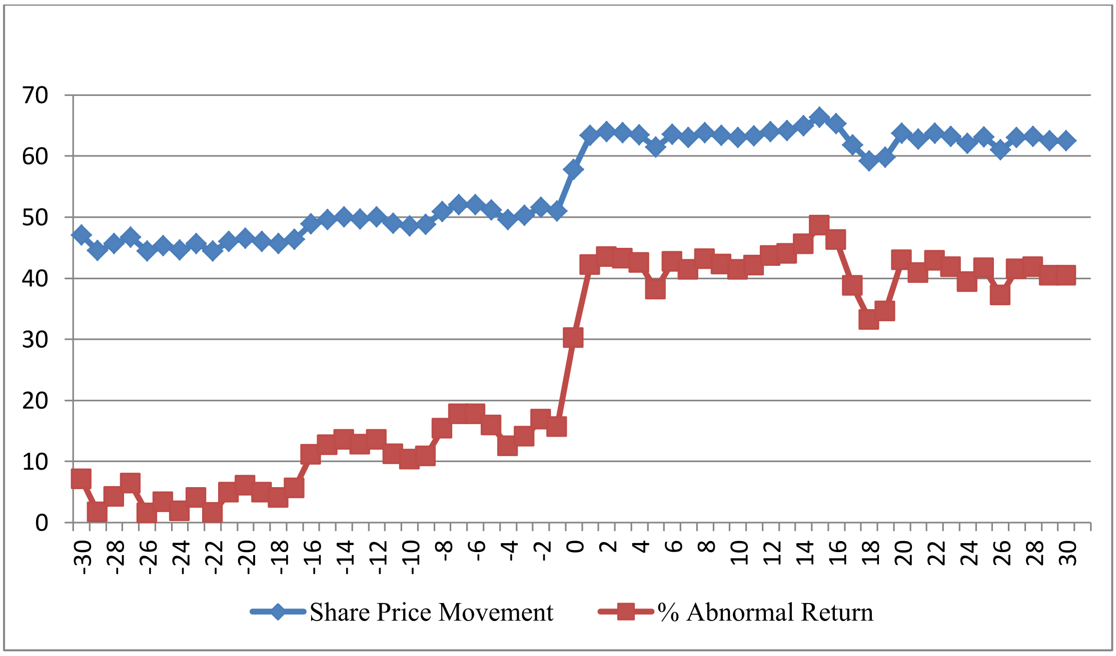
Source: Research Findings

4.2.6 TPS East Africa

The analysis of share price movement and the rate of return showed an upward trend immediately after the announcement. The data analysis show that the share price level in the post announcement period was much higher than the prices in the pre-announcement period. For instance, the share price on t_{-30} was 47.00 and this increased to 51.00 on t_{-1} while the share prices in the post announcement period ranged from 63.31 on t_{+1} to 62.5 on t_{+30}. The analysis also indicates that prices increased steadily from t_{-29} to t_{-2} before the price jumped to 57.76 on the announcement day and a further upward momentum.

Percentage stock return also indicates that the company return recorded a sustained upward positive return of above 10% from sixteenth day before the announcement (t_{-16}). TPS recorded positive mean abnormal return of 0.254969 for the event period and a t-test undertaken found a t-value of 3.30992E-21, which is lower than the critical value of 1.699. This shows that the means are significantly different, thus indicating that the announcement of rights issue significantly impacts share prices and significantly impact stock returns. This is represented in figure 6 below, indicating a sharp rise in returns on the rights issue announcement day.

Figure 4.6: Share price Movement and % Stock Returns for TPS East Africa



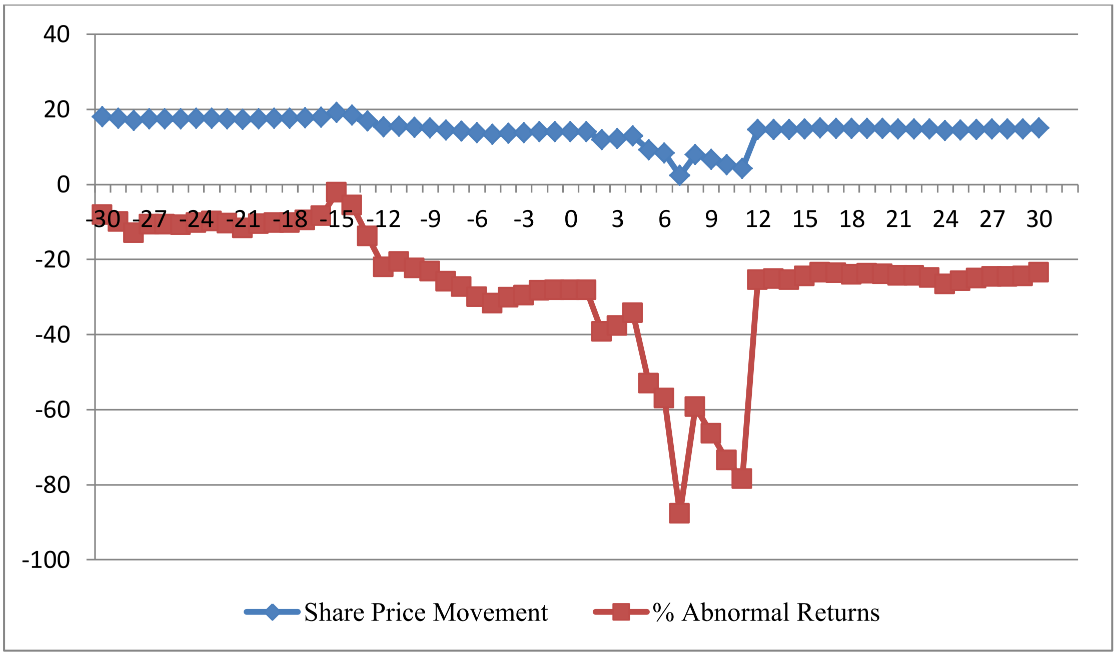
Source: Research Findings

4.2.7 Kenya Airways

Analysis of Kenya Airways stock return indicates that there is a sustained reduction in returns upon the announcement of the issue. The share prices reduced from 14.01on t_{+1} to 4.19 on t_{+11} and thereafter maintaining a price of 14 per share. Prior to the announcement, the prices take a downward trend from 17.94 on t_{-30} to 13.33 on t_{-5} and then a marginal rise four days before the announcement date. This reduction was attributed to internal trading activity that leaked information about the pending rights issue before the exact announcement date.

The abnormal negative return also took the same direction in which percentage stock return substantially reduced by a wider margin from t_{+5} to t_{+10}. Despite the fact that there was a slight increase in percentage return from $t_{+11,}$ it was minimal and below the expected rate of return that was determined during the estimation period (t_{-60} to t_{-31}). The mean abnormal rate of return was found to be -0.263599 and the t-value calculated was 0.000121. This t-value was less than the critical value of 1.699 indicating that there is a significant difference in the means. It is therefore concluded that the announcement of a rights issue negatively affected the stock returns for Kenya Airways. This is represented in the figure 7 below.

Figure 4.7: Share Price Movement and % Stock Return for KQ



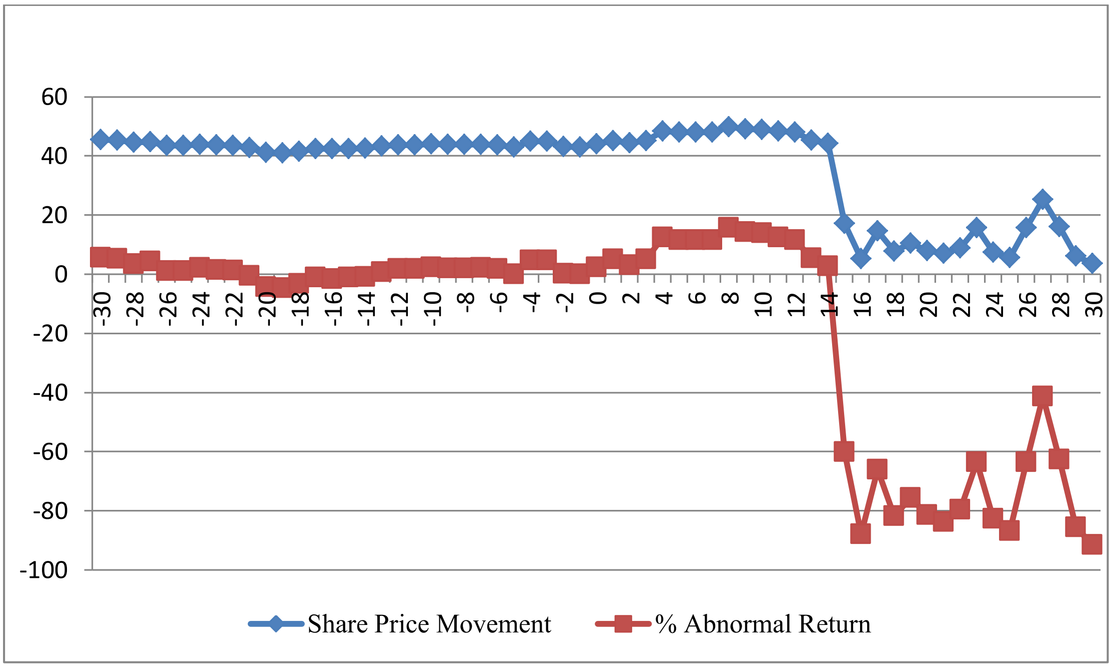
Source: Research Findings

4.2.8 CFC Stanbic Holdings Ltd

The share prices took an upward trend for the first ten days after the announcement from 44 on t_0 to 49 on t_{+10}. The prices then took a 60.07% deep on day 15 after the announcement to 5.19 on t_{+16} and thereafter oscillated for the remaining event period, closing at an all-time low of 3.65 on t_{+30}. The post announcement share price movement is significantly different from the prices before the announcement that was fairly stable with a difference of only Sh. 2 per share, hence a conclusion that the announcement impacted the share price movement.

As noted in this data analysis, the stock return is a function of the prices. In this case, stock returns increased in the post announcement period, particularly between t_{+1} to t_{+10}, then reduced with a wide margin between t_{+14} and t_{+30} with a low of -0.915141 as shown in figure 8. Mean abnormal return was -0.167706 for the event period and a t-value calculated to be 0.0001031, which is lower than the critical value of 1.699. This shows that the two means were significantly different, leading to a conclusion that the announcement of rights issue affects the firms' stock returns. Further analysis is outlined in figure 4.8 below.

