# EFFECT OF RIGHT ISSUES ON SHARE PRICES FOR COMPANIES LISTED AT THE NAIROBI SECURITIES EXCHANGE 

BY<br>ANTONY KIMANI KINYANJUI

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RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR AWARD OF THE DEGREE OF MASTER OF BUSINESS ADMINISTRATION, SCHOOL OF BUSINESS UNIVERSITY OF NAIROBI

## DECLARATION

This research project is my own work and has not been submitted for award of any degree in any university and where other people's research work has been used, they have been duly acknowledged.

Signed $\qquad$
Date $\qquad$

Antony Kimani Kinyanjui

D61/60880/2013

This management research Project has been submitted for examination with my approval as a university supervisor.

Signed $\qquad$
Date $\qquad$
Name: Dr. Josiah Aduda

Dean

School of Business,

University of Nairobi

## DEDICATION

This project is dedicated to my parents, family, friends and the lecturers of University of Nairobi without whom i would not have gone this far

A special dedication goes to my wife Hellen and my son Adrian Kinyanjui Kimani who supported me and encouraged me in all that i needed to make this research a success.

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May the almighty God bless you.


#### Abstract

The research examines the effect of right issues on share prices for companies listed at the Nairobi Securities Exchange. The study sampled ten companies in the NSE between years 2009 to 2014 which had announced and made rights issues. The research project examines whether there is any significant effect on the market price and whether the average abnormal returns surrounding the rights issue announcement was statistically different from zero. The study used the market model to determine the expected returns of the various securities and a t-test statistic was used to test the hypothesis.

The regression analysis on the research data analyzed for the ten companies reflected a negative price adjustment for companies which issued rights issue. The results show negative abnormal returns after the announcement date of the rights issue. The return analysis thus indicates that there is an impact on the share price return for firms which announced the rights issues for the period under the study. The share price returns showed a decline when compared to the market analysis as shown on the regression analysis. The slight decline in share price returns however has not hindered more companies in the Nairobi Securities Exchange from announcing and issuing rights issues as a source of raising funds.


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## LIST OF ABBREVIATIONS

| AR | Abnormal Returns |
| :--- | :--- |
| CAR | Cumulative Abnormal Returns |
| CDS | Central Depositing System |
| CMA | Capital Market Authority |
| MAR | Marginal Abnormal Returns |
| NSE | Nairobi Securities Exchange |

## CHAPTER ONE

## INTRODUCTION

### 1.1 Background Information

In Kenya, dealing in shares and stocks started in the 1920's when the country was still a British colony. However the market was not formal as there did not exist any rules and regulations to govern stock broking activities. Nairobi securities exchange was constituted in 1954 before Kenya gained independence as a voluntary association of stock brokers registered under the societies Act. The trading was done by professionals acting on behalf of their clients and traded under the gentleman agreement as there were no underlying regulations. After independence NSE in Kenya became more formal with the first issues of share through the NSE being in 1988 when the first privatization involving the sale of a $20 \%$ government stake in Kenya Commercial Bank was done. The newly established stock exchange was charged with the responsibility of developing the stock market and regulating trading activities. Despite its history, however, the stock market is yet to make significant contribution in the development process. The question of interest to research is what defines the development path of the stock market? Does it mimic development paths of other developed or emerging markets? The development path of stock markets in both the emerging and developed world indicates an evolutionary process where changes in institutional infrastructure and the policy environment are witnessed as efforts are made to facilitate the growth of the stock market. The evolutionary process indicates graduation from non-formal markets to formal organizations without a regulatory body and then establishment of a statutory body in the reform/restructuring process. The establishment of a statutory body is aimed at enhancing the confidence of investors. While statutory regulatory bodies in most developed markets are set up to resolve the conflict of interest in the selfregulation framework, most of the emerging markets are establishing such bodies as part of the revitalization reform process. It is argued that protection of investors encourages participation in share trading and enhances the development of financial markets (La Porta et al, 1998). It is
also indicated that countries that protect shareholders have more valuable stock markets, large number of listed securities per capita and a high rate of Initial Public Offers (IPOs). Further, it is observed that protection of investors and quality of law enforcement as proxy for governance have predictors power on the extent of market declines during crises and even better than macroeconomic variables (La Porta et al, 2000). Ensuring investors' confidence enhances investors' participation in the market activities and encourages saving and channeling of savings into productive real investment, therefore fostering capital accumulation and efficiency in investment and real sector development. It is however debatable whether protection of investors promotes market efficiency. In addition, it is argued that information disclosure enhances market efficiency by providing informed traders with costless information that ensures market efficiency (Georgakopoulos, 1996). For example, it is observed that securities may deviate from their fundamental values because of irrationalities in the market, including uninformed trading or noise trading. This type of trading interferes with the optimality of market allocation of capital among competing firms. Therefore, it is important that disclosure rules are tightened, especially for the benefit of transient institutional investors who require more accurate prices. The evolutionary process is also characterized by a shift in trading system from a periodic auction system to a continuous trading system. Trading system defines the price discovery process or the transformation of latent demand of investors into realized transactions (Madhavan, 1992). The evolutionary process of trading system also indicates a shift from manual to electronic and centralized settlement clearing.

In November 1991, share trading moved from coffee-house to floor based open outcry system. The open outcry system was opted for to enhance transparency by according all brokers an equal opportunity to bid for securities and also to enhance handling of the growing trading activity. This followed the recommendations made by the IFC/CBK (1984) study justifying that since
brokerage businesses were conducted behind closed doors, the stock exchange had not been able to generate adequate public awareness and confidence in the buying and selling of securities. The trading system, it was felt, did not guarantee that the prices obtained by buyers and sellers are best since all buying and selling interests did not get exposed to one another.With the new trading system, trading took place on Mondays to Fridays between 10.00 a.m. and 12.00 noon except for public holidays or any other closures approved by the Board of Directors of the NSE. Potential buyers and sellers contacted stockbrokers directly or through registered agents and gave their buying or selling orders. Foreign institutional investors were supposed to have a current custodian account with a Kenyan banking institution. Then, stockbrokers through their authorized representatives took the customers' orders to the trading floor where deals were transacted using open outcry auction. Trading board lot was in terms of one hundred shares or units while trading was effected to and from the trading board on the trading floor and no private negotiation was permitted. Only when bid price was equal to or up to two spreads away from the offer price is transaction effected. There were daily limits on movements of quotations whether bid or offer set at $15 \%$ of opening bid or offer prices. No bid or offer quotations were more than six spreads from the last quotation appearing on the trading board for that security (NSE, 1997b). The following were the bid spreads set for shares, stocks, rights, options and other securities: for less than Ksh 20 the spread was 5 cents; Ksh 20-Ksh 50 was 25 cents; Ksh 50 Ksh 100 was 50 cents; and over Ksh 100 was 100 cents. The manual system of clearing and settlement lengthens the financial transaction period. As noted in the NSE Annual Report (1998), excluding A proposal was made to install the Central Depositing System (CDS) in 1995 following a feasibility study which identified the urgent need for CDS as a critical factor among three critical issues. The other two issues included the need to establish an enabling legislation to ensure best practice and the need to acquire the best technology. A draft Bill was submitted to the Attorney General for finalization in March 1996. Installation of a CDS was aimed at
enhancing liquidity and efficiency in the trading system by reducing the period of delivery and settlement.

### 1.1.1. Right issues

Right issues are options where the existing shareholders can exercise preemption to their shareholdings as defined by Renneboog (2002). This gives the existing shareholders the "rights" price on a stated future market date. The right issues have developed as more companies listed in the Nairobi Securities Exchange approach the market for more capital through right issues, thus increasing the number of share which is being traded in the market which in return affects the market trading index.

The shareholders have the following options to act on the offered right issues, Subscribe to the rights in full by taking up all the shares offered to the investor in proportion to the current holdings in the company issuing the right issues. The investor in this cause will increase the number of shares in the company and retain the original shareholding ratio by purchasing the discounted right issue shares in full. The investor can ignore the right issue by allowing the right issue trading period in the market to expire. The investor in this option will not retain the original shareholding stake in the company. The investor can sell the right issue. This is for the cases whereby the right issue have the option of transferring the rights to others through the investor selling the rights and making a capital gain based on the ex rights price. The study will focus on the companies listed in the NSE which have exercised right issues.

Right Issues are new share issue offered to the existing shareholders in proportion to their current shareholding, for a specified period and at a specified usually discounted price. The objective of right issue is to afford the shareholders the opportunity to maintain their percentage of ownership of the company. This constitutes an option that gives existing shareholders the
right but not an obligation to invest in more shares of a company.
The shareholders have the following options to act on the offered right issue; Subscribe to the rights in full by taking up all the shares offered to the investor in proportion to the current holdings in the company issuing the right issues. The investor in this cause will increase the number of shares in the company and retain the original shareholding ratio by purchasing the discounted right issue shares in full. The investor can ignore the right issue by allowing the right issue trading period in the market to expire. The investor in this option will not retain the original shareholding stake in the company. The investor can sell the right issue. This is for the cases whereby the right issue have the option of transferring the rights to others through the investor selling the rights and making a capital gain based on the ex rights price.

Table 1.1: Historical Analysis of right issues announcement samples from NSE

| Company | Shares on <br> Issue | Date of <br> Issue | Offer <br> Price | Sum Raised | Subscription <br> level |
| :--- | ---: | ---: | ---: | ---: | ---: |
|  |  |  |  |  |  |
| KCB | $50,000,000$ | 2004 | 49 | $2,750,125,000$ | $112 \%$ |
| Uchumi | $120,000,000$ | 2005 | 10 | $1,269,600,000$ | $106 \%$ |
| CfC Bank | $12,000,000$ | 2005 | 62 | $744,000,000$ | $100 \%$ |
| DTB | $15,527,343$ | 2006 | 50 | $2,305,810,436$ | $297 \%$ |
| Olympia Capital | $30,000,000$ | 2007 | 14 | $428,400,000$ | $102 \%$ |
| DTB | $23,291,015$ | 2007 | 70 | $2,902,060,469$ | $178 \%$ |
| NIC Bank | $16,482,910$ | 2007 | 70 | $1,719,167,513$ | $149 \%$ |
| HFCK | $115,000,000$ | 2008 | 20 | $2,369,000,000$ | $103 \%$ |
| KCB | $221,777,777$ | 2008 | 25 | $8,122,024,075$ | $146 \%$ |
| KCB | $887,111,110$ | Jul-10 | 17 | $12,500,000,000$ | $82.50 \%$ |
| TPS East Africa | $24,701,774$ | Sep-10 | 48 | $1,185,685,152$ | $135 \%$ |
| Standard Chartered | $15,109,323$ | Oct-10 | 165.45 | $2,499,837,490$ | $161 \%$ |
| KPLC | $488,630,245$ | Nov-10 | 19.5 | $9,830,340,000$ | $103 \%$ |

Source: Author 2014
In Kenya, companies at the NSE that have issued rights have been on the increase in the recent past. As given in the above table 1.1, in 2004 and 2005, Uchumi and CFC stanbic holdings raised a combined sh. 2.01 billion and in 2004 KCB Group rights issue attracted sh. 2.75 billion. In 2006, DTB issued rights which attracted sh. 2.3 billion. In 2007, Olympia Capital, DTB and

NIC bank issued rights which attracted a combined sh. 5.04 billion and in 2008 KCB and DTB issued rights which attracted a combined sh. 11.02 billion. There was no single rights issue in 2009 but there was a shoot-out in 2010 where four companies;- KCB Group, TPS East Africa, Standard Chartered and Kenya power floated rights that attracted applications for sh. 26.01 billion, making it the highest rights issue year ever. In 2011, there were no rights issue done but this was overtaken by 2012 whereby five NSE Listed firms turned to their shareholders for cash. They include; - Kenya Airways, DTB, NIC Bank, CFC stanbic Holdings and Standard Chartered. This was the best rights issue year and the cash calls attracted applications for shares worth sh. 37.6 from the investors. This was $18.7 \%$ more than what the firms were looking for in the market.

### 1.1.2. Share prices in Nairobi Securities Exchange

A stock market is where shares or securities are issued and traded through exchanges or over-the-counter markets. It is also known as the equity market and is one of the important areas of a market economy as it provides access to capital to companies, ownership in the company for primary investors and the potential of gains based on the firm's future performance for secondary investors.

NSE is one of the most vibrant markets in Africa which has attracted investors from all over the world, has grown considerably and notably on February 18, 1994 NSE 20-share index recorded an all-record high of 5,030 points. In 1994 NSE was rated by the International Finance Corporation (IFC) as the best performing emerging market in the world with a return of 179 percent in dollar terms and they echoed this in 2007 when a record six Initial Public Offers (IPOs) and additional offers were conducted between 2006 and 2007 (NSE Website).

In the Nairobi Securities Exchange, share prices have been increasing steadily more so in the Main Investment Market segment where the prices of the shares has rapidly increased to be the highest in East Africa. Investors in this section have experienced increase in Share prices with
more companies offering rights issue which have experienced oversubscriptions with Diamond Trust Bank in 2014 experiencing the highest oversubscription by $340 \%$ in the history of rights issue and Kenya Airways with the lowest subscription of $70 \%$ which is the lowest subscription for rights issue in NSE. The share prices for the various companies issuing rights issue have risen with DTB in 2014 experiencing a share price rise of $60 \%$ after the right issue announcement.

### 1.1.3. Rights issues and share prices

In the security market right issues have been attributed to high prices during and after the announcement of a company's right issues. This is due to the factor that investors' views the company as having better projects and more profitable business ventures that they need to invest in thus the investors in the market tend to subscribe and purchase the shares with anticipation of gaining from the future profitability of the company. More companies have announced and issued right issues in the security market. Rights issues have opened another relay for companies to be obtaining cheaper source of financing thus many companies have announced and issued right issues to their existing shareholders giving the current shareholders chances to retain the same percentage of shareholding. This has been viewed as an easy way to obtain financing for extension and new project venture.

In the Nairobi Securities Exchange rights issues started with Kenya Commercial Bank in the year 2004 and since then the market have experienced nineteen right issues announcements and executions up to July 2014. The recent one being Diamond Trust Bank which realized an oversubscription of $340 \%$ with more than $50 \%$ increases in its share prices. Due to the experienced share price increase and better source of capital, some companies have offered right issues in the market for more than once with Diamond Trust Bank topping with four time, Kenya Commercial Bank with three times, CFC Stanbic bank with two times and Standard

Chartered Bank with two times. Right issues announcement should be observed critically to see if there is any direct relationship with share price fluctuation during and after the announcement.

### 1.2 Research Problem

Right issue's impact on the market variables have been widely researched in the various stock exchanges in the various countries by researchers who try to outline the impact of the right issues in the specific market of study. The researchers' findings on the changes of the market prices for the various shares after the announcement of right issue or after the issuing of such right issues vary widely for the various markets of study and period covered.

In comparison various studies give different findings from the research conducted on right issues impact on share prices, in Singapore, Dawson (1984) recorded a positive market price effect between 1975 and 1983. Where as in Switzerland, Loderer and Zimmerman (1988) recorded a positive market price effect after the announcement of the right issues; this is similar with Ball, Brown and Finn (1977) in Australia. Research from USA contradicts the various researches from other countries with Kim and Stulz (1996) recorded average decline in market prices for the various shares after the announcement of right issue. Also in UK, Levis (1995) recorded a significant market price decline for the various shares after the right issues are announced to the market.

