

**THE EFFECT OF RIGHTS ISSUE ON STOCK PRICES OF FIRMS LISTED  
AT EAST AFRICA SECURITIES EXCHANGES**

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## DECLARATION

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

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I thank God for His guidance all through the journey of this project. I also thank my supervisor for his time and wisdom in this project. Last, my family members for the support they accorded me in writing this project.

## **DEDICATION**

I dedicate this project to my mother, the person who first taught me how to express myself.

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## **LIST OF ABBREVIATIONS AND ACRONYMS**

<b>ATS</b>	Automated Trading System
<b>DSE</b>	Dar es Salaam Stock Exchange
<b>EASEA</b>	East Africa Securities Exchanges Association
<b>EGMS</b>	Enterprise Growth Market Segment
<b>IFC</b>	International Finance Corporation
<b>IPO</b>	Initial Public Offer
<b>MIMS</b>	Main Investment Market Segment
<b>NSE</b>	Nairobi Securities Exchange
<b>RSE</b>	Rwanda Security Exchange
<b>USE</b>	Uganda Securities Exchange

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## **ABSTRACT**

Firms in stock markets engage in rights issue as an option to generate more capital for financing their growth plans and internal undertakings (Ramirez, 2011). Corporations issue rights as an alternative of raising capital for expansion or for internal operations financing. Rights issues offer the current stockholders the opportunity of acquiring new stocks, usually offered at a price lower compared to the current market price to persuade participation. Companies cross list to attract more investors, reduce cost of capital and generally increase liquidity of stock. The study was established to examine rights issue's effect of on stock prices of listed firms at East Africa Securities Exchanges. The study adopted a descriptive research design targeting firms listed on East Africa Securities Exchange. Data used for the study was mainly secondary and was gathered using a data collection sheet. The analysis was done using event study methodology. Findings of the study revealed that rights issue announcement affects share prices of the firms listed on East Africa Securities Exchange. This study concludes that stock prices of the listed firms on EASE are sensitive to rights issue, the share prices of the listed companies are initially insensitive to right issue announcements some few days to the announcement and then the share prices highly become sensitive towards the announcement dates. The study recommends that all fund managers operating in East Africa should make their decisions based on the rights issue announcement dates on behalf of their clients. Regular monitoring of the performance of the listed firms and their announcements should further be in place among fund managers so as to make rational investment decisions on behalf of their clients, that top management of the listed firms on EASE should use rights issue to manipulate their share prices. Hence, their value at the market place and that both individual as well as institutional investors operating on the EASE should make rational and informed decisions based on the rights issue announcements of the listed firms. This will help them to enhance their capital gains.

# CHAPTER ONE: INTRODUCTION

## 1.1 Background of the Study

Firms in stock markets engage in rights issue as option to generate more capital for financing their growth plans and internal undertakings (Ramirez, 2011). Corporations finance operations using either debt or equity. The usual long term method companies use for raising capital includes long preferred stock, common stock, term debt and retained earnings. Companies favor equity financing as it is a permanent source of funding that redeeming is not easily. Listed corporations in the securities exchanges globally, use an initial public offer (IPO) to raise external equity capital where public members participate, or through existing stockholders through a secondary issue also known as rights issue. Rights issues offer an opportunity to the current stockholders to purchase additional stocks in a company at a reduced price (Lambrechts & Mostert, 1980).

In the theoretical literature of finance, it has been assumed for some time that capital markets are to be efficient, with all available information reflected in securities prices, (White & Lusztig, 1980). Capital Market Authorities as regulatory bodies assists in providing favorable environment for growth and development of capital markets. Apart from lower flotation costs, there are some other reasons for the use of rights issues prevailing in these countries. Existing firms' stockholders may also be after unchanged shareholding due to dilution, control following a rights issue. The underwriting syndicate may incline towards rights issue since it increases the chances of the issue's.

Empirical researches in local and global framework done to examine rights issue's effect on stock returns. Some findings were coherent with the signaling theory signifying that capital markets show reaction information new in the market, specifically when management announces additional equity offering to the firms' existing stockholders. Stock Exchange listing regulations requires that rights issue must be offered before a new issue to the public. This is due to that existing stockholders possess the pre-emption right on the new shares therefore; current stockholders can maintain their current shareholding in the company. The preemption rights are presented by a provisional allotment letter and need to be exercised within a stipulated period subsequent to the announcement (Gay,

Leung and Zhu, 1992). Rights issue as a source of equity funding is important for publicly quoted companies.

### **1.1.1 Cross Listing**

A situation where a firm lists its shares in more than one securities exchange is referred to as cross listing (Ramirez, 2011). Examples include: European Depositary Receipt (EDR), International Depositary Receipt (IDR), American Deposit Receipt (ADR) and Global Registered Shares (GRS). Cross-listing of shares is a process of rearranging a security primarily listed on an Exchange (such as NSE) for to be purchased by an investor from another market. Corporations list in foreign exchanges to gain from enhanced market visibility (Baker et al., 2002), to increase liquidity in a stock (Karolyi, 1998) or to bring down cost of capital on segmented markets (Hail and Leuz, 2006). These arguments may give explanation as to why announcement on cross listing normally is linked with abnormal returns that are positive (Doukas and Switzer, 2000). Cross listings may result to an increment in stock's liquidity and decrease in cost of capital on a deeper and more liquid equity markets. Cross listing through an enhancement of the firm's information environment can bring down the cost of capital on a foreign market (Bashir, 2013).

Cross listing in East Africa Securities Exchanges is seen where some securities are listed in 2 or more exchanges. DSE has 6 cross listed corporations including East Africa Breweries, Kenya Airways, Jubilee Holdings Limited, Kenya Commercial Bank, Uchumi Supermarket Limited and Nation Media Group. RSE has 4 cross listed securities including Equity Bank, Kenya Commercial Bank, Nation Media Group, and Uchumi Supermarket. USE has 8 cross listed securities including Kenya Airways, Kenya Commercial Bank, East Africa Breweries, Jubilee Holdings Limited, Uchumi Supermarket Limited, Nation Media Group, NIC Bank and Centum Investment Limited. NSE has no cross listed securities from the region.

### **1.1.2 Rights Issue**

Renneboog (2002) defines a rights issue as an option where the existing stockholders can exercise pre-emption rights to acquire more securities in a corporation relative ratio to

their holdings. The right's exercise price is normally at a lower price to the pre-announcement stock price. Rights issue, therefore, is a significant source of new equity funding for corporations. Companies issue rights to shareholders in the following circumstances: To raise funds for strategic expansions, to acquire new assets, pay debts owed or conduct takeovers.

According to Van Horne et al (1975) shareholders with rights have three options: first they can exercise them and subscribe for additional shares, secondly they can sell them as they are transferable and thirdly they can simply do nothing. Also, a rights issue does not benefit a shareholder since it does not affect the shareholders' wealth. The advantages of rights issues are: it is a cost effective method of companies to raise additional funds due to lower flotation costs. The rights issues are priced lower than the pre- announcement price; there is an intrinsic value in rights. The shareholders have maintained control by exercising their rights.

The disadvantage of rights issues are the indirect costs such as capital gain taxes, selling rights transaction costs and increment in bid-ask spread. However, the company is in a better position of raised additional capital from shareholders due to its convenience to both stockholders and the company, (Eckbo and Masulis (1992) and Kothare (1997)).

### **1.1.3 Stock Prices**

A stock price is the value of a unit share of stocks of a corporation. Once the share is purchased, owner of shares becomes a shareholder of the company. To empirically assess the movement of a stock price, the price is normally examined at fixed intervals of time (Bashir, 2013). The intervals could be days, weeks or months. Before any analysis to be done one needs to answer whether the movement of an exchange traded instrument is the similar when the exchange is open as it is closed. Some argue that information turn up even when an exchange is closed and this should influence the price (Myers & Majluf, 1984).

The importance of the share price response within the event window is normally evaluated in relation to what is known to as the normal return period. The normal return

period is the normally a long period before the event window over which abnormal returns variance is estimated. The length of the estimation period must be specified as part of conducting an event study,

#### **1.1.4 Effect of Rights Issue on Stock Prices**

When a company issues information for corporate action through some communication, it is initiating a process which will result to change in its stock. Through comprehending different processes and their outcome, an investor may be capable of having a comprehensible outcome of what a corporate action point out about a company's financial affairs and how that action will influence the company's performance and share price (Bashir, 2013). This information will assist the investor to decide either sell, hold or buy the stock. Corporate board of directors normally agreed upon the events and informed and authorized by shareholders from time to time.

While Marisetty et al. (2008) found that there exist insignificant but abnormal positive returns among firms in India. Chen and Chen (2007) examined 205 right issues in China and found that around such announcement there is negative reaction from the market, but positive reaction post announcement period (in +10 to +20 days expiration period). In another study, Adaoglu (2006) conducted a study on how markets respond to “unsweetened” (plain) and “sweetened” rights offerings in the Istanbul security Exchange. The findings observed a significant negative abnormal returns on announcement day for “unsweetened” rights offerings and positive abnormal returns that were significant for “sweetened” rights offerings.

#### **1.1.5 East Africa Securities Exchanges**

The study was done upon the four East Africa Securities Exchanges, Nairobi Securities Exchange (NSE), Rwanda Security Exchange (RSE), Dar es Salaam Stock Exchange (DSE) and the Uganda Securities Exchange (USE).

Nairobi Securities Exchange was established in 1954, then known as Nairobi Stock Exchange and registered under the Societies Act as a voluntary association of

stockbrokers. The performance of NSE gradually improved over the decades until it was the best performing market in the world in addition to a return of 179% in dollar terms rated on February 18, 1994 after the NSE 20-Share Index recorded 5030 points by International Finance Corporation (IFC) (Nse.co.ke, 2014).

At present, 67 companies are listed in the NSE trading their stock and bonds daily. These companies are divided onto 12 main sectors of the economy. They include; agricultural, commercial and services, banking, insurance, investment services, telecommunication and technology, energy and petroleum, manufacturing and allied, investment, construction and allied, real estate investment trust and automobile and accessories (Appendix I). The NSE operates on the Automated Trading System (ATS) for government bonds. Innovations including the removal of the block trades board and introduction of trading of rights in the same manner as equities were later observed. The trading of corporate bonds through the ATS was possible on bonds that are immobilized and treasury bonds besides trading equities. These listed companies occasionally engage in rights issue to raise more capital for expansion or to finance their operations. All listed firms in the NSE are required to present their financial reports in compliance with IFRS. Umeme Limited is the only East Africa firm that is cross listed on the NSE, having been cross listed in 2012.

The Dar es Salaam Stock Exchange (DSE) incorporated in 1996 as a limited company by guarantee with no share capital and became operational in 1998. The DSE is a nonprofit making body created to assist the Government in implementation of financial sector reforms and resulting in encouragement of wider share ownership of Tanzania's companies. Currently traded securities are 17 Ordinary Shares, 5 corporate bonds and 8 government's bonds. Among the companies listed, 5 are cross listed. The exchange's main mission is to provide a responsive securities market that aims at mobilizing savings and directs them into productive sectors to contribute to the country's economic growth. Financial reports of firms listed in the DSE must be issued in compliance with IFRS. The first cross listed stock was Kenya Airways in 2004 followed by East Africa Breweries Limited in 2005 (Dse.co.tz, 2016).

Securities of rights issuing company are admitted on the list of the Exchange but only where those rights are renounceable in favour of other parties and convertible into a class of security was already admitted on the list. Upon rights issue or bonus shares allotment, the Registrar, irrespective of whether the DSE or any other person is appointed by the issuer to provide this service, shall supply the CSD with information that is relevant to assist in amending the relevant register of holders on behalf of the issuer to reflect the new securities' allotment. (Dse.co.tz, 2016).

The Uganda Securities Exchange (USE) was licensed by Capital Markets Authority of Uganda in 1997. The USE began formal trading operations in 1998 following the East Africa Development Bank (EADB) Bond listing. Currently, listed products on the Exchange include bonds and 16 equities (8 equities are cross listed). The USE's basic function is to provide a facility for raising funds for long-term assets investment. In 2000, Uganda Clays Ltd share was listed followed by the British American Tobacco (Uganda) Ltd (BATU) shares; which were both oversubscribed.

The USE requires all eligibility criteria for the Main Investment Market segment of the exchange by companies intending to cross list on the exchange (USE, 2014). There are eight cross listed firms on the USE. The first cross listed security was East Africa Breweries Limited in 2001, followed by Kenya Airways in 2002, Jubilee Holdings Limited (JHL) (2006), Kenya Commercial Bank (KCB) (2008), Equity Bank Limited (EBL) (2009), National Insurance Corporation (NIC) Bank, Nation Media Group (NMG) (2010) and Centum Investment Limited (2011). Rights issue in the USE market is not very common with New Vision Printing, Uganda Clays, & Publishing Company Limited being the first in 2008. This was followed by Kenya Airways (2012) and NIC Bank (2014).

The Rwanda Stock Exchange Limited incorporated in 2005 with a carrying out stock market operations' objective. The Stock Exchange was demutualized from the start as it was registered as a limited company and officially launched in 2011. The stock exchange has roles in the economy such as: providing companies with raising capital for



expansion's facility, mobilizing investment's savings, improved management standards and satisfy the stakeholders' demands through efficiency, government borrowing funds to finance infrastructure projects and stock indexes used as a general indicator of the economy's trend (rse.rw, 2016). There are 7 listed stocks at RSE: Bank of Kigali, Kenya Commercial Bank, Equity Bank Group Limited, Uchumi Supermarket Limited, Nation Media Group, Bralirwa and Crystal Telecom. The first 5 stocks are cross listed at the RSE from the NSE. Uchumi Supermarket Limited (2013) and Kenya Commercial Bank (2016) were expected to offer rights at RSE but, they did not take place both in NSE and RSE (RSE, 2016).