Figure 4.8: Share Price Movement and % Stock Return for CFC Holdings

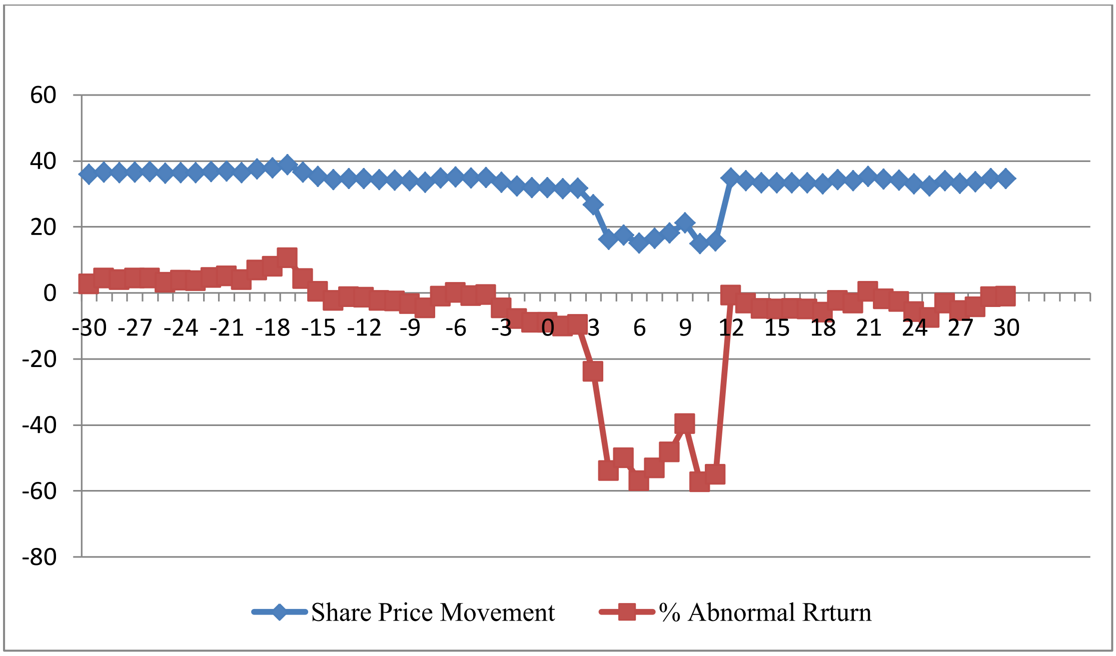


Source: Research Findings

4.2.9 NIC Bank

Data analysis reveals that the share prices took a downward trend from 31.9 on t_0 to 14.93 on $t_{+10,}$ then a sharp rise to a fairly stable price above 30 as outlined by figure 8. Analysis of the pre-announcement share price movement also found a fairly constant fluctuation, but without the shock as seen on day four after announcement day. Similarly, stock returns from -0.090223 on t_0 to -0.57425 on t_{+10}. The mean abnormal return for the event period was found to be -0.08284 and the t-value found to be 0.00021296, lower than the critical value of 1.699, indicating that the two means were significantly different. In this regard, it is concluded that the rights issue announcement negatively impacted the firm's stock return.

Figure 4.9: Share Price Movement and % Stock Return for NIC Bank



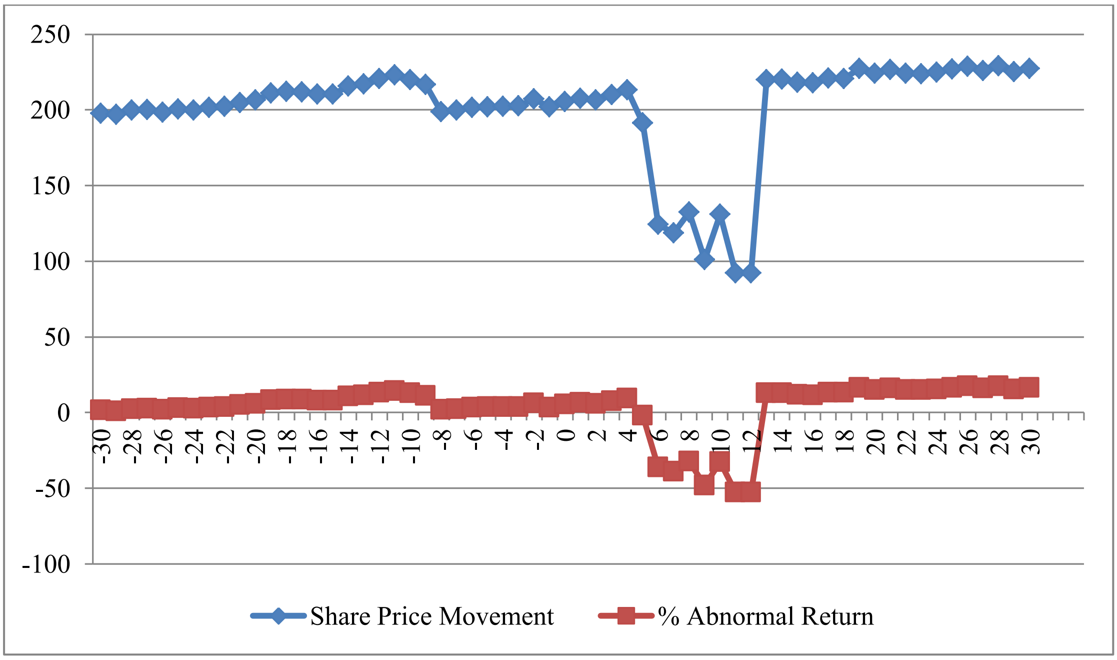
Source: Research Findings

4.2.10 Standard Chartered Bank 2012 Issue

This is the second rights issue in two years by the bank. It is noted from the data that the announcement first shocks the market then stabilises after some time. For instance, major share price changes are experienced on day five after the event in which prices dip to191.13 and further to 92.2 on day twelve after the announcement. Prices then rise sharply to 219.82 and maintain the positive trend for the remaining event period. This same trend was also experienced by the same bank during the 2010 rights issue in which prices dipped by 22.1% on t_{+1} then a sharp rise six days later.

The stock recorded a positive abnormal return of 0.029392 for the event period and the t-value generated was 0.187647, which is lower than the critical value of 1.699. This means that the means were significantly different. This finding is similar to the finding relating to the 2010 issue in which a positive mean abnormal return was also realised. Therefore, for StanChart bank, it is concluded that announcement of rights issue positively impact the stock returns.

Figure 4.10: Share Price movement and % Stock return for SCBK 2012 Issue

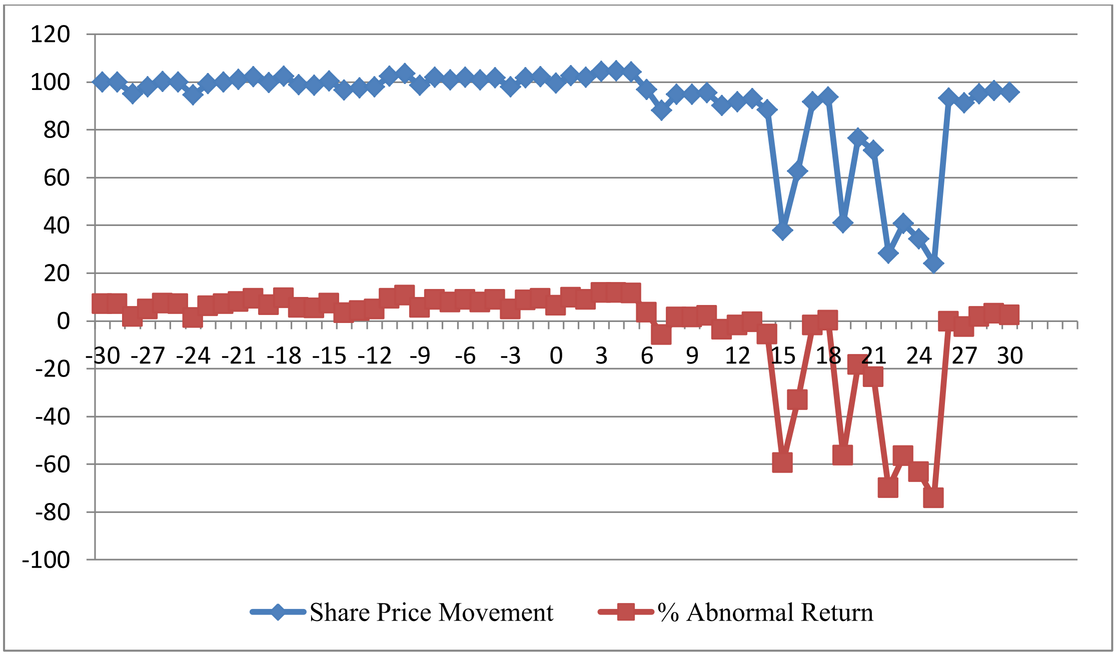


Source: Research Findings

4.2.11 Diamond Trust Bank 2012 Issue

Upon the announcement of a rights issue, the share prices for DTB rose from 99.5 on the event day to 102.56 on t_{+1}. The prices maintained a marginal rise until t_{+5}, and then followed by a sustained fall in the prices to 37.86 on t_{+15}. From day 16 in the post announcement period, the prices fluctuated between 24.04 and 96.33. This wider decrease in price resulted into a negative mean abnormal return of -0.032864. T-value for average return was found to be 0.000362. Compared to the critical value of 1.699, it is established that there was significant difference between the mean of abnormal return before the event and the mean after the announcement period, hence rights issue announcement impacts stock returns.

Figure 4.11: Share Price Movement and % Stock Return for DTK 2012 Issue

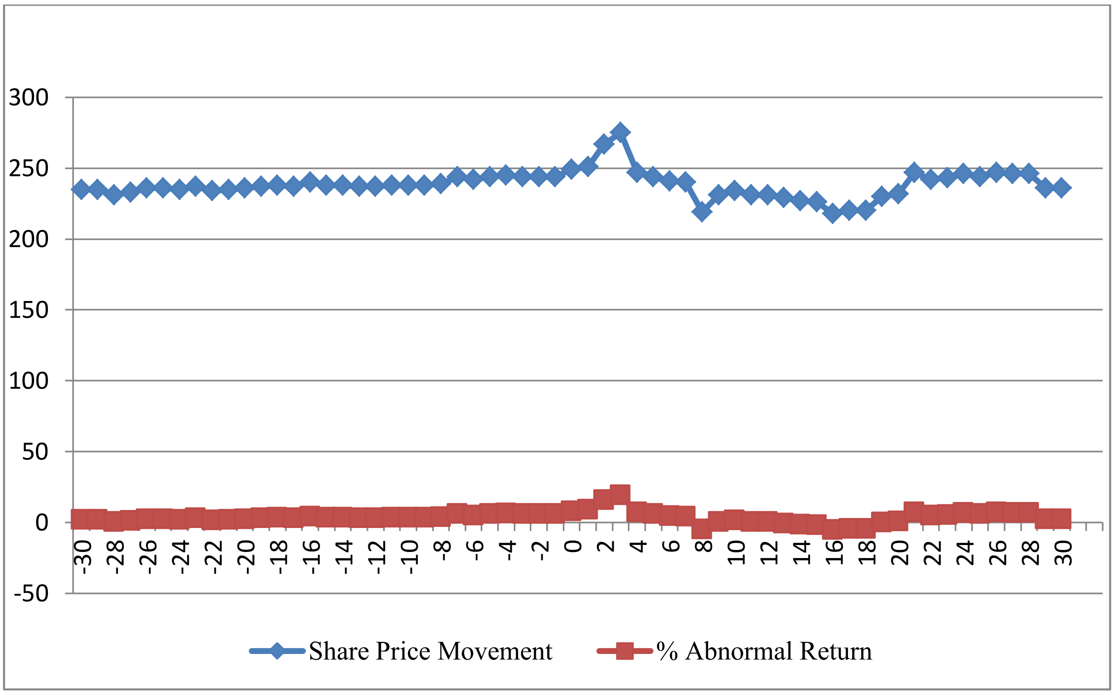


Source: Research Findings

4.2.12 Diamond Trust Bank 2014 Issue

The analysis of data indicate that share prices rose for the first three days after the announcement day from 249 on t_0 to 275 on t_{+3}, then consistent decline in prices from 247 on t_{+4} to 220 on t_{+18}. Prior to the announcement, share prices took a positive trend from 231 on t_{-28} to 244 on t_{-1}. Stock returns remained positive throughout the pre-announcement, though fluctuating until t_{-6} when the return took consistent upward trend from 0.049436 to 0.192541on t_{+3}. However, from $t_{+4,}$ the return reduced substantially to -0.002602 on t_{+19}. The analysis found positive mean abnormal return 0.033654 and the calculated t-value found to be 0.989661, which is lower than the critical value of 1.699. This means that the means before the announcement and the mean after the announcement were significantly different. Therefore, the study finds that rights issue announcement has effect on the stock return of a listed company. The movement of stock return is further explained by figure 12 below that shows that stock return were fairly stable throughout the event window period when compared to the changes experienced by the same company after the 2012 rights issue.

