THE EFFECT OF INITIAL PUBLIC OFFER UNDERPRICING ON SHORT-RUN PERFORMANCE OF COMPANIES LISTED AT NAIROBI SECURITIES EXCHANGE

BY

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DECLARATION

I, the undersigned, declare that is my own original work and has not been presented for award for a degree at this or any other university.

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This Project has been submitted for examination with my approval as the appointed supervisor.

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DEDICATION

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LIST OF ABBREVIATIONS

CMA   :   Capital Market Authority

GOK   :   Government of Kenya

IPO   :   Initial Public Offer

IPOS   :   Initial Public Offers

CAR   :   Cumulative Abnormal Return

NSE   :   Nairobi Securities Exchange

ABSTRACT

Underpricing is a variation between post issue price in a secondary market and offer price of a share on an initial public offering. Considerable evidence, from most of research conducted in various stock markets around the world; shows that those IPOs are on average underpriced. The study objective was to determine effect of IPO underpricing on short- run performance of the shares of firms that are listed at the NSE. The study adopted an event study model to study effects of IPO underpricing on short run performance of companies listed the Nairobi Securities Exchange. The period covered by the study was between the years 2006 – 2016 during which nine companies were listed at the N.S.E structured as IPOs. The study used secondary data sources to gather information relevant in achieving the research objectives. The study focused on 1-day, 3-day, 5-day, 7- day and 15-day cumulative abnormal returns (CAR) in order to evaluate the short-term performance. The research adopted the standard model for calculating underpricing of new issues and market index as the benchmark for the return of stocks at the NSE. The results on the mean adjusted short run performance established that the mean adjusted short run performance in day 3 were negative but positive in day 5, day 7 and Day 15. The study also found that the average abnormal returns were positive in day 3 and day 5 but negative abnormal returns in day 7 and 15. The finding revealed also revealed that there was no significant variability between IPO underpricing and short-run performance of companies listed at the Nairobi Securities Exchange. The study concluded that there is a short-run underperformance of IPOs underpricing at the Nairobi Securities Exchange. Additionally, the study concluded that there is an insignificant variability between IPO underpricing and short-run performance of companies listed at the Nairobi Securities Exchange. The study recommended that various policy-making organizations like the capital markets authority and the NSE should come up with effective policies on initial public offerings to ensure that IPOs are priced correctly.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

One crucial milestone of a company's life cycle, and which particularly interests investors (individual and/or entities), is transition of the company from either a private entity or a parastatal, to a public entity through an initial public offer. An IPO is the first sell of an entity's (mostly a private firm or company) stocks to general public or other investors who are not the primary entity owners and letting the stocks trade in public market (Brigham & Ehrhardt, 2005). The primary reason why many companies consider a public equity issue is in order to seek additional funds for growth and expansion purposes. In most cases if external sources are not used, the ability of the firm to grow will be constrained.

Additional motives for a company for going public include: gaining of publicity, status and employee ownership Grundvall, Jakobsson, & Thorell, 2004; Kim & Weisbach, 2005). Other secondary reasons include gain liquidity in terms of access to additional equity finance in the future via secondary issue, to restructure their balance sheet i.e. the amount raised from an issue of securities is used to reduce debt, help shareholders unlock the value of share (price discovery) or unlock the potential value of the company, for Mergers, takeovers and buyouts plans can be carried out, and also as exit strategy for founders and other shareholders of the company.

1.1.1 The IPO Underpricing

Underpricing is a variation between post issue price in a secondary market and offer price of a share on an initial public offering. Considerable evidence, from most of research conducted in various stock markets around the world; shows that those IPOs are on average underpriced. That is, the offer prices for the firm's IPOs are mostly set below the value that investors seem willing and able to pay for the shares or stocks when they finally start to trade in a secondary market. Loughran, & Rydqvist (1994) show evidence of underpricing phenomenon for 38 countries. From this evidence, the abnormal initial returns have ranged from 6.3% observed in Canada to a high of 256.9% observed in China.

Underpricing phenomenon is documented by scholars who include Ibbotson (1975), Ritter (1984), Chalk and Peavey (1987), Allen and Faulhaber (1989), Cook and Officer (1996), and Loughran and Ritter (2002) in the United States. Authors such as Aggarwal, Leal, and Hernandez (1993), Islam, Ali, and Ahmed (2010), Bansal and Khanna (2012) among others document the evidence of underpricing in the Latin American ma and Asian Markets respectively. Similar studies have been fewer in the African continent with scholars who include Osei, Adjasi, and Fiawoyife (2012), Van and Alagidede (2013) and Cheluget (2008) documenting the evidence of underpricing in Nigeria, South Africa and Kenya respectively.

Scholars have sought to explain IPO underpricing by empirically analyzing the issues or features which are closely associated with short term underpricing levels. The issues or characteristics are as follows; offer size, firm's size, subscription rate and firm's age. However, results regarding the significance of some of the determinants of underpricing vary across different financial markets.

The underpricing phenomenon is a tantalizing puzzle of finance. Underpricing has persisted over the decades; this suggests that it is a conscious strategy of underwriters and issuers rather than an unintended failure to price stocks correctly. This is mainly because underwriters are in the business of pricing and marketing securities and both companies and underwriters enjoy financial benefits from higher offering price.

1.1.2 The Short Run Performance

Short run performance refers to day one stock price return, that is, the difference between day one closing price and offer price. Stock price performance refers to the behavior exhibited by stock price. The different behavior of stock price in the economy is seen to be attributed to economic variables such as; information on money supply, inflation, output, and the central bank's discount rate (Warner & Watts, 1987). The period under analysis of short run performance of stock is one year, months, weeks or days.

IPOs of common shares usually earn abnormal returns in the early days. IPO underpricing is highly documented and it seems to be international omnipresent in long run and short run. There exists great evidence on short run performance of IPOs. Furthermore, most entrepreneurs have realized that acquirers can easily pressurize a target on pricing concessions in a great way than they can pressurize the public investors. By offering shares to the public, entrepreneurs can easily acquire a higher value for their companies than what they would have earned on an outright sale.

