IMPACT OF RIGHTS ISSUE ON SHARE RETURNS OF FIRMS LISTED ON THE
NAIROBI SECURITIES EXCHANGE

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ABSTRACT

The purpose of this study was to establish the impact of rights issue on share returns of firms listed on the Nairobi Securities Exchange. The study adopted an event study methodology which attempted to establish the information content of rights issue on share returns. The population of this study was 18 companies listed in the NSE. Secondary data collected spans 7 years from 2005-2012; share prices for 30 days before the announcement of rights issue and 30 days after the announcement date was used to generate actual returns, expected returns and abnormal returns. T test analysis was used to test whether there was significant difference on returns between the two periods before and after announcement date. Following the study findings, it was possible to conclude that the market return is a good predictor of stock returns hence the market model was validated. Finally, results led to the conclusion that the expected returns as well as the market returns were significantly higher after rights issue than before rights issue. However, abnormal returns were not significantly different implying that the information content of rights issues do not affect stock return and this may be an indicator of market efficiency. The unique contribution of the paper is that it will reduce the inconclusiveness that has been observed in empirical studies focusing on impacts of rights issue on stock returns.
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1.0 Background Literature

Companies often need adequate capital base to enable them operate efficiently. Each company can therefore adopt various methods of raising finances for their businesses; the method chosen by the firm to raise finance depends on factors such as profitability prospects of the project to be financed, timing of the finance, the existing capital structure and the costs of raising such capital. Most common types of long-term financing include long-term debt, common stock, preferred stock and retained earnings. Companies use either equity or debt financing but equity is preferred since it forms a permanent source of funding that cannot be redeemed easily. Listed corporations around the world typically raise external equity capital either from existing shareholders or from new investors. Where corporations raise capital from new investors, it’s called initial public offer (IPO). Here, the public are invited to participate and the formula of allotting shares is clearly stated. Where funds are raised from the existing shareholders; it’s referred to as a rights issue; thus an offer to buy additional securities in a corporation at a discounted price. Rights issue targets existing shareholders and are allocated based on the number of shares they hold. In most cases, a rights issue is offered by closed-end companies; those that redistribute all their earnings failure to which, they face backlash from shareholders who may sell en mass and lower company’s value (Gowthorpe, 2005).

Rights issue is an important source of new equity funding for publicly quoted companies. In these rights offerings, companies grant shareholders a chance to buy new shares at a discount to the current trading price. It is often used by listed companies in the securities exchange to raise money rather than take on debt, the transaction involves the company giving existing shareholders the right to subscribe to newly issued shares in proportion to their existing holdings. Legally a rights issue must be made before a new issue to the public. This is because existing shareholders have the “right of first refusal” otherwise known as a “preemptive rights on the new shares (Hillier, Ross, Westerfield & Jordan, 2013). By taking these preemptive rights up, existing shareholders can maintain their existing percentage holding in the company. However, shareholders can, and often do, waive these rights, by selling them to others. It has been noted that prior to the announcements of rights issue the market forces come into play and share prices change based on this information. The general feeling is that the prices will change because the price will now be cum rights. But the rights issue announcements are often
accompanied by corporate news over why the capital is being sought. The market will therefore take this information into account and react to it. If the money is to be put to really good use, then the share price may rise, even though the prospect of extra shares has a dilutive effect (Hillier et al, 2013). So the question is; what is the impact of rights issues on share returns of the issuing company?

It has been said that Companies issue rights as a way of raising capital for expansion or for financing internal operations. Rights issues provide a useful mechanism for raising equity for such companies and according to Lambrechts and Mostert (2000), rights issues give the existing shareholders the option of purchasing new shares, normally issued at a discount to the prevailing market price to encourage participation. It is noteworthy that the 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 found out that both offerings incur many legal and filing charges. For a firm issuing common stock, the costs include preparing and publishing a prospectus and lining up buyers for the issue. In contrast to a rights issue, the company is required to contact all the shareholders and set up mechanism for the selling of rights.