## **1.2 Research Problem**

Corporations issue rights as a means of capital raising for expansion or internal operations financing. Rights issues provide useful mechanism for raising equity for such corporations and according to Lambrechts and Mostert (2000), rights issues give the current shareholders opportunity of purchasing new shares at a discounted price to encourage participation. Type and source of finance to be raised by the firm depends on a variety of factors one being the cost. Jurin (2002) analyzed the transaction costs involved in a rights issue and issue of common stock at the stock exchange and established that both offerings incur many filing and legal charges. For a firm issuing a rights issue, it is required to contact all the shareholders and set up mechanism for the selling of rights.

Cross listing has been recognized also as a determinant of accounting quality. Corporations' shares listed on at least one foreign market apart from the domestic market will have to observe abide by international investors' needs and international practices' disclosures (Meek & Saudagaran, 2010). Adelegan (2008) established positive effect that was significant in measures of the depth of securities markets around regional cross listing events and gave emphasis to the possible effect of cross listing on success variables of cross listed.

A number of studies have been undertaken on rights issues and its impact on stock prices. Irungu (2012) did a study on informational content as a result of general election results announcement at the Nairobi Securities Exchange and established that general election

results carried a lot of information which affected the performance of shares trading at the NSE. Olesaaya (2010) conducted a research on the rights issue's returns effects on stock on companies listed at the NSE. The study found abnormal negative returns before rights issue announcement, abnormal positive returns during announcement and negative results thereafter. Kakiya (2007) conducted a study on the announcements effects of returns on stock. The findings from the study were that trends in stock returns are dependent on event announcement. Karanja (2006) conducted a study on companies listed at NSE on post rights issue evaluation of effects on firms' share price and volumes traded. He 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.

From the above review, little focus has been laid in relation on rights issues and its impact on stock prices in all four securities exchanges in East Africa. Therefore, this study seeks to find the following research question answers: what effect of rights issue on stock prices of firms listed at East Africa Securities Exchanges?

### **1.3 Research Objective**

To investigate the effect of rights issue on stock prices of firms listed at East Africa Securities Exchanges.

### **1.4 Value of the Study**

The study would contribute to the existing literature in the area of rights issue effect on stock prices of firms listed at East Africa Securities Exchanges. The findings of the study would be important to future scholars and academicians because it would serve as a source of reference on the subject besides providing suggestions on areas requiring future study in as far as the rights issue on stock prices at the East Africa Securities Exchanges is concerned.

The findings of this study would also be important to managers at the East Africa Securities Exchanges in understanding the rights issue effect on stock prices for the listed shares. This would help them institute measures required to stabilize the market and avoid abnormal stock returns at the market during such periods. The findings of this

study would assist investors in making more informed decisions when trading in East Africa Securities Exchanges.

The study would reveal whether and how rights issue on stock prices which is of great importance in making investment decisions. The findings of this study would equip financial advisors with empirical knowledge related to rights issue that would enable proper financial analysis hence informed financial advisory

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This chapter reviews the literature related to rights issue and how it impacts share prices and volumes of traded shares in the securities markets. The chapter outlines the theories the empirical studies on the impact of rights issue on share prices and volumes traded in a securities market both locally and at the global stage.

### **2.2 Theoretical Review**

This section outlines three theories that give the foundation of this study

#### **2.2.1 The Efficient Market Hypothesis**

Fama (1970) states that market efficient would be as a result of an perfect world where costs on transactions are zero, information that is relevant in the market is costless and available to all participants, and all agree on current information consequences on current share price and future volatility on the price. Doidge (2004) says that the above results to assumptions that expected profits are exploited as a result of all potential information to the point where they do not exceed the ‘normal’ returns level available in other options.

Boldt and Arbit (1990) state that completed empirical work since 1970 that had dealt with EMH testing at different information levels: weak, strong and semi strong forms. Weak EMH form states that the securities’ prices always reflect all historical available information on the prices (and returns), hence, information of sequence is of no benefit in forming future expectations n prices. Semi strong EMH form states that securities’ prices fully reflect all public available information and investors cannot gain abnormal profits from such information. Tests in this form of EMH focuses on securities’ price adjustment through a particular information event including dividend change, stock split or earnings report. Strong EMH form states that the prices of securities fully reflect public, private and sometimes in extreme interpretations, monopolistic information is available in the market. Thus, investors with special information cannot gain abnormal returns from its use.

Efficient market hypothesis is associated with the random walk idea characterized to show that subsequent securities' prices changes signify random volatilities from previous prices. Random walk ideology has the judgment that information is unimpeded and is simultaneously reflected in securities' prices and subsequent prices reflects the subsequent day's information. Burton (2003) thus defines efficiency as efficient financial markets where one cannot earn above average returns earnings by investors without accepting risk above average. This concept makes chartists believe of outdoing the market impossible. The market prices under EMH reflect both private and public information.

### **2.2.2 Asymmetrical Information Theory**

Asymmetric information theory was developed in the 1970s-1980s to be plausible common phenomena that general equilibrium mainstream economics could not explain. Simply, the theory proposes information imbalance between seller and buyers that may lead to outcomes that are inefficient. Most commonly, information asymmetries are looked into in the context of principal agent problems. Misinformation is caused by information asymmetry and in every communication process is very important.

The theory suggests that managers have an advantage to access inside information, hence, at a considerable informational advantage in comparison to outsiders' in regards to a firm's value, activities and opportunities in investments. Given this advantage on information accessibility, Ross (1977) suggested that managers do have an incentive in conveying information about their company's prospects to markets through financing activities. Managers are not likely to consign additional debt except when positive about future earnings and cash flows. Thus, debt issuing could be perceived by investors as a sign of optimism and quality with regards to future company's prospects leading to positive share price movements. In summary, generally asymmetric information theory expects debt announcements to be favorable. In addition, reduction in negative market responses can be observed when there is insignificant information asymmetry between participants in the market.

### **2.2.3 Signalling Theory**

The signaling hypothesis was initially investigated in the product and job markets context by Akerlof and Arrow, later Spence (1973) developed it into signal equilibrium theory by stating that a firm which is good can be distinguished from one that is bad by conveying reliable signals concerning its quality to capital markets. Ross (1977) shows how debt could be used as a costly indicator to separate the bad from the good firms. Under the asymmetric information between investors and management when obtaining financial resources, firms' signals are important. Ross assumes that correct distribution of firms' returns is known by the insiders (managers), but not by investors. Higher debt indication by managers can suggest an optimistic future of the firm and high quality firms could use more debt meanwhile low quality firms may have lower debt levels. The signaling theory looks into tactics of financing, where good firms try to differentiate themselves from bad firms by using different financing device (Jianmei et al., 2004).

Signaling theory is a situation where managers put forward information about the firms' quality and future prospects (Dodd, 2011). For example, in US stock market, cross-listing signals firms' dedication to protect minority investors in the domestic market, as a result it allows firms to raise funds at low cost and subsequently exploiting growth opportunities in domestic market (Charitou & Louca, 2009).

### **2.3 Determinant of Stock Prices**

Liquidity is identified as the ease to sell or buy stock in a securities market. Therefore, volume presence or no presence has a direct impact on liquidity in the market. Evidence of low levels of stocks transacted, stock is termed as illiquid in a particular period. Equally, if there is a high number of a stock traded, then we term the stock as liquid. There is no direct relationship since it is yet to be defined the number of shares traded will lead to a stock be liquid (Sapna & Dani, 2014). Liquidity is considered by annual turnover, which is simply the total of traded shares divided by the stock's outstanding shares. Stocks with high turnover are likely to have spreads that are low, low price impact per unit currency and high volume traded relative to the firm's size (Dalgaard, 2009).

Company's reputation could be changed by the demand for shares, political stability and other several external and internal factors. Oil prices rise, economy collapse risk and also threat of war may result to serious volatilities in the share prices often quite unpredictable (Copper, 2011). When viewing over long time frames, share price is directly related to the dividends and earnings of the firm (Coleman, 2011). Agrawal (2011) stated that earnings are the most significant factor in determining the stock's price most of the time. Earnings are the gains a company gets, and no matter how good a company is, if positive earnings are not made it will not survive at some point.

## **2.4 Empirical Review**

Kithinji, Oluoch & Mugo (2014) conducted a study on the rights issue's effect on firms share performance in the Nairobi Securities Exchange. The study found that Rights issues provide existing stockholders opportunity to purchase new shares, usually issued at a lower price than the prevailing market price so as to encourage investors in the raising of capital through purchasing shares in the market. The research was to evaluate the effects of rights issue on firms' subsequent trading prior to and after the issue. All the firms listed at the Nairobi Securities Exchange were part of the NSE 20 share index which was considered. In addition to this, all the firms that performed rights issue between 2007 and 2012 were included in the target population whether or not they were part of the NSE 20 share index.

Bashir (2013) investigated rights issue announcement market reaction to by using an event study methodology. The study focused on thirty one rights issues' performance in Karachi Stock Exchange (KSE) over a period between 2008 and 2011. They tested whether the investors' returns can be higher or lower than average normal return through depending on public information in a rights issue announcement. Abnormal gains were computed by the use of the market model and t-tests were performed to test significance. The study resulted to evidence in existence of positive abnormal returns on date of event. However the gain in stockholders' wealth was insignificant statistically. The study concluded that reaction of Karachi Stock Market was not indication of rights issue announcement affects i.e. investors did not maximize wealth.

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

Sakwa (2013) conducted a study on the rights issue announcement effect on stock returns of companies listed at the Nairobi securities exchange. The study covered a period of ten years from 2003 to 2012. A traditional event study approach was adopted for this study. The mean adjusted returns model as specified in Brown and Warner (1985) was used in this study. This model uses the mean return over the estimation period as the normal return for the security if the event did not take place. Study of 13 out of the 61 companies listed on the NSE that had rights issued during this period was done. A two tailed t-statistic at 95% confidence level was done to test for statistical significance of the mean abnormal returns. The results of the study show that stock returns positively react to rights issue announcements. A positive mean abnormal return was recorded over the event period with the highest abnormal returns being on day  $t+2$ . There was a statistical difference between mean abnormal returns observed during the event period and estimation period for eighteen events and no statistical significance for one event. It was recommended that the Capital market intensifies supervision of market participants to enforce compliance with market regulations and also implement education programs to raise awareness among market participants and reduce information asymmetry.

Suresha and Gajendra (2012) conducted a study on the reaction in the market announcement of rights issue, using an event study methodology for 90 stocks for the period between 1995 and 2011 and also examined neglected firm hypothesis, Price pressure hypothesis. They found that in other studies before, it is obvious that stock



returns are affected negatively or positively significantly around rights issue dates of announcement. The negative ARR were reported and it was insignificant statistically. Stocks' volume traded had no significant change observed during event window. The study concluded that the Indian stock market negatively reacts to announcement of rights issue.

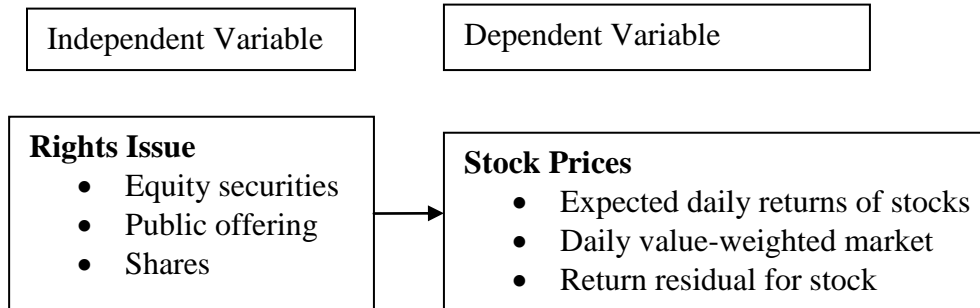
A study done by Ndua (2012) on the effects of the rights issue on share returns for companies traded in NSE also indicated that rights issue impacts on the returns. The study adopted a market model to generate the abnormal returns and the significance of the findings tested using two tailed t statistic.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

Njoroge (2003) conducted a study on the impacts of right issue announcements on share prices of listed companies at the Nairobi Stock Exchange. The study was based on a sample of six rights issues between 1996 and 2002. It examined whether the average abnormal returns surrounding the rights issue announcement was different statistically from zero. The market model was used to derive the expected returns and a t-test statistic used to test the hypothesis. Data analyzed for six companies showed negative price adjustment for companies, which issued rights issue. The results document abnormal negative return prior to announcement day and a moderate setback thereafter.

## **2.5 Conceptual Framework**

The conceptual framework describes the relationship between stock prices and rights issue in the East Africa including: Tanzania, Uganda, Kenya Tanzania and Rwanda. The rights issue was measured in terms of equity securities, public offering and shares whereas stock prices were measured over a 30 day event window. These are shown in the figure 2.1 below:

**Figure 2.1 : Conceptual Model**



**Source: Researcher**

## **2.6 Summary of Literature Review**

Review of the local empirical evidence also revealed that there is an effect on rights issue announcement on stock returns. Njoroge (2003) found abnormal negative stock return immediately before the announcement day of the rights issue and a moderate negative return thereafter. Ndua (2012) and Cheruiyot (2006) found that the positive or negative return experiences are dependent on the information content issued. The studies' findings looked at both negative and positive effects; the study will contribute into knowledge on the response of stocks' returns when rights issues are announced.

Investigation on the rights issue's effects of on stock prices in East Africa in terms of policy decisions for development promotion of the stock market found that stock markets have contributed to large corporations' growth financing in certain East Africa countries. Econometric examination of effect of share prices on growth in East Africa countries, however, evidence is found that is inconclusive although stock prices and volume traded are observed to be positively and significantly growth associated.

East Africa securities exchanges face the integration challenge and need for better institutional and technological development in addressing the low liquidity setback. Prerequisites for regional approaches to be successful include: legislations to be harmonized such as accounting and bankruptcy laws and a regime in trade that is liberalized. Liberalization in the domestic market financial sector such as ways to develop the legal and accounting framework, capabilities of credit evaluation in private

sector, and regulatory oversight would also be beneficial in public sector. There is no study conducted to investigate the rights issue's effect on prices of firms listed at all East Africa Securities Exchanges. This research gap is the motivating factor towards this study.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This chapter provides a discussion on the methodology of the research used in this study. It discusses the research design, sample and sampling technique, population, methods of collection of data used as well as data analysis and presentation methods used in the study.