According to Agarwal, Chunlin, and Ghon (2003) there is a very strong relationship that exists between the demand of IPOs by investor and short run and the long run post-issue performance of IPOs in stock market of Hong Kong during the year 1993 to the year 1997.

The IPOs demand by Investor is positively related to initial returns of listed companies at Hong Kong stock market.

The day one trading returns indicates that, the IPOs which are underpriced are highly demanded by investors in a very significant way. The less demanded IPOs by investors are overpriced. Adjusted excess returns of IPOs on the long run are negatively related to investors demand. IPOs that are highly demanded by investors have great positive initial returns but negative excess in long run returns. On the other hand, the IPOs which are less demanded by investors have negative returns at the beginning but a positive excess in long run returns. The IPO'S demand any investor is highly driven by investor's overreaction to some information that exists about the prospects prior to the offering. As such, most IPOs are usually not correctly priced at their intrinsic value especially during early trading days but eventually their real values are usually reflected in pricing process. The IPO market is subject to fads which are reflected in excess demand for IPOs as explained by the bandwagon

1.1.3 The Effect of IPO Underpricing on Short Run Performance

One interesting characteristic that defined most of the IPOs issued in Kenya is the instance of "abnormal" huge positive returns, witnessed in the first trading day of the security. The period 2005 - 2008 was marked by euphoric listing and this was evidenced from the mere fact that six companies issued their IPOs, i.e. Kengen, Scan group, Eveready East Africa, Access Kenya, Safaricom and Kenya Re. The huge increase in number of new issues in the primary market was partially attributed to the several incentives provided by the GoK on advice from C.M.A to companies going public via IPO. Most of these incentives hinge on

taxation policies-, and are at most an attempt to deepening, widening and generally developing the capital market in the country.

Large empirical evidence-mostly from international researchers- exists documenting this phenomenon of underpricing. Early scholars such as (Ibbotson, 1975) tried to show underpricing evidence of IPOs by documenting initial excess returns of 11.44% on US common stocks of IPOs on first day of trade that involved a sample of 120 IPOs from the year 1965 to 1969.

In Kenya Apaka (1998) examined the difference in the pricing behavior of primary and secondary offerings of common stock at the NSE in the time period 1980-1997. The study confirmed existence of underpricing, but found no conclusive evidence to validate the theorem that the extent of underpricing was the same for both primary and secondary types of offerings. Secondary offerings were under priced at a high of 37.79%, while the primary offerings were under priced at a high of 34.46%. Though many researchers in this aspect of the subject differ in the method of analysis of the problem, their common view is that, under pricing in IPOs occurs as a result of differences in the level of valuable information, which one class of IPO market participants possess over the others i.e. information asymmetries.

In developed capital markets with no restrictions on price fluctuations, the underpricing level is highly and quickly evident by the day's end results at the bourse. In computing initial underpricing returns, most of the studies use first closing day price. The use of the end of the month of trading or week, usually make little difference. On the other hand, less

developed capital market especially with price fluctuation restrictions; aftermarket prices are likely to take some time before reach equilibrium where supply equals demand.

In the United States of America and some European countries, offer price which is normally set some days before trading of stocks begins. This typically means that the market fluctuations on price and trade are insignificant and therefore overlooked. However, in less developed markets in third world countries, there are considerable obstruction between pricing and trading. For example, in Kenya, the period between pricing and trading of an IPO is on average two-three weeks.

In general, IPOs are distinguished by their unpredictable nature of their real value because of lack of information to the public especially during initial offering to the public. In an environment where public information is scarce, determining the true worth or value of an issue is a very tough task. Moreover, the first return on IPO (realized when the stock starts trading) reveals substantial information, since it offers initial public evidence that average market assessment of an IPO varies from one which the underwriter and that company that is in issue of the stocks.

1.1.4 The Nairobi Securities Exchange

NSE is a sole exchange that presently exists in Kenya with 64 listed companies in 2016. It is also among the most vibrant in Africa and the leading in Eastern Africa. However, NSE is relatively a small market as compared to other exchanges in United States and United Kingdom that have more than 5000 and 2000 companies listed respectively. The subscription rates have been very high, culminating to Eveready East Africa IPO in 2006 which was oversubscribed by about 800%. However, studies carried out by Jumba (2002)

indicated that in the long run the average daily return for a sample of nine IPOs for the period 1992-2000 was about 0.06% in 3 years after being listed compared to a market return of 0.3%.

NSE was initially registered as a private company in the year 1991 by shares with the floor - based open outcry system in place, it was later replaced by the central depository system that was commissioned in 2004. According to the NSE website, its market capitalization has tremendously improved hitting Kshs. 1930.58 billion as of September 2016. Turnover at the NSE increased phenomenally from Kshs. 2.90 billion in the year 2002 to Kshs. 95 billion in the year 2006. The number of CDSC accounts that were opened increased from 80,000 in the year 2005 to over 1,000,000 investors to date (www.nse.co.ke).

The NSE stock market is composed of two independent market segments, Main Investment Market Segments (MIMS) which is the main quotations market. The Alternative Investment Market Segments(AIMS) which was set up to provide capital markets access to growing small and medium sized companies with a high growth potential.

There exist 2 indices used to measure the performance in the NSE. NSE 20 share index is a yardstick that is used to track the best performing 20 companies in Kenya that are listed at the NSE. Although it is widely watched and cited because it is comprised of select companies, it cannot gauge fluctuations in smaller companies. The Nairobi Securities Exchange all share index (^NASI) that is usually used in measurement of Market Capitalization overall rather than movements of prices of the selected counters.

Underpricing is a common phenomenal observed at the NSE, as evidenced by the sprouting "hot market" period 2005-2008, during this period the number of IPOs grew steadily, and

in fact the market for IPOs in Kenya was subject to "cascades", whereby one IPO was followed by another and many growing and mature private companies went public through an initial public offering.