In Kenya, Cheruiyot (2006) identified positive information content in the market but the market should a negative market price effect from the right issues. Njoroge (2003) also showed a negative price adjustment for companies which issued rights issues. Both research documented a negative abnormal return prior to the announcement day of the rights issue and a moderate setback after the right issue.

The variance and disparity in the research results on the impact of the right issues on the share prices in the market for the various countries and various markets gives the need for further research in the Nairobi Securities Exchange to establish whether there is a consistent trend of impact on the share prices as a result of right issues announcement. This will also show whether the market response to the right issue have changed as investors become more informed on the market behaviors from the past issuance.

In the Nairobi Stock Exchange, many companies have issued right issues but it has not been determined whether there is any effect on the share prices of the listed companies trading in the market. When a company declares a right issues, the share price change during the period of such an issue have not be well captured so as to determine whether there is any association of the share right issue and the share prices in the market for companies trading in the Nairobi Securities Exchange. The research compared the share performance of the companies before and after issuance of the announced right issues and established whether there is any relation between the rights issue and the share price in the market.

### 1.3 Objective of the study

### 1.3.1. Specific objectives

- To evaluate whether the announcement of the rights issue by firms listed in the Nairobi Securities Exchange has an effect on share prices.
- To evaluate the impact of right issue announcement on the shares price return.


### 1.4 Value of the study

In the current securities markets, there is an increase in the issuance of rights issue by companies which have big operation capacity but just a few studies have been conducted on the impact of the share price to back up on the responsive effect of the share prices in the market. More
companies are continuing to announce rights issue as a way of raising capital for expansion and or operational financing, thus there is need to conduct a research on the reaction of the market forces which will affect the share prices as investors respond to the rights issue. Currently only few researches have been conducted i.e Njoroge (2003), Ndua (2012), Cheruiyot (2006) and Mutua (2013) with some of the researchers discussing the effect on the company financial performance after obtaining the financing. Right issues in Kenya have grown tremendously with various listed companies opting to issue right issues to generate capital for investment. With this trend increasing in Nairobi Securities Exchange, there are increasing questions on the impact of the right issues to the company securities, valuation and the market in general.

The current investors are also raising questions on the market prices of the various listed companies and the information being relayed to the market which will in turn affect the investment decisions to be made. It was thus necessary to conduct a recent research which was to give guidance as to how the rights issue impacted the share prices of the company before, during and after the right issue. This research study is useful to the various interested parties which include but not restricted to; investors, corporate managers, stock exchange and regulators, fellow students and government.

## CHAPTER TWO <br> LITERATURE REVIEW

### 2.1 Introduction

This study was an investigation on the effects of right issue on the market share prices of companies. The chapter will analyze the various researches which have been conducted on this topic and the theories which form the basis for this price impact due to the various market forces.

### 2.2 Theoretical Literature Review

### 2.2.1 Information effect

In the model by Miller and Rock (1985), it is implied that the market reaction to external financing is more negative, the greater the size of the offer and any large-than -expected external financing by the firm reveals a small-than-expected current operating cash flow which constitutes negative news for the market about the company issuing right issue on its ability to have good cash flow on the current and future periods. The announcement of right issue relays information to the company about the company and its ability to manage finances, this information is taken into consideration by the investors and the exchange market which in turn affects the share prices of the securities listed in the stock exchange for that particular company announcing the right issue. As seen in the model the effect can either be negative where the investor value the company as one which cannot finance its operations and projects hence the right issues or in a positive view where the investor values the company as one which have viable projects which will be financed by the right issue and lead to profitability in the future thus the investor will make money on the dividends obtained in the long run or the capital gain obtained after the share price have increased for the company's stock.

The model by Myers and Majluf (1984) assumes securities are issued with proper knowledge and information asymmetry between the investors or public and the management of the company. If there is greater information asymmetry between the investors, market and the company management the share prices of the company will have a greater share price effect. Myers and Mjluf (1984) examined corporate financing and investment decisions under the assumption that management has better information about the value of the firm than do market participants. When company issues equity a proportion of the company asset is owned by the shareholders but the company can be able to take up projects which have positive NPV thus remaining profitable. If the company's assets are undervalued then the investor will suffer greater loss from the dilution than the gains received from undertaking the new project. According to Myers and Majluf (1984), right issues have adverse selection problem which arise from the imminent transfer of wealth from the current shareholders to the new shareholders. The adverse selection problem in rights issue is eliminated if the existing shareholders take up and hold all new shares in an issue for the announced right issues. The adverse selection problem shows that is the firm can be able to relay information to the market that the existing shareholders will be able to take up and hold the shares being issued then the negative impact on the share price of the security can be minimized and have a positive impact through the increase of market share prices.

### 2.2.2 Random Walk Hypothesis

Random walk hypothesis is a stock market theory that states that the past movement or direction of the price of a stock or overall market cannot be used to predict its future movement according to Professor Burton G. Malkiel (1973). Originally examined by Maurice Kendall (1953), the theory states that stock price fluctuations are independent of each other and have the same probability distribution, but that over a period of time, prices maintain an upward trend.

Random walk says that stocks take a random and unpredictable path. The chance of a stock's future price going up is the same as it going down. A follower of random walk believes it is impossible to outperform the market without assuming additional risk. Malkiel (1973) preaches that both technical analysis and fundamental analysis are largely a waste of time and are still unproven in outperforming the markets.

The theory of random walk hypothesis is based on the reaction experienced after the release of crucial information in the market and how that information will influence security prices in the market. The information released by a company is received at random intervals in the market by investors who access the information at random intervals. Therefore there is continuous trading of a security through buying and selling securities and the prices of such securities are determined by a stochastic market force of continuous change of prices due to new information. The random walk hypothesis therefore leads to Efficient Market Hypothesis (E.M.H) in the security exchange market.

### 2.2.3 Modern Portfolio Theory

Modern Portfolio Theory (MPT) or portfolio theory was discussed in the paper "Portfolio Selection," which appeared in the 1952 Journal of Finance. Thirty-eight years later, he shared a Nobel Prize with Merton Miller and William Sharpe for what has become a broad theory for portfolio selection. Prior to Markowitz's work, investors focused on assessing the risks and rewards of individual securities in constructing their portfolios as given by Harry Markowitz (1952). Standard investment advice was to identify those securities that offered the best opportunities for gain with the least risk and then constructs a portfolio from these. Following this advice, an investor might conclude that railroad stocks all offered good risk-reward characteristics and compile a portfolio entirely from these. Intuitively, this would be foolish. Markowitz formalized this intuition. Detailing mathematics of diversification, he proposed that investors focus on selecting portfolios based on their overall risk-reward characteristics instead
of merely compiling portfolios from securities that each individually have attractive risk-reward characteristics. In a nutshell, inventors should select portfolios not individual securities. If we treated single-period returns for various securities as random variables, we can assign them expected values, standard deviations and correlations. Based on these, we can calculate the expected return and volatility of any portfolio constructed with those securities. We may treat volatility and expected return as proxies for risk and reward. Out of the entire universe of possible portfolios, certain ones will optimally balance risk and reward. These comprise what Markowitz called an efficient frontier of portfolios. An investor should select a portfolio that lies on the efficient frontier.

The expansion on Markowitz's work by adding a risk-free asset to the analysis was done by James Tobin (1958). This made it possible to leverage or deleverage portfolios on the efficient frontier. This leads to the notions of a super-efficient portfolio and the capital market line. Through leverage, portfolios on the capital market line are able to outperform portfolio on the efficient frontier. This theory contribute to the field of finance by explaining how rational investors in perfect markets can minimize the risk associated with their investments without reducing their returns through diversification and by building up an efficient portfolio of investments. The study draws its roots from the portfolio theory. This theory advocates that the investors aim at reducing their risks while increasing their returns and thus they should diversify so as not to put all their eggs in one basket. Through undertaking rights issue, investors stand a chance of increasing their returns since they purchase the shares at a discount. The risk and return of any given stock can be duplicated in many ways through various combinations of other stocks.

### 2.3 Determinants of share prices

Share prices in the Nairobi Securities Exchange are affected by the various determinants which are prominent in the market.Share prices are mostly determined by the company factors, industry performance, investor sentiments and economic factors. The various company specific factors which affect the share prices are but not limited to; News releases on earnings and profits, and future estimated earnings. These announcements trigger positive information in the market thus increasing the share prices. The opposite of company registering losses triggers negative information thus reduction in share prices.

Company dividends rewarded to be given for a particular year. If the company rewards high dividends the company will experience high share prices and the opposite happens when they issue low dividends. Introduction of a new product or a product recall, this affects the company share prices as the investors anticipate company's future performance in terms of product line and profitability. Securing a new large contract, when a company secures a large contract or losses a large contract the information about it will lead to increase or decrease in share prices as the performance of the company is weighed. Anticipated takeover or merger also affects the company shares greatly as the existing share holder either feels threatened or raises prices to make it hard for takeover.

In industry performance, it is the stock price of the companies in the same industry which will move in tandem with each other. This is because market conditions generally affect the companies in the same industry the same way. But sometimes, the stock price of a company will benefit from a piece of bad news for its competitor if the companies are competing for the same market. Investor sentiment or confidence can cause the market to go up or down, which can cause stock prices to rise or fall. The general direction that the stock market takes can affect the value of a stock: In a bull market, we experience a strong securities market where security prices
are rising and investors' confidence is growing. It's often tied to economic recovery or an economic boom, as well as investor optimism. Where as in bear market the market is weak and the security prices are falling and the investors' confidence is fading. It often happens when an economy is in recession and unemployment is high, with rising prices.

In economic factors the share prices are affected by either; interest rate, economic outlook, inflation, deflation, economic and political shocks, changes in the economic policy and the exchange rate. The banks can raise or lower interest rates to stabilize or stimulate the economy. This is known as monetary policy. If a company borrows money to expand and improve its business, higher interest rates will affect the cost of its debt. This can reduce company profits and the dividends it pays shareholders. As a result, its share price may drop. And, in times of higher interest rates, investments that pay interest tend to be more attractive to investors than shares.

In economic outlook, if it looks like the economy is going to expand, stock prices may rise. Investors may buy more stocks thinking they will see future profits and higher share prices. If the economic outlook is uncertain, investors may reduce their buying or start selling. Inflation means higher consumer prices. This often slows sales and reduces profits. Higher prices will also often lead to higher interest rates. These changes will tend to bring down share prices. Commodities however, may do better with inflation, so their prices may rise. Falling prices tend to mean lower profits for companies and decreased economic activity. Share prices may go down, and investors may start selling their shares and move to fixed-income investments like bonds. Economic and political shocks also affect the share prices. Changes around the world can affect both the economy and security prices. An act of terrorism can also lead to a downturn in economic activity and a fall in share prices.

Changes in the economic policy also affect the security prices. If a new government comes into power, it may decide to make new policies. Sometimes these changes can be seen as good for business, and sometimes not. They may lead to changes in inflation and interest rates, which in turn may affect share prices. Exchange rate fluctuations affect the share prices in the market. If the exchange rate rises, customers will have to spend more to buy goods. This can drive down sales, which in turn can lead to lower share prices. When the price of the exchange rate falls, it makes it cheaper for others to buy our products. This can make share prices increase.

### 2.4 Review of empirical studies

The research by Cheruiyot (2006) examined the impact of rights issue for companies listed in the Nairobi stock Exchange (NSE). As per the study, the exact impact for the companies listed in the NSE was however unclear. The research was intended to be useful mainly to potential investors and corporate managers who may be faced with a rights issue paradox and rights issue financing option respectively. The study considered a sample of six companies from the Nairobi Stock exchange (NSE) selected from the period of 1st April 1996 to 31st December 2002. The research used the market model to generate the excess returns. The constant parameters of the market model were computed from pre event data using the GARCH (Generalized Autoregressive Conditional Heteroscedasticity) model, a superior analytical technique that incorporates data breaks. A competing method of Least Squares was also used to compare findings. The significance of the findings was tested using the two tailed $t$ - statistic. The overall findings from the research strongly confirmed that rights issues in the NSE have information content. The nature of the information was negative but the extent varied across the sample like other findings across the world. The implication of these findings was that companies issuing rights must release sufficient and relevant information to the market for proper interpretation of the issue.

A study which examined the impact of right issue announcements on share prices of companies listed at the Nairobi Stock Exchange. The Study was based on a sample of six rights issues between 1996 and 2002 was conducted by Njoroge Cecilia (2003). The study examined whether the average abnormal returns surrounding the rights issue announcement was statistically different from zero. The market model was used to derive the expected returns and a t -test statistic was used to test the hypothesis. The study analyzed data for six companies which showed negative price adjustment for companies which had issued rights issue. The results of the study documented a negative abnormal return prior to the announcement day of the rights issue and a moderate setback thereafter. The study left questions on the impact of the rights issues announcement on the impact of share prices which resulted from the various decisions which were made by investors on basis of the information communicated to the market through the company announcing the rights issues on their trading shares.

A study on the effects of Announcements on stock returns. The researcher computed a 5 day moving average to observe the trend of stock returns following earnings announcement. Daily market adjusted abnormal and cumulative abnormal returns were computed and a further t -test done to determine the effect of earnings announcement on stock returns and results interpreted was conducted by Kakiya (2007). The findings from the study were that trends in stock returns are dependent on event announcement. Traded volumes are not significantly affected by announcement. Earnings announcement had a significant effect on stock returns when CAR was evaluated indicating market inefficiency but AR was not significant for individual companies. From the findings of the study, it was concluded that the Nairobi Stock exchange is not semistrong form efficient. The researcher analyzed all companies and was testing the efficiency but this research has narrowed down on effect of rights issue on company's share performance and
only companies that have done rights and those that form part of the NSE 20 share index formed the target population.

Another study on an evaluation of post rights issue Effect on firms' share price and traded volumes. The objective of the research was to evaluate the effects of post rights issue on the firms share price and traded volumes were conducted by Karanja (2006). On the population, Karanja evaluated 9 firms out of the 14 firms that had announced rights issue. He did an analysis 90 days after the rights issue and noted that most firms that announce rights issue usually experience a decrease in the share price after the issue at least in the very short run. Karanja recommended that firms that announce rights issue must consider information asymmetry as this highly determines the firms share prices after successful rights issue. Karanja (2006) further uses the work of Christie William et al who also examined whether post offer price share performance is related to the decision to issue rights instead of a firm commitment offering if market offering is important factor affecting post issue stock returns. Christie William et al wanted to find significant difference in stock performance after a firm commitment offering would be consistent with the notion that firm's commitments are timed. They found out that significantly more negative abnormal return during the year following the offer for the firm's commitment than for rights offer firms. They show that differences in these abnormal returns are robust to controlling for the offer size, the firm's leverage, and the market to book ratio and other firm's attributes. Hence the evidence suggests that firms selling shares to current owners via rights offer did not appear to be timing their issue to exploit over-valued equity while firms selling to new owners were. These findings support the notion that the pattern of underperformance is tied to market timing.