Stock markets in the world individually and collectively play a critical role in their economies as they provide an avenue for raising funds, for trading in securities including futures, options and other derivatives which provide opportunities for investors to generate returns (Alesina and Rodrik, 1994). The markets perform a wide range of economic and political functions while offering trading, investment, speculation, hedging, and arbitrage opportunities. In addition they serve as a mechanism for price discovery and information dissemination while providing vehicles for raising finances for companies. Stock markets are used to implement privatization programs, and they often play an important role in the development of emerging economies (Lee, 1998). The performance of a stock market of an economy is of interest to various parties including investors, capital market regulators, the stock exchange and government among others. Stock market performance is influenced by a number of factors key among them being activities of the government and the general performance of the economy. Other factors that affect stock markets performance include, availability of other investment assets, change in composition of investors, and market sentiments among many other factors (Siegel, 1998).
1.1 Nairobi Securities Exchange

The Nairobi Securities Exchange was constituted as a voluntary association of stock brokers registered under the societies Act in 1954. In 1991 the Nairobi Security Exchange was incorporated under the companies Act cap 486; laws of Kenya as a company limited by guarantee and without a share capital (Kibuthu, 2005). Subsequent developments of the market has seen an increase in the number of stockbrokers, introduction of investment banks, establishment of custodial institutions, credit rating agencies and the number of listed companies have also increased over time. Securities traded include equities and bonds (NSE, 2013). 1996 witnessed the largest share issue in the history of NSE; the privatization of Kenya Airways. In May 2006, NSE formed a demutualization committee to spearhead the process of demutualization and in September 2006 live trading on the automated trading systems of the Nairobi Securities Exchange was implemented. In July 2007 NSE reviewed the Index and announced the companies that would constitute the NSE Share Index. The review of the NSE 20-share index was aimed at ensuring that it is a true barometer of the market.

In 2008, the NSE All Share Index (NASI) was introduced as an alternative index (NSE, 2012). Its measure is an overall indicator of market performance. The Index incorporates all the traded shares of the day. Its attention is therefore on the overall market capitalization rather than the price movements of select counters. The Nairobi Securities Exchange marked the first day of automated trading in government bonds through the Automated Trading System (ATS) in November 2009. The automated trading in government bonds marked a significant step in the efforts by the NSE and Central Bank of Kenya (CBK) towards creating depth in the capital markets by providing the necessary liquidity (NSE, 2013). In July 2011, the Nairobi Stocks Exchange Limited changed its name to the Nairobi Securities Exchange Limited. The change of name reflected the strategic plan of the Nairobi Stocks Exchange to evolve into a full service securities exchange which supports trading, clearing and settlement of equities, debt, derivatives and other associated instruments. In September 2011 the Nairobi Securities Exchange converted from a company limited by guarantee to a company limited by shares and adopted a new Memorandum and Articles of Association reflecting the change. In October 2011, the Broker Back Office commenced operations; thus the system has the capability to facilitate internet
trading which improved the integrity of the exchange trading systems and facilitates greater access to the securities market (NSE, 2013).

1.2 Statement of Problem

Most companies in Kenya often issue rights but it has not been established how this impacts these companies’ stock returns. Loughran and Ritter (2005) found out that those American companies that offer rights issues tend to underperform in the long run, as compared to their counterparts that do not.

A number of studies have been undertaken about right issues and its impact on stock prices. For example Karanja (2006) conducted a study on an evaluation of post rights issue effects on firms’ share price and traded volumes. 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. Kakiya (2007) conducted a study on the effects of announcements on stock returns. The findings from the study were that trends in stock returns are dependent on event announcement. Olesaaya (2010) conducted a research on the effects of rights issue on stock returns and he investigated companies listed at the NSE. The study found negative abnormal returns prior to announcement of rights issue, positive abnormal returns during the announcement and negative results thereafter. Munene (2006) studied the relationship between profitability and sources of financing of quoted companies at the NSE. A previous study conducted in Kenya, by Gitobu (2000), focused on the influence of macro-economic indicators on stock market returns. Irungu (2012) did a study on the informational content 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.