Figure 4.12: Share Price Movement and % Stock Return for DTK 2014 Issue



Source: Research Findings

4.3 Analysis of Abnormal Returns

The cumulative abnormal return was calculated to understand the overall effect of rights issue announcement on stock returns for each of the listed companies involved in the study. The abnormal return was also tested at 95% significance level and the results were computed in table 4.1 below. To understand the overall effect, CAAR was calculated and it was found that for the 12 rights issues analysed, there was a negative CAAR of -0.0285. This leads to a conclusion that the announcement of a rights issue results into a negative stock returns for listed companies in the NSE.

Table 4.1: Results of Abnormal Returns

Companies that Issued Rights	T-Value (AR)	Degree of Freedom (Df)	T-Critical Value	Cumulative Abnormal Average Return (CAAR)
Olympia capital	5.66E-10	29	1.699	0.0675
KCB 2008 Issue	3.15E-06	29	1.699	-0.0035
KPLC	7.37E-07	29	1.699	-0.1594
KCB 2010 Issue	4.54E-06	29	1.699	-0.1832
TPS East Africa	3.31E-21	29	1.699	0.25497
Standard Chartered Bank (2010)	0.037459	29	1.699	0.16569
CFC Stanbic Holdings Ltd	0.0001031	29	1.699	-0.1677
Kenya Airways	0.000121	29	1.699	-0.2636
NIC bank	0.00021296	29	1.699	-0.0828
DTB (2012 Issue)	0.00036185	29	1.699	-0.0329
DTB (2014 Issue)	0.98966159	29	1.699	0.03365
Standard Chartered Bank (2012)	0.187647	29	1.699	0.02939
		CAAR		**-0.0285**

Source: Research Findings

4.4 Interpretation of the Findings

Table 4.1 summarises the finding of the study that focussed on investigating the effects of rights issue announcement on stock returns of companies listed in NSE. The results contained in table 4.1 were generated from the event window of t_{-30} to t_{+30}

making a total of 61 days. The calculated mean abnormal return for Olimpia capital for the event window (Appendix III) was found to be 0.0675 and a t-test value that compares the mean of abnormal returns before announcement and after announcement was found to be 5.66E-10. The t-value is less than the t-critical value of 1.669 at degree of freedom of 29, tested under 95% significance level. This is interpreted that in Olimpia Capital, the announcement results in an increase in stock returns by 6.75%. The t –value shows that there was a significant difference in mean of abnormal returns. It is noted that the calculated t-value (5.66E-10) is far much lower than the critical t-value (1.699), thus the means are significantly different at $p = 5.66 \times 10^{-10}$. This means that rights issue announcement has a significant effect on stock returns.

Repeated procedure for the remaining eleven companies generated either positive or negative mean abnormal return, as indicated in table 4.1 column 5 or t-tests in column 2. These calculations are as indicated in Appendices IV – XIV. Out of the 12 companies analysed, 5 recorded positive mean abnormal return, while 7 recorded negative mean abnormal returns, with all the 12 generating a t-test which is less than the t-critical value of 1.699 showing that the means were significantly different. The negative cumulative abnormal average return (CAAR) for the 12 companies analysed show that there was a negative value of -0.0285. This means that there was a cumulative reduction of stock return by 2.85% during the event window t_{-30} to t_{+30}. This study therefore, finds that the announcement of a rights issue results into negative abnormal stock returns for listed companies.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter outlines the summary and conclusion of the results of the effects of rights issue announcement on stock returns of companies listed in Nairobi Securities Exchange. The chapter also gives the recommendations to the stakeholders and for future research.

5.2 Summary

From the results analysed about the twelve companies, on the effect of rights issue announcement on stock returns, it was found that in all the companies, the announcement had significant effect on the stock returns. Share prices and stock returns for all the companies involved in the study took a downward trend in the post announcement period as compared to the pre-announcement period, except for Olimpia Capital and TPS East Africa whose returns increased after the announcement. This finding leads to the conclusion that the changes in stock returns were attributed to the announcement. The fairly contestant negative price changes before the announcement as seen in KCB 2010 issue and Kenya Airways were attributed to the possible leakage of information about the pending official announcement of a rights issue.

Analysis of the mean abnormal return also indicate that for the event period (t_{-30} to t_{+30}), seven out of the twelve firms recorded negative abnormal return, leading to a negative cumulative abnormal average return of -0.0285 for all the companies under study. This means that most companies' stock, record a negative return around the rights issue announcement period. In all the companies, there was a significant difference between the means of abnormal return prior to the event day and the mean after event day, with 100% of the t-value indicating a positive significance level. Therefore, rights issue announcement has a significant effect on the stock return of companies listed in NSE.

5.3 Conclusion

The study aimed at investigating the effect of rights issue announcement on stock returns. It was found that except for two companies, there was negative movement of stock prices during the period surrounding the announcement of a rights issue, with more substantial reduction in stock prices and returns experienced after the announcement. This study therefore, concludes that rights issue announcement produces negative abnormal stock returns on the companies. The direction of the return depends on the company and time of issue. Cumulative returns combining the 12 companies indicate that rights issue negatively affect stock returns.

This study is consistent with other local studies such as Kithinji, Oluoch and Mugo (2014), Olesaaya (2010), and Njoroge (2003), and equally consistent with international studies such as Sugiana and Surya (2013) for Indonesia, Suresha and Naidu (2012) for India, and Roosenboom and Kabir (2002) for Netherlands.

5.4 Recommendations for Policy

Investment banks need to understand stock price reactions and stock return changes to the announcement of rights issue, in order to determine the rights issue discount prices. It is noted that for KCB 2010 issue, the share prices fell far below the rights issue price of Sh. 17 per share. This substantially affected the uptake of rights issue, since investors preferred buying directly from the market. The same scenario was experienced by Kenya Power which fell to Sh. 2.16 per share in the market, while the rights issue price was Sh. 19.5 per share. This negatively affected the issue process. It is therefore recommended that Capital Markets Authority and NSE to develop a policy that will limit the minimum and maximum price levels, especially during rights issue period to protect the prices from manipulations and to protect the interest of the investors. This will limit how low or high prices can go during the issue period.

5.5 Limitations of the Study

The study faced the limitation of identifying the exact rights issue announcement date, especially for those issues in 2007 whose exact dates could not be explicitly identified. It was also noted that there are other important days that may affect stock returns, such as the date CMA approves a planned rights issue, but was not considered in this study. This means that the official rights issue announcement day alone may not have a huge impact on returns since the information of the planned rights issue occasionally leaks to the market way before the official announcement date, and may cause changes in stock prices as proved by the consistent unidirectional changes in stock prices a few days before the event day for most of the companies analysed in this study. The study also faced a limitation of short duration of study.

5.6 Areas for Further Research

For further study, it is recommended that a longer event period to be used in order to understand the percentage stock return after the new rights taken up by investors begin to trade in the securities market. In the further study, the day the new issued rights begin to trade becomes the event day.

It would also be interesting to increase the sample to include all the rights issued in the Kenyan context since the conception of NSE.

This study also recommends further study on the impacts of repeat rights issues on stock prices, in order to understand the possible response of investors to seasonal issues.

REFERENCES

Aggarwal, R. K. & Wu, G., (2003). *Stock Market Manipulation: Theory and Evidence*. Retrieved on September 21, 2014 from https://www.ou.edu/dam/price/Finance/CFS/paper/pdf/aw39.pdf

Becket, M. (2012).*How the Stock Market Works: A Beginner's Guide to Investment*. New York. Kogan Page Publishers

Cheruiyot, K. V., (2006). *The impact of rights issues on security Prices - Nairobi stock exchange (NSE).*Unpublished MBA project. University of Nairobi.

Christensen, L. B., Johnson, B., & Turner, L. (2011). *Research methods, design, and analysis (11th ed.)*. Boston: Allyn & Bacon.

Cotterell, P.J.M (2011). *The impact of rights issues announcements on share price performance in South Africa.* University of Pretoria. Retrieved on 12 September 2014 from http://upetd.up.ac.za/thesis/available/etd-06242012-135803/unrestricted/dissertation.pdf

Dalgaard, R., (2009). *Liquidity and stock returns: Evidence from Denmark*. Copenhagen Business School. Retrieved on September 21, 2014 from http://studenttheses.cbs.dk/bitstream/handle/10417/740/rune_dalgaard.pdf?sequence=1

Dulwich E., (2006). *The impact news has upon stock price volatility: An investigation into the impact major BBC news reports have upon the FTSE 100*. Retrieved on September 21, 2014 from http://pure.au.dk/portal/files/1638/000154540-154540.pdf

Elton, E. J., Gruber, M. J., Brown, S. J. & Goetzmann, W. N. (2009). *Modern Portfolio Theory and Investment Analysis.* Hoboken New Jersey. John Wiley & Sons.

Elton, E. J. W. & Gruber, M. J (1995), *Modern Portfolio Theory and investment analysis. 5th edition,* New York, John Wiley & Sons

Fama, E. F. (1970). Efficient Capital Markets: A Review of theory and Empirical Work. *Journal of Finance*. 24 Issue 2

Fama, E. F., Fisher, L., Jensen, M. C. & Roll, R. (1969)). The adjustment of stock prices to new information. *International Economics Review* 10, 1-21

Gatundu, S.K., (2007). *The Effects of Secondary Equity Offering on Stock Returns of Firms Quoted on The Nairobi Stock* Exchange Unpublished MBA project. University of Nairobi.

Huang Y.C., Chen, R.C.Y. & Cheng, Y. J., (2007). *Stock manipulation and its impact on market quality*. Retrieved on September 21, 2014 from http://centerforpbbefr.rutgers.edu/2007/Papers/066-manipulation.pdf

Ilmanen, A., (2011). *Expected Returns: An Investor's Guide to Harvesting Market Rewards*. Inited Kingdom. John Wiley & Sons.

Kabir, R. & Roosenboom, P. (2002).*Can the stock market anticipate future operating performance? Evidence from equity rights issues*. Retrieved on 10 August 2014 from www.erim.eur.nl

Kithinji J. G., Oluoch, W. & Mugo, R. (2014). What Is the Effect of Rights Issue on Firms Share Performance in the Nairobi Securities Exchange? *Research Journal of Finance and Accounting*: 5, No.4, 2014.

Lambrechts, I. J., & Mostert, F. J. (1980). An analysis of the behaviour of market prices during rights issues. *Investment Analysts Journal* No 15, 25-33.

Lhabitant, F. & Gregoriou, G. N. (2008).*Stock Market Liquidity: Implications for Market Microstructure and Asset Pricing*. Hoboken New Jersey. John Wiley & Sons.

MacKinlay, A. C., (1997). Event Studies in Economics and Finance. *Journal of Economic Literature* XXXV , 13-39.

McWilliams, A. & Siegel, D., (1997). Event studies in management research: Theoretical and empirical issues. *Academy of Management Journal*, 40, No. 3

Miglani, P. (2011). An empirical analysis of impact of right issues on shareholders returns of Indian listed companies. *Journal of Arts, Science & Commerce*, II, Issue –4 Oct. 2011

Miller, R.M and Rock, K (1985), Dividend policy under asymmetric information, *Journal of Finance*, 40, pp.133-152

Musyoki, D. (2012). Changes in share prices as a predictor of accounting earnings for financial firms listed in Nairobi Securities Exchange. *International Journal of Business and Public Management*. 2(2): 1-11

Mutua, N. M. (2013). *The effect of rights Issue on performance of firms listed at the Nairobi Securities Exchange*. Unpublished MBA project.University of Nairobi.