According to NSE Annual report of June 2008, the Safaricom Company Limited stocks were offered at KES 5 per stock. It was also revealed from the report that, on day one of trading closing price of Safaricom Company Limited was KES 7.35. This is a clear indication that Safaricom Company Limited stocks were underpriced by 47%. According to the annual report of June 2006 of NSE Kengen stocks were offered at KES 11.90 per stock (NSE 2006). It was also noted that day one closing price of the stock was KES 40. This is a clear indication that Kengen stocks were underpriced by 236% which is a very huge percentage.

A study conducted by Koech (2011) on the short-run and the long-run IPO performance in financial terms for companies listed at NSE found that IPOs in Kenya were MOSTLY underpriced by a huge average of 57%. It was noted that 87.5% of the IPOs since 2001 were underpriced. The most underpriced IPO was Kengen (236%) while the least underpriced was Mumias (0%).

Poor short run performance from the issuer's perspective is having continuous positive gains of the trading price from offer price or an increase in cumulative underpricing in the short run. Contrary, these are IPOs that are highly demanded by investors since they have large positive initial returns in the short term. Most of the studies carried out previously on IPO's at Nairobi Securities Exchange concentrated on using Cumulative Abnormal Return (CAR), Marginal Adjusted Initial Return and Market Adjusted Buy and Hold Return

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(MABHR) to study IPO short run performance. Jumba (2002) studied the performance of IPOs in Kenya for the period 1992-2000 and concluded that in short run, IPOs over perform the market while in long run IPOs underperformed the market using three year holding period. This was done using Cumulative Abnormal Return (CAR) method. Ndatimana (2008) analyzed the performance of IPOs for the period 1992-2007 and reported that underperformance for the first three years reverses by the fifth year using Market Adjusted Buy and Hold Return (MABHR) to measure performance.

According to Koech (2011) the 7-day abnormal returns showed that 75% of the IPOs underperformed while only 25% of the IPOs performed better. From the 15-day abnormal returns, the study noted that 50% of the stocks underperformed in short-run. Overall, the market performed better in short-run as the cumulative abnormal returns (CAR) were 0.16. The study concluded that IPOs in Kenya perform better in the short run given the high returns on day one of trading and high abnormal returns on the day 15.

1.2 Research Problem

Many studies have recognized a significant drop in operating performance of several firms after they become listed in different economies around the world. Evidence for the USA was provided by Jain & Kini, 1994; Mikkelson, 1997; Teoh, 1998). Coakley (2004) for UK; Wang (2005) for China and Kim (2004) for Thailand. The results of these studies are conflicting as far as their finding on the operating performance as well as share prices is concerned.

Further, studies on developing economies and especially Africa are still very few. With the rising number of IPOs at the Nairobi Stock Exchange market in recent past, it is vital to undertake analysis of post- IPO share price firms' performance that have gone the IPO in the periods 2006-2015.

In the Kenya capital market, little research has been done regarding short-run performance of IPOs, with most empirical studies focusing on the shares long run performance of firms listed at NSE. Thuo (2009) performed a study, which confirmed underpricing of IPOs at the Nairobi Securities Exchange and also long term under performance. Karitie (2010) on long-run perform ance of IPOs. Wamari (2014) on effect of Initial Public Offers on Long run Stock Performance, Leshore (2008) on medium-term performance of IPOs, Simiyu (2008) on pricing and performance of initial public offering: a comparison between states owned enterprises and privately owned enterprises at NSE.

Evidence from the Nairobi Stock Exchange reveals that most of the IPOs are usually underpriced more so if the share price value at the end of 1st day of trading is checked against the offer price. In their first market debut after listing, the KenGen shares closed at nearly four times the issue price of KES 11.90. Safaricom issued its shares at a price of KES 5 The shares rose 50% on the first day of trading. These two examples underscore the fact that IPO shares are usually underpriced but their performance in the short-run require further investigation.

While most of these studies may have tackled the issue of IPO performance in the long run, the present study differs from the previous ones as it seeks to establish the short-run performance of post-IPO share prices. This research therefore sets out to answer the

following research question: Was there any effect of an IPO underpricing on the short run performance of stocks of companies listed in the NSE?

1.3 Research Objective

To determine effect of IPO underpricing on short- run performance of the shares of firms that are listed at the NSE.

1.4 Value of Study

The study is bound to be insightful to many users and in particular the academicians who will attain knowledge and understanding of underpricing IPOs in Kenya and the relative strength of the various factors that affect IPO pricing and will add more to financial literature.

The study will be helpful to investors in helping them see the trend and return IPOs yield during the first day of trading at the bourse, and as a result an investor would be able to see whether it is more beneficial to buy and hold shares during an IPO or wait and buy the same in secondary market.

The Government and Regulators will be interested in understanding the right price to issue shares to avoid underpricing as they are constantly in the stock market to raise capital for infrastructural development.

The regulator has an interest to ensure that firms are optimally priced to improve the confidence of investors in IPOs and deepen the capital market in Kenya.

Firms have an interest to raise funds in the market and as such they would be interested in understanding the factors that they need to take into account in pricing their firms. Particularly firms would be interested to ensure that initial public offers do not diminish their opportunities to raise capital in future.

The issuing companies that will be provided with a more knowledgeable outlook of the local IPO market and the syndicate of underwriters and transaction advisors who will be exposed to the trends surrounding IPO underpricing and over pricing in the local market thereby enable them to further refine their valuation techniques.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Chapter 3 presents theoretical review, empirical review, conceptual framework and determinants of underperformance of IPOs and finally the summary of the literature review.

2.2 Theoretical Review

IPO short term underpricing has always been one of the continual and significant areas of research. Government firms tend to be underpriced as a way of the government to signal its intention not to interfere in the firm following the issue particularly in high regulated industries which are vulnerable to changes in government policy (Perotti, 1995). Investment banks usually extract some information from investors that help in reducing the overall underpricing and thus increase the sales proceeds of stocks (Benviniste & Spindt, 1989).