A research on the effects of rights issue on stock returns and he investigated companies listed at the NSE. Oleesaya used event study methodology in his study. He used market model which is a statistical model that relates the returns of any given security to the return of the market portfolio to measure and analyse the abnormal returns which was conducted by Olesaaya E.(2010). In this study, Olesaaya assumed that the abnormal returns reflect the stock markets reaction to the announcement of rights issue. The findings of this study by Olesaaya shows negative abnormal returns prior to announcement of rights issue, positive abnormal returns during the announcement and negative results thereafter. Munene K. (2006) studied the relationship between profitability and sources of financing of quoted companies at the NSE. The study population of the 48 companies quoted at the NSE between 1999 and 2004 and they concluded that there is a week positive relationship between capital structure and profitability of firms quoted at the NSE between 1999 and 2004 and therefore other factor contribute to firm capital structure.

Examination on the empirical relationship between equity share prices and the explanatory variables; Book Value Per (BVP) share, Dividend Per Share (DPS), Earnings Per Share (EPS), price earnings ratio, dividend yield, dividend payout, size in terms of sale and net worth for the period 1993 to 1994 and 2008 to 2009 in India conducted by Sharma (2011). Using correlation and a linear multiple regression model the results revealed that EPS, DPS and BVP had significant impact on the market price of shares with the former two being the strongest determinants. This was echoed by Nirmala et al (2011) when they conducted a study on the determinants of share prices in India wherein share price was modeled as a function of firm specific variables; dividend, profitability, price-earnings ratio and leverage for the period 2000 to 2009. Following the panel unit root, panel co integration, correlation and OLS tests the results revealed that dividend, price-earnings ratio and leverage are significant determinants of share
prices for all sectors under consideration where dividend and price-earnings ratio bear a positive relation to share price while leverage bears a negative relation. Profitability was found to be positively related to share prices in the auto sector alone.

### 2.5 Summary of Literature Review

Different theories have been extensively discussed and tested to date but there is no consensus from both the theoretical and empirical literature on the impact of right issues on the securities market prices and different markets behave differently depending on the variables tested.

In Miller and Rock (1985), it is implied that the market reaction to external financing is more negative, the greater the size of the offer and any large-than -expected external financing by the firm reveals a small-than-expected current operating cash flow which constitutes negative news for the market about the company issuing right issue on its ability to have good cash flow on the current and future periods. Where as in Myers and Majluf (1984) they assumed securities are issued with proper knowledge and information asymmetry between the investors or public and the management of the company. The investors in order to take up the right issues there should be information asymmetry which puts all the investors in the same level. Prior to Markowitz's work, investors focused on assessing the risks and rewards of individual securities in constructing their portfolios. Standard investment advice was to identify those securities that offered the best opportunities for gain with the least risk and then constructs a portfolio from these investments.

In the local researches conducted on the Nairobi Securities Exchange, it was clear that the researchers did not find a clear significant effect of the right issues on the share prices. With various researchers i.e. Cheruiyot (2006), Njoroge Cecilia (2003) and Karanja (2006) all found an unclear relationship between the right issues and the share prices. Despite this, the
researchers concluded that the investors use the information in the market in making their decision on whether to invest or not to invest. Also the study by Olesaaya E. (2010) showed negative abnormal returns prior to announcement of rights issue, positive abnormal returns during the announcement and negative results thereafter. From all the researchers analyzed the result doesn't align with the market behavior in the recent years, the announcements of the various rights issues have resulted in investors oversubscribing to the issue while experiencing an increase in the security prices in the market before and after the announcement of the right issue, thus it was important to conduct a recent research to establish whether there is any significant impact of right issues on the market prices of the various securities listed in the Nairobi Security Exchange.

## CHAPTER THREE RESEARCH METHODOLOGY

### 3.1 Introduction

This chapter introduces the logical framework to be followed in the process of conducting the study. It is divided into: research design, population and sample, data collection and data analysis.

### 3.2 Research Design

The research adopted a descriptive study to evaluate the effect of rights issue on firms subsequent trading prior to and after the issue. The study was based on a knowledgeable aspect of the market phenomenon and normal operations. Descriptive research was aimed at generating knowledge that was useful in developing a profile of the study

### 3.3 Population and Sample Size

The target population included all the companies listed at the NSE as at $30^{\text {th }}$ June 2014. The NSE has classified the listed companies into five categories known as sectors. These sectors are; Agriculture sector, Finance and Investment sector, Industrial and Allied sector and Alternative Investment Market segment. The study will target all the Kenyan based companies which are in the NSE 20 share index and all other listed companies which have announced and issued rights issue in the period within $1^{\text {st }}$ January 2009 to $31^{\text {st }}$ July 2014, a five and a half years period of trading. The study used purposive sampling method in get the targeted companies from the NSE trading market. Population was selected from the listed companies in the NSE 20 share index for companies which had issued rights issue within the sampling period. This yielded ten (10) companies which were analysed in this study. See Appendix I for the sampled companies
listed in the Nairobi Securities Exchange which have announced and issued rights issues.

### 3.4 Data Collection

The study used secondary data in analysing the outcome. Data was collected from the Nairobi Securities Exchange and the Capital Market Authority. The secondary data obtained included securities prices, market index and the rights issue announcement dates for the sampled population. The data was collected and captured in data analysis sheet for the sample population of companies listed in NSE and have announced rights issue, daily closing share date of rights issue announcement, market index and the traded volumes over an event period of 15 days before and 15 days after the rights issue announcement with the day of the announcement being the central day for data collection bases. The fifteen (15) days period was picked because the intent of this research was to show the effect of rights issue on the securities prices and hence extending the period of coverage on the data collected can lead to securities price changes due to other market factors which affect the security prices.

### 3.5 Data Analysis

In the research, descriptive study was used with data analysis tool from the computerised spreadsheet program and use t-test to conduct analysis on the daily share prices and trading volumes over the sample periods of securities trading in order to determine whether there is a significant effect of the share prices and trading volumes with the announcement of the rights issue. On the performance of companies which have performed rights issue to those which have not performed rights issue, daily market abnormal return (AR) and daily cumulative abnormal return (CAR) was computed.

AR was also computed.
$\mathbf{A R}_{\text {it }}=\mathbf{R}_{\text {it }}-\mathbf{E}(\mathbf{R})$

Where;
$\mathbf{A R}_{\mathbf{i t}}$ is the abnormal return for security $\boldsymbol{i}$ over time $\boldsymbol{t}$
$\mathbf{R}_{\mathrm{it}}$ is the return at time $\boldsymbol{t}$ on security $\boldsymbol{i}$
$\mathbf{R}_{\mathrm{mt}}$ is the time $\boldsymbol{t}$ return on NSE 20 Share Index
$\mathbf{E}(\mathbf{R})$ is the expected return for security $\boldsymbol{i}$ at time $\boldsymbol{t}$

The study used market model to provide a linear specification of the securities return for the sampled securities to the return of the market portfolio. The market model was useful as it reduced variances in the calculation of abnormal returns by removing the portion of securities return generated from the variation in the market return, Adelegan, (2009). Market model has the following specifications:
$\mathbf{R}_{\mathrm{it}}=\mathrm{a}_{\mathrm{i}}+\mathrm{b}_{\mathrm{i}} \mathbf{R}_{\mathrm{mt}}+\mathbf{e}_{\mathrm{it}}(\mathbf{1})$

Where: $\mathbf{R}_{\mathbf{i t}}$ and $\mathbf{R}_{\mathrm{mt}}$ are the returns on stock $\mathbf{i}$ and the market respectively at time period $\boldsymbol{t}$.
$\mathbf{e}_{\mathbf{i t}}$ is the error term.
$\mathbf{E}(\mathbf{R})=\alpha+\beta^{*} \mathbf{R}_{\mathrm{mrt}}$ Where;
$\boldsymbol{\alpha}$ and $\boldsymbol{\beta}$ are the parameters estimated with the market model. $\mathbf{R}_{\mathbf{i t}}$ and $\mathbf{R}_{\mathrm{mrt}}$ were calculated as follows; - $\mathbf{R}=\mathbf{L n}\left(\mathbf{P}_{\mathbf{1}} / \mathbf{P}_{\mathbf{0}}\right)$ which is the same as $\left(\mathbf{P}_{\mathbf{0}}-\mathbf{P}_{\mathbf{1}}\right) / \mathbf{P}_{\mathbf{0}}$

The market model states that the return on a security depends on the return on the market portfolio and the extent of the security's responsiveness as measured by beta. The return also depends on conditions that are unique to the firm. The market model apply in Nairobi Securities Exchange in that the unique state of the companies announcing rights issues can be assessed to identify any impact of such announcement and exercise on the individual firm share prices when compared to the market portfolios.

An average market abnormal return was estimated as follows:-

## ${ }^{n} \boldsymbol{A R}_{i t}$ <br> $\left(\right.$ MAR $\left._{t}\right)=\sum_{N}$

Where, N is the number of companies being examined, where each company was analyzed separately. Market abnormal return was estimated to determine whether on the average, the rights issue announcement was associated with change in security prices. Cumulative abnormal returns (CAR), which measures investors' total return over a period starting from 15 days prior to and 15 days after rights issue announcement, was measured as below:-

$$
\begin{gathered}
t=j \\
\operatorname{CAR}_{\mathbf{t}}=\sum A R_{t} \\
t=1
\end{gathered}
$$

Where $\boldsymbol{j}$ denotes day -15 through to a day +15
$\mathbf{A R} \boldsymbol{t}$ Is the abnormal return for each security over time $\boldsymbol{t}$.

T-test was conducted at $95 \%$ confidence level to find if there was any significant Abnormal Return, Cumulative Abnormal Return and Market Abnormal Return after rights issue announcement. The event date was defined as $t=0$, while the estimation period will be 30
days starting from 15 days before rights issue announcement to 15 days after rights issue announcement. The use of t-test is due to the fact that the sampled population was less than thirty (30) thus it was suitable for this study.

## CHAPTER FOUR

## RESEARCH FINDINGS

### 4.1 Introduction

In meeting the project objective of examining the effects of rights issues on share prices of companies listed in the Nairobi Securities Exchange, a sample of ten companies that issued rights issues over the period between year 2009 and 2014 were picked from the population of all the listed companies in the NSE by 31st July 2014. The companies which were selected and their announcement details are shown in table 1 in appendix 1 .

### 4.2 The regression analysis

The study null hypothesis stated that there is significant effect of rights issue announcement on share price performance of companies doing rights issue; indicating that the population mean before and after rights issue announcement should be equal; i.e. Ho: $\mathrm{U}_{1}=\mathrm{U}_{2}$. The hypothesized mean difference is equal to zero and the alternative hypothesis is $\mathrm{H}_{1}: \mathrm{U}_{1} \neq \mathrm{U}_{2}$.

Table 4.1 Regression analysis result

|  | Company | Calculated t | Critical t | Region - 95\% cofidence level distribution | Price before | Price <br> on | Price after |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  | Rights Issue Announcement date |  |  |
| 1 | KCB | -6.46693E-16 | 2.001717468 | Reject | 20.75 | 18.60 | 17.75 |
| 2 | TPS East Africa | $1.17949971 \mathrm{E}-17$ | 2.001717468 | Accept | 59.00 | 54.50 | 59.00 |
| 3 | $\begin{aligned} & \text { Standard Chartered } \\ & 2010 \\ & \hline \end{aligned}$ | 0 | 2.001717468 | Accept | 42.75 | 43.50 | 47.75 |
| 4 | KPLC | 0 | 2.001717468 | Accept | 218.00 | 23.25 | 22.00 |
| 5 | KQ | $1.59518 \mathrm{E}-16$ | 2.001717468 | Accept | 18.05 | 14.00 | 14.90 |
| 6 | DTB 2012 | 0 | 2.001717468 | Accept | 104.00 | 89.00 | 95.50 |
| 7 | NIC | 0.223472496 | 2.001717468 | Accept | 34.75 | 32.00 | 33.50 |
| 8 | CFC Stanbic Holdings | -1.12248E-16 | 2.001717468 | Accept | 42.75 | 38.50 | 39.00 |
| 9 | Standard Chartered 2012 | 0 | 2.001717468 | Accept | 220.00 | 214.00 | 229.00 |
| 10 | DTB 2014 | 0 | 2.001717468 | Accept | 239.00 | 240.00 | 232.00 |

[^0]Table 4.2 Abnormal returns analysis

|  | Company | Rights Issue start date | Rights Issue close date | Mean before start date | Mean after start date | Mean difference |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  | Abnormal Returns |  |  |
| 1 | KCB | 1st July 2010 | 23rd July 2010 | 0.0071 | 0.0031 | -0.0040 |
| 2 | TPS East Africa | 12nd August 2010 | 23rd August 2010 | 0.0048 | -0.0054 | -0.0102 |
| 3 | Standard Chartered | 7th September 2010 | 28th September 2010 | -0.0017 | -0.0070 | -0.0053 |
| 4 | KPLC | 1st December 2010 | 22nd December 2010 | 0.0675 | 0.0035 | -0.0640 |
| 5 | KQ | 2nd April 2012 | 27th April 2012 | 0.0162 | -0.0043 | -0.0205 |
| 6 | DTB | 17th July 2012 | 10th August 2012 | 0.0098 | -0.0048 | -0.0146 |
| 7 | NIC | 27th August 2012 | 15th September 2012 | 0.0053 | -0.0032 | -0.0085 |
| 8 | CFC Stanbic Holdings | 12th September 2012 | 16th October 2012 | 0.0067 | -0.0010 | -0.0077 |
| 9 | Standard Chartered | 9th October 2012 | 26th October 2012 | 0.0015 | -0.0046 | -0.0061 |
| 10 | DTB | 30th June 2014 | 25th July 2014 | -0.0009 | 0.0018 | 0.0027 |

Sources: Researcher work (2014)

### 4.3 Summary and interpretations of the findings

In the case of TPS Serena, the trend of share prices drops from 59.00 to 54.50 on announcement as seen in table 4. The share prices of TPS Serena shares were collected and $t$-test conducted. It was found that the computed $t$-value was 1.1794 which was within the $t$-critical value of 2.0017 , thus it falls within the acceptance region. Hence we fail to reject the null hypothesis, Ho: $\mathrm{U} 1=\mathrm{U} 2$. The computed mean abnormal return of 0.0048 before the rights issue open date, the mean dropped to a negative value of -0.0054 resulting in mean abnormal return movement of 0.0102 as shown in graph 1 . Thus, there was a significant mean difference in the hypothesized population mean of zero. Therefore, rights issue announcement has a significant effect on the share price performance of companies doing rights.

In the case of Standard Chartered Bank, the trend of share prices increased from 42.75 to 47.75 , but dropped from 47.50 kshs to 43.50 kshs on announcement as seen in table 5 . The share prices of Standard Chartered Bank shares were collected and $t$-test conducted. It was found that the
computed t -value was 0 which was within the t -critical value of 2.0017 , thus it falls within the acceptance region. Hence we fail to reject the null hypothesis, Ho: U1=U2. The computed mean abnormal return of 0.0017 before the rights issue open date, the mean dropped to a negative value of -0.0070 resulting in mean abnormal return movement of -0.0053 as shown in graph 2 . Thus, there was a significant mean difference in the hypothesized population mean of zero. Therefore, rights issue announcement has a significant effect on the share price performance of companies doing rights.

In the case of Kenya Power and Lighting co., the trend of share prices drops from 218.00 to 23.50 due to share split of ratio $8: 1$ but the shares dropped further to 22.00 kshs on announcement as seen in table 6. The share prices of Kenya Power and Lighting company shares were collected and $t$-test conducted. It was found that the computed $t$-value was 0 which was within the $t$-critical value of 2.0017 , thus it falls within the rejection region. Hence we fail to reject the null hypothesis, Ho: $\mathrm{U} 1=\mathrm{U} 2$. The computed mean abnormal return of 0.0675 before the rights issue open date, the mean dropped further to value of 0.0035 resulting in mean abnormal return movement of -0.0640 as shown in graph 3 . Thus, there was a significant mean difference in the hypothesized population mean of zero. Therefore, rights issue announcement has a significant effect on the share price performance of companies doing rights.