Ndua, D. N., (2012). *The effect of rights issue on market returns of firms listed at Nairobi securities exchange*. Unpublished MBA project.University of Nairobi.

Njoroge, C. (2003). *Impact of rights issues on stock prices: the case of Companies listed at the Nairobi stock exchange.*Unpublished MBA project.University of Nairobi.

NSE Handbook (2013). Retrieved on 5 September 2014 from http://www.african-exchanges.org/download/library/NSE_Handbook.pdf

Nse.co.ke, (2014). *NSE Handbook*. Retrieved on 5 September 2014 from https://www.nse.co.ke/resource-center/publications/category/15-nseh.html

Olesaaya, E. (2010). *The effects of rights issues on stock returns. An empirical investigation of companies listed at the Nairobi Stock Exchange*. Unpublished MBA project. University of Nairobi.

Padley M. (2009). *Stock Market Secrets.An essential guide for the self-managed investor and trader*. Harbour Esplande Victoria. Slattery Media Group.

Quiry, P., Fur, Y. L., Salvi, A., Dallocchio, M. & Vernimmen, P., (2011).*Corporate Finance: Theory and Practice*. West Sussex UK.John Wiley & Sons.

Raghunathan, P. R.V (2007).*Stock Exchanges, Investments and Derivatives.*New Delhi.Tata McGraw-Hill Education.

Ramirez, J. (2011). *Handbook of Corporate Equity Derivatives and Equity Capital Markets*. United Kingdom. John Wiley & Sons.

Sapna & Dani, V., (2014).Stock Market and Factors Affecting Trade Volumes. *International Journal of Advance Research in Computer Science and Management Studies.*2Issue3March2014

Serra, A. P. (2002), *Event Study Tests: A brief survey.* Working Papers

Singal V. J. (2003). *Beyond the Random Walk: A Guide to Stock Market Anomalies and Low-Risk Investing.*New York. Oxford University Press.

Spiess, D., Katherine & Affleck-Graves, J., (1995). Underperformance in long-run stock returns following seasoned equity offerings. *Journal of financial economics:* 38.pp243-267

Sugiana, B. & Surya B. A., (2013). Implication of Right Issue Cum and Ex-Date Announcement To The Stock Return (Empirical Study On Indonesia Stock Exchange Period:2009-2012) *The Indonesian Journal Of Business Administration*: 2,No.12, 2013:1395-1410

Suresha B. & Naidu, G. (2012).An empirical study on announcement effect of right issue on share price volatility and liquidity and its impact on market wealth creation of informed investors in Bangalore, with special reference to CNX nifty stocks of NSE. *International Journal of Multidisciplinary Management Studies*. 2 Issue 7 July 2012

Swedroe, L., (2012). *Liquidity has solid impact on stock returns*. Retrieved on September 21, 2014 from http://www.cbsnews.com/news/liquidity-has-solid-impact-on-stock-returns/

Tsangaraskis, N., (1996). Shareholder wealth effects of equity issues in emerging markets: evidence from rights offer in Greece. *Financial Management*. Retrieved on 31 August 2014 from www.allbusiness.com

APPENDIX I: LISTED COMPANIES AT NSE BY SECTOR AS AT AUGUST 31, 2014

AGRICULTURAL

Eaagads Ltd
Kapchorua Tea Co. Ltd
Kakuzi
Limuru Tea Co. Ltd
Rea Vipingo Plantations Ltd
Sasini Ltd Ord 1.00
Williamson Tea Kenya Ltd

AUTOMOBILES AND ACCESSORIES

Car and General (K) Ltd
CMC Holdings Ltd
Sameer Africa Ltd
Marshalls (E.A.) Ltd

BANKING

Barclays Bank Ltd
CFC Stanbic Holdings Ltd
I&M Holdings Ltd
Diamond Trust Bank Kenya Ltd
Housing Finance Co Ltd
Kenya Commercial Bank Ltd
National Bank of Kenya Ltd
NIC Bank Ltd
Standard Chartered Bank Ltd
Equity Bank Ltd
The Co-operative Bank of Kenya Ltd

COMMERCIAL AND SERVICES

Express Ltd
Kenya Airways Ltd
Nation Media Group
Standard Group Ltd
TPS Eastern Africa (Serena) Ltd
Scangroup Ltd
Uchumi Supermarket Ltd
Hutchings Biemer Ltd
Longhorn Kenya Ltd

CONSTRUCTION AND ALLIED

Athi River Mining
Bamburi Cement
Crown Berger Ltd
E.A.Cables Ltd
E.A.Portland Cement Ltd

ENERGY AND PETROLEUM

Kenol Kobil Ltd
Total Kenya Ltd
KenGen Ltd
Kenya Power & Lighting Co Ltd
Umeme Ltd

INSURANCE

Jubilee Holdings Ltd
Pan Africa Insurance Holdings Ltd
Kenya Re-Insurance Corporation Ltd
Liberty Kenya Holdings Ltd
British-American Investments Company (Kenya) Ltd
CIC Insurance Group Ltd

INVESTMENT

Olympia Capital Holdings ltd
Centum Investment Co Ltd

INVESTMENT SERVICES

Nairobi Securities Exchange Ltd

MANUFACTURING AND ALLIED

B.O.C Kenya Ltd
British American Tobacco Kenya Ltd
Carbacid Investments Ltd
East African Breweries Ltd
Mumias Sugar Co. Ltd
Unga Group Ltd
Eveready East Africa Ltd
Kenya Orchards Ltd
A.Baumann CO Ltd

TELECOMMUNICATION AND TECHNOLOGY

Safaricom Ltd

GROWTH ENTERPRISE MARKET SEGMENT

Home Afrika Ltd

Source: NSE Handbook 2014.

APPENDIX II: Companies that Issued Rights between January 1, 2007 and August 31, 2014

Name of Company	Year Rights are Issued
Olympia capital	2007
Kenya Commercial Bank	2008
KPLC	2010
KCB Group	2010
TPS East Africa	2010
Standard Chartered Bank	2010, 2012
CFC Stanbic Holdings	2012
Kenya Airways	2012
NIC bank	2012
DTB	2012, 2014

Source: NSE Handbook 2014

APPENDIX III: Analysis of Results before and after the Announcement for Olimpia Capital

OLIMPIA CAPITAL HOLDINGS					
Event Window	Ri (actual returns)	ERit	AR	Critical Vale	Df
-30	0.0626703	-0.00272	0.06539	1.699	29
-29	0.0354223	-0.00272	0.03814	1.699	29
-28	0.0899183	-0.00272	0.09264	1.699	29
-27	0.0038147	-0.00272	0.00653	1.699	29
-26	0.0899183	-0.00272	0.09264	1.699	29
-25	0.0354223	-0.00272	0.03814	1.699	29
-24	0.0217984	-0.00272	0.02452	1.699	29
-23	-0.019074	-0.00272	-0.01635	1.699	29
-22	-0.019074	-0.00272	-0.01635	1.699	29
-21	-0.019074	-0.00272	-0.01635	1.699	29
-20	-0.019074	-0.00272	-0.01635	1.699	29
-19	-0.019074	-0.00272	-0.01635	1.699	29
-18	-0.037057	-0.00272	-0.03434	1.699	29
-17	-0.110082	-0.00272	-0.10736	1.699	29
-16	-0.089918	-0.00272	-0.08720	1.699	29
-15	-0.019074	-0.00272	-0.01635	1.699	29
-14	0.0217984	-0.00272	0.02452	1.699	29
-13	-0.00327	-0.00272	-0.00055	1.699	29
-12	-0.014169	-0.00272	-0.01145	1.699	29
-11	-0.019619	-0.00272	-0.01690	1.699	29
-10	-0.059946	-0.00272	-0.05723	1.699	29
-9	-0.019074	-0.00272	-0.01635	1.699	29
-8	-0.019074	-0.00272	-0.01635	1.699	29
-7	-0.013079	-0.00272	-0.01036	1.699	29
-6	-0.019074	-0.00272	-0.01635	1.699	29
-5	0.0081744	-0.00272	0.01089	1.699	29
-4	-0.009809	-0.00272	-0.00709	1.699	29
-3	0.0027248	-0.00272	0.00544	1.699	29
-2	0.0059946	-0.00272	0.00871	1.699	29
-1	0.0435967	-0.00272	0.04632	1.699	29
0	0.0708447	-0.00272	0.07356	1.699	29
1	0.0997275	-0.00272	0.10245	1.699	29
2	0.0844687	-0.00272	0.08719	1.699	29
3	0.0299728	-0.00272	0.03269	1.699	29
4	0.0626703	-0.00272	0.06539	1.699	29
5	0.0844687	-0.00272	0.08719	1.699	29
6	0.1275204	-0.00272	0.13024	1.699	29
7	0.1912807	-0.00272	0.19400	1.699	29
8	0.1940054	-0.00272	0.19673	1.699	29
9	0.2158038	-0.00272	0.21852	1.699	29
10	0.2032698	-0.00272	0.20599	1.699	29
11	0.1825613	-0.00272	0.18528	1.699	29
12	0.1754768	-0.00272	0.17820	1.699	29

13	0.1934605	-0.00272	0.19618	1.699	29
14	0.1814714	-0.00272	0.18419	1.699	29
15	0.1956403	-0.00272	0.19836	1.699	29
16	0.1961853	-0.00272	0.19891	1.699	29
17	0.1215259	-0.00272	0.12425	1.699	29
18	0.1547684	-0.00272	0.15749	1.699	29
19	0.1171662	-0.00272	0.11989	1.699	29
20	0.1384196	-0.00272	0.14114	1.699	29
21	0.1149864	-0.00272	0.11771	1.699	29
22	0.0970027	-0.00272	0.09972	1.699	29
23	0.0959128	-0.00272	0.09863	1.699	29
24	0.0899183	-0.00272	0.09264	1.699	29
25	0.093733	-0.00272	0.09645	1.699	29
26	0.1493188	-0.00272	0.15204	1.699	29
27	0.1024523	-0.00272	0.10517	1.699	29
28	0.1226158	-0.00272	0.12534	1.699	29
29	0.0899183	-0.00272	0.09264	1.699	29
30	0.0822888	-0.00272	0.08501	1.699	29
Mean	0.0647787	MARit	0.06750		
		T-test AR	5.65582E-10		

Source: Research Findings

APPENDIX IV: Analysis of Results before and after the Announcement for KCB 2008 Issue