From the above discussion, it can be seen that limited studies if any have been conducted on the impact of right issue on stock returns. The existing studies are inconclusive; while some researchers find significant positive effects; others find significant negative effects while still others don’t find any significant effects. This area is therefore riddled with inconclusiveness. This study therefore was aimed at investigating the impact of rights issue on stock returns at the Nairobi Securities Exchange. It compared the stock returns of firms before and after issuance of rights issues.
1.3 Objective

The objective of the study was to establish the impact of rights issue on stock returns at Nairobi Securities Exchange.

1.4 Significance of the Study

The study contributes to the existing literature in the area of rights issue and share returns of firms listed on the Nairobi Securities Exchange. The findings of the study will be important to future scholars and academicians because it will serve as a source of reference on the subject besides providing suggestions on areas requiring future study in as far as the rights issue and share returns at the NSE is concerned.

The findings of this study will also be important to managers at the Nairobi Securities Exchange in understanding the impact of rights issue on the stock returns for the listed shares. This will help them institute measures required to stabilize the market and avoid abnormal stock returns at the market during such periods.

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The findings of this study will assist investors in making more informed decisions when trading in Nairobi Stock Exchange. The study reveals whether and how rights issue impact on stock returns which is of great importance in making investment decisions. The findings of this study will equip financial advisors with empirical knowledge related to rights issue that would enable proper financial analysis hence informed financial advisory.

2.0 Literature and Empirical Review

2.1 Introduction

Some of the theoretical foundations that have discussed and explained rights issue on stock returns expectation gap are here in. They are the Modern Portfolio Theory, Efficient Market Hypothesis and The Random Walk Hypothesis.
2.1.1 Modern Portfolio Theory

Modern Portfolio Theory (MPT) or portfolio theory was introduced by Harry Markowitz with his 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. Standard investment advice was to identify those securities that offered the best opportunities for gain with the least risk and then construct 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 has 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, some will optimally balance risk and rewards. These comprise what Markowitz called an efficient frontier of portfolios. An investor should select a portfolio that lies on the efficient frontier (Tobin, 1958).

James Tobin (1958) expanded on Markowitz's work by adding a risk-free asset to the analysis. This made it possible to leverage or deleverage portfolios on the efficient frontier. This leads to the notions of a superefficient 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 to avoid putting 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.

2.1.2 Efficient Market Hypothesis

The efficient-market hypothesis (EMH) is a concept that deals with efficiency of information in the financial market. Economies are generally based on the principle of free market and private enterprise. To work effectively most economies require efficient capital markets. The market is considered efficient when prices of securities traded regularly in the market fully reflect all publicly available information related to the valuations and adjust quickly to new information. Given this scenario; one cannot consistently achieve returns in excess of average market returns on a risk-adjusted basis, given the information available at the time the investment is made. The efficient-market hypothesis was developed by Professor Eugene Fama (1970) at the University of Chicago; through his published Ph.D. thesis in the early 1960s. It was generally believed that securities markets were extremely efficient in reflecting information about individual stocks and about the stock market as a whole. The accepted view was that when information arises, the news spreads very quickly and is incorporated into the prices of securities without delay. Thus, neither technical analysis, nor even fundamental analysis, would enable an investor to achieve returns greater than those that could be obtained by holding a randomly selected portfolio of individual stocks with comparable risk.