2.2.1 Winners Curse Theory

According to Rock (1986) there exists two different kinds of investors who are available any IPO market. That is, the one who that informed and the other who is not well informed. Those that are informed only bid for attractively priced IPO, whereas the uninformed investor bid discriminatively. Informed investor is usually helped by available superior information in deciding on an offer price in terms of whether it is promising or not promising. Participation of an informed investor in underprice offers reduce a number of stocks that uninformed investor would buy. Uniformed investor is usually hit by a "winner's curse" problem. With such an adverse selection, uninformed investor is usually

discouraged from investing in an IPO unless the returns seem favorable. Thus an incentive, in the part of the issue, is to underprice the offering. Therefore, IPOs are priced, to give the indiscriminate uninformed investor a fair return on their investment.

2.2.2 Lawsuit Avoidance Theory

Another possible reason for underpricing that has been put forward is to do with avoidance of lawsuits. Companies deliberately set low prices for their issue because some underwriters may stand legal action if the post issue of a new issue significantly drops below the offer price. Underpricing is seen as a way of protection against any liability as far as legality is concerned and associated damages to both the bank and issuer in terms of their reputation in the market (Thakor & Hughes, 1992).

This was empirically tested by Li (2004) she specifically tested the insurance effect of the lawsuit avoidance hypothesis which affirms that companies that are subject to magnitude of litigation risks underprice their issues more to minimize the possibility of a law suit in relation to their IPO. She also examined the relationship between short run underpricing of stocks and litigation risks in an international organization and found an existence of a positive relationship between the offer price and litigation risk. This confirms the lawsuit avoidance theory as a possible contributor to underpricing.

2.2.3 The Signaling Hypothesis

Allen, Grinblatt, Hwang and Welch (1989) claimed that most of Investment banks play insignificant role in underpricing of an IPO except as a controlling or rationing supervisor. They believe that superior information on a new company's prospects is held by the company itself. High quality companies or firms underprice their issue so as to signal their

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quality in the market. Issuing firms know their prospects best, and sometimes firms with most favorable prospects like to give a signal to the market about its prospects. They do this by undervaluing their issue (Allen & Faulhaber, 1989).

Su and Fleisher (1999) found out that their data on IPOs in China was steady with the signaling. A weak connection amongst IPO underpricing and subsequent seasoned equity offering for United States of America was established (Jegadeesh et al., 1993). In less developed markets the governments usually regulate the offer price of stocks or shares.

The Commission of Securities Exchange in United States of America is more interested in firms' full disclosure and that's why they do not regulate offer price. Japan uses regulations to set the offer price. Before the reform in 1989, it was compulsory for Japanese firms to set the offer prices based upon a multiple of three similar firms. This may not be practical since it doesn't consider firm's potential as far as its growth is concerned, and firms with low multiples may have been selected for comparison (Ibbotson & Ritter, 1995).

2.2.4 Book Building Theory

According to Benveniste and Spindt (1989) on informational frictions and how the IPO marketing is affected in an attempt to explain the underpricing and long run underperformance anomalies. Their analysis focused on the role of the underwriter plays in eliciting information of an IPO during pre-selling period. Pre-market activity was modeled as auction and carried out by investment bank, in which the investor had to bid with an interest indication.

The Pivotal challenge which underwriters face while trying to assemble useful information on pricing an offer is that, most investors lack motivation to disclose positive information about the stock before the stocks are sold. Investors usually keep this information to themselves with anticipation of making profits for themselves. They would rather pay a low initial price for stock and sell the stocks at full information price in post offering market.

They believe that underwriters may therefore partially alter the offer price in order to compensate investors for honestly divulging information concerning the demand of an issue in the market, especially positive information. This is known as the book building explanation. They further confirmed that the underwriter may use the leverage of the expected future returns to reduce underpricing and thus increasing efficiency of capital acquisition process. Subsequent performance is positively correlated with initial price revision that was undertaken at the time of book building process. If there was more disclosure of negative than of positive information performance may be negative in the future (Benveniste et al., 1988).

2.3 Determinants of IPO Underpricing

The determinants of IPO underpricing are as varied as the number of studies done in the field of IPO underpricing. The guiding factors on the choices made on the variables to incorporate in this study are informed by the presence of these variables in a developing market. The following factors were investigated to establish their predictive power on the level of underpricing.

2.3.1 Firm Age

In a study of the levels of underpricing of IPOs and its determinants, Islam and Ali (2010) analyzed shares issued on the Dhaka Stock Exchange using Regression analysis and found out that the company's age has no relevant effect on underpricing level of IPOs. These results contradicted Carter, Dark, and Singh (1998) who found that the company's age was significant in explaining underpricing after studying 2,292 IPOs issued in the US between 1979 and 1991. Carter, Dark, and Singh concluded that the companies that have long operating histories and face less uncertainty. The conclusion implied that older and mature companies got a low level of information asymmetry as opposed to the new companies, resulting to less underpricing of their IPOs.

The conclusion implied that older and mature companies got a low level of information asymmetry as opposed to the new companies, resulting to less underpricing of their IPOs.

2.3.2 Size of the Firm

The sizes of firms determine the post listing market price of IPOs. Larger firms are expected to have lower underpricing because future cash flow growth rates are easier to predict for mature companies for which more information is available. A negative relationship between underpricing Size is expected as observed (Giordano et al., 2008).

2.3.3 Subscription Rate

The demand for IPOs determines the underpricing level and is measured by subscription rate. Rock (1986) argued that underpricing level depends on information heterogeneity among investors in a market which increase with demand for the company's shares. This

was supported by Booth and Chua (1996) who found that oversubscription and underpricing are positively related.

2.3.4 Size of the Offer

The firm's offer size is measured in relations to the offering multiplied by the number of stocks offered. It has been found that on average underpricing occurs more often in small offerings than larger offerings. In the united states, chalk and Peavey (1987) conducted an examination of daily returns on IPOs with an offer price of more than $1 was lower than whose offer price was less than $1, the lowest priced IPOs accounted for most of the sample's abnormal returns over the aftermarket trading period, indicating that underpricing is larger in smaller offerings.