In the case of Kenya Airways, the trend of share prices drops from 18.05 to 14.00 on announcement as seen in table 7. The share prices of Kenya Airways shares were collected and t -test conducted. It was found that the computed t -value was 1.5952 which was within the t critical value of 2.0017, thus it falls within the rejection region. Hence we fail to reject the null hypothesis, Ho: U1=U2. The computed mean abnormal return of 0.0162 before the rights issue open date, the mean dropped to a negative value of -0.0043 resulting in mean abnormal return movement of -0.0205 as shown in graph 4 . Thus, there was a significant mean difference in the
hypothesized population mean of zero. Therefore, rights issue announcement has a significant effect on the share price performance of companies doing rights.

In the case of Diamond Trust Bank, the trend of share prices dropped from 104.00 to 89.00 on announcement as seen in table 8. The share prices of Diamond Trust Bank shares were collected and $t$-test conducted. It was found that the computed $t$-value of 0 was within the $t$-critical value of 2.0017 , thus it falls within the acceptance region. Hence we fail to reject the null hypothesis, Ho: $\mathrm{U} 1=\mathrm{U} 2$. The computed mean abnormal return of 0.0098 before the rights issue open date, the mean dropped to a value of 0.0048 resulting in mean abnormal return movement of -0.0146 as shown in graph 5. Thus, there was a significant mean difference in the hypothesized population mean of zero. Therefore, rights issue announcement has a significant effect on the share price performance of companies doing rights.

In the case of NIC Bank, the trend of share prices drops from 34.75 to 32.00 on announcement as seen in table 9. The share prices of NIC Bank shares were collected and t-test conducted. It was found that the computed $t$-value was 0.223472 which was within the $t$-critical value of 2.0017, thus it falls within the acceptance region. Hence we fail to reject the null hypothesis, Ho: U1=U2. The computed mean abnormal return of 0.0053 before the rights issue open date, the mean dropped to a negative value of -0.0032 resulting in mean abnormal return movement of -0.0085 as shown in graph 6. Thus, there was a significant mean difference in the hypothesized population mean of zero. Therefore, rights issue announcement has a significant effect on the share price performance of companies doing rights.

In the case of Kenya Commercial Bank Ltd, the trend of share prices drops from 20.75 to 18.60 on announcement as seen in table 10. The share prices of Kenya Commercial Bank Ltd shares were collected and $t$-test conducted. It was found that the computed $t$-value was -6.46693 which was greater than the t-critical value of 2.0017 , thus it falls within the rejection region. Hence
we reject the null hypothesis, Ho: $\mathrm{U} 1=\mathrm{U} 2$. The computed mean abnormal return of 0.0071 before the rights issue open date, the mean dropped to a value of 0.0031 resulting in mean abnormal return movement of -0.0040 as shown in graph 7 . Thus, there was a significant mean difference in the hypothesized population mean of zero. Therefore, rights issue announcement has a significant effect on the share price performance of companies doing rights.

In the case of CFC Stanbic Holdings, the trend of share prices drops from 42.75 to 38.50 on announcement as seen in table 11. The share prices of CFC Stanbic Holdings shares were collected and t-test conducted. It was found that the computed $t$-value was -1.1224 which was within the $t$-critical value of 2.0017 , thus it falls within the acceptance region. Hence we fail to reject the null hypothesis, Ho: U1=U2. The computed mean abnormal return of 0.0067 before the rights issue open date, the mean dropped to a negative value of -0.0077 resulting in mean abnormal return movement of -0.0144 as shown in graph 8 . Thus, there was a significant mean difference in the hypothesized population mean of zero. Therefore, rights issue announcement has a significant effect on the share price performance of companies doing rights.

In the case of Standard Chartered Bank 2012, the trend of share prices drops from 220.00 to 214.00 on announcement as seen in table 12. The share prices of Standard Chartered Bank 2012 shares were collected and t -test conducted. It was found that the computed t -value was 0 was within the $t$-critical value of 2.0017 , thus it falls within the acceptance region. Hence we fail to reject the null hypothesis, Ho: U1=U2. The computed mean abnormal return of 0.0015 before the rights issue open date, the mean dropped to a negative value of -0.0046 resulting in mean abnormal return movement of -0.0061 as shown in graph 9 . Thus, there was a significant mean difference in the hypothesized population mean of zero. Therefore, rights issue announcement has a significant effect on the share price performance of companies doing rights.

In the case of Diamond Trust Bank 2014, the trend of share prices drops from 244.00 to
240.00 on announcement as seen in table 13. The share prices of Diamond Trust Bank 2014 shares were collected and $t$-test conducted. It was found that the computed $t$-value was 0 which was within the $t$-critical value of 2.0017 , thus it falls within the acceptance region. Hence we fail to reject the null hypothesis, Ho: $\mathrm{U} 1=\mathrm{U} 2$. The computed mean abnormal return of -0.0009 before announcement date which rose to a value of 0.0018 resulting in mean abnormal return movement of 0.0027 as shown in graph 10 . Thus, there was a significant mean difference in the hypothesized population mean of zero. Therefore, rights issue announcement has a significant effect on the share price performance of companies doing rights.

This study is consistent with other Studies done in this area. Studies by Ball, Brown and Finn (1977) for Australia, Kang (1990) for Korea, Tsangarakis (1996), for Greece and Tong (2002) for Singapore found significantly positive stock price increase during the period surrounding the announcement of a rights issue and thus consistent with this study.

## CHAPTER FIVE SUMMARY, CONCLUSIONS AND RECOMMENDATION

### 5.1 Summary

In the results obtained from this study on effect of rights issues on share prices for companies listed at the Nairobi Securities Exchange, the abnormal returns from the share prices was computed and t-statistics done to obtain the calculated t-value. From the analyzed the null hypothesis was accepted for nine companies out of the sample of ten companies. This had a clear result that the rights issues announcements have effect on the securities prices for the various companies announcing the rights issue. The unique case of Kenya Commercial Bank Ltd which resulted in a calculated t -value of -6.46693 which was bigger than the statistical critical $t$ value of 2.0017 thus the null hypothesis in this case was rejected. This can be attributed to other market factor underlining during and around the rights issue announcement.

On the other hand the share prices returns were analyzed whereby only one company from the ten sampled resulted in a positive mean abnormal returns growth (Diamond Trust Bank 2014) which indicated that for the majority of the companies announcing the rights issue, the share prices and the security aggregate return decreases when such a rights issue is announced to the market. The unique case of Diamond Trust Bank 2014 which has abnormal returns movement from -0.0009 before the rights issue and rose to 0.0018 after the rights issue announcement just shows a positive effect of the rights issue on the share returns.

### 5.2 Conclusion

The study objective was to evaluate the effect of rights issue on share prices for companies listed at the Nairobi Security Exchange. It can be concluded that rights issues have a significant effect on the market share prices of the securities issuing the rights issue. Nine securities out of
the ten sampled showed a negative abnormal return movement with one security showing a positive abnormal return movement, this gives a clear indication that most of the securities share prices will experience a negative abnormal return after and surrounding the rights issue period for any security issuing the rights issue.

An evaluation of the rights issue period done indicates that with the negative abnormal returns of the securities sampled most company shares prices reduced slightly in the market as investors oversubscribe the rights issue announce with exception of two securities, KCB 2010 and Kenya Airways in 2012 falling slightly short of $100 \%$ rights issue subscription levels. The securities prices gradually rose as the rights issue closed.

In this study it is clear that most for the companies announcing rights issues were banks with seven banks out of the ten sampled companies which indicated that banks have embraced rights issues as a new source of funding for the various projects and operation. Companies have actually found it necessary to raise funds through rights issue. This study is consistent with other Studies done in this area. Studies by Ball, Brown and Finn (1977) for Australia, Kang (1990) for Korea, Tsangarakis (1996), for Greece and Tong (2002) for Singapore found significantly positive stock price increase during the period surrounding the announcement of a rights issue and thus consistent with this study.

### 5.3 Limitations of the study

The study like any other study has various limitations which should be put into considerations. First the study considered a 31 trading days for any sampled security while conducting the analysis. The number of days can be extended to include forty or sixty trading days around the right issues start date and be able to ascertain if there is any significant impact on the security market prices.

The Nairobi Security Exchange has a very sample size for companies which have announced rights issues hence subjecting the study to a systematic basis that can distort the analysis. In cases where the sample size is big there will be insignificant influence of other market factors or industry specific events may not play a role and negatively affect the findings.

Trading in the NSE is usually through single orders and hence some of the trading companies may experience low trading volumes or even not trade at all for a period of time. This will impact the outcome of the market price analysis.

### 5.4 Recommendations to policy and procedure

The outcome of the study is clear that there are issues which the market needs to consider or regulate. Firstly the study shows that there is price variations during the rights issue hence the abnormal returns variations thus the companies announcing right issues should give all the necessary information to the investors for them to make sound decisions on the right issues.

Secondly the market should derive a way of handling any insider dealing and leakage of unfair information which will enable few market players to beat the market during the rights issue announcement.

The regulator should standardize the number of days which rights issues will be exercised so as to give a standard outcome and market exposure for the various companies which want to announce and issue their rights issue in the market, the international standard days is 30 trading days (Artuto 1996) therefore need to have a market standard days.

### 5.5 Suggestions for further research

The study considered a sample of ten companies in the NSE and 31 trading days for each sampled security, the study does not put into consideration all the rights issue key events date
like general meeting on rights issue decision, the first rights issue trading days and the rights issue performance announcement date. The considerations of all these key event dates in rights issue process can form the basis of further study.

The study only considered securities traded in the NSE; the study did not compare or sample securities from other trading markets like Johannesburg Security Exchange and analysis if there is a similar effect in other markets. This could form basis of further research in the area of rights issue. This research project examines the effect of right issues on share prices for companies listed at the Nairobi Securities Exchange. The study sampled ten companies in the NSE between years 2009 to 2014 which had announced and issued rights issues.

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## APPENDIX I

Table 3.1: Analysis of right issues announcement samples from NSE

|  | Company | Shares on Issue | Date of Issue | Offer <br> Price- <br> Kshs | Sum Raised | Subscription level |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 1 | KCB | 887,111,110 | Jul-10 | 17 | 12,500,000,000 | 82.50\% |
| 2 | TPS East Africa | 24,701,774 | Sep-10 | 48 | 1,185,685,152 | 135\% |
| 3 | Standard Chartered 2010 | 15,109,323 | Oct-10 | 165.5 | 2,499,837,490 | 161\% |
| 4 | KPLC | 488,630,245 | Nov-10 | 19.5 | 9,830,340,000 | 103\% |
| 5 | KQ | 1,477,169,549 | Mar-12 | 14 | 14,487,949,714 | 70.06\% |
| 6 | DTB | 24,455,566 | Jun-12 | 74 | 3,369,522,734 | 186.20\% |
| 7 | NIC | 98,724,391 | Sep-12 | 21 | 7,007,457,273 | $338 \%$ |
| 8 | CFC Stanbic Holdings | 121,637,427 | Oct-12 | 33 | 4,495,719,302 | 112\% |
| 9 | Standard Chartered $2012$ | 22,080,000 | Oct-12 | 145 | 8,272,934,400 | 258\% |
| 10 | DTB 2014 | 22,010,009 | Jun-14 | 165 | 3,631,651,485 | 440\% |
|  | Total | 3,181,629,394 |  |  | 67,281,097,550 |  |

Sources: Nairobi Securities Exchange and Capital Market Authority Analysis (2014)

## Graph 1: TPS Eastern Africa Ltd Analysis



Sources: Researcher work (2014)

Graph 2: Standard Chartered Bank 2010 Analysis


Sources: Researcher work (2014)

Graph 3: Kenya Power and Lighting 2010 Analysis


Sources: Researcher work (2014)

## Graph 4: Kenya Airways Analysis



[^1]
## Graph 5: Diamond Trust Bank 2012 Analysis



[^2]Graph 6: NIC Bank Analysis


Sources: Researcher work (2014)

## Graph 7: KCB Bank Analysis



[^3]
## Graph 8: CFC Bank Analysis



Sources: Researcher work (2014)