Fama (1970) categorized market efficiency into three; based on the information set to which each of them responds. The three forms of market efficiency are: The weak form efficiency, semi-strong form efficiency and strong form efficiency. According to Fama (1970); the weak-form efficiency claims that prices on traded assets such as stocks, bonds, or property already reflect all past publicly available information. This means that, future prices cannot be predicted by analyzing prices from the past. Excess returns cannot be earned in the long run by using investment strategies based on historical share prices or other historical data. Technical analysis techniques will not produce consistent excess returns, as share prices exhibit no serial dependence. This implies that future price movements are determined entirely by information not contained in the price series. Hence, prices must follow a random walk.
The semi-strong form efficiency theory asserts that security prices reflect all publicly available new information past and present very rapidly and in an unbiased fashion, such that no excess returns can be earned by trading on that information. Only insiders trading on short run price changes can earn profits higher than what could be earned by using naïve buy and hold strategy. Semi-strong-form efficiency implies that neither fundamental analysis nor technical analysis techniques will be able to reliably produce excess returns. This theory also provides the basic theoretical background in this study. If the market is semi-strong efficient, the adjustment of prices to the outcome of elections, rights issues, stock splits, bonus issues, regulatory pronouncements among other market shocks should occur in a very short period of time and there are no trading strategies adopted to earn abnormal returns. On the other hand, if any systematic abnormal returns can be found around shocks and used to beat the market, then this phenomenon of shocks patterns can be viewed as challenging market efficiency.

In the strong form efficiency, share prices quickly reflect all information available both public and private to the investor. This implies that no one can consistently earn excess returns; even insiders who possess privileged information are not likely to have valuable information that can consistently predict future share price movements. If there are legal barriers to private information becoming public, as with insider trading laws, strong-form efficiency is impossible, except in the case where the laws are universally ignored. To test for strong-form efficiency, a market needs to exist where investors cannot consistently earn excess returns over a long period of time. In a strong form efficient market even if certain investors have monopolistic access to inside information, they cannot make superior returns.

2.1.3 The Random Walk Hypothesis

The random character of stock market prices was first modeled by Jules Renaults, a French broker, in 1863 and by Louis Bachelier, a French mathematician, in his 1900 PhD thesis, "The Theory of Speculation" (Kuma Allan 2001); his work was largely ignored until the 1950s; however, in early 1930s scattered, independent work corroborated his thesis. A small number of studies indicated that US stock prices and related financial series followed a random walk model. Research by Alfred Cowles in the 1930s and 1940s suggested that professional investors were
generally unable to outperform the market. This is the link between Efficient Market Hypothesis and the Random Walk Hypothesis and then the Martingale Model. Much of the EMH literature before Lerol (1973) and Lucas (1978) revolved around the random walk hypothesis (RWH) and the martingale model; two statistical descriptions of unforecastable price changes that were initially taken to be implications of the EMH (Fama and Blume, 1966). One of the first tests of the RWH was developed by Cowles and Jones (1937), who compared the frequency of sequences and reversals in historical stock returns, where the former are pairs of consecutive returns with the same sign, and the latter are pairs of consecutive returns with opposite signs.

French and Roll (1986) document a related phenomenon: stock return variances over weekends and exchange holidays are considerably lower than return variances over the same number of days when markets are open. This difference suggests that the very act of trading creates volatility, which may well be a symptom of Black’s (1988) noise traders.

2.1.4 Information-based models of Stock Price Behavior

Most information-based theories presume that managers (or, more generally, existing shareholders) know more about the value of the firm than do potential new investors. This asymmetric information creates an adverse selection problem which can explain the existence of a price drop when an equity issue is announced. Myers and Majluf (1984) apply this idea to security issues and create a framework that is used in much of the subsequent literature. They assume that managers know more about the firm's true value than do outside investors and also that manager’s act in the interests of existing shareholders. Rational investors correctly value firms on average, but individual firms can be mispriced, conditional on managers' private information. Since managers act in the interests of existing shareholders, there is an incentive to sell new equity when it is overvalued. Thus, selling equity on average conveys negative information about the firm and the stock price drops at the equity issue announcement.

Lucas and McDonald (1990) demonstrate that a similar story can simultaneously explain the extended price rise preceding the equity issue, the drop at issue and the clustering of issues following a market rise. The key assumptions behind their model are managers know more about the value of the firm than do outside investors, delaying an equity issue is costly (it lowers the net present value of projects), and the market assesses firm values correctly on average, but
individual firms may be temporarily mispriced. As the market receives new information over time, the valuation of undervalued firms tends to increase while the valuation of overvalued firms tends to decrease.