	KENYA COMMERCIAL BANK 2008 ISSUE				
Event Period	Ri actual returns	ER	AR	Critical Vale	Df
-30	0.061946903	-0.00011	0.06206	1.699	29
-29	0.035738598	-0.00011	0.035852	1.699	29
-28	0.042886317	-0.00011	0.043	1.699	29
-27	0.028250511	-0.00011	0.028364	1.699	29
-26	0.019060585	-0.00011	0.019174	1.699	29
-25	0.021443159	-0.00011	0.021557	1.699	29
-24	0.031994554	-0.00011	0.032108	1.699	29
-23	0.038461538	-0.00011	0.038575	1.699	29
-22	0.0367597	-0.00011	0.036873	1.699	29
-21	0.037100068	-0.00011	0.037214	1.699	29
-20	0.051395507	-0.00011	0.051509	1.699	29
-19	0.056160654	-0.00011	0.056274	1.699	29
-18	0.054799183	-0.00011	0.054913	1.699	29
-17	0.074200136	-0.00011	0.074314	1.699	29
-16	0.085772634	-0.00011	0.085886	1.699	29
-15	0.095643295	-0.00011	0.095757	1.699	29
-14	0.099727706	-0.00011	0.099841	1.699	29
-13	0.084751532	-0.00011	0.084865	1.699	29
-12	0.057862491	-0.00011	0.057976	1.699	29
-11	0.085091899	-0.00011	0.085205	1.699	29
-10	0.095643295	-0.00011	0.095757	1.699	29
-9	0.071817563	-0.00011	0.071931	1.699	29
-8	0.068073519	-0.00011	0.068187	1.699	29
-7	0.080326753	-0.00011	0.08044	1.699	29
-6	0.089516678	-0.00011	0.08963	1.699	29
-5	0.108236896	-0.00011	0.10835	1.699	29
-4	0.110619469	-0.00011	0.110733	1.699	29
-3	0.102450647	-0.00011	0.102564	1.699	29
-2	0.084751532	-0.00011	0.084865	1.699	29
-1	0.076582709	-0.00011	0.076696	1.699	29
0	0.025867937	-0.00011	0.025981	1.699	29
1	-0.04594963	-0.00011	-0.04584	1.699	29
2	-0.04628999	-0.00011	-0.04618	1.699	29
3	-0.03131382	-0.00011	-0.0312	1.699	29
4	-0.11334241	-0.00011	-0.11323	1.699	29
5	-0.17562968	-0.00011	-0.17552	1.699	29
6	-0.22566372	-0.00011	-0.22555	1.699	29
7	-0.2059224	-0.00011	-0.20581	1.699	29
8	-0.23655548	-0.00011	-0.23644	1.699	29
9	-0.20285909	-0.00011	-0.20275	1.699	29
10	-0.14635807	-0.00011	-0.14624	1.699	29
11	-0.25970048	-0.00011	-0.25959	1.699	29
12	-0.23485364	-0.00011	-0.23474	1.699	29
13	-0.3413887	-0.00011	-0.34128	1.699	29

14	-0.52688904	-0.00011	-0.52678	1.699	29
15	0.054458816	-0.00011	0.054572	1.699	29
16	0.050034037	-0.00011	0.050147	1.699	29
17	0.046630361	-0.00011	0.046744	1.699	29
18	0.047991831	-0.00011	0.048105	1.699	29
19	0.046630361	-0.00011	0.046744	1.699	29
20	0.038461538	-0.00011	0.038575	1.699	29
21	0.027910143	-0.00011	0.028024	1.699	29
22	0.026548673	-0.00011	0.026662	1.699	29
23	0.016337645	-0.00011	0.016451	1.699	29
24	0.019741321	-0.00011	0.019855	1.699	29
25	0.01701838	-0.00011	0.017132	1.699	29
26	0.035057862	-0.00011	0.035171	1.699	29
27	0.036078965	-0.00011	0.036192	1.699	29
28	0.04390742	-0.00011	0.044021	1.699	29
29	0.033015657	-0.00011	0.033129	1.699	29
30	0.019741321	-0.00011	0.019855	1.699	29
Rit	-0.00361013	MAR	-0.0035		
		T-test AR	3.15E-06		

Source: Research Findings

APPENDIX V: Analysis of Results before and after the Announcement for KCB 2010 Issue

KENYA COMMERCIAL BANK 2010 ISSUE					
Event Window	Rit	ERit	AR	Critical Vale	Df
-30	0.023746	0.0000149	0.0237	1.699	29
-29	0.004032	0.0000149	0.0040	1.699	29
-28	0.005824	0.0000149	0.0058	1.699	29
-27	-0.0009	0.0000149	-0.0009	1.699	29
-26	-0.00762	0.0000149	-0.0076	1.699	29
-25	-0.05735	0.0000149	-0.0574	1.699	29
-24	-0.13038	0.0000149	-0.1304	1.699	29
-23	-0.13575	0.0000149	-0.1358	1.699	29
-22	-0.11246	0.0000149	-0.1125	1.699	29
-21	-0.09005	0.0000149	-0.0901	1.699	29
-20	-0.07796	0.0000149	-0.0780	1.699	29
-19	-0.03181	0.0000149	-0.0318	1.699	29
-18	-0.03943	0.0000149	-0.0394	1.699	29
-17	-0.07796	0.0000149	-0.0780	1.699	29
-16	-0.08961	0.0000149	-0.0896	1.699	29
-15	-0.08602	0.0000149	-0.0860	1.699	29
-14	-0.07975	0.0000149	-0.0798	1.699	29
-13	-0.07841	0.0000149	-0.0784	1.699	29
-12	-0.07303	0.0000149	-0.0730	1.699	29
-11	-0.07437	0.0000149	-0.0744	1.699	29
-10	-0.0914	0.0000149	-0.0914	1.699	29
-9	-0.08916	0.0000149	-0.0892	1.699	29
-8	-0.09498	0.0000149	-0.0950	1.699	29
-7	-0.07661	0.0000149	-0.0766	1.699	29
-6	-0.07706	0.0000149	-0.0771	1.699	29
-5	-0.08244	0.0000149	-0.0825	1.699	29
-4	-0.07885	0.0000149	-0.0789	1.699	29
-3	-0.07527	0.0000149	-0.0753	1.699	29
-2	-0.06855	0.0000149	-0.0686	1.699	29
-1	-0.069	0.0000149	-0.0690	1.699	29
0	-0.06138	0.0000149	-0.0614	1.699	29
1	-0.07572	0.0000149	-0.0757	1.699	29
2	-0.08871	0.0000149	-0.0887	1.699	29
3	-0.10753	0.0000149	-0.1075	1.699	29
4	-0.16532	0.0000149	-0.1653	1.699	29
5	-0.17294	0.0000149	-0.1730	1.699	29
6	-0.16891	0.0000149	-0.1689	1.699	29
7	-0.17294	0.0000149	-0.1730	1.699	29
8	-0.17832	0.0000149	-0.1783	1.699	29
9	-0.18504	0.0000149	-0.1851	1.699	29
10	-0.17652	0.0000149	-0.1765	1.699	29
11	-0.17339	0.0000149	-0.1734	1.699	29
12	-0.36783	0.0000149	-0.3678	1.699	29

13	-0.56989	0.0000149	-0.5699	1.699	29
14	-0.69713	0.0000149	-0.6971	1.699	29
15	-0.68638	0.0000149	-0.6864	1.699	29
16	-0.49731	0.0000149	-0.4973	1.699	29
17	-0.6922	0.0000149	-0.6922	1.699	29
18	-0.85439	0.0000149	-0.8544	1.699	29
19	-0.88082	0.0000149	-0.8808	1.699	29
20	-0.2043	0.0000149	-0.2043	1.699	29
21	-0.19579	0.0000149	-0.1958	1.699	29
22	-0.19355	0.0000149	-0.1936	1.699	29
23	-0.19444	0.0000149	-0.1945	1.699	29
24	-0.20296	0.0000149	-0.2030	1.699	29
25	-0.20251	0.0000149	-0.2025	1.699	29
26	-0.2043	0.0000149	-0.2043	1.699	29
27	-0.20699	0.0000149	-0.2070	1.699	29
28	-0.19803	0.0000149	-0.1980	1.699	29
29	-0.19668	0.0000149	-0.1967	1.699	29
30	-0.1922	0.0000149	-0.1922	1.699	29
		MAR	-0.1832		
		T-test AR	4.53967E-06		

Source: Research Findings

APPENDIX VI: Analysis of Results before and after the Announcement for Kenya Power

KENYA POWER (KPLC)					
Event Window	Rit	ERit	AR	Critical Vale	Df
-30	0.060854686	0.000068737	0.060786	1.699	29
-29	0.027904528	0.000068737	0.027836	1.699	29
-28	0.036591787	0.000068737	0.036523	1.699	29
-27	0.029966655	0.000068737	0.029898	1.699	29
-26	0.021630397	0.000068737	0.021562	1.699	29
-25	0.013425763	0.000068737	0.013357	1.699	29
-24	0.017506143	0.000068737	0.017437	1.699	29
-23	0.018646894	0.000068737	0.018578	1.699	29
-22	0.019875395	0.000068737	0.019807	1.699	29
-21	0.017023517	0.000068737	0.016955	1.699	29
-20	0.016102141	0.000068737	0.016033	1.699	29
-19	0.012679888	0.000068737	0.012611	1.699	29
-18	0.00460688	0.000068737	0.004538	1.699	29
-17	0.000965251	0.000068737	0.000897	1.699	29
-16	0.002237627	0.000068737	0.002169	1.699	29
-15	-0.009520885	0.000068737	-0.00959	1.699	29
-14	-0.018295893	0.000068737	-0.01836	1.699	29
-13	-0.01540014	0.000068737	-0.01547	1.699	29
-12	-0.018076518	0.000068737	-0.01815	1.699	29
-11	-0.021323271	0.000068737	-0.02139	1.699	29
-10	-0.027290277	0.000068737	-0.02736	1.699	29
-9	-0.015619516	0.000068737	-0.01569	1.699	29
-8	-0.037776413	0.000068737	-0.03785	1.699	29
-7	-0.040716041	0.000068737	-0.04078	1.699	29
-6	-0.052079677	0.000068737	-0.05215	1.699	29
-5	-0.064101439	0.000068737	-0.06417	1.699	29
-4	-0.070770446	0.000068737	-0.07084	1.699	29
-3	-0.079326079	0.000068737	-0.07939	1.699	29
-2	-0.063355563	0.000068737	-0.06342	1.699	29
-1	-0.044050544	0.000068737	-0.04412	1.699	29
0	-0.015926641	0.000068737	-0.016	1.699	29
1	0.015795016	0.000068737	0.015726	1.699	29
2	0.042822043	0.000068737	0.042753	1.699	29
3	0.049140049	0.000068737	0.049071	1.699	29
4	-0.025623026	0.000068737	-0.02569	1.699	29
5	-0.14952615	0.000068737	-0.14959	1.699	29
6	-0.188136188	0.000068737	-0.1882	1.699	29
7	-0.205686206	0.000068737	-0.20575	1.699	29
8	-0.438399438	0.000068737	-0.43847	1.699	29
9	-0.458757459	0.000068737	-0.45883	1.699	29
10	-0.476658477	0.000068737	-0.47673	1.699	29
11	-0.719199719	0.000068737	-0.71927	1.699	29
12	-0.67988768	0.000068737	-0.67996	1.699	29

13	-0.686205686	0.000068737	-0.68627	1.699	29
14	-0.637767638	0.000068737	-0.63784	1.699	29
15	-0.703053703	0.000068737	-0.70312	1.699	29
16	-0.839241839	0.000068737	-0.83931	1.699	29
17	-0.924183924	0.000068737	-0.92425	1.699	29
18	-0.209196209	0.000068737	-0.20926	1.699	29
19	-0.210600211	0.000068737	-0.21067	1.699	29
20	-0.217269217	0.000068737	-0.21734	1.699	29
21	-0.226044226	0.000068737	-0.22611	1.699	29
22	-0.230607231	0.000068737	-0.23068	1.699	29
23	-0.222885223	0.000068737	-0.22295	1.699	29
24	-0.219024219	0.000068737	-0.21909	1.699	29
25	-0.219024219	0.000068737	-0.21909	1.699	29
26	-0.219375219	0.000068737	-0.21944	1.699	29
27	-0.197262197	0.000068737	-0.19733	1.699	29
28	-0.1997192	0.000068737	-0.19979	1.699	29
29	-0.155493155	0.000068737	-0.15556	1.699	29
30	-0.096876097	0.000068737	-0.09694	1.699	29
		MAR	-0.16305		
		T test AR	7.37E-07		

Source: Research Findings

APPENDIX VII: Analysis of Results before and after the Announcement for Standard Chartered Bank