## Graph 9: Standard Chartered Bank Analysis



[^4]Graph 10: Diamond Trust Bank 2014 Analysis


Table 4: TPS Eastern Africa Ltd Analysis

| Sample Dates | Security share prices | Return of the security | NSE All Shares index | NSE all shares index market return | (E)R | Abnormal Return | Cumulative <br> Abnormal Return | AR t-test |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 21-Jul-10 | 59.00 |  | 95.87 |  |  |  |  |  |
| 22-Jul-10 | 59.50 | -0.008474576 | 95.88 | -0.000104308 | -0.000310605 | -0.008163971 | -0.008163971 | -0.318684627 |
| 23-Jul-10 | 59.00 | 0.008403361 | 95.56 | 0.003337505 | -0.000240067 | 0.008643429 | 0.000479457 | 0.337400481 |
| 26-Jul-10 | 56.50 | 0.042372881 | 94.84 | 0.007534533 | -0.000154052 | 0.042526933 | 0.04300639 | 1.660059727 |
| 27-Jul-10 | 59.50 | -0.053097345 | 95.25 | -0.00432307 | -0.000397066 | -0.052700279 | -0.009693889 | -2.057181289 |
| 28-Jul-10 | 58.50 | 0.016806723 | 95.53 | -0.002939633 | -0.000368713 | 0.017175436 | 0.007481547 | 0.670451583 |
| 29-Jul-10 | 59.00 | -0.008547009 | 96.94 | -0.014759761 | -0.00061096 | -0.007936049 | -0.000454502 | -0.30978757 |
| 30-Jul-10 | 58.00 | 0.016949153 | 97.74 | -0.008252527 | -0.000477598 | 0.01742675 | 0.016972249 | 0.680261763 |
| 2-Aug-10 | 56.50 | 0.025862069 | 99.12 | -0.014119091 | -0.000597829 | 0.026459898 | 0.043432147 | 1.032875136 |
| 3-Aug-10 | 58.50 | -0.03539823 | 100.87 | -0.017655367 | -0.000670303 | -0.034727927 | 0.00870422 | -1.355621687 |
| 5-Aug-10 | 58.50 | 0 | 102.16 | -0.012788738 | -0.000570565 | 0.000570565 | 0.009274785 | 0.022272273 |
| 6-Aug-10 | 58.50 | 0 | 102.26 | -0.000978857 | -0.000328528 | 0.000328528 | 0.009603313 | 0.012824268 |
| 9-Aug-10 | 55.00 | 0.05982906 | 102.27 | -9.77899E-05 | -0.000310471 | 0.060139531 | 0.069742845 | 2.347576154 |
| 10-Aug-10 | 52.50 | 0.045454545 | 101.47 | 0.007822431 | -0.000148151 | 0.045602697 | 0.115345542 | 1.780123679 |
| 11-Aug-10 | 55.00 | -0.047619048 | 99.98 | 0.014684143 | -7.52485E-06 | -0.047611523 | 0.067734019 | -1.858539184 |
| 12-Aug-10 | 54.50 | 0.009090909 | 98.86 | 0.01120224 | -7.88843E-05 | 0.009169793 | 0.076903812 | 0.357947391 |
| 13-Aug-10 | 54.50 | 0 | 98.10 | 0.007687639 | -0.000150914 | 0.000150914 | 0.077054726 | 0.005890998 |
| 16-Aug-10 | 54.50 | 0 | 98.91 | -0.008256881 | -0.000477687 | 0.000477687 | 0.077532413 | 0.018646749 |
| 17-Aug-10 | 55.00 | -0.009174312 | 100.04 | -0.011424527 | -0.000542606 | -0.008631706 | 0.068900707 | -0.336942881 |
| 18-Aug-10 | 54.50 | 0.009090909 | 100.71 | -0.006697321 | -0.000445725 | 0.009536634 | 0.078437341 | 0.372267191 |
| 19-Aug-10 | 55.50 | -0.018348624 | 100.49 | 0.00218449 | -0.000263698 | -0.018084926 | 0.060352415 | -0.705953983 |
| 20-Aug-10 | 56.50 | -0.018018018 | 99.54 | 0.009453677 | -0.00011472 | -0.017903298 | 0.042449117 | -0.698864033 |
| 23-Aug-10 | 56.50 | 0 | 98.50 | 0.010448061 | -9.43408E-05 | $9.43408 \mathrm{E}-05$ | 0.042543458 | 0.003682638 |
| 24-Aug-10 | 56.00 | 0.008849558 | 98.39 | 0.001116751 | -0.00028558 | 0.009135138 | 0.051678595 | 0.35659459 |
| 25-Aug-10 | 56.00 | 0 | 97.80 | 0.005996544 | -0.000185572 | 0.000185572 | 0.051864167 | 0.007243888 |
| 26-Aug-10 | 57.00 | -0.017857143 | 96.31 | 0.015235174 | $3.76819 \mathrm{E}-06$ | -0.017860911 | 0.034003256 | -0.697209438 |
| 30-Aug-10 | 58.00 | -0.01754386 | 96.13 | 0.001868965 | -0.000270164 | -0.017273696 | 0.016729561 | -0.674287194 |
| 31-Aug-10 | 57.00 | 0.017241379 | 95.93 | 0.002080516 | -0.000265828 | 0.017507208 | 0.034236768 | 0.683402457 |
| 1-Sep-10 | 59.00 | -0.035087719 | 95.78 | 0.00156364 | -0.000276422 | -0.034811298 | -0.000574529 | -1.358876113 |
| 2-Sep-10 | 59.00 | 0 | 96.11 | -0.003445396 | -0.000379079 | 0.000379079 | -0.000195451 | 0.01479752 |
| 3-Sep-10 | 59.00 | 0 | 95.58 | 0.005514515 | -0.000195451 | 0.000195451 | $3.06287 \mathrm{E}-18$ | 0.007629516 |

Table 5: Standard Chartered Bank 2010 Analysis

|  |  | $\mathbf{R}=\mathbf{L n}\left(\mathbf{P}_{\mathbf{1}} / \mathbf{P}_{\mathbf{0}}\right)$ or $\quad\left(\mathbf{P}_{\mathbf{0}}-\mathbf{P}_{\mathbf{1}}\right) / \mathbf{P}_{\mathbf{0}}$ |  | (P0-P1)/P0 | $\mathbf{E}(\mathbf{R})=\alpha+\beta^{*} \mathbf{R}_{\mathrm{mrt}}$ | $\mathrm{AR}_{\text {it }}=\mathbf{R}_{\text {it }}-\mathbf{E}(\mathbf{R})$ |  | $\begin{gathered} \hline \text { ARt-test = } \\ \text { AR/Standard } \\ \text { Error } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample Dates | Security share prices | Return of the security | NSE All Shares index | NSE all shares index market return | (E)R | Abnornal Return | Cumulative Abnornal Return | AR t-test |
| 16-Aug-10 | 42.75 |  | 98.91 |  |  |  |  |  |
| 17-Aug-10 | 44.75 | -0.046783626 | 100.04 | -0.011424527 | -0.006384659 | -0.040398967 | -0.040399 | -1.07139041 |
| 18-Aug-10 | 44.75 | 0 | 100.71 | -0.006697321 | -0.005557509 | 0.005557509 | -0.0348415 | 0.147386497 |
| 19-Aug-10 | 44.75 | 0 | 100.49 | 0.00218449 | -0.004003402 | 0.004003402 | -0.0308381 | 0.106171199 |
| 20-Aug-10 | 43.50 | 0.027932961 | 99.54 | 0.009453677 | -0.002731466 | 0.030664427 | -0.0001736 | 0.813228052 |
| 23-Aug-10 | 43.00 | 0.011494253 | 98.50 | 0.010448061 | -0.002557473 | 0.014051725 | 0.0138781 | 0.372655169 |
| 24-Aug-10 | 42.50 | 0.011627907 | 98.39 | 0.001116751 | -0.004190231 | 0.015818138 | 0.02969624 | 0.419500867 |
| 25-Aug-10 | 42.50 | 0 | 97.80 | 0.005996544 | -0.003336383 | 0.003336383 | 0.03303262 | 0.088481682 |
| 26-Aug-10 | 43.00 | -0.011764706 | 96.31 | 0.015235174 | -0.001719841 | -0.010044865 | 0.02298775 | -0.266392257 |
| 30-Aug-10 | 43.00 | 0 | 96.13 | 0.001868965 | -0.004058612 | 0.004058612 | 0.02704637 | 0.107635368 |
| 31-Aug-10 | 42.50 | 0.011627907 | 95.93 | 0.002080516 | -0.004021595 | 0.015649502 | 0.04269587 | 0.415028598 |
| 1-Sep-10 | 42.50 | 0 | 95.78 | 0.00156364 | -0.004112036 | 0.004112036 | 0.0468079 | 0.109052201 |
| 2-Sep-10 | 43.25 | -0.017647059 | 96.11 | -0.003445396 | -0.004988499 | -0.01265856 | 0.03414934 | -0.335708073 |
| 3-Sep-10 | 46.25 | -0.069364162 | 95.58 | 0.005514515 | -0.003420727 | -0.065943435 | -0.0317941 | -1.748835909 |
| 6-Sep-10 | 47.50 | -0.027027027 | 95.14 | 0.004603474 | -0.003580137 | -0.02344689 | -0.055241 | -0.621817207 |
| 7-Sep-10 | 43.50 | 0.084210526 | 95.19 | $\mathbf{- 0 . 0 0 0 5 2 5 5 4 1}$ | -0.004477594 | 0.08868812 | 0.03344714 | 2.352030471 |
| 8-Sep-10 | 43.00 | 0.011494253 | 95.56 | -0.003886963 | -0.005065763 | 0.016560016 | 0.05000716 | 0.439175643 |
| 9-Sep-10 | 43.00 | 0 | 95.38 | 0.001883633 | -0.004056045 | 0.004056045 | 0.0540632 | 0.1075673 |
| 10-Sep-10 | 45.00 | -0.046511628 | 95.60 | -0.002306563 | -0.00478923 | -0.041722397 | 0.0123408 | -1.106488108 |
| 13-Sep-10 | 48.50 | -0.077777778 | 95.59 | 0.000104603 | -0.004367333 | -0.073410444 | -0.0610696 | -1.946862803 |
| 14-Sep-10 | 48.00 | 0.010309278 | 96.98 | -0.01454127 | -0.006930015 | 0.017239293 | -0.0438303 | 0.457190247 |
| 15-Sep-10 | 43.75 | 0.088541667 | 97.70 | -0.007424211 | -0.005684698 | 0.094226365 | 0.05039602 | 2.498906062 |
| 16-Sep-10 | 43.71 | 0.000914286 | 97.76 | -0.000614125 | -0.004493094 | 0.005407379 | 0.0558034 | 0.143405016 |
| 17-Sep-10 | 43.50 | 0.004804393 | 97.81 | -0.000511457 | -0.004475129 | 0.009279522 | 0.06508292 | 0.246095171 |
| 20-Sep-10 | 43.75 | -0.005747126 | 98.43 | -0.00633882 | -0.00549478 | -0.000252346 | 0.06483057 | -0.006692284 |
| 21-Sep-10 | 44.00 | -0.005714286 | 98.21 | 0.002235091 | -0.003994548 | -0.001719737 | 0.06311083 | -0.045607854 |
| 22-Sep-10 | 44.50 | -0.011363636 | 98.68 | -0.004785663 | -0.005223014 | -0.006140622 | 0.05697021 | -0.162850784 |
| 23-Sep-10 | 44.75 | -0.005617978 | 98.33 | 0.003546818 | -0.003765027 | -0.00185295 | 0.05511726 | -0.049140696 |
| 24-Sep-10 | 44.50 | 0.005586592 | 98.38 | -0.000508492 | -0.00447461 | 0.010061203 | 0.06517846 | 0.266825536 |
| 27-Sep-10 | 44.00 | 0.011235955 | 97.79 | 0.005997154 | -0.003336276 | 0.014572231 | 0.0797507 | 0.386459109 |
| 28-Sep-10 | 47.75 | -0.085227273 | 98.40 | -0.006234789 | -0.005476577 | -0.079750696 | 0 | -2.115007805 |

Table 6: Kenya Power and Lighting 2010 Analysis

|  |  | $\mathbf{R i t}=\mathbf{L n}\left(\mathbf{P}_{\mathbf{1}} / \mathbf{P}_{\mathbf{0}}\right)$ or $\quad\left(\mathbf{P}_{\mathbf{0}}-\mathbf{P}_{\mathbf{1}}\right) / \mathbf{P}_{\mathbf{0}}$ |  | $\begin{aligned} & \text { Rmrt }= \\ & (\mathbf{P 0} 0-\mathrm{P} 1) / \mathbf{P} 0 \end{aligned}$ | $\mathbf{E}(\mathbf{R})=\alpha+\beta^{*} \mathbf{R}_{\mathrm{mrt}}$ | $\mathbf{A R}_{\text {it }}=\mathbf{R}_{\text {it }}-\mathbf{E}(\mathbf{R})$ |  | $\begin{gathered} \hline \text { ARt-test = } \\ \text { AR/Standard } \\ \text { Error } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample Dates | Security share prices | Return of the security | NSE All Shares index | NSE all shares index market return | (E)R | Abnornal Return | Cumulative Abnornal Return | AR t-test |
| 10-Nov-10 | 218.00 |  | 101.64 |  |  |  |  |  |
| 11-Nov-10 | 214.00 | 0.018348624 | 101.36 | 0.00275482 | 0.035268711 | -0.016920087 | -0.0169201 | -0.102377997 |
| 12-Nov-10 | 212.00 | 0.009345794 | 101.79 | -0.0042423 | 0.03708271 | -0.027736915 | -0.044657 | -0.167827142 |
| 15-Nov-10 | 211.00 | 0.004716981 | 101.51 | 0.00275076 | 0.035269763 | -0.030552782 | -0.0752098 | -0.184865046 |
| 16-Nov-10 | 211.00 | 0 | 100.75 | 0.00748695 | 0.034041911 | -0.034041911 | -0.1092517 | -0.205976642 |
| 17-Nov-10 | 214.00 | -0.014218009 | 100.62 | 0.00129032 | 0.035648381 | -0.04986639 | -0.1591181 | -0.301725469 |
| 18-Nov-10 | 219.00 | -0.023364486 | 100.52 | 0.00099384 | 0.035725244 | -0.05908973 | -0.2182078 | -0.357532928 |
| 19-Nov-10 | 225.00 | -0.02739726 | 100.73 | -0.00208914 | 0.036524503 | -0.063921763 | -0.2821296 | -0.386770002 |
| 22-Nov-10 | 28.00 | 0.875555556 | 100.71 | 0.00019855 | 0.035931422 | 0.839624134 | 0.55749456 | 5.080295255 |
| 23-Nov-10 | 29.50 | -0.053571429 | 100.38 | 0.00327674 | 0.035133405 | -0.088704834 | 0.46878972 | -0.536724383 |
| 24-Nov-10 | 29.75 | -0.008474576 | 100.17 | 0.00209205 | 0.035440534 | -0.04391511 | 0.42487461 | -0.265716188 |
| 25-Nov-10 | 27.75 | 0.067226891 | 99.63 | 0.00540381 | 0.034581962 | 0.032644929 | 0.45751954 | 0.197523953 |
| 26-Nov-10 | 24.00 | 0.135135135 | 98.92 | 0.00713851 | 0.034132244 | 0.101002891 | 0.55852243 | 0.611135966 |
| 29-Nov-10 | 22.75 | 0.052083333 | 98.51 | 0.00411959 | 0.034914894 | 0.017168439 | 0.57569087 | 0.103880695 |
| 30-Nov-10 | 22.50 | 0.010989011 | 98.01 | 0.0050939 | 0.034662307 | -0.023673296 | 0.55201758 | -0.14323949 |
| 1-Dec-10 | 23.25 | -0.033333333 | 97.13 | $\mathbf{0 . 0 0 8 9 6 0 4 7}$ | 0.0336599 | -0.066993234 | 0.48502434 | -0.405354484 |
| 2-Dec-10 | 24.25 | -0.043010753 | 97.41 | -0.00288273 | 0.036730242 | -0.079740995 | 0.40528335 | -0.482487081 |
| 3-Dec-10 | 23.75 | 0.020618557 | 97.36 | 0.00051329 | 0.035849825 | -0.015231268 | 0.39005208 | -0.092159497 |
| 6-Dec-10 | 23.00 | 0.031578947 | 97.27 | 0.0009244 | 0.035743245 | -0.004164297 | 0.38588778 | -0.025196822 |
| 7-Dec-10 | 22.75 | 0.010869565 | 97.25 | 0.00020561 | 0.035929591 | -0.025060025 | 0.36082776 | -0.151630144 |
| 8-Dec-10 | 22.75 | 0 | 97.47 | -0.00226221 | 0.036569372 | -0.036569372 | 0.32425838 | -0.221269493 |
| 9-Dec-10 | 23.00 | -0.010989011 | 97.75 | -0.00287268 | 0.036727635 | -0.047716646 | 0.27654174 | -0.28871806 |
| 10-Dec-10 | 22.75 | 0.010869565 | 97.51 | 0.00245524 | 0.035346376 | -0.024476811 | 0.25206493 | -0.148101301 |
| 14-Dec-10 | 22.75 | 0 | 97.38 | 0.0013332 | 0.035637266 | -0.035637266 | 0.21642766 | -0.215629618 |
| 15-Dec-10 | 22.25 | 0.021978022 | 96.91 | 0.00482645 | 0.034731642 | -0.01275362 | 0.20367404 | -0.077168047 |
| 16-Dec-10 | 22.25 | 0 | 96.48 | 0.00443711 | 0.03483258 | -0.03483258 | 0.16884146 | -0.210760723 |
| 17-Dec-10 | 22.25 | 0 | 96.68 | -0.00207297 | 0.036520311 | -0.036520311 | 0.13232115 | -0.220972641 |
| 20-Dec-10 | 22.00 | 0.011235955 | 96.55 | 0.00134464 | 0.035634298 | -0.024398343 | 0.10792281 | -0.147626519 |
| 21-Dec-10 | 21.75 | 0.011363636 | 96.06 | 0.00507509 | 0.034667183 | -0.023303547 | 0.08461926 | -0.141002256 |
| 22-Dec-10 | 21.75 | 0 | 96.25 | -0.00197793 | 0.036495672 | -0.036495672 | 0.04812359 | -0.220823562 |
| 23-Dec-10 | 22.00 | -0.011494253 | 96.49 | -0.00249351 | 0.036629335 | -0.048123588 | $3.6776 \mathrm{E}-16$ | -0.291180334 |