### **3.2 Research Design**

A descriptive research design was applied. Descriptive research determines and reports as things are observed (Gay, 1981). The research design is suitable for this study because the study involves fact finding and enquiries to describe the effect of rights issue on stock prices as it exists at present.

### **3.3 Population**

The population of this study comprised of companies listed at the East Africa Securities Exchanges as at 31 August 2016 that have issued rights issue. The stock exchanges included: Nairobi Securities Exchange-NSE (Kenya), Uganda Security Exchange-USE (Uganda), Rwanda Stock Exchange (RSE) and Dar es Salaam Stock Exchange-DSE (Tanzania).

### **3.4 Sampling**

The study was based upon the three East Africa Securities Exchanges, namely the Dar es Salaam Stock Exchange (DSE), Nairobi Securities Exchange (NSE), Rwanda Stock Exchange (RSE) and Uganda Securities Exchange (USE). The security exchange are not only the most developed among the East Africa security exchanges but also, have established a relationship among them to integrate and develop capital markets in the East Africa Community (EAC). The exchanges operate under East Africa Securities Exchanges Association (EASEA) after signing of the memorandum of understanding between the EAC exchanges in 2004.

The study was based upon companies listed at NSE, DSE and USE that under took rights issue recently after the establishment of the East Africa Securities Exchange Association

(EASEA) from 2011 to 2016. All the companies included in this study met the following criteria: Were involved in an earlier initial public offering, the company involved is listed at least in one of the countries, available daily pricing over the period, available and reliable offering data

**3.5 Data Collection**

The study was an event study based on secondary data related to: Data on rights issues at the NSE, USE & DSE for the period 2011 to 2016 and other related information for each company was obtained from stock exchanges.

The rights announcement dates and other company specific information were sourced from the prospectus and from company announcements at the stock exchanges. Information on the daily security prices was sourced from the stock exchanges.

**3.6 Data Analysis**

To determine whether excess returns exist and whether the differences between these returns are associated with a rights issue, a standard event study was used in this research. For each rights issue, daily stock index and dividend adjusted price data is collected. The event window concerns the pre-announcement, announcement and post announcement period defined as  $t_n$ ,  $t_0$  and  $t_{n-1}$  respectively. The  $n$  is identified as 15 days. The data collected was used to compute expected daily returns using the single-index market model equation as indicated by equation (1) below:

$$R_{it}=a_i+b_jR_{mt}+u_{it}..... (1)$$

Where:

- $R_{it}$  is Expected daily returns of stocks  $i$  at time  $t$
- $R_{mt}$  is Daily value-weighted market returns (Stock Exchange index)
- $U_{it}$  is Return residual for stock  $i$  at time  $t$  with zero mean
- $a$  and  $b$  are Coefficients of Regression and constants determined by simple regression using daily data over the window period.

The daily return for each stock (or index) was calculated according to equation (2) below:

$$R_{it} = \ln(P_{it}/P_{it-1}) \dots\dots\dots (2)$$

Where:

$R_{it}$  is daily return of stock  $i$  at time  $t$

$\ln$  is the natural Logarithm

$P_{it}$  is the Price of stock  $i$  at time  $t$

The market model is then used to estimate the returns which are used to device the cumulative abnormal returns (CAR) over the event window so as to test the price effect of the announcement. The abnormal returns (AR) were estimated using equation (3) below:

$$AR_{it} = R_{it} - (a_i + b_i R_{mt}) \dots\dots\dots (3)$$

The cumulative abnormal returns (CAR) were computed for all days within the window period. The use of CAR is common in event study methodology (Brown and Warner, 1980, and 1985; Collins and Dent, 1984; Warren and Dalkir, 2001; and Shanthikumar, 2002). CAR for firm  $i$  was obtained using equation (4) below:

$$CAR_i (T-15, T+15) = \sum_{T-15}^{T+15} AR_{it} \dots\dots\dots (4)$$

To gain further insight of the relationship between the rights issue and stock returns, the parametric t-test was used at 5% and 1% levels of significance to determine the statistical significance of market adjusted average abnormal returns of stocks that announced rights issue over the window period. The T-test was computed using the standard deviation of abnormal returns for each stock  $i$  using SPSS.

## CHAPTER FOUR: RESEARCH FINDINGS

### 4.1 Introduction

In meeting the project objective of examining the rights issue's effect on stock prices of firms listed at East Africa Securities Exchanges, four countries were included in the study namely: Nairobi Securities Exchange-NSE (Kenya), Uganda Security Exchange-USE (Uganda) Rwanda Stock Exchange-RSE (Rwanda) and Dar es Salaam Stock Exchange-DSE (Tanzania). Of the four target markets three security markets data was collected from three markets while one market could not avail data giving a response rate of 75%.

### 4.2 Descriptive Statistics

The study sought to establish the effect of rights issue on stock prices of firms listed at East Africa Securities Exchanges. The analysis used descriptive statistics that include mean and standard deviation. The findings are presented in subsequent sections.

#### 4.2.1 Descriptive Statistics for NSE-Kenya

The study used companies that have cross-listed and have undergone rights issue from 2011 to 2016. Based on the criteria above, six companies were identified as Kenya Air ways, NIC Bank, Standard Chartered Bank, CFC Bank, Longhorn Publishers and KENGEN. The findings of the descriptive statistics are summarized in Table 4.1.

**Table 4.1: Descriptive Statistics for NSE-Kenya**

	N	Minimum	Maximum	Mean	Std. Deviation
Share Price	363	4.19	233.00	52.6694	74.67514
Expected Return	363	.00	.99	.0057	.05382
Daily Return	363	-.26	.20	-.0008	.06292
Abnormal Return	363	.00	0.234	.2891	1.09884
Cumulative Abnormal Return	363	-.24	0.345	.5566	1.16323

#### Source: Research Findings

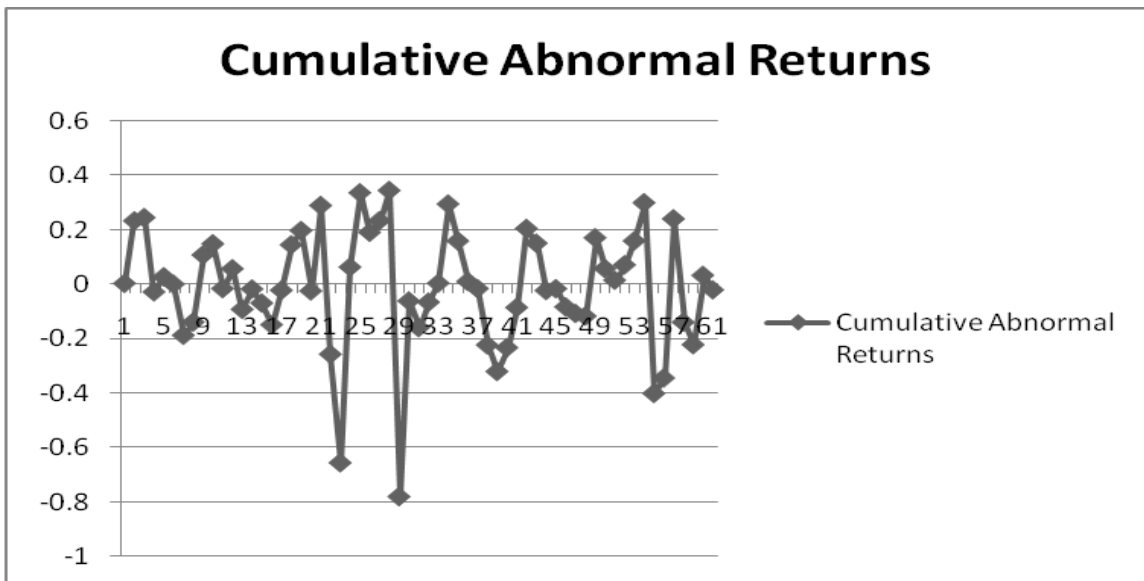
From Table 4.1, the minimum value of a security price at NSE was Ksh. 4.19 with the maximum value being Ksh. 233. The mean on the share prices was Ksh. 52.669 with standard deviation of Ksh.74.6751. The minimum expected returns were 0.00 with a maximum value was 0.99. The mean on the expected returns was 0.0057 with standard

deviation of 0.05382. The daily returns on the securities on the hand had a minimum value of -0.26 with a maximum of 0.20, mean of -0.0008 and standard deviation of 0.06292. The abnormal returns of the securities before and after the rights issue on NSE indicated that the minimum value was 0.00 while maximum was 0.234 with a mean of 0.2891 and standard deviation of 1.0988. The cumulative abnormal returns indicated that the minimum value was -0.24 with a maximum value of 0.345 and mean of 0.5566 and standard deviation of 1.1632.

#### 4.2.2 Cumulative Abnormal Returns for Nairobi Security Exchange Market

The findings of the cumulative abnormal returns for the entire Nairobi Security Exchange Market are presented in Figure 4.1.

**Figure 4.1: Cumulative Abnormal Returns for Nairobi Security Exchange Market**



**Source: Research Findings**

From the findings in Figure 4.1, the entire Nairobi Exchange Market generally had positive cumulative returns from for the first 21 days to the rights issue reaching a peak of 0.3. However, on nearing the rights issue date, there was negative drop to 0.8. This signals the sensitivity of the share price on rights issue. This further concurs with the findings of Table 4.1 that indicated a minimum value was -0.24 with a maximum value of



0.345 and mean of 0.5566 and standard deviation of 1.1632 on cumulative abnormal returns.

#### 4.2.3 Dar es Salaam Security Exchange

The study sought to examine the rights issue effect on stock prices of firms listed on EASE. Dar es Salaam Exchange was utilized as one the security exchange market in East Africa. Three firms were selected from DSE that have undergone rights issue for 2011-2015 and these included: DCB, CRBD and TOL. The findings of the descriptive statistics are indicated in Table 4.2.

**Table 4.2: Descriptive Statistics for Dar es Salaam Stock Exchange (DSE)**

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
Share Price	93	275.00	595.00	431.7742	119.15382
Expected Return	93	-98.32	.02	-1.0580	10.19478
Daily Return	93	-.09	.08	-.0011	.01884
Abnormal Return	93	-.09	0.9831	1.0569	0.19403
Cumulative Abnormal Return	93	-.11	.284	1.0567	0.19391

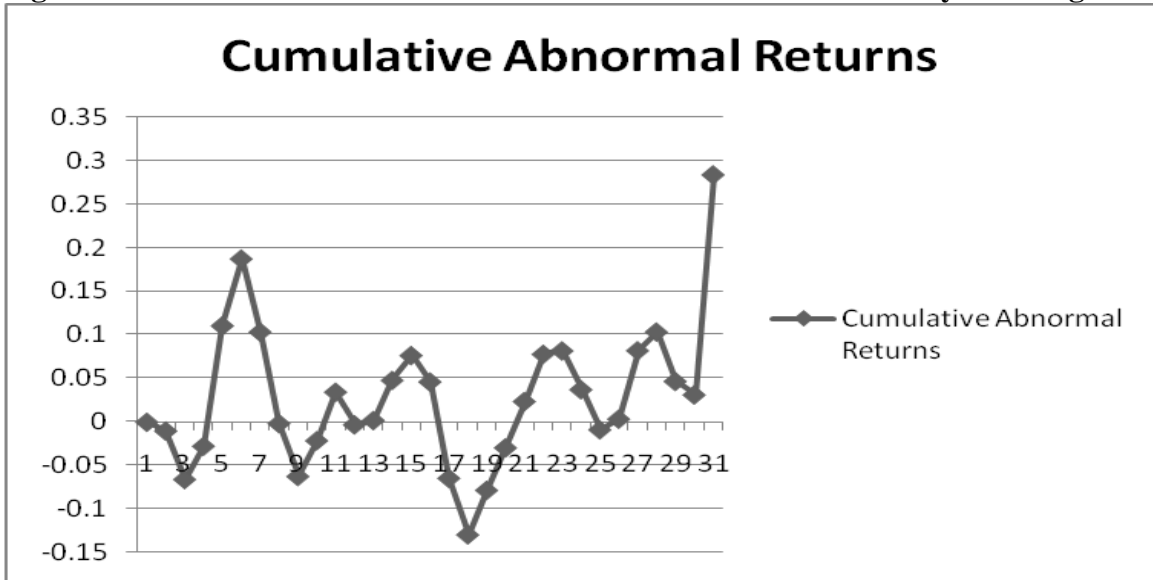
#### **Source: Research Findings**

The findings from Table 4.2 indicate that the minimum value of the share price of the securities on DSE was TZS. 275 with a maximum value of TZS. 595 and the mean was TZS. 431.77 and standard deviation was TZS. 11.15. The findings of the expected returns indicated that the minimum value was -98.32 with a maximum value being 0.02, a mean of -1.058 and standard deviation of 10.19. The findings of the daily returns indicated that the minimum value was -0.09 and maximum value of 0.08, a mean of -0.0011 and standard deviation of 0.01884. On the other hand, abnormal returns findings indicated a minimum value of -0.09 and maximum of 0.9831, a mean of 1.057 and standard deviation of 0.194. Cumulative abnormal returns on the other hand indicated a minimum value of -0.11 and a maximum of 0.284, the mean of 1.0567 and standard deviation of 0.193.

#### 4.2.4 Cumulative Abnormal Return for Dar es Salaam Security Exchange

The findings of the cumulative abnormal returns for the entire DSE market are presented in Figure 4.2.

**Figure 4.2: Cumulative Abnormal Return for Dar Es Salaam Security Exchange**



**Source: Research Findings**

From Figure 4.2, the abnormal returns for the entire Dar es Salaam Market was generally positive reaching a peak of 0.3 after the rights issue. However, on the date of the rights issue, there was a drop to about 0.14 which signals the sensitivity of the share price on rights issue. The findings of the Figure 4.2 concurs with the descriptive statistics in Table 4.2 which indicates that cumulative abnormal returns on the other hand indicated a minimum value of -0.11 and a maximum of 0.284, the mean of 1.0567 and standard deviation of 0.193.