Under these assumptions, consider two firms that for some reason plan to issue equity. Suppose the two firms are identical except that one is overvalued and one is undervalued. The undervalued firm expects the market to revise upward its estimate of the firm's value, hence there is an incentive to postpone the equity issue until the stock price is higher. The overvalued firm, on the other hand, expects that the market will learn its true value over time and it bears the cost of waiting. This firm, therefore, issues equity as soon as the opportunity arises. This issue policy for the two types of firms implies that equity issues will be preceded by positive abnormal returns on average. Undervalued firms wait for their price to rise before issuing so that their average price path prior to issue will be upward sloping. Overvalued firms, on the other hand, do not wait. If the arrival of profitable opportunities for issuing equity is uncorrelated with a firm's price history, then their price path prior to issue will, on average, be flat. Hence the average price path prior to issue for all firms that issue equity will be upward sloping. As in Myers and Majluf (1984), when firms do issue they tend to be overvalued, so the price drops at issue announcement.

### 2.2 Conceptual Framework

Below is a figurative representation of the variables to be explored by this study.

![Figure1; Conceptual framework](image.png)
2.3 Empirical Review

Njoroge (2003) conducted a study on the impacts 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. 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. Data analyzed for six companies showed negative price adjustment for companies, which issued rights issue. The results document a negative abnormal return prior to the announcement day of the rights issue and a moderate setback thereafter.

Suresha and Gajendra (2012) conducted a study on the market reaction to rights issue announcement news, using an event study methodology for Nifty stocks from 1995 to 2011 and also examined neglected firm hypothesis, Price pressure hypothesis. They found that in previous studies, it is evident that stock returns are significantly affected negatively or positively around rights issue announcement dates. The event has reported negative ARR and it was statistically insignificant. There was no significant change in trade volume for the observations stocks during event window. The study concluded that the Indian market reacts negatively to rights issue announcement.

Sakwa (2013) conducted a study on the effect of rights issue announcement 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 had the event not taken place. A 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 react positively 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.

Bashir (2013) investigated the market reaction to rights issue announcement news by employing an event study methodology. This study focuses on the performance of thirty one rights issues in Karachi Stock Exchange (KSE) from 2008 to 2011. They tested whether the investor can gain or lose an above normal return by relying on public information impounded in a rights issue announcement. Using event study methodology, the study tested where excessive abnormal return exists during event window. Abnormal returns were calculated by use of the market model and t-tests were conducted to test the significance. The study found evidence of existence of positive abnormal returns on event date. However this gain in shareholders wealth was statistically insignificant. The study concluded that the reaction of Karachi Stock Market is an indication of no rights issue announcement affects i.e. no wealth maximization for investors.

Miglani (2011) conducted a study on the impact of rights shares issued by Indian companies that took place during 2005 and 2010. The samples of 32 rights issues were used to study the announcement effect. The study examined the stock price reaction to information content of rights issues with a view to finding out whether Indian stock market is semi-strong efficient or not. The standard event study methodology was used for the purpose of examining the rights issue announcement reaction. The study revealed statistically significant abnormal returns on the announcement & surrounding dates.

Madhuri, Thenmozhi, and Kumar (2003) found negative reaction to the bonus issue announcement. They were of the opinion that market under reacted after the announcement of bonus issue. Kabir & Roosenboom (2003) observed that statistically significant negative abnormal return associated with announcement effect of rights issues in Netherlands. Mishra, (2005), examined the stock price reaction to information content of bonus issue. The results indicated significant positive abnormal returns for a five day period prior to bonus announcement. The results indicated the semi strong market efficiency of the Indian stock market. Chen and Chen (2007) examined 205 right issues in China and found market reacts negatively around such announcement date, but positively during the post announcement period
(in +10 to +20 days expiration period). Vergos, Konstantinos, Apostolos & John (2008) investigated the effects of political, economic, investment and analysts report announcement on share prices of Hellenic telecommunication organization. The study found that stock prices do not react to public announcement and continue to increase or decrease until 10 days after the event. Owen & Suchard (2008) reported significant abnormal return associated with announcement of right issue of equity in Australia. Shahid, Usman, Mahmood and Xia (2010) observed the positive market reaction after the announcement of right issues in china.