Table 7: Kenya Airways Analysis

|  |  | $\operatorname{Rit}=\operatorname{Ln}\left(\mathbf{P}_{\mathbf{1}} / \mathbf{P}_{\mathbf{0}}\right)$ or $\quad\left(\mathbf{P}_{\mathbf{0}}-\mathbf{P}_{\mathbf{1}}\right) / \mathbf{P}_{\mathbf{0}}$ |  | $\begin{aligned} & \text { Rmrt }=(\mathbf{P} 0- \\ & \mathbf{P 1}) / \mathbf{P} 0 \end{aligned}$ | $\mathbf{E}(\mathbf{R})=\alpha+\beta^{*} \mathbf{R}_{\mathrm{mrt}}$ | $\mathrm{AR}_{\text {it }}=\mathbf{R}_{\text {it }}-\mathbf{E}(\mathbf{R})$ |  | $\begin{gathered} \hline \text { ARt-test = } \\ \text { AR/Standard } \\ \text { Error } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample Dates | Security share prices | Return of the security | NSE All <br> Shares index | NSE all shares index market return | (E)R | Abnornal Return | Cumulative <br> Abnornal <br> Return | AR t-test |
| 12-Mar-12 | 18.05 |  | 74.04 |  |  |  |  |  |
| 13-Mar-12 | 16.75 | 0.072022161 | 73.32 | 0.00972447 | 0.023161146 | 0.048861015 | 0.048861015 | 1.771049104 |
| 14-Mar-12 | 15.10 | 0.098507463 | 73.05 | 0.00368249 | 0.014208038 | 0.084299425 | 0.13316044 | 3.055573495 |
| 15-Mar-12 | 15.15 | -0.003311258 | 73.06 | -8.2136E-05 | 0.00862956 | -0.011940818 | 0.121219621 | -0.432814911 |
| 16-Mar-12 | 15.15 | 0 | 73.13 | -0.00101292 | 0.007250307 | -0.007250307 | 0.113969315 | -0.262799482 |
| 19-Mar-12 | 14.95 | 0.01320132 | 72.71 | 0.0057432 | 0.017261629 | -0.004060309 | 0.109909006 | -0.147172671 |
| 20-Mar-12 | 14.50 | 0.030100334 | 71.64 | 0.014716 | 0.030557661 | -0.000457326 | 0.109451679 | -0.016576562 |
| 21-Mar-12 | 14.25 | 0.017241379 | 72.47 | -0.01158571 | -0.008416611 | 0.02565799 | 0.135109669 | 0.930016709 |
| 22-Mar-12 | 13.65 | 0.042105263 | 72.98 | -0.00703739 | -0.001676852 | 0.043782115 | 0.178891784 | 1.586955893 |
| 23-Mar-12 | 13.15 | 0.036630037 | 73.52 | -0.00739929 | -0.00221311 | 0.038843146 | 0.217734931 | 1.407934736 |
| 26-Mar-12 | 13.70 | -0.041825095 | 73.23 | 0.0039445 | 0.014596299 | -0.056421394 | 0.161313537 | -2.045087676 |
| 27-Mar-12 | 13.70 | 0 | 73.38 | -0.00204834 | 0.005716006 | -0.005716006 | 0.15559753 | -0.2071862 |
| 28-Mar-12 | 14.00 | -0.02189781 | 73.53 | -0.00204415 | 0.005722211 | -0.027620021 | 0.127977509 | -1.001133809 |
| 29-Mar-12 | 14.00 | 0 | 73.46 | 0.00095199 | 0.010161947 | -0.010161947 | 0.117815562 | -0.368336745 |
| 30-Mar-12 | 13.95 | 0.003571429 | 73.47 | -0.00013613 | 0.008549552 | -0.004978124 | 0.112837438 | -0.180440417 |
| 2-Apr-12 | 14.00 | -0.003584229 | 73.24 | 0.00313053 | 0.013390137 | -0.016974367 | 0.095863072 | -0.615264276 |
| 3-Apr-12 | 13.95 | 0.003571429 | 73.40 | -0.0021846 | 0.005514098 | -0.001942669 | 0.093920403 | -0.070415282 |
| 4-Apr-12 | 13.95 | 0 | 73.92 | -0.00708447 | -0.001746606 | 0.001746606 | 0.095667009 | 0.063308668 |
| 5-Apr-12 | 13.95 | 0 | 73.97 | -0.00067641 | 0.007748959 | -0.007748959 | 0.08791805 | -0.280873981 |
| 10-Apr-12 | 14.00 | -0.003584229 | 73.71 | 0.00351494 | 0.013959761 | -0.01754399 | 0.07037406 | -0.635911223 |
| 11-Apr-12 | 13.95 | 0.003571429 | 74.10 | -0.00529101 | 0.000910976 | 0.002660453 | 0.073034513 | 0.096432563 |
| 12-Apr-12 | 14.35 | -0.028673835 | 74.37 | -0.00364372 | 0.003351942 | -0.032025777 | 0.041008736 | -1.160827784 |
| 13-Apr-12 | 14.05 | 0.020905923 | 74.72 | -0.0047062 | 0.001777551 | 0.019128372 | 0.060137108 | 0.693339809 |
| 16-Apr-12 | 14.00 | 0.003558719 | 74.68 | 0.00053533 | 0.009544533 | -0.005985814 | 0.054151294 | -0.216965833 |
| 17-Apr-12 | 14.00 | 0 | 74.93 | -0.00334762 | 0.003790719 | -0.003790719 | 0.050360575 | -0.137400959 |
| 18-Apr-12 | 14.00 | 0 | 75.49 | -0.00747364 | -0.00232329 | 0.00232329 | 0.052683864 | 0.084211514 |
| 19-Apr-12 | 14.50 | -0.035714286 | 76.14 | -0.00861041 | -0.004007773 | -0.031706513 | 0.020977352 | -1.149255522 |
| 20-Apr-12 | 14.60 | -0.006896552 | 76.72 | -0.00761755 | -0.00253653 | -0.004360022 | 0.01661733 | -0.158036284 |
| 23-Apr-12 | 14.55 | 0.003424658 | 77.20 | -0.00625652 | -0.000519735 | 0.003944393 | 0.020561722 | 0.142971098 |
| 24-Apr-12 | 14.70 | -0.010309278 | 77.91 | -0.00919689 | -0.004876827 | -0.005432451 | 0.015129271 | -0.196908272 |
| 25-Apr-12 | 14.90 | -0.013605442 | 78.29 | -0.00487742 | 0.001523829 | -0.015129271 | $3.1225 \mathrm{E}-17$ | -0.548385701 |

Table 8: Diamond Trust Bank 2012 Analysis

|  |  | $\begin{aligned} & \hline \operatorname{Rit}=\operatorname{Ln}\left(\mathbf{P}_{\mathbf{1}} / \mathbf{P}_{\mathbf{0}}\right) \quad \text { or } \\ & \left(\mathbf{P}_{\mathbf{0}}-\mathbf{P}_{\mathbf{1}}\right) / \mathbf{P}_{\mathbf{0}} \end{aligned}$ |  | $\begin{aligned} & \text { Rmrt }=(\mathbf{P} 0- \\ & \text { P1)/P0 } \end{aligned}$ | $\mathbf{E}(\mathbf{R})=\alpha+\beta^{*} \mathbf{R}_{\mathrm{mrt}}$ | $\mathbf{A R}_{\text {it }}=\mathbf{R}_{\text {it }}-\mathbf{E}(\mathbf{R})$ |  | ARt-test = <br> AR/Standard Error |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample Dates | Security share prices | Return of the security | NSE All Shares index | NSE all shares index market return | (E)R | Abnornal Return | Cumulative <br> Abnornal <br> Return | AR t-test |
| 26-Jun-12 | 104.00 |  | 81.13 |  |  |  |  |  |
| 27-Jun-12 | 104.00 | 0 | 80.80 | 0.004067546 | 0.005332506 | -0.005332506 | -0.005332506 | -0.190833485 |
| 28-Jun-12 | 105.00 | -0.009615385 | 80.50 | 0.003712871 | 0.005129852 | -0.014745236 | -0.020077743 | -0.52768522 |
| 29-Jun-12 | 104.00 | 0.00952381 | 80.75 | -0.00310559 | 0.001233903 | 0.008289906 | -0.011787836 | 0.29666945 |
| 2-Jul-12 | 104.00 | 0 | 81.80 | -0.013003096 | -0.004421357 | 0.004421357 | -0.007366479 | 0.158226345 |
| 3-Jul-12 | 104.00 | 0 | 82.51 | -0.008679707 | -0.001951049 | 0.001951049 | -0.00541543 | 0.069821845 |
| 4-Jul-12 | 95.50 | 0.081730769 | 82.32 | 0.002302751 | 0.004324134 | 0.077406635 | 0.071991205 | 2.770137887 |
| 5-Jul-12 | 95.50 | 0 | 82.47 | -0.001822157 | 0.001967234 | -0.001967234 | 0.070023971 | -0.070401057 |
| 6-Jul-12 | 94.50 | 0.010471204 | 82.31 | 0.001940099 | 0.004116921 | 0.006354283 | 0.076378255 | 0.227399634 |
| 9-Jul-12 | 95.00 | -0.005291005 | 82.18 | 0.001579395 | 0.003910821 | -0.009201826 | 0.067176428 | -0.329304162 |
| 10-Jul-12 | 95.00 | 0 | 82.11 | 0.000851789 | 0.00349508 | -0.00349508 | 0.063681349 | -0.125077806 |
| 11-Jul-12 | 89.00 | 0.063157895 | 82.17 | -0.000730727 | 0.002590858 | 0.060567037 | 0.124248386 | 2.167502083 |
| 12-Jul-12 | 90.50 | -0.016853933 | 82.29 | -0.001460387 | 0.002173943 | -0.019027876 | 0.10522051 | -0.680947299 |
| 13-Jul-12 | 95.00 | -0.049723757 | 81.71 | 0.007048244 | 0.007035625 | -0.056759382 | 0.048461128 | -2.031238183 |
| 16-Jul-12 | 95.00 | 0 | 81.84 | -0.001590993 | 0.002099317 | -0.002099317 | 0.046361811 | -0.075127908 |
| 17-Jul-12 | 89.00 | 0.063157895 | 81.73 | 0.001344086 | 0.003776369 | 0.059381525 | 0.105743336 | $\mathbf{2 . 1 2 5 0 7 6 3 8 5}$ |
| 18-Jul-12 | 90.00 | -0.011235955 | 82.50 | -0.009421265 | -0.002374762 | -0.008861193 | 0.096882143 | -0.317113977 |
| 19-Jul-12 | 94.50 | -0.05 | 83.26 | -0.009212121 | -0.002255261 | -0.047744739 | 0.049137405 | -1.708632723 |
| 20-Jul-12 | 94.50 | 0 | 83.54 | -0.003362959 | 0.001086847 | -0.001086847 | 0.048050558 | -0.038894798 |
| 23-Jul-12 | 94.50 | 0 | 83.85 | -0.003710797 | 0.000888098 | -0.000888098 | 0.047162459 | -0.031782223 |
| 24-Jul-12 | 93.00 | 0.015873016 | 83.85 | -1.19261E-05 | 0.003001568 | 0.012871448 | 0.060033907 | 0.460628278 |
| 25-Jul-12 | 93.50 | -0.005376344 | 84.66 | -0.009648066 | -0.002504352 | -0.002871992 | 0.057161915 | -0.102779472 |
| 26-Jul-12 | 92.00 | 0.016042781 | 84.35 | 0.003661706 | 0.005100616 | 0.010942164 | 0.06810408 | 0.391585344 |
| 27-Jul-12 | 95.00 | -0.032608696 | 84.32 | 0.000355661 | 0.003211601 | -0.035820296 | 0.032283783 | -1.281894761 |
| 30-Jul-12 | 95.00 | 0 | 84.02 | 0.003557875 | 0.005041289 | -0.005041289 | 0.027242494 | -0.180411749 |
| 31-Jul-12 | 95.00 | 0 | 83.26 | 0.009045465 | 0.008176802 | -0.008176802 | 0.019065692 | -0.292621791 |
| 1-Aug-12 | 95.00 | 0 | 83.01 | 0.003002642 | 0.004724039 | -0.004724039 | 0.014341653 | -0.169058378 |
| 2-Aug-12 | 95.00 | 0 | 82.98 | 0.000361402 | 0.003214881 | -0.003214881 | 0.011126772 | -0.115050402 |
| 3-Aug-12 | 95.00 | 0 | 83.69 | -0.008556279 | -0.001880524 | 0.001880524 | 0.013007296 | 0.067297994 |
| 6-Aug-12 | 96.50 | -0.015789474 | 83.27 | 0.005018521 | 0.005875877 | -0.02166535 | -0.008658054 | -0.775334148 |
| 7-Aug-12 | 95.50 | 0.010362694 | 83.46 | -0.002281734 | 0.00170464 | 0.008658054 | $5.0307 \mathrm{E}-17$ | 0.3098443 |