STANDARD CHARTERED BANK 2010 ISSUE					
Event Window	Rit	ERit	AR	Critical Vale	Df
-30	0.090473	-0.045605084	0.136078011	1.699	29
-29	0.084947	-0.045605084	0.130551966	1.699	29
-28	0.117461	-0.045605084	0.163065674	1.699	29
-27	0.11322	-0.045605084	0.158824755	1.699	29
-26	0.114333	-0.045605084	0.159938532	1.699	29
-25	0.126371	-0.045605084	0.171975886	1.699	29
-24	0.157814	-0.045605084	0.203418655	1.699	29
-23	0.220142	-0.045605084	0.265747305	1.699	29
-22	0.313014	-0.045605084	0.358619135	1.699	29
-21	0.313699	-0.045605084	0.359304536	1.699	29
-20	0.30012	-0.045605084	0.345725029	1.699	29
-19	0.284913	-0.045605084	0.330517696	1.699	29
-18	0.214531	-0.045605084	0.260135584	1.699	29
-17	0.201808	-0.045605084	0.247412829	1.699	29
-16	0.131468	-0.045605084	0.177073556	1.699	29
-15	0.087603	-0.045605084	0.133207894	1.699	29
-14	0.12787	-0.045605084	0.173475201	1.699	29
-13	0.166767	-0.045605084	0.212371705	1.699	29
-12	0.134981	-0.045605084	0.180586236	1.699	29
-11	0.147404	-0.045605084	0.193009128	1.699	29
-10	0.133053	-0.045605084	0.178658545	1.699	29
-9	0.101139	-0.045605084	0.146744563	1.699	29
-8	0.121102	-0.045605084	0.166706866	1.699	29
-7	0.113134	-0.045605084	0.15873908	1.699	29
-6	0.101354	-0.045605084	0.146958751	1.699	29
-5	0.113263	-0.045605084	0.158867593	1.699	29
-4	0.119474	-0.045605084	0.165079039	1.699	29
-3	0.117503	-0.045605084	0.163108511	1.699	29
-2	0.117803	-0.045605084	0.163408374	1.699	29
-1	0.108508	-0.045605084	0.154112624	1.699	29
0	0.070725	-0.045605084	0.116329896	1.699	29
1	-0.15687	-0.045605084	-0.11126606	1.699	29
2	-0.40871	-0.045605084	-0.363108076	1.699	29
3	-0.38661	-0.045605084	-0.341003895	1.699	29
4	-0.29622	-0.045605084	-0.250616643	1.699	29
5	-0.34994	-0.045605084	-0.304334943	1.699	29
6	-0.27523	-0.045605084	-0.229626239	1.699	29
7	0.174306	-0.045605084	0.219911116	1.699	29
8	0.178333	-0.045605084	0.223937846	1.699	29
9	0.184844	-0.045605084	0.230449155	1.699	29
10	0.196282	-0.045605084	0.241886784	1.699	29
11	0.208319	-0.045605084	0.253924138	1.699	29
12	0.201979	-0.045605084	0.247584179	1.699	29

13	0.213631	-0.045605084	0.259235996	1.699	29
14	0.194225	-0.045605084	0.239830581	1.699	29
15	0.199923	-0.045605084	0.245527977	1.699	29
16	0.206648	-0.045605084	0.252253473	1.699	29
17	0.22087	-0.045605084	0.266475543	1.699	29
18	0.214445	-0.045605084	0.260049909	1.699	29
19	0.195682	-0.045605084	0.241287058	1.699	29
20	0.203735	-0.045605084	0.249340519	1.699	29
21	0.169808	-0.045605084	0.215413172	1.699	29
22	0.132325	-0.045605084	0.177930307	1.699	29
23	0.144748	-0.045605084	0.190353199	1.699	29
24	0.13798	-0.045605084	0.183584865	1.699	29
25	0.140293	-0.045605084	0.185898093	1.699	29
26	0.129798	-0.045605084	0.175402891	1.699	29
27	0.121787	-0.045605084	0.167392267	1.699	29
28	0.137337	-0.045605084	0.182942301	1.699	29
29	0.148561	-0.045605084	0.194165742	1.699	29
30	0.163425	-0.045605084	0.209030375	1.699	29
		MAR	0.160550898		
		T-test AR	0.037458884		

Source: Research Findings

APPENDIX VIII: Analysis of Results before and after the Announcement for TPS East Africa

TPS EAST AFRICA					
Event Period	Rit	ERit	AR	Critical Vale	Df
-30	0.010753	-0.059569892	0.070322581	1.699	29
-29	-0.04301	-0.059569892	0.01655914	1.699	29
-28	-0.01785	-0.059569892	0.04172043	1.699	29
-27	0.003656	-0.059569892	0.063225806	1.699	29
-26	-0.04516	-0.059569892	0.014408602	1.699	29
-25	-0.02688	-0.059569892	0.032688172	1.699	29
-24	-0.04086	-0.059569892	0.018709677	1.699	29
-23	-0.01935	-0.059569892	0.040215054	1.699	29
-22	-0.0443	-0.059569892	0.015268817	1.699	29
-21	-0.01075	-0.059569892	0.048817204	1.699	29
-20	0.000215	-0.059569892	0.059784946	1.699	29
-19	-0.01075	-0.059569892	0.048817204	1.699	29
-18	-0.01914	-0.059569892	0.040430108	1.699	29
-17	-0.00409	-0.059569892	0.055483871	1.699	29
-16	0.051183	-0.059569892	0.110752688	1.699	29
-15	0.066667	-0.059569892	0.126236559	1.699	29
-14	0.075269	-0.059569892	0.13483871	1.699	29
-13	0.067527	-0.059569892	0.127096774	1.699	29
-12	0.075269	-0.059569892	0.13483871	1.699	29
-11	0.051828	-0.059569892	0.111397849	1.699	29
-10	0.043011	-0.059569892	0.102580645	1.699	29
-9	0.048817	-0.059569892	0.108387097	1.699	29
-8	0.094409	-0.059569892	0.153978495	1.699	29
-7	0.117849	-0.059569892	0.177419355	1.699	29
-6	0.117634	-0.059569892	0.177204301	1.699	29
-5	0.099355	-0.059569892	0.158924731	1.699	29
-4	0.065376	-0.059569892	0.124946237	1.699	29
-3	0.080645	-0.059569892	0.140215054	1.699	29
-2	0.108602	-0.059569892	0.168172043	1.699	29
-1	0.096774	-0.059569892	0.156344086	1.699	29
0	0.242151	-0.059569892	0.30172043	1.699	29
1	0.361505	-0.059569892	0.421075269	1.699	29
2	0.375054	-0.059569892	0.434623656	1.699	29
3	0.372688	-0.059569892	0.432258065	1.699	29
4	0.365161	-0.059569892	0.424731183	1.699	29
5	0.32172	-0.059569892	0.381290323	1.699	29
6	0.366882	-0.059569892	0.426451613	1.699	29
7	0.354194	-0.059569892	0.413763441	1.699	29
8	0.371828	-0.059569892	0.431397849	1.699	29
9	0.363011	-0.059569892	0.422580645	1.699	29
10	0.353978	-0.059569892	0.413548387	1.699	29
11	0.36086	-0.059569892	0.420430108	1.699	29
12	0.376344	-0.059569892	0.435913978	1.699	29

13	0.38	-0.059569892	0.439569892	1.699	29
14	0.396344	-0.059569892	0.455913978	1.699	29
15	0.426452	-0.059569892	0.486021505	1.699	29
16	0.403226	-0.059569892	0.462795699	1.699	29
17	0.327742	-0.059569892	0.387311828	1.699	29
18	0.271613	-0.059569892	0.331182796	1.699	29
19	0.286237	-0.059569892	0.345806452	1.699	29
20	0.369892	-0.059569892	0.429462366	1.699	29
21	0.348387	-0.059569892	0.407956989	1.699	29
22	0.369247	-0.059569892	0.428817204	1.699	29
23	0.358065	-0.059569892	0.417634409	1.699	29
24	0.334194	-0.059569892	0.393763441	1.699	29
25	0.356774	-0.059569892	0.416344086	1.699	29
26	0.311828	-0.059569892	0.371397849	1.699	29
27	0.354839	-0.059569892	0.414408602	1.699	29
28	0.35828	-0.059569892	0.417849462	1.699	29
29	0.344086	-0.059569892	0.403655914	1.699	29
30	0.344086	-0.059569892	0.403655914	1.699	29
	0.195399	MAR	0.254969152		
		T-test value	3.30992E-21		

Source: Research Findings

APPENDIX IX: Analysis of Results before and after the Announcement for KQ

KENYA AIRWAYS					
Event Window	Rit	ERit	AR	Critical Vale	Df
-30	-0.08094262	0.00012	-0.081062623		
-29	-0.09989754	0.00012	-0.100017541	1.699	29
-28	-0.12961066	0.00012	-0.129730656	1.699	29
-27	-0.10655738	0.00012	-0.106677377	1.699	29
-26	-0.10655738	0.00012	-0.106677377	1.699	29
-25	-0.10809426	0.00012	-0.108214262	1.699	29
-24	-0.10348361	0.00012	-0.103603607	1.699	29
-23	-0.09887295	0.00012	-0.098992951	1.699	29
-22	-0.1045082	0.00012	-0.104628197	1.699	29
-21	-0.11680328	0.00012	-0.116923279	1.699	29
-20	-0.10604508	0.00012	-0.106165082	1.699	29
-19	-0.10348361	0.00012	-0.103603607	1.699	29
-18	-0.10348361	0.00012	-0.103603607	1.699	29
-17	-0.09528689	0.00012	-0.095406885	1.699	29
-16	-0.08504098	0.00012	-0.085160984	1.699	29
-15	-0.02151639	0.00012	-0.021636393	1.699	29
-14	-0.05532787	0.00012	-0.055447869	1.699	29
-13	-0.13831967	0.00012	-0.138439672	1.699	29
-12	-0.22079918	0.00012	-0.22091918	1.699	29
-11	-0.20696721	0.00012	-0.207087213	1.699	29
-10	-0.22387295	0.00012	-0.223992951	1.699	29
-9	-0.23258197	0.00012	-0.232701967	1.699	29
-8	-0.25922131	0.00012	-0.259341311	1.699	29
-7	-0.27356557	0.00012	-0.273685574	1.699	29
-6	-0.30020492	0.00012	-0.300324918	1.699	29
-5	-0.31711066	0.00012	-0.317230656	1.699	29
-4	-0.3022541	0.00012	-0.302374098	1.699	29
-3	-0.29559426	0.00012	-0.295714262	1.699	29
-2	-0.28381148	0.00012	-0.283931475	1.699	29
-1	-0.2817623	0.00012	-0.281882295	1.699	29
0	-0.28227459	0.00012	-0.28239459	1.699	29
1	-0.28227459	0.00012	-0.28239459	1.699	29
2	-0.39293033	0.00012	-0.393050328	1.699	29
3	-0.37653689	0.00012	-0.376656885	1.699	29
4	-0.34272541	0.00012	-0.34284541	1.699	29
5	-0.5307377	0.00012	-0.530857705	1.699	29
6	-0.57018443	0.00012	-0.570304426	1.699	29
7	-0.87653689	0.00012	-0.876656885	1.699	29
8	-0.5932377	0.00012	-0.593357705	1.699	29
9	-0.66393443	0.00012	-0.664054426	1.699	29
10	-0.73565574	0.00012	-0.735775738	1.699	29
11	-0.78534836	0.00012	-0.785468361	1.699	29
12	-0.25461066	0.00012	-0.254730656	1.699	29