2.4 Empirical Review

Carter, Dark, and Singh (1988) analyzed 2292 IPOs issued in the US between 1979 and 1991. Regression Analysis found that the age of the firm was significant in explaining underpricing. They concluded that older firms have long histories of operations and face a lower degree of uncertainty. This conclusion implied that older firms have a low information asymmetry degree than younger firms, leading to less underpricing of their IPOs.

Prices drop at issue announcement and increases with time from the last information release. Intraday price data was used to determine announcement effects on new equity issues. Size of an Issue, the intended use of sale proceeds and the estimated profits of new investment are not correlated with the announcement effect as observed by (Michael & Robert, 1988).

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A study by Loughran and Ritter (2002) which looked at 3,025 new issues from 1990 -1998 in the U.S also found that on average, an IPO gained by 14.1% on its first trading day leading to $27 billion being left on table by issuing companies. They defined money being left on table as "the day one price gain which is multiplied by number of stocks that were sold. If stocks were sold at opening day's closing price in the market other than offer price, the offering proceeds would have been higher by an amount equal to the amount left of table". They were puzzled by the fact that issuers rarely complain about leaving money on the table since it was equivalent to selling a company's stock at a fraction of its value (Loughran, 2002).

Cheluget (2008) found the first day gains to be 40.28%. The study looked at IPOs that took place between 1984 and 2008. Later, Swanya (2014) analyzed IPOs that took place between 2006 and September 2014 and found that the average first day gains of the IPOs was 67.67%. The difference in their findings can be attributed to the use of samples of different sizes and with different variable characteristics resultant from the study of IPOs issued during those periods.

Ochege (2011) sampled 15 Kenyan IPOs for the period 1990-2008 and found out that average initial market attuned returns for the first 3 days of listing is around 64.3% indicating a significant level of underpricing. Statistical analysis also indicated that the IPO underpricing level in Kenya is more related to listing delays, offer size, offer price, oversubscription rate and the type of issuer.

Kipngetich, Kibet, Guy, and Kipkoskey (2011) examined determinants of IPO pricing in Kenya. They examined the extent to which investor sentiment, post-IPO ownership retention, size of the firm, firm's age and board prestige affect IPO pricing of listed firms at NSE. Secondary data was used and analyzed by multiple regression analysis and presented using descriptive statistics. Average under-pricing of 49.44 percent was observed for the period under study and all the variables tested were found not to significantly influence IPO offer price at 5 percent level of significance. The study concluded that public information disclosed in the prospectus was insignificantly mirrored in IPO offer prices and that rational theory cannot explain the effect of investor sentiment in IPO market in Kenya given that investor sentiment and board prestige were negatively related to IPO offer price. Further research is needed on the role of regulatory authorities, especially as regards disclosure requirements; in protecting potential investors as 9 the publicly available information provided in the prospectus may not reflect all pertinent facts to inform sound investment decisions.

Kiluku (2013) carried a study to establish correlation between offer price and post-offer price of listed State Owned Enterprises at the NSE. The results revealed there exist a strong relationship between offer price and first post-offer price. In addition, the results showed that IPO share price is positively correlated with first day price at (0.974) with a significance level of 0.0110. This shows that lower IPO share prices have lower post listing market prices and degrees of underpricing and vice versa. A significant level 0.0110 showed that first day price of a share price significantly affects the performance of a share. (0.9485) shows that 94.85% is explained by the model with a lower standard error of

estimate of 3.869. The significance value of 0.0110 is less than 0.05 and therefore shows that IPO share price affects post listing market price.

Kanja (2013) conducted a study to determine effect of IPOs on shares returns of firms listed at the NSE. The results indicate that initial public offer affect stock returns of companies listed in the NSE and that the median return is less than (equal weighted) averages return signifying that distribution of initial returns is skewed to right, as expected. Over the entire sample, the equal-weighted average initial return exceeds the value weighted average by a factor of 1.75, which suggests that IPO offer is a vital determinant of initial return.

2.5 Conceptual Framework

A conceptual framework is an essential research tool intended to assist a researcher to develop awareness and understanding of the situation under scrutiny and to communicate this (Kombo and Tromp, 2006).The diagram below shows the expected relationship between the factors that affect short run performance of shares of companies listed at the NSE. Short run performance is critical as it measures the immediate market reaction once the company goes public by comparing the offer price and post market price.

Short run performance is influenced differently by firm age, size of the firm. Subscription rate and size of the offer   resulting to either under or overpricing of shares of companies listed at the NSE. Older and mature companies have a low level of information asymmetry as opposed to the new companies, resulting to less underpricing of their IPOs. A negative relationship between underpricing and Size is expected as observed (Giordano et al., 2008). This is because larger firms are usually expected to have lower underpricing because future

cash flow growth rates are easier to predict for mature companies for which more information is available.

Booth and Chua (1996) who found that oversubscription and underpricing are positively related as underpricing level depends on information heterogeneity among investors in a market which increase with demand for the company's shares and on average underpricing occurs more often in small offerings than larger offerings.

Figure 2.1: Conceptual Model

Independent variable   **Dependent Variable**

Independent variable	Dependent Variable
• Firm age • Size of the firm • Subscription rate • Size of the offer	Short run performance

Source: Researcher
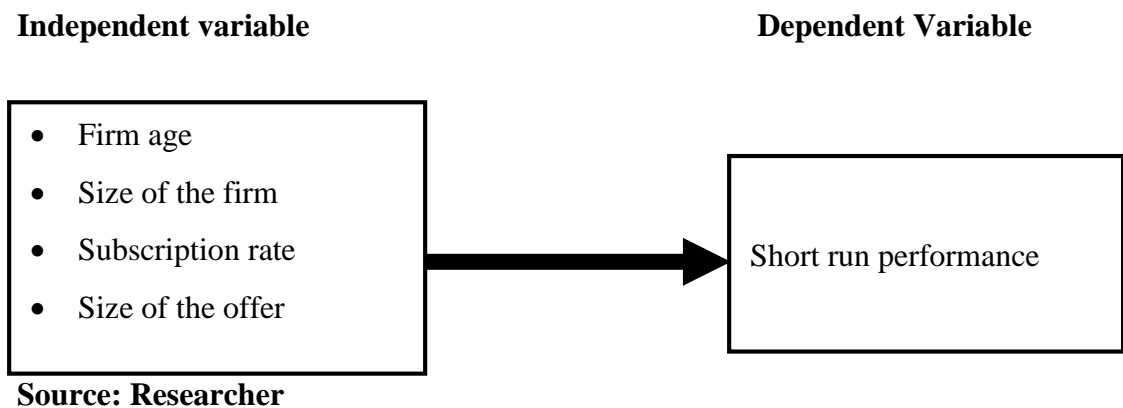
2.6 Hypothesis

This study was based on the following hypothesis;