#### **4.2.5 Descriptive Statistics for Uganda Securities Exchange (USE)**

Uganda Security Exchange was established as one security exchange market in East Africa and firms that had issued rights issue from 2011-2015 were identified and selected. Two firms were identified as NIC and Kenya Air Ways. The findings of the descriptive statistics are presented in Table 4.3.

**Table 4.3: Descriptive Statistics for Uganda Securities Exchange (USE)**

	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
Share Price	121	35.00	558.00	244.1901	210.96695
Expected Return	121	-.18	.13	-.0034	.06338
Daily Return	121	-.14	.13	.0015	.03820
Abnormal Return	121	-.20	.18	.0049	.07200
Cumulative Abnormal Return	121	-.28	.15	.0111	.08679

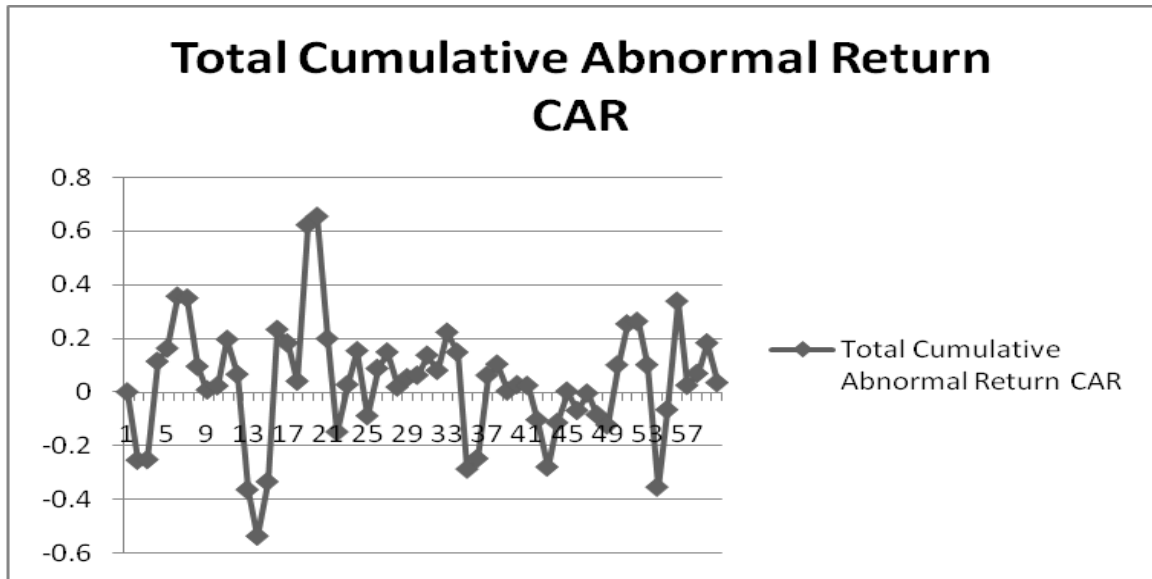
**Source: Research Findings**

From Table 4.3, the share price indicated by the securities on the USE was USh. 35 with a maximum value of USh. 558, the mean was USh. 244.1901 and standard deviation was USh. 210.967. The findings on the expected returns indicated a minimum value of -0.18 and a maximum value of 0.13, the mean was -0.0013 and standard deviation was 0.0634. The daily returns had a minimum value of -0.14 with a maximum value of 0.13; the mean was 0.0015 and standard deviation of 0.03820. The abnormal returns on the other hand had a minimum value of -0.20 with a maximum value of 0.18, a mean of 0.0049 and standard deviation of 0.0720. The cumulative abnormal returns on the hand had a minimum value of -0.28 and a maximum of 0.15, a mean of 0.011 and standard deviation of 0.0868.

**4.2.6 Cumulative Abnormal Returns for Uganda Securities Exchange**

The findings of the cumulative abnormal returns for the entire Uganda Securities Exchange are presented in Figure 4.3.

**Figure 4.3: Cumulative Abnormal Returns for Uganda Securities Exchange**



**Source: Research Findings**

The abnormal returns for Uganda Security Exchange experienced greater fluctuations with the highest positive at 0.6 some few days to the rights issue date. However, the 13<sup>th</sup> day before the rights issue, there was a significant drop to 0.59 which show how sensitive the share price was on rights issue. The findings further concurs with the results in Table 4.3 which indicates that The cumulative abnormal returns on the hand had a minimum value of -0.28 and a maximum of 0.15, a mean of 0.011 and standard deviation of 0.0868.

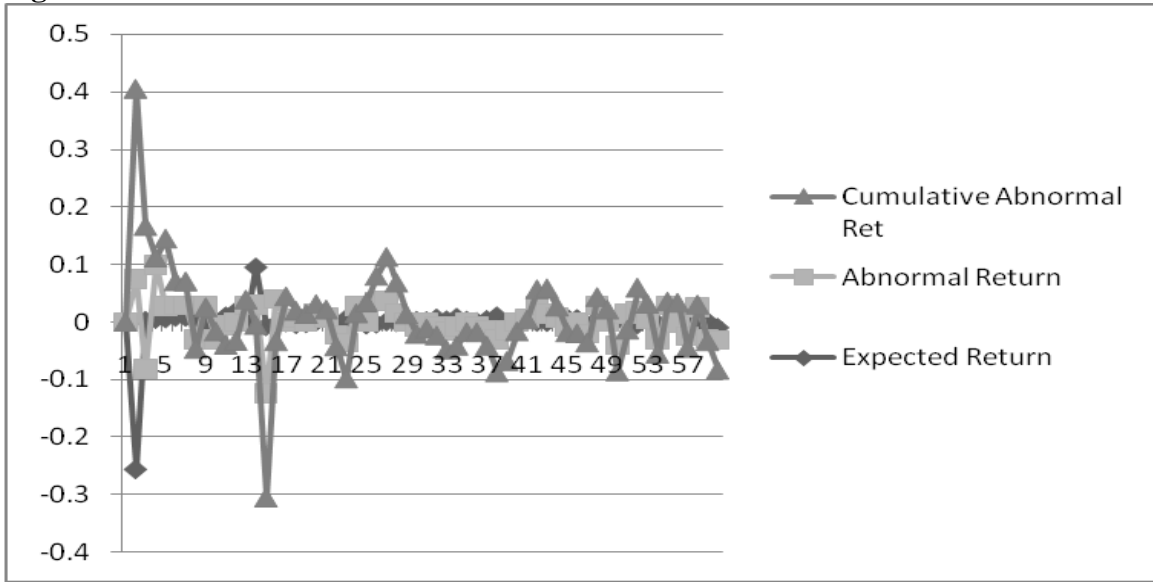
### **4.3 Trend Analysis**

Trend analysis was conducted to determine the effect of rights issue on prices of the stocks.

#### **4.3.1 NIC Bank-2012**

NIC bank was also identified as one of the cross-listed firm that had undergone rights issue and the findings of the trend analysis are illustrated in Figure 4.4.

**Figure 4.4: NIC Bank-2012**



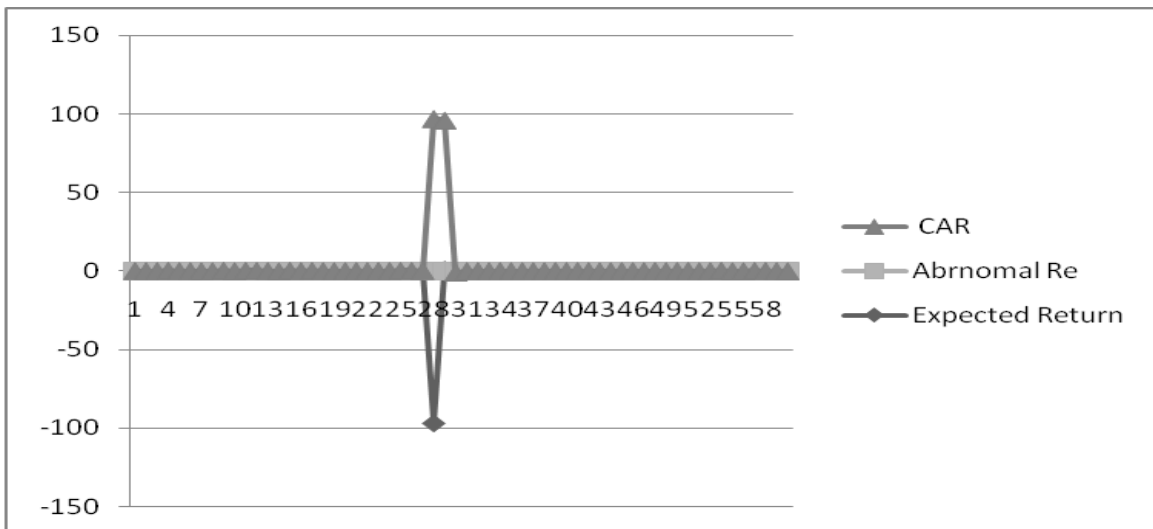
**Source: Research Findings**

As indicated in Figure 4.4, both abnormal returns and cumulative abnormal returns of NIC bank were positive and above the expected returns.

### 4.3.2 Kenya Air Ways

Kenya Air ways was identified as one the firms that had issued rights issue in 2012. The findings of trend analysis are presented in Figure 4.5

**Figure 4.5: Kenya Air Ways**



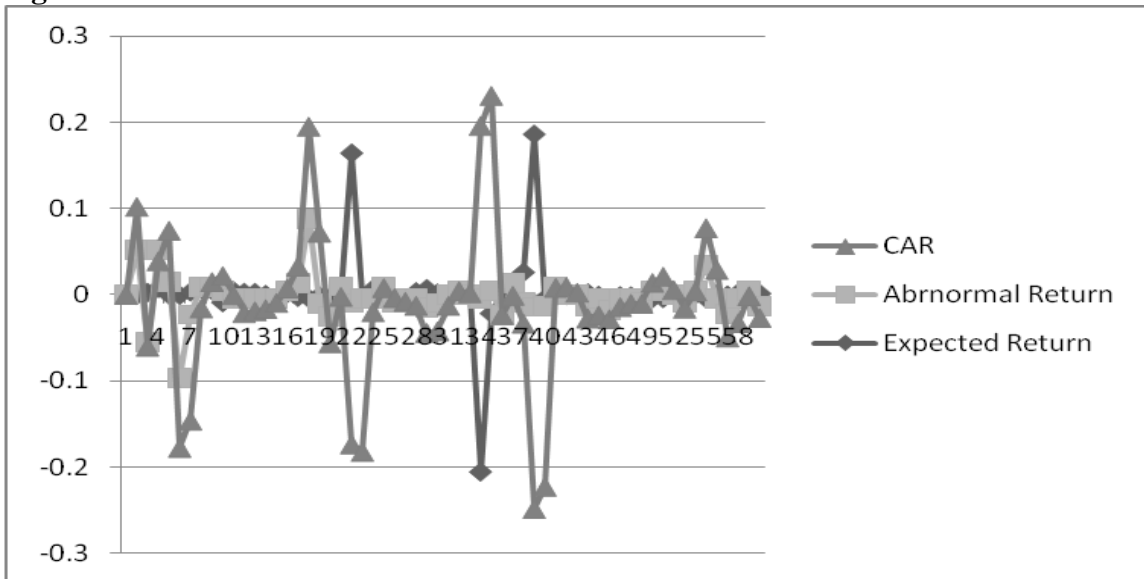
**Source: Research Findings**

From Figure 4.5, the value of CAR, Abnormal returns and expected returns for Kenya Air ways were stable with less fluctuation. This is an indication that the share price was insensitive on rights issue.

### 4.3.3 Standard Chartered Bank-2012

Standard Chartered Bank was also identified as one of the listed company that had undergone rights issue. The findings of its trend analysis are summarized in Figure 4.6.

**Figure 4.6: Standard Chartered Bank-2012**



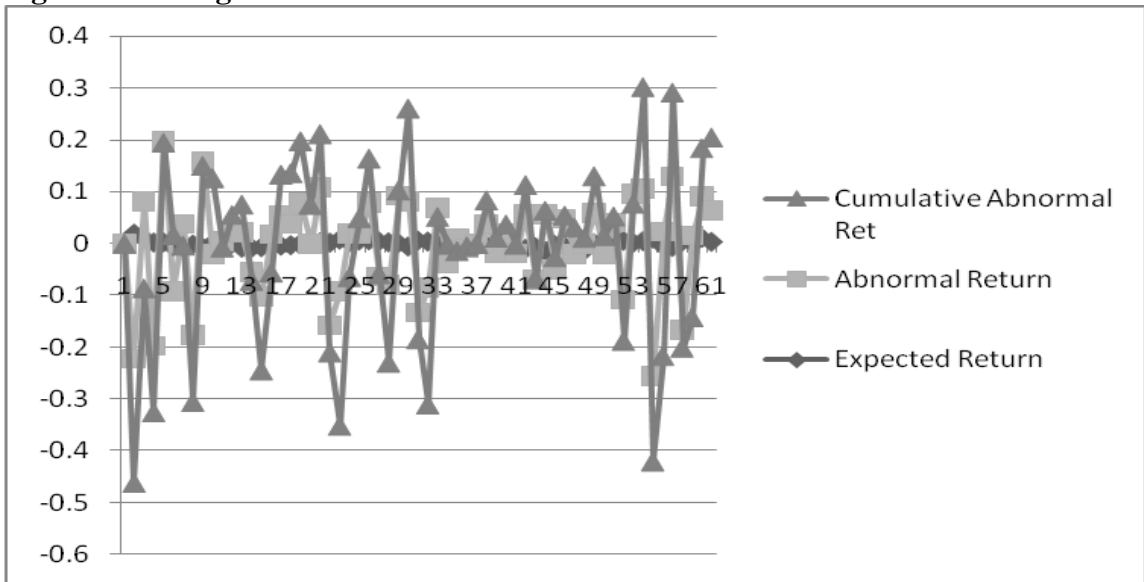
**Source: Research Findings**

For Standard Chartered bank, there was a great fluctuation in the expected returns and cumulative abnormal returns. However, the abnormal returns remained stable across the window period.