Table 9: NIC Bank Analysis

|  |  | $\begin{aligned} & \operatorname{Rit}=\operatorname{Ln}\left(\mathbf{P}_{1} / \mathbf{P}_{\mathbf{0}}\right) \text { or } \\ & \left(\mathbf{P}_{\mathbf{0}}-\mathbf{P}_{\mathbf{1}}\right) / \mathbf{P}_{\mathbf{0}} \end{aligned}$ |  | $\begin{gathered} \text { Rmrt }= \\ (\mathbf{P} 0-\mathbf{P} 1) / \mathbf{P 0} \end{gathered}$ | $\begin{aligned} & \mathbf{E}(\mathbf{R})=\alpha+\beta^{*} \\ & \mathbf{R}_{\mathrm{mrt}} \end{aligned}$ | $\mathbf{A R} \mathbf{R}_{\text {it }}=\mathbf{R}_{\text {it }}-\mathbf{E}(\mathbf{R})$ |  | ARt-test = AR/Standar d Error |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample Dates | Security share prices | Return of the security | NSE All <br> Shares <br> index | NSE all shares index market return | (E)R | Abnornal Return | Cumulative <br> Abnornal Return | AR t-test |
| 3-Aug-12 | 34.75 |  | 83.69 |  |  |  |  |  |
| 6-Aug-12 | 34.75 | 0 | 83.27 | 0.005018521 | -0.002493778 | 0.002493778 | 0.002493778 | 0.143007723 |
| 7-Aug-12 | 34.50 | 0.007194245 | 83.46 | -0.002281734 | 0.00166321 | 0.005531034 | 0.008024813 | 0.317181613 |
| 8-Aug-12 | 34.50 | 0 | 83.64 | -0.002156722 | 0.001592024 | -0.001592024 | 0.006432789 | -0.091295911 |
| 9-Aug-12 | 34.00 | 0.014492754 | 83.86 | -0.00263032 | 0.001861706 | 0.012631048 | 0.019063836 | 0.724337577 |
| 10-Aug-12 | 33.75 | 0.007352941 | 83.86 | $2.38493 \mathrm{E}-05$ | 0.00035034 | 0.007002601 | 0.026066437 | 0.401569764 |
| 13-Aug-12 | 34.50 | -0.022222222 | 83.13 | 0.008681342 | -0.004579501 | -0.017642721 | 0.008423716 | -1.011736011 |
| 14-Aug-12 | 35.75 | -0.036231884 | 83.22 | -0.001082642 | 0.00098041 | -0.037212294 | -0.028788578 | -2.133968891 |
| 15-Aug-12 | 34.75 | 0.027972028 | 83.16 | 0.000720981 | -4.66275E-05 | 0.028018655 | -0.000769923 | 1.606752293 |
| 16-Aug-12 | 34.75 | 0 | 83.60 | -0.005291005 | 0.003376781 | -0.003376781 | -0.004146704 | -0.19364423 |
| 17-Aug-12 | 33.50 | 0.035971223 | 83.67 | -0.000837321 | 0.000840717 | 0.035130506 | 0.030983802 | 2.014587082 |
| 21-Aug-12 | 32.25 | 0.037313433 | 83.48 | 0.002270826 | -0.000929157 | 0.03824259 | 0.069226392 | 2.19305201 |
| 22-Aug-12 | 31.75 | 0.015503876 | 83.70 | -0.002635362 | 0.001864577 | 0.013639299 | 0.082865691 | 0.782156577 |
| 23-Aug-12 | 31.75 | 0 | 84.01 | -0.003703704 | 0.002472923 | -0.002472923 | 0.080392768 | -0.141811762 |
| 24-Aug-12 | 32.00 | -0.007874016 | 83.84 | 0.002023569 | -0.000788361 | -0.007085655 | 0.073307113 | -0.406332561 |
| 27-Aug-12 | 32.00 | 0 | 83.95 | -0.001312 | 0.001111027 | -0.001111027 | 0.072196086 | -0.063712729 |
| 28-Aug-12 | 32.25 | -0.0078125 | 83.91 | 0.000476474 | $9.2602 \mathrm{E}-05$ | -0.007905102 | 0.064290985 | -0.453324419 |
| 29-Aug-12 | 32.75 | -0.015503876 | 84.36 | -0.005362889 | 0.003417714 | -0.01892159 | 0.045369395 | -1.085073763 |
| 30-Aug-12 | 33.00 | -0.007633588 | 84.87 | -0.006045519 | 0.003806425 | -0.011440012 | 0.033929382 | -0.656036691 |
| 31-Aug-12 | 33.00 | 0 | 84.66 | 0.002474373 | -0.001045063 | 0.001045063 | 0.034974445 | 0.059929952 |
| 3-Sep-12 | 33.25 | -0.007575758 | 84.95 | -0.003425467 | 0.002314486 | -0.009890244 | 0.025084201 | -0.567163981 |
| 4-Sep-12 | 33.75 | -0.015037594 | 85.62 | -0.007886992 | 0.004855016 | -0.01989261 | 0.005191591 | -1.140757674 |
| 5-Sep-12 | 34.75 | -0.02962963 | 85.82 | -0.002335903 | 0.001694055 | -0.031323685 | -0.026132094 | -1.796281871 |
| 6-Sep-12 | 35.25 | -0.014388489 | 85.35 | 0.005476579 | -0.002754611 | -0.011633879 | -0.037765972 | -0.667154104 |
| 7-Sep-12 | 35.25 | 0 | 85.90 | -0.006444054 | 0.004033362 | -0.004033362 | -0.041799335 | -0.231296404 |
| 10-Sep-12 | 35.00 | 0.007092199 | 85.16 | 0.008614668 | -0.004541535 | 0.011633733 | -0.030165601 | 0.667145782 |
| 11-Sep-12 | 34.00 | 0.028571429 | 86.59 | -0.016791921 | 0.009925755 | 0.018645674 | -0.011519927 | 1.069251144 |
| 12-Sep-12 | 33.50 | 0.014705882 | 87.25 | -0.007622127 | 0.004704193 | 0.010001689 | -0.001518238 | 0.573554883 |
| 13-Sep-12 | 33.25 | 0.007462687 | 87.22 | 0.00034384 | 0.000168128 | 0.007294558 | 0.00577632 | 0.41831231 |
| 14-Sep-12 | 33.50 | -0.007518797 | 86.61 | 0.006993809 | -0.003618568 | -0.003900229 | 0.001876091 | -0.223661773 |
| 17-Sep-12 | 33.50 | 0 | 86.84 | -0.002655582 | 0.001876091 | -0.001876091 | $2.49366 \mathrm{E}-17$ | -0.107585935 |

Table 10: KCB Bank Analysis

|  |  | $\begin{aligned} & \operatorname{Rit}=\operatorname{Ln}\left(\mathbf{P}_{1} / \mathbf{P}_{\mathbf{0}}\right) \quad \text { or } \\ & \left(\mathbf{P}_{\mathbf{0}}-\mathbf{P}_{1}\right) / \mathbf{P}_{\mathbf{0}} \end{aligned}$ |  | $\begin{aligned} & \text { Rmrt }=\quad(\mathbf{P 0}- \\ & \mathbf{P 1}) / \mathbf{P 0} \end{aligned}$ | $\mathbf{E}(\mathbf{R})=\alpha+\beta^{*} \mathbf{R}_{\text {mrt }}$ | $\mathrm{AR}_{\text {it }}=\mathbf{R}_{\text {it }}-\mathbf{E}(\mathbf{R})$ |  | ARt-test = AR/Standard Error |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample Dates | Security share prices | Return of the security | NSE All <br> Shares index | NSE all shares index market return | (E)R | Abnornal Return | Cumulative <br> Abnornal <br> Return | AR t-test |
| 10-Jun-10 | 20.75 |  | 92.76 |  |  |  |  |  |
| 11-Jun-10 | 20.75 | 0 | 93.18 | -0.004527814 | -0.001282011 | 0.001282011 | 0.001282011 | 0.11125785 |
| 14-Jun-10 | 20.75 | 0 | 93.52 | -0.003648852 | 0.000360585 | -0.000360585 | 0.000921427 | -0.031292937 |
| 15-Jun-10 | 20.75 | 0 | 93.94 | -0.004491018 | -0.001213248 | 0.001213248 | 0.002134674 | 0.105290285 |
| 16-Jun-10 | 20.75 | 0 | 94.35 | -0.004364488 | -0.00097679 | 0.00097679 | 0.003111464 | 0.084769546 |
| 17-Jun-10 | 20.25 | 0.024096386 | 94.39 | -0.000423953 | 0.006387246 | 0.017709139 | 0.020820604 | 1.536866764 |
| 18-Jun-10 | 19.95 | 0.014814815 | 94.32 | 0.000741604 | 0.008565429 | 0.006249386 | 0.027069989 | 0.542345553 |
| 21-Jun-10 | 18.75 | 0.060150376 | 93.85 | 0.004983036 | 0.01649178 | 0.043658596 | 0.070728585 | 3.788859683 |
| 22-Jun-10 | 18.65 | 0.005333333 | 93.95 | -0.00106553 | 0.005188273 | 0.00014506 | 0.070873645 | 0.012588873 |
| 23-Jun-10 | 18.65 | 0 | 94.09 | -0.001490154 | 0.004394739 | -0.004394739 | 0.066478906 | -0.381392255 |
| 24-Jun-10 | 18.50 | 0.008042895 | 94.59 | -0.005314061 | -0.002751343 | 0.010794239 | 0.077273145 | 0.93676527 |
| 25-Jun-10 | 18.40 | 0.005405405 | 94.73 | -0.001480072 | 0.004413581 | 0.000991824 | 0.078264969 | 0.086074292 |
| 28-Jun-10 | 18.45 | -0.002717391 | 94.64 | 0.000950069 | 0.008955006 | -0.011672397 | 0.066592571 | -1.012975224 |
| 29-Jun-10 | 18.55 | -0.005420054 | 95.00 | -0.003803888 | $7.08537 \mathrm{E}-05$ | -0.005490908 | 0.061101664 | -0.476521957 |
| 30-Jun-10 | 18.60 | -0.002695418 | 95.10 | -0.001052632 | 0.005212378 | -0.007907796 | 0.053193868 | -0.686268708 |
| 1-Jul-10 | 18.60 | 0 | 95.03 | 0.000736067 | 0.008555082 | -0.008555082 | 0.044638786 | -0.742442717 |
| 2-Jul-10 | 18.65 | -0.002688172 | 95.00 | 0.00031569 | 0.007769485 | -0.010457657 | 0.034181129 | -0.907555382 |
| 5-Jul-10 | 18.35 | 0.016085791 | 94.72 | 0.002947368 | 0.012687542 | 0.003398249 | 0.037579378 | 0.294913014 |
| 6-Jul-10 | 18.20 | 0.008174387 | 94.94 | -0.002322635 | 0.002839007 | 0.00533538 | 0.042914758 | 0.463024687 |
| 7-Jul-10 | 18.15 | 0.002747253 | 94.90 | 0.000421319 | 0.007966883 | -0.00521963 | 0.037695128 | -0.452979448 |
| 8-Jul-10 | 18.15 | 0 | 95.24 | -0.003582719 | 0.000484174 | -0.000484174 | 0.037210954 | -0.042018447 |
| 9-Jul-10 | 17.75 | 0.022038567 | 95.09 | 0.001574969 | 0.010122813 | 0.011915754 | 0.049126708 | 1.034094656 |
| 12-Jul-10 | 17.75 | 0 | 95.28 | -0.001998107 | 0.003445482 | -0.003445482 | 0.045681227 | -0.299012064 |
| 13-Jul-10 | 17.80 | -0.002816901 | 95.38 | -0.001049538 | 0.005218159 | -0.00803506 | 0.037646167 | -0.697313206 |
| 14-Jul-10 | 18.05 | -0.014044944 | 96.18 | -0.008387503 | -0.008494964 | -0.00554998 | 0.032096186 | -0.481648487 |
| 15-Jul-10 | 18.00 | 0.002770083 | 96.50 | -0.003327095 | 0.000961881 | 0.001808202 | 0.033904389 | 0.156922695 |
| 16-Jul-10 | 17.95 | 0.002777778 | 97.06 | -0.005803109 | -0.003665272 | 0.006443049 | 0.040347438 | 0.559152426 |
| 19-Jul-10 | 17.75 | 0.011142061 | 96.55 | 0.005254482 | 0.016999055 | -0.005856994 | 0.034490444 | -0.508292269 |
| 20-Jul-10 | 17.80 | -0.002816901 | 96.69 | -0.001450026 | 0.004469731 | -0.007286632 | 0.027203812 | -0.632361782 |
| 21-Jul-10 | 17.75 | 0.002808989 | 95.87 | 0.008480712 | 0.023028204 | -0.020219215 | 0.006984597 | -1.75470074 |
| 22-Jul-10 | 17.75 | 0 | 95.88 | -0.000104308 | 0.006984597 | -0.006984597 | 0 | -0.606149971 |

_Sources: Researcher work (2014)

Table 11: CFC Bank Analysis

|  |  | $\begin{aligned} & \mathbf{R i t}=\operatorname{Ln}\left(\mathbf{P}_{\mathbf{1}} / \mathbf{P}_{\mathbf{0}}\right) \text { or } \\ & \left(\mathbf{P}_{\mathbf{0}}-\mathbf{P}_{1}\right) / \mathbf{P}_{\mathbf{0}} \end{aligned}$ |  | $\begin{aligned} & \text { Rmrt }=\quad(\mathbf{P} 0- \\ & \mathbf{P} 1) / \mathbf{P} 0 \end{aligned}$ | $\mathbf{E}(\mathbf{R})=\alpha+\beta^{*} \mathbf{R}_{\mathrm{mrt}}$ | $\mathbf{A R}_{\text {it }}=\mathbf{R}_{\text {it }}-\mathbf{E}(\mathbf{R})$ |  | ARt-test = AR/Standard Error |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample Dates | Security share prices | Return of the security | NSE All Shares index | NSE all shares index market return | (E)R | Abnornal Return | Cumulative <br> Abnornal <br> Return | AR t-test |
| 21-Sep-12 | 42.75 |  | 86.41 |  |  |  |  |  |
| 24-Sep-12 | 42.50 | 0.005847953 | 86.29 | 0.001388728 | 0.000413579 | 0.005434375 | 0.005434375 | 0.257358035 |
| 25-Sep-12 | 42.50 | 0 | 86.43 | -0.001622436 | 0.002676401 | -0.002676401 | 0.002757974 | -0.126747461 |
| 26-Sep-12 | 41.75 | 0.017647059 | 86.22 | 0.002429712 | -0.000368697 | 0.018015756 | 0.02077373 | 0.853179969 |
| 27-Sep-12 | 40.00 | 0.041916168 | 86.98 | -0.00881466 | 0.008081195 | 0.033834973 | 0.054608703 | 1.602337472 |
| 28-Sep-12 | 40.00 | 0 | 87.38 | -0.004598758 | 0.00491304 | -0.00491304 | 0.049695663 | -0.232668951 |
| 1-Oct-12 | 40.50 | -0.0125 | 87.17 | 0.002403296 | -0.000348846 | -0.012151154 | 0.037544509 | -0.575447456 |
| 2-Oct-12 | 41.00 | -0.012345679 | 86.63 | 0.006194792 | -0.00319807 | -0.009147609 | 0.0283969 | -0.43320729 |
| 3-Oct-12 | 40.00 | 0.024390244 | 87.11 | -0.005540806 | 0.005620967 | 0.018769277 | 0.047166177 | 0.888864779 |
| 4-Oct-12 | 39.75 | 0.00625 | 87.08 | 0.000344392 | 0.001198374 | 0.005051626 | 0.052217804 | 0.239232064 |
| 5-Oct-12 | 39.50 | 0.006289308 | 87.54 | -0.005282499 | 0.005426855 | 0.000862453 | 0.053080256 | 0.040843555 |
| 8-Oct-12 | 38.00 | 0.037974684 | 86.97 | 0.006511309 | -0.003435926 | 0.041410609 | 0.094490866 | 1.961100165 |
| 9-Oct-12 | 36.25 | 0.046052632 | 87.19 | -0.002529608 | 0.00335812 | 0.042694512 | 0.137185377 | 2.021902502 |
| 10-Oct-12 | 38.25 | -0.055172414 | 87.13 | 0.000688152 | 0.000940046 | -0.056112459 | 0.081072918 | -2.65734206 |
| 11-Oct-12 | 38.50 | -0.006535948 | 87.85 | -0.008263514 | 0.007667021 | -0.014202969 | 0.066869949 | -0.672616155 |
| 12-Oct-12 | 38.50 | 0 | 87.71 | 0.001593625 | 0.000259603 | -0.000259603 | 0.066610346 | -0.012294125 |
| 15-Oct-12 | 37.50 | 0.025974026 | 87.89 | -0.002052218 | 0.002999372 | 0.022974654 | 0.089585001 | 1.088020662 |
| 16-Oct-12 | 38.00 | -0.013333333 | 88.02 | -0.001479122 | 0.002568703 | -0.015902036 | 0.073682964 | -0.75307963 |
| 17-Oct-12 | 37.50 | 0.013157895 | 88.50 | -0.005453306 | 0.005555213 | 0.007602682 | 0.081285646 | 0.360043492 |
| 18-Oct-12 | 37.50 | 0 | 88.85 | -0.003954802 | 0.004429121 | -0.004429121 | 0.076856525 | -0.209751814 |
| 19-Oct-12 | 38.25 | -0.02 | 89.13 | -0.003151379 | 0.003825367 | -0.023825367 | 0.053031158 | -1.128308212 |
| 22-Oct-12 | 38.25 | 0 | 89.51 | -0.004263435 | 0.004661052 | -0.004661052 | 0.048370106 | -0.220735465 |
| 23-Oct-12 | 38.25 | 0 | 89.78 | -0.003016423 | 0.00372395 | -0.00372395 | 0.044646156 | -0.176356723 |
| 24-Oct-12 | 38.00 | 0.006535948 | 90.28 | -0.005569169 | 0.005642282 | 0.000893666 | 0.045539822 | 0.042321738 |
| 25-Oct-12 | 39.00 | -0.026315789 | 90.62 | -0.003766061 | 0.004287287 | -0.030603076 | 0.014936746 | -1.449283137 |
| 26-Oct-12 | 38.00 | 0.025641026 | 91.18 | -0.006179651 | 0.006101045 | 0.019539981 | 0.034476726 | 0.925363328 |
| 29-Oct-12 | 38.50 | -0.013157895 | 91.43 | -0.002741829 | 0.003517599 | -0.016675494 | 0.017801232 | -0.789708606 |
| 30-Oct-12 | 38.75 | -0.006493506 | 91.78 | -0.003828065 | 0.004333881 | -0.010827388 | 0.006973845 | -0.512757291 |
| 31-Oct-12 | 38.75 | 0 | 91.67 | 0.001198518 | 0.000556517 | -0.000556517 | 0.006417328 | -0.026355221 |
| 1-Nov-12 | 38.50 | 0.006451613 | 91.28 | 0.004254391 | -0.001739902 | 0.008191515 | 0.014608843 | 0.387929134 |
| 2-Nov-12 | 39.00 | -0.012987013 | 91.30 | -0.000219106 | 0.00162183 | -0.014608843 | -6.93889E-17 | -0.691837298 |