H$_0$: There is no significant variability between IPO underpricing and short-run performance of companies listed at the Nairobi Securities Exchange

H$_1$: There is a significant variability between IPO underpricing and short-run performance of companies listed at the Nairobi securities exchange

2.7 Summary of the Literature Review

A Majority of empirical reviews that have been conducted have been done on international markets with few studies conducted locally, moreover most of the studies focused on long run performance with less focusing on the short run performance of companies listed the NSE. Karitie (2010) on long-run performance of IPOs. Wamari (2014) on effect of Initial Public Offers on Long run Stock Performance, Leshore (2008) on medium-term performance of IPOs in Kenya. This study therefore seeks to bridge the gap by focusing on the short-run performance of companies listed at the NSE.

A few of the studies that have been conducted on short run performance include; a study by Ochege (2011) that sampled 15 Kenyan IPOs for the period 1990-2008 and found out that average initial market attuned returns for the first 3 days of listing is around 64.3% indicating a significant level of underpricing. The study covered 3 consecutive days after the IPO day and my research seeks to include more days that are drawn from different calendars days to determine the short run performance. Cheluget (2008) found the first day gains to be 40.28% by looking at IPOs that took place between 1984 and 2008, the study did not cover the period when the IPO market in Kenya was in a condition referred to as 'hot market' in financial literature which this study covers.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research design, the study population, data collection procedure and data analysis technique.

3.2 Research Design

The study adopted an event study model to study the effects of initial public offer Underpricing on short run performance of companies listed the Nairobi Securities Exchange. An event study attempts to measure the valuation effects of a corporate event, such as a merger or earnings announcement, by examining the response of the stock price around the announcement of the event. The event study methodology seeks to determine whether there is an abnormal stock price effect associated with an event. From this, the researcher can infer the significance of the event

3.3 Population and Sample

A population is a well-defined or set of people, services, elements, and events, group of things or households that are being investigated (Ngechu, 2004). The sample of data which was used in this current study comprised IPOs, stock returns and market returns of all the companies that have issued IPOs for the period 2006 to 2016 and data was obtained from NSE and CMA data. They were 14 firms listed on the NSE between 2006 and 2016. The population was therefore the 14 stocks. A further scrutiny showed that five of these firms were not listed through IPO but were structured as an introduction hence were dropped from the final sample giving a sample of 9 firms.

3.4 Data Collection Procedure

This study used secondary data sources to gather information relevant in achieving the research objectives. The data on IPOs and the companies' specific characteristics, as well as share price of the companies in the sample was obtained from Nairobi securities exchange official website, Capital Market Authority and prospectus of the companies under study.

3.5 Data Analysis

The market measures of performance were used in this study. These are because most of the empirical results on short-run and long run performance of IPOs have favored their use (Aktas et al, 2003). In order to determine the short-run performance of IPOs in Kenya, the study analyzed short-term performance of IPOs using market adjusted stock returns with traditional event study methodology. The study focused on 1-day, 3-day, 5-day, 7- day and 15-day cumulative abnormal returns (CAR) in order to assess short-term performance.

3.5.1 Measuring Short Run Performance

The research adopted the standard model for calculating underpricing of new issues namely: mean adjusted short run performance

$$R_{i,t} = \frac{P_{i,t} - P_{i,t-1}}{P_{i,t-1}} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots (1)$$

Where;

$R_{i,t}$ = Initial return of the stock

$P_{i,t}$ = Current price of the stock on

$P_{i,t-1}$ = Previous price of the stock

The return on the market index during the same time was calculated as the benchmark for the return of stocks at the NSE

The return on the index was calculated as;

$$R_{mt} = \frac{I_{i,t} - I_{i,t-1}}{I_{i,t-1}} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \quad (2)$$

Where;

R_{mt} = Market return

$I_{i,t}$ = Closing index at the current period

$I_{i,t-1}$ = Closing index at the previous period

The expected return of each security was calculated as follows.

$$E[R_{i,t}] = \alpha_i + \beta_i R_{mt} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \quad (3)$$

Where;

ER_{it} = Expected return of the security i in period t

α_i = Alpha (the intercept of the characteristic line)

β_i = Beta coefficient (slope of characteristic line)

R_{mt} = Market return in period t.

The daily abnormal returns (AR) was calculated as follows

$$AR_{i,t} = R_{i,t} - E[R_{i,t}] \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \quad (4)$$

Where;

$AR_{i,t}$ = Abnormal return for security i over time t,

$R_{i,t}$ = Return at time t on security i

$E[R_{i,t}]$ = Expected return for security i at time t,

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The Cumulative Abnormal Returns (CAR) was determined using the following formula

$$CAR = \sum_{t=1}^{n} AR \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{ (5)}$$

Where;

CAR = Cumulative abnormal returns

AR = Abnormal returns

3.5.2 Test of Significance

The test for significance was done on the abnormal return and cumulative abnormal

return (CAR) using a standard t-test statistic at 95% confidence interval for the 5 days.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

This chapter consists of the descriptive statistics, the results on IPO performance at the NSE, the test of significance and an interpretation of the findings.

4.2 Descriptive Statistics

This section presents the summary descriptive statistics on stock prices and the NSE 20 share index for the sampled firms

4.2.1 Summary Descriptive Statistics on Stock Price

Table 4.1 shows the descriptive results of the firms that had issue an initial public offering at the NSE.