Kithinji (2014) conducted a study on the effect of rights issue on firms share performance in the Nairobi Securities Exchange. The study found that Rights issues give existing shareholders the option of purchasing new shares, normally issued at a discount to the prevailing market price in order to encourage participation in the capital raised over 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.

Karanja (2006) did a study on an evaluation of post rights issue effect on firms’ share price and traded volumes. On the population, the study evaluated 9 firms out of the 14 firms that had announced rights issue. The study 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. The study 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.

Kakiya (2007) conducted 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. 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 study findings, it was concluded that the Nairobi Stock exchange is not semi-strong 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.

Olesaaya (2010) did a research on the effects of rights issue on stock returns and he investigated companies listed at the NSE. The study 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 analyze the abnormal returns. The study assumed that the abnormal returns reflect the stock market’s reaction to the announcement of rights issue. The study found negative abnormal returns prior to announcement of rights issue, positive abnormal returns during the announcement and negative results thereafter.

Wabwire, Owuor, Onyuna and Njuguna (2013) conducted a study on issues that may impact the market returns. In addition, the study assessed the effects of the turnover and volume traded on the market return. The study incorporated all the seven recently floated IPOs at the NSE between January 2006 and March 2009. The main results from the fitted linear regression model showed that all IPOs had a significant effect on the market return. This study employed logistic
regression to evaluate the effect of the IPO announcement within the 60-day window period on the market index. The study found that all IPOs had positive significant influence on the market return except for Eveready and KenGen.

3.0 Methodology

The study adopted an event study methodology which attempt to establish the information content of right Issue on share returns. The population of this study was 18 companies listed in the NSE. The secondary data was collected for 7 years from 2005-2012. Share prices for 30 days before the announcement of right issue and 30 days after the announcement of the right issue was used to generate actual returns, expected returns and abnormal returns. T test analysis was used to test whether there was significant difference on returns between the two periods before and after announcement date. The collected secondary data was coded and entered into Statistical Package for Social Sciences (SPSS, Version 20.0) for analysis. The study collected data on NSE 20 share index for the identified right issue dates.

MacKinlay (1997) outlined an event study methodology involving the following steps: (i) identification of the event of interest; (ii) definition of the event window; (iii) selection of the sample set of firms to be included in the analysis; (iv) prediction of a “normal” return during the event window in the absence of the event; (v) estimation of the “abnormal” return within the event window, where the abnormal return is defined as the difference between the actual and predicted returns, without the event occurring; and (vi) testing whether the abnormal return is statistically different from zero. The study computed the changes recorded in share prices as measured by the NSE 20 Share index. To arrive at conclusive results, the study compared the performance of the NSE 20 share index before, during and after right issue for the seven years 2005 to 2012.

![Event Study Timeline](image-url)
The market model that was applied was;

\[ Y = a + b_1 x_1 + \text{error term} \]

Where

\[ Y = \text{actual returns} \]
\[ X_1 = \text{market return} \]
\[ B_1 = \text{market risk} \]

The research applied a mean adjusted return model below to measure abnormal returns on securities in the period of study.

\[ AR_{it} = R_{it} - (\alpha_i + \beta R_{mt}) \]

Where

\[ AR_{it} = \text{abnormal return of stock } i \text{ at date } t \]
\[ R_{it} = \text{actual return of stock } i \text{ at time } t \]
\[ R_{mt} = \text{market return} \]

\[ \alpha \text{ and } \beta = \text{firm specific constants or parameters from the estimation period.} \]

In event studies abnormal returns were aggregated over both observation of events and investigation windows. Individual securities’ abnormal returns were aggregated \( AR_{it} \) for each period for any given number of N events.