13	-0.25256148	0.00012	-0.252681475	1.699	29
14	-0.25461066	0.00012	-0.254730656	1.699	29
15	-0.24538934	0.00012	-0.245509344	1.699	29
16	-0.23514344	0.00012	-0.235263443	1.699	29
17	-0.23565574	0.00012	-0.235775738	1.699	29
18	-0.24129098	0.00012	-0.241410984	1.699	29
19	-0.23719262	0.00012	-0.237312623	1.699	29
20	-0.2392418	0.00012	-0.239361803	1.699	29
21	-0.24282787	0.00012	-0.242947869	1.699	29
22	-0.24334016	0.00012	-0.243460164	1.699	29
23	-0.24897541	0.00012	-0.24909541	1.699	29
24	-0.26588115	0.00012	-0.266001148	1.699	29
25	-0.25819672	0.00012	-0.258316721	1.699	29
26	-0.25102459	0.00012	-0.25114459	1.699	29
27	-0.24641393	0.00012	-0.246533934	1.699	29
28	-0.24641393	0.00012	-0.246533934	1.699	29
29	-0.24436475	0.00012	-0.244484754	1.699	29
30	-0.23514344	0.00012	-0.235263443	1.699	29
	-0.26347924	MAR	-0.263599239	1.699	29
		T-test AR	0.000121223		

Source: Research Findings

APPENDIX X: Analysis of Results before and after the Announcement for CFC Holdings Ltd

CFC STANBIC HOLDINGS					
Event Window	Rit	ER	AR	Critical Vale	Df
-30	0.056254506	0.0000233	0.056231206		
-29	0.052998767	0.0000233	0.052975467	1.699	29
-28	0.034859654	0.0000233	0.034836354	1.699	29
-27	0.042533895	0.0000233	0.042510595	1.699	29
-26	0.011604381	0.0000233	0.011581081	1.699	29
-25	0.011604381	0.0000233	0.011581081	1.699	29
-24	0.020906491	0.0000233	0.020883191	1.699	29
-23	0.013929909	0.0000233	0.013906609	1.699	29
-22	0.012302039	0.0000233	0.012278739	1.699	29
-21	-0.00537197	0.0000233	-0.005395268	1.699	29
-20	-0.04258041	0.0000233	-0.042603705	1.699	29
-19	-0.0465338	0.0000233	-0.046557102	1.699	29
-18	-0.03304574	0.0000233	-0.033069043	1.699	29
-17	-0.01165089	0.0000233	-0.011674192	1.699	29
-16	-0.01560429	0.0000233	-0.015627588	1.699	29
-15	-0.01165089	0.0000233	-0.011674192	1.699	29
-14	-0.00862771	0.0000233	-0.008651006	1.699	29
-13	0.007650985	0.0000233	0.007627685	1.699	29
-12	0.0174182	0.0000233	0.0173949	1.699	29
-11	0.0174182	0.0000233	0.0173949	1.699	29
-10	0.023232018	0.0000233	0.023208718	1.699	29
-9	0.019278621	0.0000233	0.019255321	1.699	29
-8	0.019743727	0.0000233	0.019720427	1.699	29
-7	0.020906491	0.0000233	0.020883191	1.699	29
-6	0.0174182	0.0000233	0.0173949	1.699	29
-5	-2.3255E-05	0.0000233	-4.65553E-05	1.699	29
-4	0.046487291	0.0000233	0.046463991	1.699	29
-3	0.046487291	0.0000233	0.046463991	1.699	29
-2	0.001837167	0.0000233	0.001813867	1.699	29
-1	-2.3255E-05	0.0000233	-4.65553E-05	1.699	29
0	0.023232018	0.0000233	0.023208718	1.699	29
1	0.050440687	0.0000233	0.050417387	1.699	29
2	0.031371363	0.0000233	0.031348063	1.699	29
3	0.051138346	0.0000233	0.051115046	1.699	29
4	0.123927351	0.0000233	0.123904051	1.699	29
5	0.11625311	0.0000233	0.11622981	1.699	29
6	0.11625311	0.0000233	0.11622981	1.699	29
7	0.11625311	0.0000233	0.11622981	1.699	29
8	0.156949838	0.0000233	0.156926538	1.699	29
9	0.14346178	0.0000233	0.14343848	1.699	29
10	0.139508384	0.0000233	0.139485084	1.699	29
11	0.123927351	0.0000233	0.123904051	1.699	29
12	0.11625311	0.0000233	0.11622981	1.699	29

13	0.054161531	0.0000233	0.054138231	1.699	29
14	0.027185414	0.0000233	0.027162114	1.699	29
15	-0.60070696	0.0000233	-0.60073026	1.699	29
16	-0.87930513	0.0000233	-0.879328432	1.699	29
17	-0.65977535	0.0000233	-0.659798654	1.699	29
18	-0.81791121	0.0000233	-0.817934511	1.699	29
19	-0.7569824	0.0000233	-0.757005696	1.699	29
20	-0.81419037	0.0000233	-0.814213668	1.699	29
21	-0.83791075	0.0000233	-0.837934046	1.699	29
22	-0.79512104	0.0000233	-0.795144344	1.699	29
23	-0.63489221	0.0000233	-0.634915512	1.699	29
24	-0.82628311	0.0000233	-0.82630641	1.699	29
25	-0.86860771	0.0000233	-0.868631007	1.699	29
26	-0.63605498	0.0000233	-0.636078275	1.699	29
27	-0.41350201	0.0000233	-0.413525312	1.699	29
28	-0.62628776	0.0000233	-0.626311061	1.699	29
29	-0.85604986	0.0000233	-0.856073159	1.699	29
30	-0.91511825	0.0000233	-0.915141553	1.699	29
	-0.16768234	MAR	-0.167705638	1.699	29
		T test AR	0.000103097		

Source: Research Findings

APPENDIX XI: Analysis of Results before and after the Announcement for DTK 2012

DIAMOND TRUST BANK 2012 ISSUE					
Event Window	Rit	ER	CAR	Critical Vale	Df
-30	0.069289991	0.0000285	0.069261491	1.699	29
-29	0.069289991	0.0000285	0.069261491	1.699	29
-28	0.015825492	0.0000285	0.015796992	1.699	29
-27	0.047904192	0.0000285	0.047875692	1.699	29
-26	0.0715355	0.0000285	0.071507	1.699	29
-25	0.069289991	0.0000285	0.069261491	1.699	29
-24	0.011869119	0.0000285	0.011840619	1.699	29
-23	0.061698033	0.0000285	0.061669533	1.699	29
-22	0.069289991	0.0000285	0.069261491	1.699	29
-21	0.079982891	0.0000285	0.079954391	1.699	29
-20	0.09185201	0.0000285	0.09182351	1.699	29
-19	0.065333618	0.0000285	0.065305118	1.699	29
-18	0.094204448	0.0000285	0.094175948	1.699	29
-17	0.055496151	0.0000285	0.055467651	1.699	29
-16	0.053250642	0.0000285	0.053222142	1.699	29
-15	0.071963216	0.0000285	0.071934716	1.699	29
-14	0.031864842	0.0000285	0.031836342	1.699	29
-13	0.041809239	0.0000285	0.041780739	1.699	29
-12	0.047904192	0.0000285	0.047875692	1.699	29
-11	0.093776732	0.0000285	0.093748232	1.699	29
-10	0.106073567	0.0000285	0.106045067	1.699	29
-9	0.054106074	0.0000285	0.054077574	1.699	29
-8	0.089178785	0.0000285	0.089150285	1.699	29
-7	0.077309666	0.0000285	0.077281166	1.699	29
-6	0.088857998	0.0000285	0.088829498	1.699	29
-5	0.077630453	0.0000285	0.077601953	1.699	29
-4	0.087147134	0.0000285	0.087118634	1.699	29
-3	0.047904192	0.0000285	0.047875692	1.699	29
-2	0.08650556	0.0000285	0.08647706	1.699	29
-1	0.091638152	0.0000285	0.091609652	1.699	29
0	0.063943541	0.0000285	0.063915041	1.699	29
1	0.096663815	0.0000285	0.096635315	1.699	29
2	0.088857998	0.0000285	0.088829498	1.699	29
3	0.117087254	0.0000285	0.117058754	1.699	29
4	0.117835757	0.0000285	0.117807257	1.699	29
5	0.114734816	0.0000285	0.114706316	1.699	29
6	0.034003422	0.0000285	0.033974922	1.699	29
7	-0.059024808	0.0000285	-0.059053308	1.699	29
8	0.013686912	0.0000285	0.013658412	1.699	29
9	0.014542344	0.0000285	0.014513844	1.699	29

10	0.021171942	0.0000285	0.021143442	1.699	29
11	-0.037639008	0.0000285	-0.037667508	1.699	29
12	-0.019781865	0.0000285	-0.019810365	1.699	29
13	-0.005560308	0.0000285	-0.005588808	1.699	29
14	-0.056886228	0.0000285	-0.056914728	1.699	29
15	-0.595166809	0.0000285	-0.595195309	1.699	29
16	-0.330838323	0.0000285	-0.330866823	1.699	29
17	-0.019033362	0.0000285	-0.019061862	1.699	29
18	0.001924722	0.0000285	0.001896222	1.699	29
19	-0.563088109	0.0000285	-0.563116609	1.699	29
20	-0.183276305	0.0000285	-0.183304805	1.699	29
21	-0.236206159	0.0000285	-0.236234659	1.699	29
22	-0.699101796	0.0000285	-0.699130296	1.699	29
23	-0.565012831	0.0000285	-0.565041331	1.699	29
24	-0.633768178	0.0000285	-0.633796678	1.699	29
25	-0.742942686	0.0000285	-0.742971186	1.699	29
26	-0.003528657	0.0000285	-0.003557157	1.699	29
27	-0.025342173	0.0000285	-0.025370673	1.699	29
28	0.015825492	0.0000285	0.015796992	1.699	29
29	0.030047049	0.0000285	0.030018549	1.699	29
30	0.023096664	0.0000285	0.023068164	1.699	29
		MAR	-0.032864467		
		Ttest AR	0.000361852		

Source: Research Findings

APPENDIX XII: Analysis of Results before and after the Announcement for Standard Chartered 2012