Table 4.1: Summary Descriptive Statistics on Stock Prices

	N	Minimum	Maximum	Mean	Std. Deviation
KenGen	5	30.50	40.00	37.14	4.01
Scan Group	5	15.00	29.80	21.42	5.59
Eveready	5	11.00	18.10	15.70	2.86
Access Kenya	5	12.60	14.00	13.22	.58
Kenya Re	5	14.20	17.20	16.08	1.15
Safaricom	5	7.00	7.80	7.36	.29
Co-op Bank	5	9.50	10.40	10.08	.37
Britam	5	5.40	8.40	6.80	1.14
NSE	5	16.20	23.20	20.76	2.92

Source: Research Findings

The results on table 4.1 shows that the average share price for Kengen after the IPO was 37.14 and the minimum and maximum share prices being 30.50 and 40 respectively. The findings show that the mean share price for scan group was 21.42 with maximum and minimum values of 15 and 29.80 respectively. The findings for Eveready show that the mean share price was 15.70 within minimum and maximum prices of 11 and 18.10 respectively.

The findings for access Kenya indicate that the average share price for the company was 13.22 with minimum and maximum prices of 12.60 and 14 while average share price for Kenya Re insurance company was 16.08 with minimum and maximum values of 14.20 and 17.20. The findings also indicate that Safaricom's average share price was 7.36 with the minimum and maximum values of 7.00 and 7.80 while the average share price of Co-op bank was 10.08 with the minimum and maximum values of 9.50 and 11.40 respectively.

Further, the results indicate that the average share price for Britam was 6.80 with the maximum and minimum share prices being 8.40 and 5.40 while the average share price for NSE was 20.76 with minimum and maximum values of 16.20 and 23.20 in that order. These findings indicate that the shares of Kengen, Scan group, Eveready, Access Kenya, Kenya Re, Safaricom and NSE had performed better within the first 15 days after the IPO considering the issue price was 11.90, 10.45, 9.5, 10, 9.5, 5 and 9.50 respectively. However, the results indicate that the share prices of Cooperative bank and Britam had not performed well after the initial public offering.

4.2.2 Summary Descriptive Statistics on the NSE 20 Share Index

Table 4.2: Summary Descriptive Statistics on the NSE 20 Share Index

	N	Minimum	Maximum	Mean	Std. Deviation
Ken Gen	5	4281.00	4448.00	4369.50	67.38
Scan Group	5	4486.10	4839.20	4561.80	155.34
Eveready	5	5487.70	6085.60	5656.78	244.97
Access Kenya	5	5043.40	5124.10	5075.18	29.74
Kenya Re	5	5274.50	5484.60	5373.60	78.41
Safaricom	5	5152.00	5445.70	5306.92	104.21
Co-op Bank	5	3367.20	3589.20	3455.72	83.84
Britam	5	3323.40	3507.80	3415.06	67.74
NSE	5	5161.20	5257.80	5198.80	37.09

Source: Research Findings

The results on table 4.2 shows that the average market return after Kengen's IPO was 4639.50 whereas the average market return after Scan group IPO was 4561.80 while the average market return after Eveready's IPO was 5656.78. The results also show that the average market return after Access Kenya IPO, Kenya-Re IPO, Safaricom IPO, Coop bank IPO, Britam IPO and NSE IPO were 5075.18, 5373.60, 5306.92, 3455.72, 3415.06 and 5198.80 respectively.

4.3 IPOs performance at the NSE

This section presents the market adjusted short run returns, the average market adjusted returns, the abnormal returns, the Average abnormal returns (ARR) and the cumulative average returns (CAR).

4.3.1 Market Adjusted Short Run Performance

The return on the market index during the IPO time was calculated as the benchmark for the return of stocks at the NSE. The return on the index was calculated as follows

$$M_{i,t} = \frac{I_{i,t} - I_{i,t-1}}{I_{i,t-1}}$$

Table 4.3 shows the results of market adjusted short run returns of IPOs over the period 2006 to 2014.

Table 4.3: Market Adjusted Short Run Performance

Event time	Day 3	Day 5	Day 7	Day 15
Kengen	-0.82%	-0.64%	-1.41%	-0.98%
Scan group	-0.08%	0.00%	0.49%	6.85%
Eveready	-1.80%	-0.69%	1.31%	8.63%
Access Kenya	0.44%	0.06%	0.11%	0.98%
Kenya Re	1.12%	0.70%	0.58%	1.49%
Safaricom	-2.57%	0.21%	-0.23%	-3.02%
Co-op	1.15%	1.55%	3.60%	-3.86%
Britam	-0.06%	1.34%	1.80%	-5.55%
NSE	-0.42%	0.42%	0.50%	0.93%

Source: Research Findings

The results on table 4.3 shows the adjusted market short run performance in day 3 were negative after the IPO for Kengen, Scan group, Eveready, Safaricom, Britam and the NSE but positive for Access, Kenya, Kenya Re and Cooperative bank. Secondly, results also show that the adjusted market short run performance in day 5 were positive after the IPO for Scan group, Access Kenya, Kenya Re, Safaricom, Coop, Britam and the NSE but negative for Kengen and Eveready. Thirdly, the results indicate that the adjusted market

short run performance in day 7 were positive after the IPO for Scan group, Access Kenya, Kenya Re, Eveready, Coop, Britam and the NSE but negative for Kengen and Safaricom. Finally, the results show that adjusted market short run performance in day 15 were negative after the IPO for Kengen, Safaricom, Coop and Britam but positive for Scan group, Eveready, Access Kenya, Kenya Re and the NSE respectively.

4.3.2 Mean Adjusted Short Run Performance

Table 4.4 shows that the mean adjusted short run performance

Table 4.4: Mean Adjusted Short Run Performance

Event time	Day 3	Day 5	Day 7	Day 15
Av. MAR	-0.34%	0.33%	0.75%	0.61%

Source: Research Findings

Table 4.4 shows that the mean adjusted short run performance for day 3 was negative but positive in day 5, 7 and 15

4.3.3 Abnormal Returns

Table 4.5 shows the calculated abnormal returns for the firms that had issue an IPO from 2006 to 2014.