### 4.3.4 Longhorn Publishers-2016

The study also selected Longhorn as one of the listed company on EASE. The findings of the trend analysis are presented in Figure 4.7.

**Figure 4.7: Longhorn Publishers-2016**



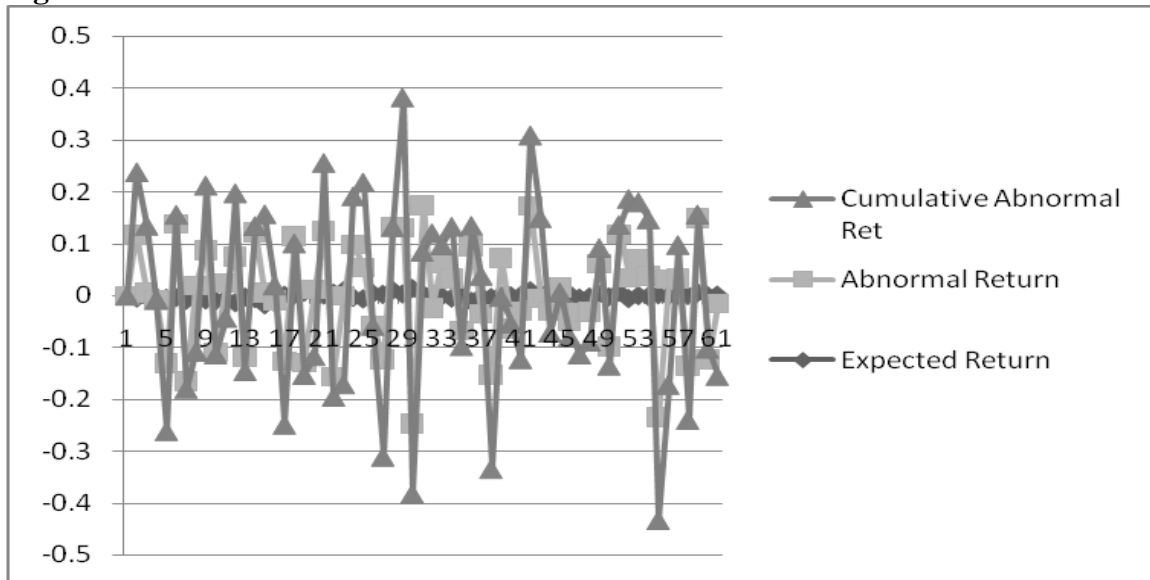
**Source: Research Findings**

For Long Horn Publishers, there was a fluctuation in both expected returns, cumulative abnormal returns and abnormal returns which signals great sensitivity of the share price towards the rights issue.

#### **4.3.5 KenGen-2016**

The study further selected KenGen as one of the cross listed companies that had undergone rights issue in 2016 and the findings of the trend analysis are presented in Figure 4.8

**Figure 4.8: KenGen-2016**



**Source: Research Findings**

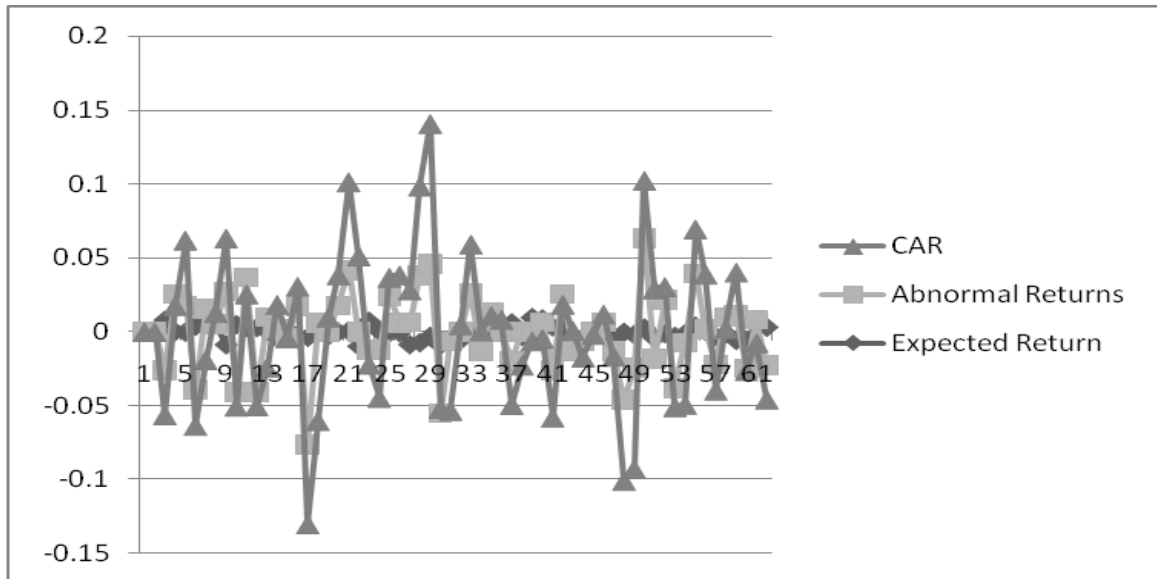
For Ken-Gen, there was also great fluctuation in cumulative abnormal returns, abnormal returns and expected returns. This signals sensitivity of Ken Gens share price towards the rights issue.

#### **4.3.6 CFC Stanbic**

The study sought to investigate the rights issue effect on share price of the firm listed on EASE. The findings of the CFC Stanbic are summarized in Figure 4.9



**Figure 4. 9: CFC Stanbic**



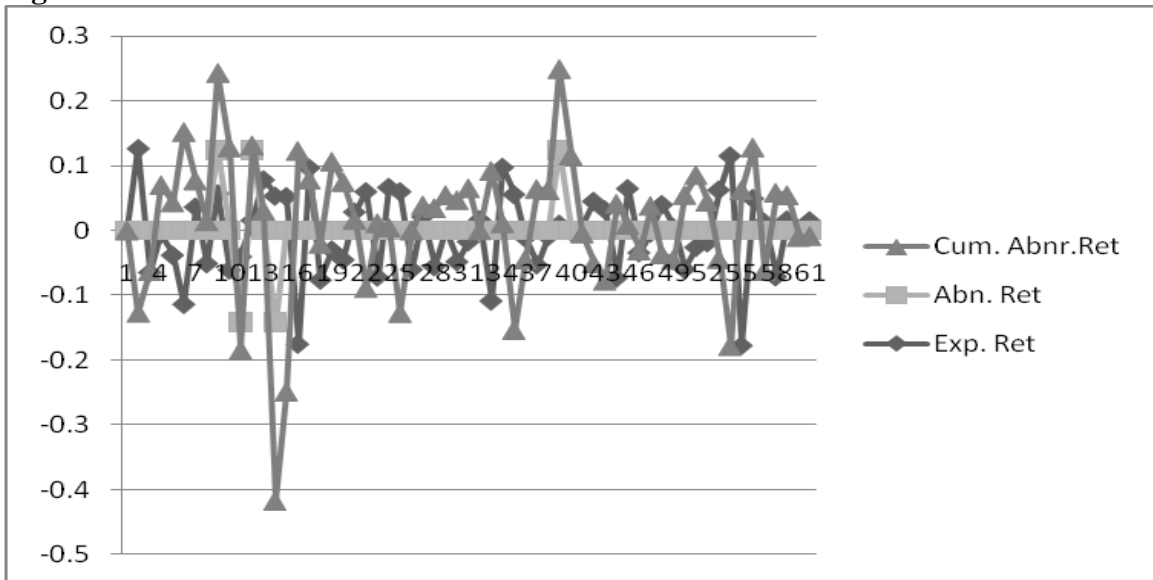
**Source: Research Findings**

Regarding CFC Stanbic, there were also fluctuations in cumulative abnormal returns, abnormal returns and expected returns. This indicates that the share price was sensitive towards rights issue.

#### **4.3.10 NIC-National Insurance Company**

National Insurance Corporation was identified as one the listed firm on USE that had issued rights issue. The findings of the trend analysis are presented in Figure 4.10.

**Figure 4.10: NIC**



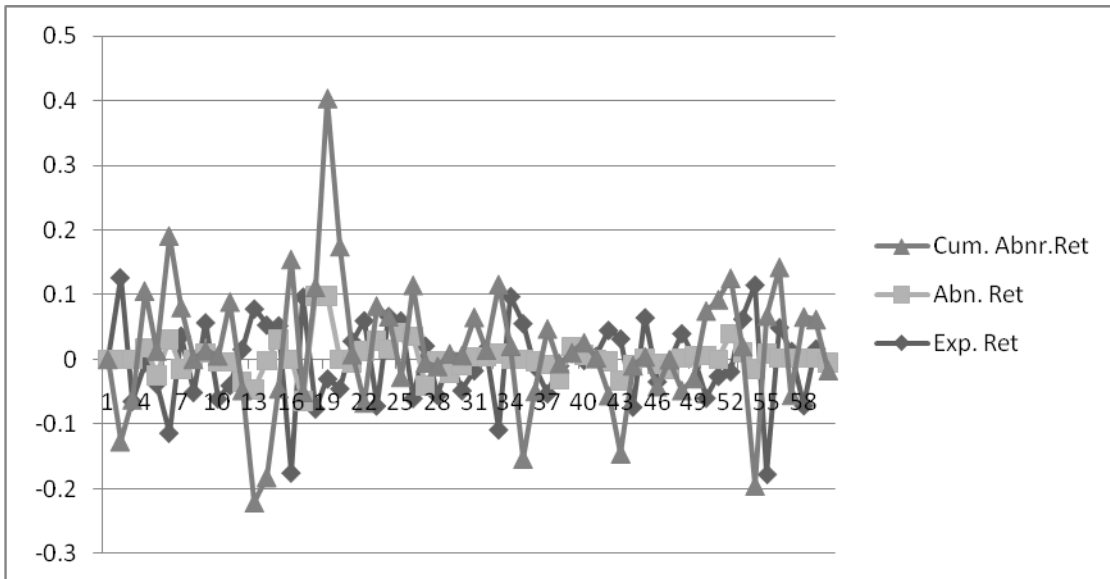
**Source: Research Findings**

Regarding the National Insurance Company listed on there was also fluctuations in cumulative abnormal returns, abnormal returns and expected returns which indicate that the share price was sensitive to rights issue.

#### **4.3.8 Kenya Airways-USE**

The study sought to investigate the rights issue's effect of on Kenya Airways stock as one of the firm listed on EASE. The findings of Kenya Air ways rights issue on USE are summarized in Figure 4.11.

**Figure 4.11: Kenya Air Ways-Uganda Security Exchange**



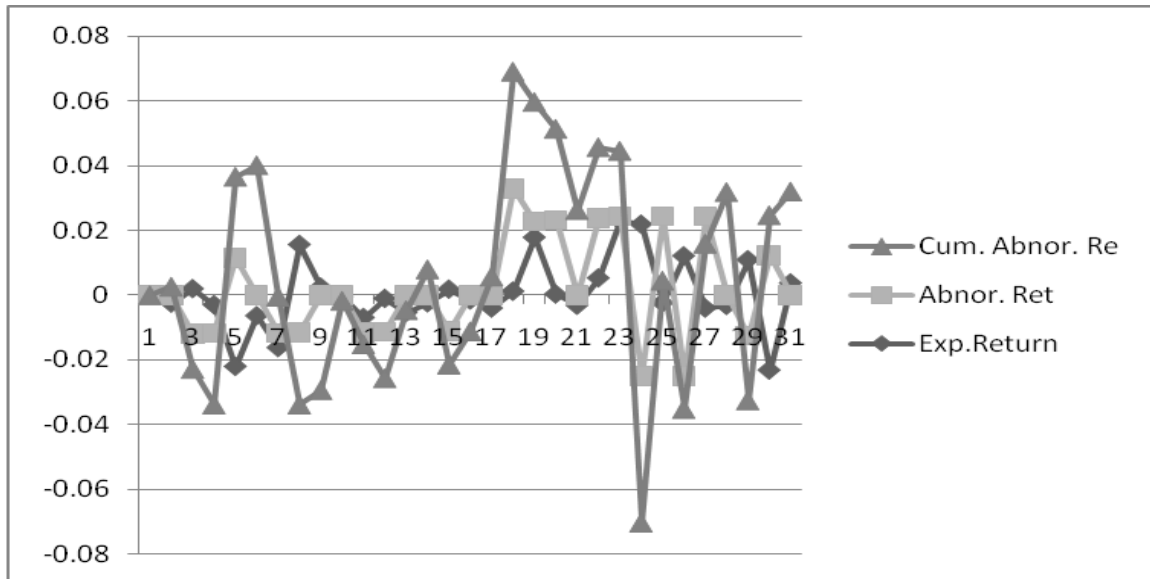
**Source: Research Findings**

In respect to Kenya air ways listed on USE, there were fluctuations in cumulative abnormal returns, abnormal returns and expected returns which mean that the share price was sensitive on rights issue.

#### **4.3.9 CBDB Bank Public Limited Company**

CRBD was also established as one of the listed companies on DSE. The trend analysis results are generalized in Figure 4.12.