Cumulative average abnormal returns

\[ CAAR_{(t_1,t_2)} = \frac{1}{N} \sum_{t=t_1}^{t_2} \sum_{t-1}^{n} AR_{it} \]

Test statistics were used to measure the statistical significance the CAARs reported before and after the event window of a significant level of 95%. To test for the strength of the model the
study tested at 95% confidence level and 5% significant levels. If the significance number found is less than the critical value (\( \alpha \)) set 0.05, then the conclusion would be that the model is significant in explaining the relationship. Else the model would be regarded as non-significant.

4.0 Results and Discussion

This section presents the trend analysis of the dependent and independent variables of the study. The trend analysis of the market return represented in figure 4.1 shows that there was a drastic decline from year 2005 to year 2006 followed by a slight increase in the year 2007 to 2008 and drastic increase in the market returns in 2010 to 2013 to attain a mean of 0.00687.

![Trend Analysis of Market Returns](image)

**Figure 4.1: Trend Analysis of Market Returns**

Trend analysis in stock returns presented in figure 4.2 indicates a slight decline in stock return in year 2005 and a slight increase in 2007. The mean stock return of year 2008 to 2010 drastically increase to the mean of 0.0391 which indicates that there were many companies that made their right issues that year hence high stock returns.
Figure 4.2: Trend Analysis in Stock Returns

Trend analysis in expected returns presented in figure 4.3 indicates a decline in expected return in year 2005 to 2008 and a drastic increase in the year 2010 to 2013. The mean expected return of year 2006 was the lowest at -0.0097 which indicates that there were few companies that made their right issue that year hence low market returns. This indicates that there was also low activity in individual stock returns and market returns in that year hence the low expected returns.
Figure 4.3: Trend Analysis of Expected Returns

The trend analysis of the abnormal return represented in figure 4.4 shows that there was a slight incline from year 2005 to year 2007 followed by a slight decrease in abnormal returns in the following years. Abnormal returns present the difference between the actual returns and the expected returns over a certain period of time. This changes that caused the drift in abnormal returns as represented by the graph can be explained by the changes in market returns and the right issue. In 2010 the abnormal returns shoot to 0.0392 and were the highest this was because to the issuance of the right issue thus the individual stock returns for the companies increased due to the market activities. This further is because abnormal returns are sometimes triggered by events. In finance events can typically be classified as occurrences or information that has not already been priced by the market. The decline in 2012 and 2013 may be as a result of a decline in the firms’ market value which exceeded the expected amount, this therefore is a loss.
This section illustrates the fitness of the model used in the study as well as the calculation that derived the alpha and beta coefficients for generation of the abnormal returns. Table 4.1 shows fitness of the regression model in determining the abnormal returns. The variables that are used to determine abnormal returns were actual stock returns and market returns. From the results presented below, an R square of 0.014 indicates that the independent variable; market return explains 1.4% of the variations of actual stock return. This shows that the goodness of fit of model is not satisfactory.

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Coefficient</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>0.118</td>
</tr>
<tr>
<td>R Square</td>
<td>0.014</td>
</tr>
<tr>
<td>Adjusted R Square</td>
<td>0.013</td>
</tr>
<tr>
<td>Std. Error of the Estimate</td>
<td>0.339725</td>
</tr>
</tbody>
</table>
ANOVA statistics presented on Table 4.2 indicate that the overall model was statistically significant. This was supported by an F statistic of 12.206 and probability (p) value of 0.001. Probability value (p) is usually given the value of 0.05; therefore any value below the same is statistically significant while any value above 0.05 is not significant. Therefore from the results the reported p value 0.001 was less than the conventional probability of 0.05 significance level thus its significance. The ANOVA results imply that the overall model is significant.