_Sources: Researcher work (2014)

Table 12: Standard Chartered Bank Analysis

|  |  | $\operatorname{Rit}=\operatorname{Ln}\left(\mathbf{P}_{\mathbf{1}} / \mathbf{P}_{\mathbf{0}}\right)$ or $\quad\left(\mathbf{P}_{\mathbf{0}} \mathbf{-} \mathbf{P}_{\mathbf{1}}\right) / \mathbf{P}_{\mathbf{0}}$ |  | $\begin{aligned} & \text { Rmrt }=(\mathbf{P} 0- \\ & \mathbf{P 1}) / \mathbf{P 0} 0 \end{aligned}$ | $\mathbf{E}(\mathbf{R})=\alpha+\beta^{*} \mathbf{R}_{\mathrm{mrt}}$ | $\mathrm{AR}_{\text {it }}=\mathbf{R}_{\text {it }}-\mathbf{E}(\mathbf{R})$ |  | ARt-test = AR/Standard Error |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample Dates | Security share prices | Return of the security | NSE <br> All <br> Shares <br> index | NSE all shares index market return | (E)R | Abnornal Return | Cumulative <br> Abnornal Return | AR t-test |
| 18-Sep-12 | 220.00 |  | 87.04 |  |  |  |  |  |
| 19-Sep-12 | 217.00 | 0.013636364 | 86.95 | 0.001034007 | 0.002797318 | 0.010839046 | 0.010839046 | 0.573085903 |
| 20-Sep-12 | 198.00 | 0.087557604 | 86.37 | 0.0066705 | 0.011476 | 0.076081604 | 0.086920649 | 4.022613795 |
| 21-Sep-12 | 200.00 | -0.01010101 | 86.41 | -0.000463124 | 0.000492139 | -0.010593149 | 0.0763275 | -0.560084773 |
| 24-Sep-12 | 205.00 | -0.025 | 86.29 | 0.001388728 | 0.003343493 | -0.028343493 | 0.047984008 | -1.498587284 |
| 25-Sep-12 | 203.00 | 0.009756098 | 86.43 | -0.001622436 | -0.00129289 | 0.011048987 | 0.059032995 | 0.58418601 |
| 26-Sep-12 | 205.00 | -0.009852217 | 86.22 | 0.002429712 | 0.004946327 | -0.014798544 | 0.044234451 | -0.782433918 |
| 27-Sep-12 | 206.00 | -0.004878049 | 86.98 | -0.00881466 | -0.012366979 | 0.00748893 | 0.051723381 | 0.3959574 |
| 28-Sep-12 | 207.00 | -0.004854369 | 87.38 | -0.004598758 | -0.005875625 | 0.001021256 | 0.052744637 | 0.053996216 |
| 1-Oct-12 | 205.00 | 0.009661836 | 87.17 | 0.002403296 | 0.004905654 | 0.004756182 | 0.057500819 | 0.251470553 |
| 2-Oct-12 | 207.00 | -0.009756098 | 86.63 | 0.006194792 | 0.010743537 | -0.020499634 | 0.037001185 | -1.083864009 |
| 3-Oct-12 | 208.00 | -0.004830918 | 87.11 | -0.005540806 | -0.007326124 | 0.002495207 | 0.039496391 | 0.131927453 |
| 4-Oct-12 | 209.00 | -0.004807692 | 87.08 | 0.000344392 | 0.001735496 | -0.006543188 | 0.032953203 | -0.345953804 |
| 5-Oct-12 | 212.00 | -0.014354067 | 87.54 | -0.005282499 | -0.006928401 | -0.007425666 | 0.025527537 | -0.392612452 |
| 8-Oct-12 | 214.00 | -0.009433962 | 86.97 | 0.006511309 | 0.011230888 | -0.020664851 | 0.004862687 | -1.092599379 |
| 9-Oct-12 | 214.00 | 0 | 87.19 | -0.002529608 | -0.00268969 | 0.00268969 | $\mathbf{0 . 0 0 7 5 5 2 3 7 7}$ | 0.14221027 |
| 10-Oct-12 | 213.00 | 0.004672897 | 87.13 | 0.000688152 | 0.002264794 | 0.002408103 | 0.00996048 | 0.127322079 |
| 11-Oct-12 | 213.00 | 0 | 87.85 | -0.008263514 | -0.011518363 | 0.011518363 | 0.021478843 | 0.609002997 |
| 12-Oct-12 | 214.00 | -0.004694836 | 87.71 | 0.001593625 | 0.003658979 | -0.008353815 | 0.013125028 | -0.441685895 |
| 15-Oct-12 | 213.00 | 0.004672897 | 87.89 | -0.002052218 | -0.001954638 | 0.006627535 | 0.019752562 | 0.350413394 |
| 16-Oct-12 | 218.00 | -0.023474178 | 88.02 | -0.001479122 | -0.001072224 | -0.022401954 | -0.002649392 | -1.184444143 |
| 17-Oct-12 | 215.00 | 0.013761468 | 88.50 | -0.005453306 | -0.007191398 | 0.020952866 | 0.018303475 | 1.107827452 |
| 18-Oct-12 | 217.00 | -0.009302326 | 88.85 | -0.003954802 | -0.004884106 | -0.00441822 | 0.013885255 | -0.233601689 |
| 19-Oct-12 | 220.00 | -0.013824885 | 89.13 | -0.003151379 | -0.00364705 | -0.010177835 | 0.00370742 | -0.538126125 |
| 22-Oct-12 | 223.00 | -0.013636364 | 89.51 | -0.004263435 | -0.005359318 | -0.008277046 | -0.004569625 | -0.437626921 |
| 23-Oct-12 | 221.00 | 0.00896861 | 89.78 | -0.003016423 | -0.003439254 | 0.012407864 | 0.007838239 | 0.656033026 |
| 24-Oct-12 | 221.00 | 0 | 90.28 | -0.005569169 | -0.007369796 | 0.007369796 | 0.015208035 | 0.38965851 |
| 25-Oct-12 | 221.00 | 0 | 90.62 | -0.003766061 | -0.004593495 | 0.004593495 | 0.01980153 | 0.242868936 |
| 26-Oct-12 | 224.00 | -0.013574661 | 91.18 | -0.006179651 | -0.008309775 | -0.005264886 | 0.014536644 | -0.278366939 |
| 29-Oct-12 | 225.00 | -0.004464286 | 91.43 | -0.002741829 | -0.003016454 | -0.001447832 | 0.013088813 | -0.076550266 |
| 30-Oct-12 | 229.00 | -0.017777778 | 91.78 | -0.003828065 | -0.004688965 | -0.013088813 | 0 | -0.692036395 |

_Sources: Researcher work (2014)

Table 13: Diamond Trust Bank 2014 Analysis

|  |  | $\operatorname{Rit}=\operatorname{Ln}\left(\mathbf{P}_{1} / \mathbf{P}_{0}\right)$ or $\quad\left(\mathbf{P}_{0}-\mathbf{P}_{\mathbf{1}}\right) / \mathbf{P}_{\mathbf{0}}$ |  | $\begin{aligned} & \text { Rmrt }= \\ & (\mathbf{P} 0-\mathbf{P} 1) / \mathbf{P} 0 \end{aligned}$ | $\mathbf{E}(\mathbf{R})=\boldsymbol{\alpha}+\boldsymbol{\beta}^{*} \mathbf{R}_{\mathrm{mrt}}$ | $\mathbf{A R}_{\text {it }}=\mathbf{R}_{\text {it }}-\mathbf{E}(\mathbf{R})$ |  | $\begin{gathered} \text { ARt-test = } \\ \text { AR/Standard } \\ \text { Error } \\ \hline \end{gathered}$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Sample Dates | Security share prices | Return of the security | NSE <br> All <br> Shares index | NSE all shares index market return | (E)R | Abnornal Return | Cumulative <br> Abnornal <br> Return | AR t-test |
| 9-Jun-14 | 239.00 |  | 149.61 |  |  |  |  |  |
| 10-Jun-14 | 244.00 | -0.020920502 | 150.24 | -0.004210948 | -0.000533514 | -0.020386988 | -0.020386988 | -0.609413102 |
| 11-Jun-14 | 242.00 | 0.008196721 | 150.09 | 0.000998403 | 0.000791188 | 0.007405533 | -0.012981455 | 0.221368097 |
| 12-Jun-14 | 244.00 | -0.008264463 | 150.04 | 0.000333133 | 0.000622015 | -0.008886478 | -0.021867933 | -0.265636881 |
| 13-Jun-14 | 245.00 | -0.004098361 | 150.60 | -0.003732338 | -0.000411806 | -0.003686554 | -0.025554487 | -0.110199429 |
| 16-Jun-14 | 244.00 | 0.004081633 | 149.47 | 0.00750332 | 0.002445344 | 0.001636289 | -0.023918199 | 0.04891236 |
| 17-Jun-14 | 244.00 | 0 | 148.84 | 0.004214893 | 0.00160912 | -0.00160912 | -0.025527318 | -0.048100217 |
| 18-Jun-14 | 244.00 | 0 | 149.02 | -0.001209352 | 0.000229771 | -0.000229771 | -0.02575709 | -0.006868389 |
| 19-Jun-14 | 249.00 | -0.020491803 | 149.41 | -0.002617098 | -0.000128209 | -0.020363595 | -0.046120685 | -0.608713811 |
| 20-Jun-14 | 251.00 | -0.008032129 | 149.72 | -0.002074828 | $9.68708 \mathrm{E}-06$ | -0.008041816 | -0.0541625 | -0.240388021 |
| 23-Jun-14 | 267.00 | -0.06374502 | 150.17 | -0.00300561 | -0.000227005 | -0.063518015 | -0.117680516 | -1.898696857 |
| 24-Jun-14 | 275.00 | -0.029962547 | 149.92 | 0.00166478 | 0.000960644 | -0.03092319 | -0.148603706 | -0.924363962 |
| 25-Jun-14 | 247.00 | 0.101818182 | 149.66 | 0.001734258 | 0.000978311 | 0.10083987 | -0.047763835 | 3.014331353 |
| 26-Jun-14 | 244.00 | 0.012145749 | 149.52 | 0.000935454 | 0.000775181 | 0.011370568 | -0.036393267 | 0.339891947 |
| 27-Jun-14 | 241.00 | 0.012295082 | 149.69 | -0.001136972 | 0.000248177 | 0.012046905 | -0.024346363 | 0.360109171 |
| 30-Jun-14 | 240.00 | 0.004149378 | 150.37 | -0.004542722 | -0.000617881 | 0.004767259 | -0.019579104 | 0.142504131 |
| 1-Jul-14 | 219.00 | 0.0875 | 152.11 | -0.011571457 | -0.00240524 | 0.08990524 | 0.070326137 | 2.687470576 |
| 2-Jul-14 | 231.00 | -0.054794521 | 153.64 | -0.01005851 | -0.002020508 | -0.052774012 | 0.017552124 | -1.57753435 |
| 3-Jul-14 | 234.00 | -0.012987013 | 152.63 | 0.006573809 | 0.002208976 | -0.015195989 | 0.002356136 | -0.454242405 |
| 4-Jul-14 | 231.00 | 0.012820513 | 152.09 | 0.003537968 | 0.001436982 | 0.011383531 | 0.013739666 | 0.340279425 |
| 7-Jul-14 | 231.00 | 0 | 152.02 | 0.000460254 | 0.000654341 | -0.000654341 | 0.013085325 | -0.019559724 |
| 8-Jul-14 | 231.00 | 0 | 152.29 | -0.001776082 | 8.5656E-05 | -8.5656E-05 | 0.012999669 | -0.002560452 |
| 9-Jul-14 | 229.00 | 0.008658009 | 152.20 | 0.000590978 | 0.000687583 | 0.007970426 | 0.020970095 | 0.238254014 |
| 10-Jul-14 | 227.00 | 0.008733624 | 151.93 | 0.001773982 | 0.000988413 | 0.007745212 | 0.028715307 | 0.231521861 |
| 11-Jul-14 | 227.00 | 0 | 151.12 | 0.005331403 | 0.00189304 | -0.00189304 | 0.026822266 | -0.056587251 |
| 14-Jul-14 | 226.00 | 0.004405286 | 151.19 | -0.000463208 | 0.000419511 | 0.003985776 | 0.030808042 | 0.119143827 |
| 15-Jul-14 | 218.00 | 0.03539823 | 151.12 | 0.000462994 | 0.000655038 | 0.034743193 | 0.065551234 | 1.038552451 |
| 16-Jul-14 | 220.00 | -0.009174312 | 150.49 | 0.004168872 | 0.001597417 | -0.010771729 | 0.054779505 | -0.321991292 |
| 17-Jul-14 | 220.00 | 0 | 151.03 | -0.003588278 | -0.000375173 | 0.000375173 | 0.055154678 | 0.011214768 |
| 18-Jul-14 | 230.00 | -0.045454545 | 151.55 | -0.003443025 | -0.000338236 | -0.045116309 | 0.010038369 | -1.348628331 |
| 21-Jul-14 | 232.00 | -0.008695652 | 151.07 | 0.003167272 | 0.001342717 | -0.010038369 | 0 | -0.300069508 |

Sources: Researcher work (2014)


[^0]:    Sources: Researcher work (2014)

[^1]:    Sources: Researcher work (2014)

[^2]:    Sources: Researcher work (2014)

[^3]:    Sources: Researcher work (2014)

[^4]:    Sources: Researcher work (2014)