**Figure 4.12: CRBD**



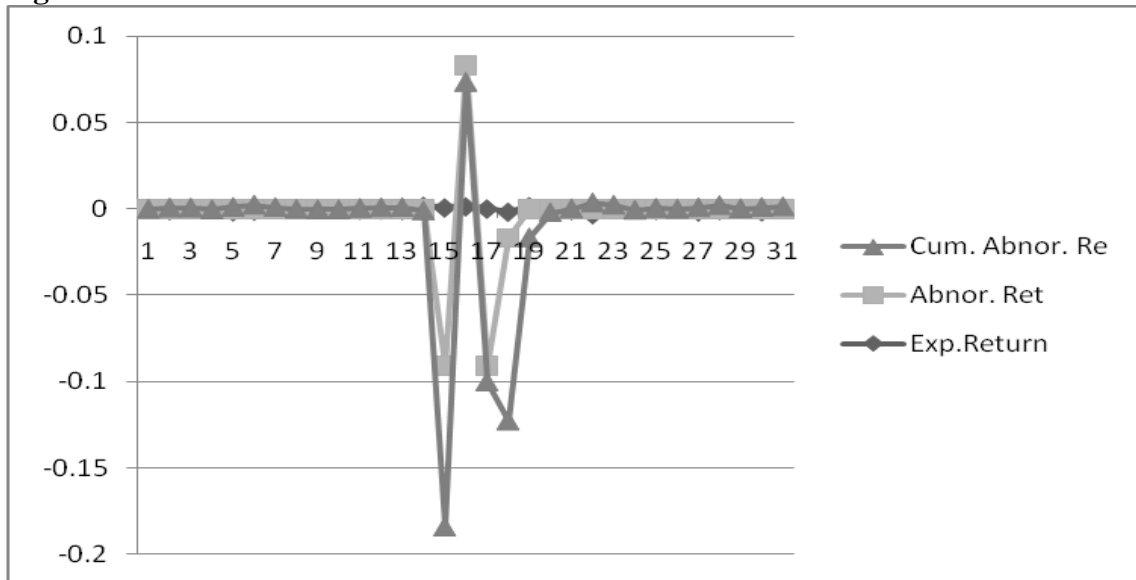
**Source: Research Findings**

For CRBD, a listed firm on DSE, there was highest fluctuation in cumulative abnormal returns ranging from positive to negative values and indication of the sensitivity of the share price.

#### **4.3.10 TOL Gases Limited**

TOL was also established as one the listed companies on DSE. The findings of the trend analysis are presented in Figure 4.13.

**Figure 4. 13: TOL**



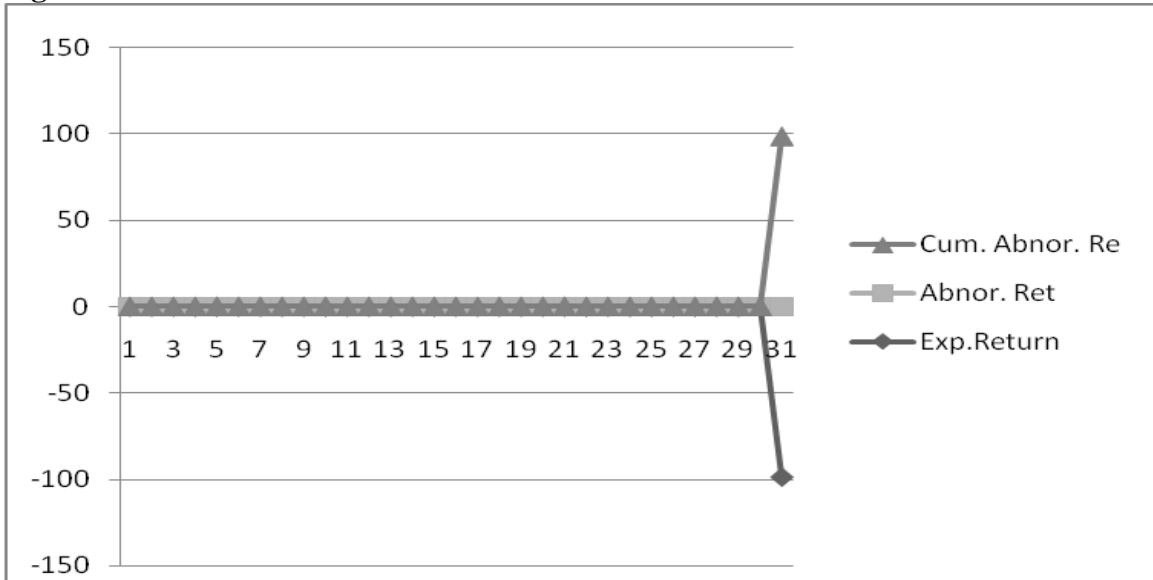
**Source: Research Findings**

TOL a listed company on DSE, also had great fluctuations during the announcement period in cumulative abnormal returns followed by abnormal returns across the window period. While before announcement and after we observe stable returns on the share price.

#### **4.3.11 Dares Salaam Community Bank DCB**

DCB was identified as one the listed companies on DSE. The trend analysis findings are presented in Figure 4.14.

**Figure 4. 14: DCB**



**Source: Research Findings**

DCB as a company listed on little fluctuations in cumulative returns, expected returns and abnormal returns. The share price was therefore not so sensitive on rights issue.

#### **4.4 Interpretation of the Findings**

The study revealed that the abnormal returns of the NSE before and after the rights issue on NSE indicated that the minimum value was 0.00 while maximum was 0.234 with a mean of 0.2891 and standard deviation of 1.0988. The cumulative abnormal returns indicated that the minimum value was -0.24 with a maximum value of 0.345 and mean of 0.5566 and standard deviation of 1.1632. On the other hand, abnormal returns findings for DSE indicated a minimum value of -0.09 and maximum of 0.9831, a mean of 1.057 and standard deviation of 0.194. Cumulative abnormal returns on the other hand indicated a minimum value of -0.11 and a maximum of 0.284, the mean of 1.0567 and standard deviation of 0.193. The abnormal returns for USE on the other hand had a minimum value of -0.20 with a maximum value of 0.18, a mean of 0.0049 and standard deviation of 0.0720. The cumulative abnormal returns on the hand had a minimum value of -0.28 and a maximum of 0.15, a mean of 0.011 and standard deviation of 0.0868. The findings above are similar with Bashir (2013) who investigated rights issue announcement market reaction by employing an event study methodology and found evidence of existence of abnormal positive returns on event date. However this gain in shareholders' wealth was

insignificant statistically. The study concluded that the reaction in Karachi Stock Market indicate no rights issue announcement affects i.e. investors do not maximize their wealth.

In order to establish the sensitivity of security prices towards the announcement of the rights issue, a T-test was conducted on the standard deviation (volatility) of abnormal returns prior and after the announcement of rights issue. The findings are presented in subsequent sections based on the appendices.

The findings of Kenya Airways reveal that for the first 9 days before the rights issue, the share price of Kenya Airways was so insensitive to rights issue as indicted by a negative T values. However, on reaching date 8<sup>th</sup> day, the share price was so sensitive to rights issue announcements as indicated by T values closer to 2. On the day before the rights issue was made, the share price was so sensitive to rights issue as indicated by a T-value of 2.611. The findings of Standard Chartered indicated that the share price of the security was initially insensitive to the price as indicated by negative T value unto the 9<sup>th</sup> day. The share price then was sensitive to rights issue from 9<sup>th</sup> as indicated by t value closer to 2. The share price was however highly sensitive to right issue announcement two days before the rights issue was made. The share price of CFC bank on the hand was also insensitive to the rights issue up to the 9<sup>th</sup> day. However, the share price become sensitive the rights issue from the 9<sup>th</sup> day before the rights issue was done. On the first day after the rights issue, the share price was highly sensitive to rights issue.

The findings from Table indicate that the share price of NIC Bank was initially insensitive to rights issue up 6 days to the rights issue. However, from the 5<sup>th</sup> day before the issue was made the share price was sensitive to rights issue as indicated by a T value closer to 2. The security price was so sensitive to the rights issue 2 days before the rights issue for the T value was 2.511. For Longorn Publisher, the share price was also initially sensitive before the rights issue was made up to four days before the rights issue. However from 4<sup>th</sup> date to issue the share price was sensitive as indicated by T value closer to 2. The share price of Long horn Publisher was heavily sensitive to rights issue one day before the rights issue as indicated by a t value of 2.841. The findings of Ken-Gen indicate that the share price was less sensitive before the rights issue was done from

date 15 up to the 9<sup>th</sup> date. However, from 10<sup>th</sup> day to right issue the share price was sensitive. On the day the right issue was made, the share price was so sensitive as indicated by t value of 2.867.

The findings of DCB indicate that the share price was insensitive to rights issue up to the 12<sup>th</sup> day. However, from the 12<sup>th</sup> day the price was sensitive reaching a peak one day before the rights issue. The findings of CRBD indicate that the share price was insensitive for the first 10 days before the issue was announced. However, on approaching date 5<sup>th</sup> the share price was sensitive reaching a peak of 2.838 a day after the announcement. For TOL, the share price was insensitive from 15<sup>th</sup> to 5<sup>th</sup> day before the rights issue. The share price however became sensitive from date 5<sup>th</sup> before right issue announcement with a peak of 2.711 two days before the rights issue announcement.

For the National Insurance Company, the share price was initially insensitive to rights issue announcements from 15<sup>th</sup> to 9<sup>th</sup> date as indicated by negative T values. From the 9<sup>th</sup> date onwards, the share price was sensitive with a peak of 2.811 two days before rights issue was announced. A t -test was conducted to assess the effect of rights issue on stock price of Kenya air. For Kenya Air Ways, the share price was initially insensitive before the rights issue announcement from 15<sup>th</sup> to 7<sup>th</sup> day. The share price however became sensitive to rights issue announcement from 8<sup>th</sup> date reaching a peak of 2.941 a day before the rights issue announcement was made.



## **CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMENDATIONS**

### **5.1 Introduction**

This chapter gives the summary of the findings of the analyzed data for the study. The chapter also presents the conclusion of the study based on the findings of the study. There chapter also presents the recommendations for the study as per the findings of the study. The chapter also sheds light on the recommendations for further research to future scholars and academicians.

### **5.2 Summary**

The study revealed that the minimum value of a security price at NSE was Ksh. 4.19 with the maximum value being Ksh. 233. The mean on the share prices was Ksh. 52.669 with standard deviation of Ksh.74.6751. The minimum expected returns were 0.00 with a maximum value was 0.99. The mean on the expected returns was 0.0057 with standard deviation of 0.05382. The daily returns on the securities on the hand had a minimum value of -0.26 with a maximum of 0.20, mean of -0.0008 and standard deviation of 0.06292. The abnormal returns of the securities before and after the rights issue on NSE indicated that the minimum value was 0.00 while maximum was 0.234 with a mean of 0.2891 and standard deviation of 1.0988. The cumulative abnormal returns indicated that the minimum value was -0.24 with a maximum value of 0.345 and mean of 0.5566 and standard deviation of 1.1632.

The study further revealed that for the first 9 days before the rights issue, the share price of Kenya Airways was so insensitive to rights issue as indicted by a negative T values. However, on reaching date 8<sup>th</sup> day, the share price was so sensitive to rights issue announcements as indicated by T values closer to 2. On the day before the rights issue was made, the share price was so sensitive to rights issue as indicated by a T-value of 2.611. For Standard Chartered bank, The findings of Standard Chartered indicated that the share price of the security was initially insensitive to the price as indicated by

negative T value unto the 9<sup>th</sup> day. The share price then was sensitive to rights issue from 9<sup>th</sup> as indicated by t value closer to 2. The share price was however highly sensitive to right issue announcement two days before the rights issue was made.

For CFC bank, the share price was also insensitive to the rights issue up to the 9<sup>th</sup> day. However, the share price become sensitive the rights issue from the 9<sup>th</sup> day before the rights issue was done. On the first day after the rights issue, the share price was highly sensitive to rights issue.

In respect to NIC bank, the share price of NIC Bank was initially insensitive to rights issue up 6 days to the rights issue. However, from the 5<sup>th</sup> day before the issue was made the share price was sensitive to rights issue as indicated by a T value closer to 2. The security price was so sensitive to the rights issue 2 days before the rights issue for the T value was 2.511.

For Long Horn Publishers, the share price was also initially sensitive before the rights issue was made up to four days before the rights issue. However from 4<sup>th</sup> date to issue the share price was sensitive as indicated by T value closer to 2. The share price of Long horn Publisher was heavily sensitive to rights issue one day before the rights issue as indicated by a t value of 2.841.

In respect to Ken Gen, the share price was less sensitive before the rights issue was done from date 15 up to the 9<sup>th</sup> date. However, from 10th day to right issue the share price was sensitive. On the day the right issue was made, the share price was so sensitive as indicated by t value of 2.867.

The findings from Table 4.2 indicate that the minimum value of the share price of the securities on DSE was TZS. 275 with a maximum value of TZS. 595 and the mean was TZS. 431.77 and standard deviation was TZS. 11.15. The findings of the expected returns indicated that the minimum value was -98.32 with a maximum value being 0.02, a mean of -1.058 and standard deviation of 10.19. The findings of the daily returns indicated that the minimum value was -0.09 and maximum value of 0.08, a mean of -0.0011 and standard deviation of 0.01884. On the other hand, abnormal returns findings indicated a

minimum value of -0.09 and maximum of 0.9831, a mean of 1.057 and standard deviation of 0.194. Cumulative abnormal returns on the other hand indicated a minimum value of -0.11 and a maximum of 0.284, the mean of 1.0567 and standard deviation of 0.193.

With respect to DCB, the share price was insensitive to rights issue up to the 12<sup>th</sup> day. However, from the 12<sup>th</sup> day the price was sensitive reaching a peak one day before the rights issue. Regarding CRBD, the share price was insensitive for the first 10 days before the issue was announced. However, on approaching date 5<sup>th</sup> the share price was sensitive reaching a peak of 2.838 a day after the announcement. In respect to TOL, , the share price was insensitive from 15<sup>th</sup> to 5<sup>th</sup> day before the rights issue. The share price however became sensitive from date 5<sup>th</sup> before right issue announcement with a peak of 2.711 two days before the rights issue announcement.

From Table 4.3, the share price indicated by the securities on the USE was USh. 35 with a maximum value of USh. 558, the mean was USh. 244.1901 and standard deviation was USh. 210.967. The findings on the expected returns indicated a minimum value of -0.18 and a maximum value of 0.13, the mean was -0.0013 and standard deviation was 0.0634. The daily returns had a minimum value of -0.14 with a maximum value of 0.13; the mean was 0.0015 and standard deviation of 0.03820. The abnormal returns on the other hand had a minimum value of -0.20 with a maximum value of 0.18, a mean of 0.0049 and standard deviation of 0.0720. The cumulative abnormal returns on the hand had a minimum value of -0.28 and a maximum of 0.15, a mean of 0.011 and standard deviation of 0.0868.