Table 4.2: Analysis of Variance (ANOVA)

<table>
<thead>
<tr>
<th>Indicator</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>1.409</td>
<td>1</td>
<td>1.409</td>
<td>12.206</td>
<td>0.001</td>
</tr>
<tr>
<td>Residual</td>
<td>100.178</td>
<td>868</td>
<td>0.115</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>101.587</td>
<td>869</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 4.3 presents results of the alpha and beta constants that were used to derive the abnormal return. The model presented below shows how the abnormal return was calculated. The regression of coefficients results further indicate that the variable market return had a positive and significant relationship with the actual stock return, which is evident from the value 0.001. The conventional value of 0.05 is the scale that determines the significance of an independent variable, thus any value below 0.05 is significant and a value above the same is not significant. Therefore in the results, 0.001 is lower than the conventional value 0.05 thus making the market return variable significant in explaining actual stock return and determining the beta and alpha coefficients.

Table 4.3: Regression of Coefficients

<table>
<thead>
<tr>
<th>Variable</th>
<th>Beta</th>
<th>Std. Error</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>0.007</td>
<td>0.012</td>
<td>0.614</td>
<td>0.539</td>
</tr>
<tr>
<td>Market returns</td>
<td>0.815</td>
<td>0.233</td>
<td>3.494</td>
<td>0.001</td>
</tr>
</tbody>
</table>
Y=0.007+0.815X
Y = Expected Return
X = Actual Returns

The table below provides descriptive statistics for the returns, market, expected and abnormal returns before and after right issue. The results indicate a high score in the mean of market return after right issue than before the right issue. This is presented by a negative mean of 0.002 before the right issue and a mean of 0.000 after right issue. The stock returns had a mean of 0.018 before the rights issue and a mean of 0.001 after the rights issue. The same case is also presented in the expected returns mean where the returns before the rights issue is 0.006 and after the rights issue is 0.007. The mean of the abnormal return before the right issue is 0.013 and the mean after the right issue is -0.006. These results show that Abnormal returns show insignificant differences before and after right issue.

<table>
<thead>
<tr>
<th>PERIOD</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Market return</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before</td>
<td>0.002</td>
<td>0.063</td>
<td>8.409</td>
<td>0.000</td>
</tr>
<tr>
<td>After</td>
<td>0.000</td>
<td>0.031</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Stock return</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before</td>
<td>0.018</td>
<td>0.510</td>
<td>0.35</td>
<td>0.931</td>
</tr>
<tr>
<td>After</td>
<td>0.001</td>
<td>0.028</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Expected</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>before</td>
<td>0.006</td>
<td>0.051</td>
<td>8.409</td>
<td>0.000</td>
</tr>
<tr>
<td>After</td>
<td>0.007</td>
<td>0.026</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Abnormal</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Before</td>
<td>0.013</td>
<td>0.506</td>
<td>0.598</td>
<td>0.758</td>
</tr>
<tr>
<td>After</td>
<td>-0.006</td>
<td>0.030</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

5.0 Conclusions

Following the study findings, it was possible to conclude that the market return is a good predictor of stock returns. Finally, results led to the conclusion that the expected returns as well as the market returns were significantly higher after right issuance than before right issue.
However, abnormal returns were not significantly different implying that the informational content of right issues do not affect stock return and this may be an indicator of market efficiency.

The unique contribution of the paper is that it will reduce the inconclusiveness that has been observed in empirical studies focusing on impact of right issue.

6.0 Recommendations for Further Study

This study recommends that further studies to be done on the impact on stock return of the companies listed at the NSE; could include bonus issues, IPOs, elections, post-election violence, and global economic crisis. This is because this study focused on the impact of rights issue on share return thus, a yearly overview could be an interesting study to identify the effects on company’s financial and share performance. Also, other studies on other rights issue on stock return should be done to show clearly the effect of events announcement on right issue.

The study recommends that NSE to establish and enhance policies for investing so as to attract and encourage large institutional and foreign investors to participate at the NSE. The study also recommends that policy makers and regulators at the NSE should encourage more research on the NSE form of efficiency; this will provide a forum for investors to get the information on the form of efficiency of the market and boost their confidence in the operations of NSE.
References