STANDARD CHARTERED BANK 2012 ISSUE					
Event Window	Rit	ER	AR	Critical Vale	Df
-30	0.014130145	-4.02456E-17	0.014130145	1.699	29
-29	0.008951826	-4.02456E-17	0.008951826	1.699	29
-28	0.023717725	-4.02456E-17	0.023717725	1.699	29
-27	0.026281249	-4.02456E-17	0.026281249	1.699	29
-26	0.017719079	-4.02456E-17	0.017719079	1.699	29
-25	0.028178257	-4.02456E-17	0.028178257	1.699	29
-24	0.024896946	-4.02456E-17	0.024896946	1.699	29
-23	0.03376674	-4.02456E-17	0.03376674	1.699	29
-22	0.036894239	-4.02456E-17	0.036894239	1.699	29
-21	0.049968212	-4.02456E-17	0.049968212	1.699	29
-20	0.058068949	-4.02456E-17	0.058068949	1.699	29
-19	0.08155083	-4.02456E-17	0.08155083	1.699	29
-18	0.08693423	-4.02456E-17	0.08693423	1.699	29
-17	0.084883411	-4.02456E-17	0.084883411	1.699	29
-16	0.077961896	-4.02456E-17	0.077961896	1.699	29
-15	0.077808084	-4.02456E-17	0.077808084	1.699	29
-14	0.105750497	-4.02456E-17	0.105750497	1.699	29
-13	0.112569472	-4.02456E-17	0.112569472	1.699	29
-12	0.13051414	-4.02456E-17	0.13051414	1.699	29
-11	0.142716515	-4.02456E-17	0.142716515	1.699	29
-10	0.127437911	-4.02456E-17	0.127437911	1.699	29
-9	0.111697873	-4.02456E-17	0.111697873	1.699	29
-8	0.019205923	-4.02456E-17	0.019205923	1.699	29
-7	0.024127889	-4.02456E-17	0.024127889	1.699	29
-6	0.032382437	-4.02456E-17	0.032382437	1.699	29
-5	0.035048502	-4.02456E-17	0.035048502	1.699	29
-4	0.036842969	-4.02456E-17	0.036842969	1.699	29
-3	0.038124731	-4.02456E-17	0.038124731	1.699	29
-2	0.062888374	-4.02456E-17	0.062888374	1.699	29
-1	0.034484527	-4.02456E-17	0.034484527	1.699	29
0	0.052839359	-4.02456E-17	0.052839359	1.699	29
1	0.063759972	-4.02456E-17	0.063759972	1.699	29
2	0.057863867	-4.02456E-17	0.057863867	1.699	29
3	0.075757265	-4.02456E-17	0.075757265	1.699	29
4	0.09329177	-4.02456E-17	0.09329177	1.699	29
5	-0.020067267	-4.02456E-17	-0.020067267	1.699	29
6	-0.363118066	-4.02456E-17	-0.363118066	1.699	29
7	-0.390957938	-4.02456E-17	-0.390957938	1.699	29
8	-0.321383893	-4.02456E-17	-0.321383893	1.699	29
9	-0.482475749	-4.02456E-17	-0.482475749	1.699	29
10	-0.328049056	-4.02456E-17	-0.328049056	1.699	29
11	-0.526619635	-4.02456E-17	-0.526619635	1.699	29
12	-0.527286151	-4.02456E-17	-0.527286151	1.699	29

13	0.127027748	-4.02456E-17	0.127027748	1.699	29
14	0.128873485	-4.02456E-17	0.128873485	1.699	29
15	0.117901602	-4.02456E-17	0.117901602	1.699	29
16	0.1156457	-4.02456E-17	0.1156457	1.699	29
17	0.133334017	-4.02456E-17	0.133334017	1.699	29
18	0.130667952	-4.02456E-17	0.130667952	1.699	29
19	0.164865364	-4.02456E-17	0.164865364	1.699	29
20	0.148868973	-4.02456E-17	0.148868973	1.699	29
21	0.160866266	-4.02456E-17	0.160866266	1.699	29
22	0.148458809	-4.02456E-17	0.148458809	1.699	29
23	0.147843564	-4.02456E-17	0.147843564	1.699	29
24	0.151893932	-4.02456E-17	0.151893932	1.699	29
25	0.162712003	-4.02456E-17	0.162712003	1.699	29
26	0.173068641	-4.02456E-17	0.173068641	1.699	29
27	0.158712906	-4.02456E-17	0.158712906	1.699	29
28	0.173530075	-4.02456E-17	0.173530075	1.699	29
29	0.154559997	-4.02456E-17	0.154559997	1.699	29
30	0.165019175	-4.02456E-17	0.165019175	1.699	29
		MAR	0.029391939		
		T test AR	0.187646702		

Source: Research Findings

APPENDIX XIII: Analysis of Results before and after the Announcement for NIC Bank

NIC BANK					
Event Window	Rit	ER	AR	Critical Vale	Df
-30	0.02567028	0.000092	0.02557828	1.699	29
-29	0.043639475	0.000092	0.043547475	1.699	29
-28	0.038505419	0.000092	0.038413419	1.699	29
-27	0.04335425	0.000092	0.04326225	1.699	29
-26	0.044495151	0.000092	0.044403151	1.699	29
-25	0.031374786	0.000092	0.031282786	1.699	29
-24	0.037079293	0.000092	0.036987293	1.699	29
-23	0.036508842	0.000092	0.036416842	1.699	29
-22	0.045350827	0.000092	0.045258827	1.699	29
-21	0.051055334	0.000092	0.050963334	1.699	29
-20	0.039361095	0.000092	0.039269095	1.699	29
-19	0.067598403	0.000092	0.067506403	1.699	29
-18	0.080148317	0.000092	0.080056317	1.699	29
-17	0.105248146	0.000092	0.105156146	1.699	29
-16	0.042213349	0.000092	0.042121349	1.699	29
-15	0.003422704	0.000092	0.003330704	1.699	29
-14	-0.023673702	0.000092	-0.023765702	1.699	29
-13	-0.012264689	0.000092	-0.012356689	1.699	29
-12	-0.013976041	0.000092	-0.014068041	1.699	29
-11	-0.024529378	0.000092	-0.024621378	1.699	29
-10	-0.025099829	0.000092	-0.025191829	1.699	29
-9	-0.033656589	0.000092	-0.033748589	1.699	29
-8	-0.047062179	0.000092	-0.047154179	1.699	29
-7	-0.010553337	0.000092	-0.010645337	1.699	29
-6	0.000855676	0.000092	0.000763676	1.699	29
-5	-0.010268112	0.000092	-0.010360112	1.699	29
-4	-0.005989732	0.000092	-0.006081732	1.699	29
-3	-0.047347404	0.000092	-0.047439404	1.699	29
-2	-0.078436965	0.000092	-0.078528965	1.699	29
-1	-0.09098688	0.000092	-0.09107888	1.699	29
0	-0.090131204	0.000092	-0.090223204	1.699	29
1	-0.101540217	0.000092	-0.101632217	1.699	29
2	-0.096976612	0.000092	-0.097068612	1.699	29
3	-0.2387336	0.000092	-0.2388256	1.699	29
4	-0.539646321	0.000092	-0.539738321	1.699	29
5	-0.501426127	0.000092	-0.501518127	1.699	29
6	-0.570450656	0.000092	-0.570542656	1.699	29
7	-0.530804335	0.000092	-0.530896335	1.699	29
8	-0.483456931	0.000092	-0.483548931	1.699	29
9	-0.397033657	0.000092	-0.397125657	1.699	29
10	-0.574158585	0.000092	-0.574250585	1.699	29
11	-0.551625784	0.000092	-0.551717784	1.699	29
12	-0.007130633	0.000092	-0.007222633	1.699	29

13	-0.031660011	0.000092	-0.031752011	1.699	29
14	-0.04820308	0.000092	-0.04829508	1.699	29
15	-0.049629207	0.000092	-0.049721207	1.699	29
16	-0.049058756	0.000092	-0.049150756	1.699	29
17	-0.049914432	0.000092	-0.050006432	1.699	29
18	-0.059897319	0.000092	-0.059989319	1.699	29
19	-0.024529378	0.000092	-0.024621378	1.699	29
20	-0.032515687	0.000092	-0.032607687	1.699	29
21	0.003137479	0.000092	0.003045479	1.699	29
22	-0.018539646	0.000092	-0.018631646	1.699	29
23	-0.027666857	0.000092	-0.027758857	1.699	29
24	-0.058185967	0.000092	-0.058277967	1.699	29
25	-0.075869937	0.000092	-0.075961937	1.699	29
26	-0.032800913	0.000092	-0.032892913	1.699	29
27	-0.054478038	0.000092	-0.054570038	1.699	29
28	-0.043069025	0.000092	-0.043161025	1.699	29
29	-0.012549914	0.000092	-0.012641914	1.699	29
30	-0.011123788	0.000092	-0.011215788	1.699	29
	-0.082748076	MAR	-0.082840076		
		T-test AR	0.000212955		

Source: Research Findings

APPENDIX XIV: Analysis of Results before and after the Announcement for DTK 2014

DIAMOND TRUST BANK 2014 ISSUE					
Event Window	Rit	ER	AR	Critical Vale	Df
-30	0.019081	2.45174E-17	0.019081	1.699	29
-29	0.019081	2.45174E-17	0.019081	1.699	29
-28	0.001735	2.45174E-17	0.001735	1.699	29
-27	0.010408	2.45174E-17	0.010408	1.699	29
-26	0.023417	2.45174E-17	0.023417	1.699	29
-25	0.023417	2.45174E-17	0.023417	1.699	29
-24	0.019081	2.45174E-17	0.019081	1.699	29
-23	0.027754	2.45174E-17	0.027754	1.699	29
-22	0.014744	2.45174E-17	0.014744	1.699	29
-21	0.019081	2.45174E-17	0.019081	1.699	29
-20	0.023417	2.45174E-17	0.023417	1.699	29
-19	0.027754	2.45174E-17	0.027754	1.699	29
-18	0.03209	2.45174E-17	0.03209	1.699	29
-17	0.027754	2.45174E-17	0.027754	1.699	29
-16	0.040763	2.45174E-17	0.040763	1.699	29
-15	0.03209	2.45174E-17	0.03209	1.699	29
-14	0.03209	2.45174E-17	0.03209	1.699	29
-13	0.027754	2.45174E-17	0.027754	1.699	29
-12	0.027754	2.45174E-17	0.027754	1.699	29
-11	0.03209	2.45174E-17	0.03209	1.699	29
-10	0.03209	2.45174E-17	0.03209	1.699	29
-9	0.03209	2.45174E-17	0.03209	1.699	29
-8	0.036427	2.45174E-17	0.036427	1.699	29
-7	0.058109	2.45174E-17	0.058109	1.699	29
-6	0.049436	2.45174E-17	0.049436	1.699	29
-5	0.058109	2.45174E-17	0.058109	1.699	29
-4	0.062446	2.45174E-17	0.062446	1.699	29
-3	0.058109	2.45174E-17	0.058109	1.699	29
-2	0.058109	2.45174E-17	0.058109	1.699	29
-1	0.058109	2.45174E-17	0.058109	1.699	29
0	0.079792	2.45174E-17	0.079792	1.699	29
1	0.088465	2.45174E-17	0.088465	1.699	29
2	0.157849	2.45174E-17	0.157849	1.699	29
3	0.192541	2.45174E-17	0.192541	1.699	29
4	0.071119	2.45174E-17	0.071119	1.699	29
5	0.058109	2.45174E-17	0.058109	1.699	29
6	0.0451	2.45174E-17	0.0451	1.699	29
7	0.040763	2.45174E-17	0.040763	1.699	29
8	-0.0503	2.45174E-17	-0.0503	1.699	29
9	0.001735	2.45174E-17	0.001735	1.699	29
10	0.014744	2.45174E-17	0.014744	1.699	29
11	0.001735	2.45174E-17	0.001735	1.699	29
12	0.001735	2.45174E-17	0.001735	1.699	29

13	-0.00694	2.45174E-17	-0.00694	1.699	29
14	-0.01561	2.45174E-17	-0.01561	1.699	29
15	-0.01995	2.45174E-17	-0.01995	1.699	29
16	-0.05464	2.45174E-17	-0.05464	1.699	29
17	-0.04597	2.45174E-17	-0.04597	1.699	29
18	-0.04597	2.45174E-17	-0.04597	1.699	29
19	-0.0026	2.45174E-17	-0.0026	1.699	29
20	0.006071	2.45174E-17	0.006071	1.699	29
21	0.071119	2.45174E-17	0.071119	1.699	29
22	0.049436	2.45174E-17	0.049436	1.699	29
23	0.053773	2.45174E-17	0.053773	1.699	29
24	0.066782	2.45174E-17	0.066782	1.699	29
25	0.058109	2.45174E-17	0.058109	1.699	29
26	0.071119	2.45174E-17	0.071119	1.699	29
27	0.066782	2.45174E-17	0.066782	1.699	29
28	0.066782	2.45174E-17	0.066782	1.699	29
29	0.023417	2.45174E-17	0.023417	1.699	29
30	0.023417	2.45174E-17	0.023417	1.699	29
	0.033654	MAR	0.033654		
		T-Test AR	0.989662		

Source: Research Findings