The study revealed that for the National Insurance Company, the share price was initially insensitive to rights issue announcements from 15<sup>th</sup> to 9<sup>th</sup> date as indicated by negative T values. From the 9<sup>th</sup> date onwards, the share price was sensitive with a peak of 2.811 two days before rights issue was announced. Furthermore, For Kenya Air Ways, the share price was initially insensitive before the rights issue announcement from 15<sup>th</sup> to 7<sup>th</sup> day. The share price however became sensitive to rights issue announcement from 8<sup>th</sup> date reaching a peak of 2.941 a day before the rights issue announcement was made.

### **5.3 Conclusion**

The study concludes the security prices of the listed firms on EASE are sensitive to rights issue. The shares respond to the new information on the announcement of rights issue as evidenced by the changes in the share prices. The share prices of the listed companies are initially insensitive to right issue announcements some few days to the announcement and then the share prices highly become sensitive towards the announcement dates. Therefore, rights issue affects the prices of security prices of the firms listed on EASE.

The study further concludes that the announcement of rights issue passes on some information to investors of the existence of a brighter future as this means that the company targets more projects with positive net present values. This therefore serves as a motivation for investors wanting to purchase the shares while those holding the shares demand more to sell them.

### **5.4 Recommendations for Policy and Practice**

The study recommends that all fund managers operating in East Africa should make their decisions based on the rights issue announcement dates on behalf of their clients. Regular monitoring of the performance of the listed firms and their announcements should further be in place among fund managers so as to make rational investment decisions on behalf of their clients.

The study also recommends that top management of the listed firms on EASE should use rights issue to manipulate their share prices. The top management of the listed firms should regularly declare rights issue as this will trigger effects on their share prices hence their value at the market place.

The study further recommends that both individual as well as institutional investors operating on the EASE should make rational and informed decisions based on the rights issue announcements of the listed firms. This will help them to enhance their capital gains.

### **5.5 Limitations of the Study**

The study exclusively relied on the use of secondary data on share prices; dates on rights issue announcement and the index of the market. Some of the data could not be obtained especially on share prices. This is because some of the companies had issued private placements as options to rights issue.

The study depended on secondary data which relates to the past. This is not very relevant in future decision making of financial management as the data relates to the past. This therefore limits the application of the findings to other future scenarios.

The study experienced some challenges in getting data from some of the target markets as data was either not available or the respondents were not willing to provide the required data. This limited the scope of the study to excluding some of the target markets

### **5.6 Recommendations for Further Studies**

This study on the rights issue effect on stock price of the listed focused on firms that have their shares on EASE. The study used mainly secondary data that was gathered exclusively by the use of data collection sheet. There is need to carry out similar studies in future but to include the effect of bonus issue, script issue and share split on the value of the stock prices both on NSE and EASE. Future studies should also employ the use of either primary and secondary data or empirical reviews on the subject. There is also need to carry out future studies on continent and global scale focusing on international security exchange markets including the New York Security Exchange (NYSE).

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## APPENDICES

### APPENDIX I: Descriptive data Nairobi Securities Exchange (NSE)

Below is the list of 20 companies that have undertaken rights issue from 1989 to 2015 at the Nairobi Securities Exchange (NSE).

<b>Year</b>	<b>Company</b>	<b>No. of stocks</b>	<b>Amount Raised</b>	<b>Sponsoring Broker</b>
1989	BBK	2,050,000	88,000,000	
1990	ICDC	5,069,014	70,966,196	
1991	Marshalls	1,827,000	21,475,475	
1992	KFB	2,719,707	4,487,500	
1993	EA Portland	72,000,000	1,008,000,000	Shah Munge
1994	EABL	28,080,675	1,488,275,775	Kestrel Capital
1995	ICDCI	9,419,476	282,584,280	Dyer & Blair Ltd
1996	Unga	5,201,450	8,200,000	
1997	PanAfrica Insurance	24,000,000	516,000,000	Suntra Stocks Ltd
1998	Kenya Orchards	72,000,000	36,000,000	Hall Securities
1999	Standard Newspaper	76,000,000	306,000,000	
2000	Total Company Ltd	76,871,154	306,080,775	CFC Financial Services
2001	Total Company Ltd	70,030,000	1,275,086,508	Shah Munge & Partner
2006	Diamond Trust Bank		776,000,000	
2007	Diamond Trust flank		1,600,000,000	
2007	HFCK	115,000,000	2,300,000	
2007	NIC Bank	14,285,715	1,000,000,000	

2008	KCB	221,777,777	5,544,444,425	Standard & Faida investments Banks
2008	HFCK	115,000,000	2,300,000,000	
2010	KCB	887,111,110	15,080,888,870	Standard Investment Bank
2010	Kenya Power & lighting company	488,630,245	1,221,575,613	
2010	Standard Chartered	15,100,000	2,500,000,000	Standard Investment Bank
2010	TPS Serena	24,700,000	1,180,000,000	
2012	Kenya Airways	1,477,169,549	20,680,373,686	KCB & Equity Bank
2012	Standard Chartered Bank		3,200,000,000	Standard Investment Bank
2012	NIC Bank	98,724,391	2,070,000,000	NIC security Limited
2012	CFC Stanbic Holdings	121,637,427	4,014,035,095	Standard Investment Bank
2014	KCB	50,000,000	2,750,125,000	Standard Investment Bank
2014	KPLC	488,630,245	9,830,340,000	
2015	CfC Bank	12,000,000	744,000,000	
2016	Longhorn Publishers	530,000,000		

**Source: Nairobi Securities Exchange (NSE)**

## APPENDIX II: Descriptive data Dar Es Salaam Stock Exchange

The following are 7 companies that have offered rights issue at the Dar es Salaam Stock Exchange DSE (2 are cross listed securities).

Year	Company	No. of stocks	Amount Raised (TShs)	Sponsoring Broker
2007	TOL Gases Limited	238,096,000	39,285,840	
2009	CBDB Bank Public Limited Company	197,870,000	20,560,000,000	Dyer & Blair Ltd
2010	KCB*	887,111,110	15,080,888,870	Standard investment Bank Limited
2012	Kenya Airways*	1,477,169,549	20,680,373,686	KCB & Equity Bank
2013	TOL Gases Limited	18,611,843	4,466,842,320	
2015	Dares Salaam Community Bank	6,000,000	3,060,000,000	Dyer & Blair Ltd
2015	CBDB Bank Public Limited Company	435,306,432	3,500,000,000	Dyer & Blair Ltd

\* (Cross listed security)

Source: **Dar es Salaam Stock Exchange (DSE)**

### **APPENDIX III: Descriptive data Uganda Securities Exchange USE**

The following are 4 companies that have offered rights issue in Exchange USE (3 are cross listed securities).

<b>Year</b>	<b>Company</b>	<b>No. of stocks</b>	<b>Amount Raised (TShs)</b>	<b>Sponsoring Broker</b>
2008	New vision Printing & Publishing Company Limited	25,500,000	29,116,000,000	Dyer & Blair Ltd
2008	Uganda Clays Limited	4,000,000	10,600,000,000	Dyer & Blair Ltd
2010	KCB*	887,111,110	15,080,888,870	Standard investment Bank Limited
2012	Kenya Airways*	1,477,169,549	20,680,373,686	KCB & Equity Bank
2014	NIC*	192,000,000	819,661,942	Dyer & Blair Ltd

\*(Cross listed security)

Source: **Uganda Securities Exchange (USE)**

**Appendix iv: T-Statistics Across the Window Period- Kenya Airways**

DAYS	t	Sig.	Mean Difference	95% Confidence Interval of the Difference	
				Lower	Upper
-15	-.541	.027	-.01013	-.0133	-.0015
-14	-.134	.009	-.00074	-.0126	.0119
-13	-.213	.038	-.00217	-.0176	.0119
-12	-.776	.043	-.00268	-.0048	.0014
-11	-.552	.033	-.00251	-.0104	.0034
-10	-.016	.010	-.00010	-.0036	.0044
-9	-.758	.036	-.00237	-.0031	.0013
-8	1.173	.025	-.00496	-.0119	.0010
-7	1.322	.025	-.00343	-.0069	.0010
-6	1.351	.024	-.00451	-.0134	.0024
-5	1.719	.011	-.00626	-.0118	.0003
-4	1.689	.022	-.00498	-.0008	.0003
-3	1.418	.017	-.00657	-.0126	.0024
-2	2.611	.034	-.00470	-.0204	.0100
-1	2.541	.040	-.00305	-.0120	.0049
0	2.266	.023	-.00295	-.0205	.0106
1	2.437	.005	-.00307	-.0102	.0101
2	2.248	.029	-.00201	-.0100	.0009
3	1.518	.021	-.00492	-.0107	.0034
4	1.271	.042	-.00142	-.0100	.0002

5	1.164	.031	.00117	-.0037	.0101
6	1.173	.006	-.00120	-.0101	.0057
7	1.207	.009	-.00158	-.01031	.0029
8	1.282	.202	-.00665	-.0147	.0034
9	1.871	.379	.01756	-.0229	.0410
10	-1.288	.211	-.02334	-.0630	.0163
11	1.208	.056	-.00929	-.0184	.0003
12	1.624	.133	-.00870	-.0210	.0037
13	1.123	0.224	0.00321	0.0021	0.0021
14	1.345	0.138	0.00943	0.0072	0.0032
15	1.595	.397	-.00168	-.0231	.0038



**Appendix v: T-Statistics Across the Window Period Standard Chartered**

				<b>95% Confidence Interval of the Difference</b>	
<b>DAYS</b>	<b>t</b>	<b>Sig.</b>	<b>Mean Difference</b>	<b>Lower</b>	<b>Upper</b>
-15	-.251	.017	-.00016	-.0138	-.0005
-14	-.124	.005	-.00026	-.0046	.0043
-13	-.223	.018	-.00018	-.0073	.0009
-12	-.376	.027	-.00219	-.0058	.0034
-11	-.602	.013	-.00111	-.0104	.0034
-10	-.006	.010	-.00210	-.0036	.0074
-9	-.948	.026	-.00127	-.0071	.0031
-8	-1.233	.015	-.00066	-.0039	.0010
-7	1.002	.004	-.00023	-.0069	.0020
-6	1.351	.014	-.00251	-.0134	.0044
-5	1.819	.001	-.00426	-.0128	.0012
-4	1.879	.012	-.00298	-.0106	.0005
-3	1.418	.016	-.00457	-.0136	.0024
-2	2.711	.024	-.00420	-.0114	.0110
-1	2.411	.030	-.00105	-.0120	.0069
0	2.167	.013	-.00245	-.0205	.0126
1	2.438	.004	-.00227	-.0122	.0101
2	1.338	.019	-.00101	-.0120	.0105
3	1.388	.011	-.00392	-.0127	.0035
4	1.241	.012	-.00132	-.0100	.0052

5	1.234	.021	.00127	-.0037	.0121
6	1.243	.003	-.00010	-.0111	.0057
7	1.217	.003	-.00038	-.0121	.0059
8	1.322	.201	-.00365	-.0137	.0047
9	1.331	.359	.01256	-.0219	.0410
10	-1.158	.201	-.02434	-.0530	.0173
11	1.128	.036	-.00919	-.0159	.0043
12	1.524	.133	-.00830	-.0110	.0027
13	1.595	.297	-.00468	-.0121	.0068

**Appendix vi: T-Statistics Across the Window Period CFC Stanbic**

				95% Confidence Interval of the Difference	
DAYS	t	Sig.	Mean Difference	Lower	Upper
-15	-.251	.013	-.02016	-.0148	-.0035
-14	-.114	.009	-.00046	-.0126	.0116
-13	-.313	.018	-.00118	-.0131	.0111
-12	-.436	.044	-.00139	-.0038	.0044
-11	-.212	.013	-.00151	-.0012	.0034
-10	-.014	.010	-.00010	-.0026	.0034
-9	-.938	.016	-.00117	-.0041	.0013
-8	1.123	.015	-.00396	-.0109	.0020
-7	1.322	.025	-.00143	-.0019	.0010
-6	1.451	.014	-.00151	-.0125	.0014
-5	1.519	.011	-.00426	-.0128	.0003
-4	1.759	.022	-.00198	-.0105	.0003
-3	1.218	.017	-.00327	-.0116	.0034
-2	2.311	.044	-.00350	-.0104	.0110
-1	2.141	.010	-.00105	-.0140	.0079
0	2.267	.013	-.00295	-.0215	.0156
1	2.738	.005	-.00307	-.0162	.0101
2	2.328	.019	-.00201	-.0140	.0109
3	1.658	.021	-.00492	-.0117	.0029
4	1.341	.042	-.00142	-.0110	.0072

5	1.244	.031	.00107	-.0087	.0211
6	1.253	.006	-.00120	-.0121	.0093
7	1.307	.009	-.00158	-.0131	.0049
8	1.392	.102	-.00365	-.0177	.0024
9	1.931	.179	.01756	-.0259	.0510
10	-1.358	.211	-.02134	-.0630	.0163
11	1.128	.016	-.00929	-.0189	.0003
12	1.324	.123	-.00870	-.0210	.0027
13	1.195	.377	-.00368	-.0121	.0048

**Appendix vii: T-Statistics Across the Window Period NIC Bank**

				95% Confidence Interval of the Difference	
DAYS	t	Sig.	Mean Difference	Lower	Upper
-15	-.321	.037	-.01016	-.0188	-.0015
-14	-.145	.009	-.00086	-.0146	.0129
-13	-.523	.048	-.00218	-.0173	.0129
-12	-.776	.047	-.00269	-.0098	.0044
-11	-.852	.033	-.00251	-.0114	.0064
-10	-.036	.010	-.00010	-.0086	.0084
-9	-.658	.036	-.00237	-.0081	.0033
-8	-1.383	.025	-.00496	-.0139	.0040
-7	-1.322	.025	-.00343	-.0099	.0030
-6	-1.551	.024	-.00451	-.0144	.0054
-5	1.419	.011	-.00626	-.0138	.0013
-4	1.689	.022	-.00498	-.0108	.0008
-3	1.418	.017	-.00657	-.0166	.0034
-2	2.511	.034	-.00470	-.0214	.0120
-1	2.341	.040	-.00305	-.0140	.0079
0	2.267	.023	-.00295	-.0215	.0156
1	2.238	.005	-.00307	-.0162	.0101
2	2.158	.029	-.00201	-.0150	.0109
3	1.588	.021	-.00492	-.0137	.0039
4	1.241	.042	-.00142	-.0110	.0082

5	1.274	.031	.00117	-.0087	.0111
6	1.253	.006	-.00120	-.0121	.0097
7	1.117	.009	-.00158	-.0131	.0099
8	1.192	.212	-.00765	-.0177	.0044
9	1.631	.359	.01556	-.0259	.0610
10	-1.258	.201	-.02234	-.0630	.0163
11	1.128	.046	-.00729	-.0189	.0003
12	1.524	.123	-.00670	-.0210	.0037
13	1.715	.297	-.00268	-.0131	.0058

**Appendix viii: T-Statistics Across the Window Period LongHorn Publishers**

				95% Confidence Interval of the Difference	
DAYS	t	Sig.	Mean Difference	Lower	Upper
-15	-.631	.017	-.01016	-.0188	-.0035
-14	-.124	.019	-.00086	-.0186	.0109
-13	-.353	.058	-.00218	-.0153	.0119
-12	-.896	.057	-.00769	-.0098	.0034
-11	-.632	.043	-.00351	-.0114	.0054
-10	-.026	.010	-.00030	-.0056	.0044
-9	-.558	.066	-.00237	-.0071	.0033
-8	-1.683	.025	-.00496	-.0129	.0040
-7	-1.482	.025	-.00343	-.0099	.0030
-6	-1.751	.024	-.00451	-.0144	.0054
-5	-1.819	.011	-.00626	-.0138	.0013
-4	1.789	.022	-.00498	-.0105	.0005
-3	1.518	.017	-.00657	-.0166	.0032
-2	2.611	.034	-.00470	-.0214	.0120
-1	2.841	.040	-.00305	-.0141	.0079
0	2.167	.023	-.00295	-.0215	.0156
1	2.238	.005	-.00307	-.0161	.0100
2	2.058	.029	-.00201	-.0150	.0100
3	1.388	.021	-.00490	-.0137	.0039
4	1.741	.042	-.00172	-.0100	.0052

5	1.574	.031	.00117	-.0084	.0111
6	1.453	.006	-.00120	-.0121	.0067
7	1.317	.009	-.00158	-.0121	.0079
8	1.692	.202	-.00665	-.0157	.0034
9	1.731	.379	.01756	-.0239	.0510
10	-1.658	.211	-.02334	-.0630	.0153
11	1.728	.056	-.00929	-.0159	.0001
12	1.524	.143	-.00870	-.0110	.0047
13	1.995	.797	-.00168	-.0131	.0058



**Appendix ix: T-Statistics across the Window Period Ken-Gen**

				95% Confidence Interval of the Difference	
DAYS	t	Sig.	Mean Difference	Lower	Upper
-15	-.351	.027	-.01016	-.0188	-.0015
-14	-.344	.009	-.00086	-.0176	.0119
-13	-.133	.048	-.00208	-.0153	.0119
-12	-.576	.047	-.00249	-.0088	.0024
-11	-.652	.033	-.00251	-.0114	.0064
-10	-.026	.010	-.00010	-.0086	.0084
-9	-.958	.036	-.00247	-.0071	.0003
-8	1.283	.025	-.00496	-.0139	.0030
-7	1.422	.025	-.00343	-.0099	.0020
-6	1.651	.024	-.00451	-.0144	.0052
-5	1.719	.011	-.00626	-.0138	.0043
-4	1.589	.022	-.00498	-.0108	.0008
-3	1.518	.017	-.00657	-.0156	.0024
-2	2.611	.034	-.00470	-.0214	.0120
-1	2.641	.040	-.00305	-.0130	.0079
0	2.867	.023	-.00255	-.0205	.0136
1	2.538	.005	-.00307	-.0162	.0111
2	2.158	.029	-.00201	-.0150	.0109
3	1.488	.021	-.00492	-.0137	.0019
4	1.141	.042	-.00142	-.0110	.0072

5	1.174	.031	.00117	-.0087	.0101
6	1.153	.006	-.00100	-.0121	.0047
7	1.117	.009	-.00058	-.0101	.0069
8	1.345	.202	-.00465	-.0107	.0034
9	1.921	.379	.01756	-.0209	.0110
10	-1.258	.211	-.02334	-.0530	.0103
11	1.128	.056	-.00929	-.0109	.0003
12	1.624	.143	-.00870	-.0210	.0037
13	1.895	.397	-.00368	-.0131	.0058

**Appendix x: T-Statistics Across the Window Period DCB-**

				95% Confidence Interval of the Difference	
DAYS	t	Sig.	Mean Difference	Lower	Upper
-15	-.681	.047	-.01006	-.0108	-.0011
-14	-.104	.005	-.00084	-.0143	.0119
-13	-.323	.038	-.00118	-.0153	.0109
-12	.856	.043	-.00249	-.0068	.0034
-11	.642	.023	-.00051	-.0154	.0034
-10	.026	.050	-.00010	-.0086	.0084
-9	.978	.056	-.00237	-.0061	.0013
-8	1.273	.015	-.00456	-.0119	.0020
-7	1.442	.035	-.00543	-.0069	.0050
-6	1.451	.024	-.00451	-.0144	.0054
-5	1.619	.021	-.00426	-.0118	.0003
-4	1.959	.032	-.00298	-.0508	.0003
-3	1.418	.027	-.00457	-.0186	.0024
-2	2.611	.034	-.00170	-.0204	.0020
-1	2.941	.050	-.00205	-.0040	.0009
0	2.067	.013	-.00495	-.0215	.0154
1	2.578	.005	-.00607	-.0162	.0301
2	2.558	.029	-.00101	-.0140	.0105
3	1.788	.021	-.00452	-.0137	.0039
4	1.331	.032	-.00142	-.0110	.0082

5	1.264	.031	.00107	-.0067	.0101
6	1.253	.006	-.00120	-.0121	.0097
7	1.417	.009	-.00156	-.0121	.0099
8	1.362	.102	-.00665	-.0157	.0044
9	1.531	.375	.01756	-.0259	.0610
10	-1.158	.211	-.02334	-.0630	.0163
11	1.228	.056	-.00529	-.0159	.0006
12	1.624	.143	-.00770	-.0210	.0037
13	1.895	.367	-.00388	-.0151	.0058

**Appendix xi: T-Statistics Across the Window Period CRBD**

				95% Confidence Interval of the Difference	
DAYS	t	Sig.	Mean Difference	Lower	Upper
-15	-.354	.067	-.01076	-.0288	.0015
-14	-.174	.019	-.00046	-.0246	.0159
-13	-.363	.048	-.00218	-.0173	.0179
-12	-.876	.047	-.00269	-.0098	.0074
-11	-.652	.033	-.00251	-.0114	.0084
-10	-.026	.010	-.00060	-.0086	.0034
-9	-.958	.036	-.00257	-.0091	.0023
-8	-1.883	.055	-.00496	-.0169	.0010
-7	-1.722	.075	-.00343	-.0049	.0030
-6	-1.461	.094	-.00451	-.0144	.0054
-5	1.959	.011	-.00626	-.0138	.0013
-4	1.909	.032	-.00498	-.0108	.0008
-3	1.508	.027	-.00657	-.0166	.0034
-2	2.711	.034	-.00490	-.0214	.01220
-1	2.641	.040	-.00605	-.0160	.0049
0	2.667	.023	-.00235	-.0115	.0156
1	2.838	.005	-.00507	-.0162	.0101
2	2.558	.029	-.0011	-.0150	.0109
3	1.678	.021	-.00792	-.0137	.0069
4	1.381	.052	-.00132	-.0510	.0782

5	1.284	.531	.00117	-.0087	.0111
6	1.293	.006	-.00120	-.0121	.0097
7	1.517	.009	-.00158	-.0131	.0099
8	1.372	.202	-.00665	-.0177	.0044
9	1.831	.379	.01356	-.0439	.0610
10	-1.578	.216	-.02354	-.0830	0.0054
11	1.298	.016	-.00629	-.0189	.0001
12	1.674	.144	-.00770	-.0210	.0067
13	1.965	.667	-.00398	-.0171	.0058

**Appendix xii: T-Statistics across the Window Period TOL Gas**

DAYS	t	Sig.	Mean Difference	95% Confidence Interval of the Difference	
				Lower	Upper
-15	-.632	.067	-.01916	-.0148	-.0115
-14	-.144	.009	-.00086	-.0146	.0169
-13	-.333	.023	-.00348	-.0123	.0129
-12	-.834	.045	-.00269	-.0098	.0044
-11	-.634	.025	-.00256	-.0114	.0034
-10	.024	.010	-.00034	-.0045	.0067
-9	.958	.036	-.00237	-.0081	.0033
-8	1.232	.032	-.00454	-.0134	.0035
-7	1.428	.025	-.00343	-.0099	.0022
-6	1.423	.045	-.00443	-.0167	.0054
-5	1.919	.011	-.00456	-.0138	.0011
-4	1.989	.232	-.00468	-.0108	.0008
-3	1.518	.056	-.00657	-.0166	.0024
-2	2.711	.077	-.00470	-.0270	.0111
-1	2.632	.040	-.00305	-.0132	.0079
0	2.367	.023	-.00295	-.0215	.0156
1	2.523	.005	-.00307	-.0162	.0101
2	2.358	.012	-.00232	-.0150	.0109
3	1.623	.021	-.00492	-.0137	.0039
4	1.341	.042	-.00160	-.0110	.0082

5	1.245	.031	.00117	-.0038	.0111
6	1.234	.006	-.00169	-.0121	.0097
7	1.356	.067	-.00158	-.0131	.0099
8	1.392	.269	-.00665	-.0177	.0044
9	1.931	.379	.01756	-.0259	.0676
10	-1.321	.211	-.02334	-.0630	.0163
11	1.232	.021	-.00929	-.0156	.0032
12	1.624	.150	-.00832	-.0232	.0021
13	1.837	.397	-.00368	-.0131	.0039



**Appendix VIII: T-Statistics Across the Window Period National Insurance  
Company**

DAYS	t	Sig.	Mean Difference	95% Confidence Interval of the Difference	
				Lower	Upper
-15	-.631	.054	-.01032	-.0168	-.0015
-14	-.164	.049	-.00086	-.0146	.0138
-13	-.335	.048	-.00118	-.0134	.01221
-12	-.879	.047	-.00269	-.0098	.0044
-11	-.657	.033	-.00251	-.0114	.0064
-10	-.025	.017	-.00011	-.0086	.0084
-9	-.958	.036	-.00237	-.0081	.0033
-8	1.287	.025	-.00496	-.0139	.0040
-7	1.427	.025	-.00343	-.0099	.0030
-6	1.491	.024	-.00451	-.0144	.0054
-5	1.909	.011	-.00626	-.0138	.0013
-4	1.909	.022	-.00498	-.0108	.0038
-3	1.518	.017	-.00457	-.0168	.0024
-2	2.811	.034	-.00470	-.0204	.0110
-1	2.631	.020	-.00375	-.0130	.0049
0	2.357	.063	-.00255	-.0205	.0106
1	2.568	.015	-.00387	-.0165	.0131
2	2.358	.064	-.00101	-.0130	.0119
3	1.688	.011	-.00452	-.0147	.0139
4	1.431	.045	-.00432	-.0130	.0182

5	1.574	.041	.00107	-.0057	.0611
6	1.153	.006	-.00620	-.0161	.0297
7	1.517	.009	-.00758	-.0141	.0499
8	1.352	.202	-.00695	-.0477	.0544
9	1.941	.379	.01759	-.0659	.0610
10	-1.368	.211	-.02364	-.0530	.0163
11	1.328	.056	-.00429	-.0389	.0503
12	1.6424	.159	-.00860	-.0310	.0237
13	1.695	.337	-.00368	-.0331	.0158

**Appendix IX: T-Statistics Across the Window Period Kenya Air Ways**

				95% Confidence Interval of the Difference	
DAYS	t	Sig.	Mean Difference	Lower	Upper
-15	-.654	.027	-.01016	-.0188	-.0015
-14	-.174	.009	-.00086	-.0146	.0129
-13	-.373	.048	-.00218	-.0173	.0129
-12	-.896	.047	-.00269	-.0098	.0044
-11	-.602	.033	-.00251	-.0114	.0064
-10	-.006	.010	-.00010	-.0086	.0084
-9	-.948	.036	-.00237	-.0081	.0033
-8	-1.293	.025	-.00496	-.0139	.0040
-7	-1.432	.025	-.00343	-.0099	.0030
-6	1.651	.024	-.00451	-.0144	.0054
-5	1.519	.011	-.00626	-.0138	.0013
-4	1.789	.022	-.00498	-.0108	.0008
-3	1.518	.017	-.00657	-.0166	.0034
-2	2.611	.034	-.00470	-.0214	.0120
-1	2.941	.040	-.00305	-.0140	.0079
0	2.167	.023	-.00295	-.0215	.0156
1	2.438	.005	-.00307	-.0162	.0101
2	2.658	.029	-.00201	-.0150	.0109
3	1.388	.021	-.00492	-.0137	.0039
4	1.341	.042	-.00142	-.0110	.0082

5	1.274	.031	.00117	-.0087	.0111
6	1.253	.006	-.00120	-.0121	.0097
7	1.317	.009	-.00158	-.0131	.0099
8	1.392	.202	-.00665	-.0177	.0044
9	1.931	.379	.01756	-.0259	.0610
10	1.358	.211	-.02334	-.0630	.0163
11	1.528	.056	-.00929	-.0189	.0003
12	1.624	.143	-.00870	-.0210	.0037
13	1.895	.397	-.00368	-.0131	.0058