Table 4.5: Abnormal Returns

Event time	Day 3	Day 5	Day 7	Day 15
Kengen	-1.27%	2.67%	-8.68%	-18.85%
Scan group	3.73%	3.69%	-8.04%	0.61%
Eveready	17.43%	-19.43%	-0.11%	2.11%
Access Kenya	3.79%	-7.07%	5.10%	-1.82%
Kenya Re	-10.59%	6.91%	-1.65%	5.34%
Safaricom	-0.07%	0.13%	-0.14%	0.08%
Co-op	-1.23%	4.96%	-2.77%	-0.96%
Britam	-2.33%	0.46%	1.30%	0.56%
NSE	0.95%	8.54%	-13.18%	3.69%

Source: Research Findings

The results on table 4.5 show that in day 3 Scan group, Eveready, Access Kenya and the NSE had positive abnormal returns while the other firms had negative abnormal returns. In day 5, only Eveready and access Kenya had negative returns but the other firms had positive returns. In day 7, only, Access Kenya and Britam had negative abnormal returns while in day 15 the firms that had a negative abnormal returns included Kengen, Access Kenya and Cooperative bank.

4.3.4 Average Abnormal Returns

Table 4.6 shows the average abnormal returns

Table 4.6: Average Abnormal Returns

Event time	Day 3	Day 5	Day 7	Day 15
AAR	1.16%	0.10%	-3.13%	-1.03%

Source: Research Findings

The results on table 4.6 shows the average abnormal returns were positive in day 3 and 5 but negative in day 7 and 15.

4.3.5 Cumulative Abnormal Returns (CAR)

Table 4.7 shows the results of cumulative abnormal returns

Table 4.7: Cumulative Abnormal Returns

Event time	Day 3	Day 5	Day 7	Day 15
Kengen	-1.27%	1.39%	-7.28%	-26.13%
Scan group	-0.83%	-1.65%	-13.86%	-13.00%
Eveready	17.13%	-2.58%	-2.91%	-0.86%
Access Kenya	-0.57%	-17.60%	-21.78%	-20.02%
Kenya Re	-10.40%	-9.21%	-18.29%	-7.48%
Safaricom	-0.84%	-10.10%	-18.27%	-17.56%
Co-op	-3.46%	-0.66%	-5.21%	-9.35%
Britam	-3.33%	-3.97%	-3.80%	-3.86%
NSE	-10.74%	-7.09%	-24.50%	-21.60%

Source: Research Findings

The results on table 4.7 show that Scan group, Access Kenya, Kenya Re, Safaricom, Cooperative bank, Britam and the NSE had underperformed since they had negative cumulative abnormal returns in all the days. The results also show that Kengen had under performed in day 3, 7 and 15 while Eveready had underperformed in day 5, 7 and 15.

4.4 Test of Significance

The t-statistic was used at 95% confidence level to test the significance of abnormal returns and cumulative abnormal return (CAR). The test of significance results are shown in Appendix V. According to the results, all the t statistics values were less than 2 which

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indicates that the abnormal returns and cumulative abnormal returns for the firms which had an IPO under-pricing were insignificant. Thus, the study adopts the Null hypothesis, which states "there is no significant variability between IPO underpricing and short-run performance of companies listed at the Nairobi Securities Exchange"

4.5 Interpretation of the Findings

The finding of the study shows mixed findings on the effect of IPO underpricing on short run performance of companies listed at the NSE. The results on the mean adjusted short run performance indicates that IPO underpricing led to negative market returns in day 3 and positive performance in day 5, 7 and 15 respectively. The results also established that IPO underpricing led to positive average abnormal returns in day 3 and 5 but negative average abnormal returns in day 7 and day 15 respectively. The findings also found an insignificant variability between IPO underpricing and short-run performance of companies listed at the Nairobi Securities Exchange.

The above finding agree with those of Loughran and Ritter (2002) which looked at 3,025 new issues from 1990 -1998 in the U.S also found that on average, an IPO gained by 14.1% on its first trading day leading. Lowry and Schwert (2002) found that IPO volume tends to be higher following periods of especially high initial returns, and their findings suggest that this relation is driven by information learned by the investors during the registration period. Additionally, Apaka (1998) confirmed the existence of underpricing, but found no conclusive evidence to validate the theorem that the extent of underpricing was the same for both primary and secondary types of offerings.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of the research, the research conclusions and the recommendations, the limitations and the suggestions for further research.

5.2 Summary

The objective of this study was to explore the effect of IPO underpricing on short- run performance of the shares of firms that are listed at the NSE. The study adopted an event study model to study the effects of initial public offer Underpricing on short run performance of companies listed the Nairobi Securities Exchange. The study covered 9 firms which had participated in Initial public offerings between the years 2006 - 2016. The research adopted the standard model for calculating underpricing of new issues namely: mean adjusted short run performance and the return on the market index during the same time is calculated as the benchmark for the return of stocks at the NSE.

The descriptive results established that the shares of Kegnen, Scan group, Eveready, Access Kenya, Kenya Re, Safaricom and NSE had performed better within the first 15 days after the IPO considering the issue price was 11.90, 10.45, 9.5, 10, 9.5, 5 and 9.50 respectively. The results also established that the share prices of Cooperative bank and Britam had not performed well after the initial public offering. The results also revealed that the average market return after Access Kenya IPO, Kenya-Re IPO, Safaricom IPO, Coop bank IPO, Britam IPO and NSE IPO were 5075.18, 5373.60, 5306.92, 3455.72, 3415.06 and 5198.80 respectively.

The analysis of the performance of IPOs at the NSE established that the mean adjusted short run performance in day 3 were negative but positive in day 5, day 7 and Day 15. The findings also established that the average abnormal returns were positive in day 3 and day 5 but negative abnormal returns in day 7 and 15. An analysis of cumulative abnormal returns found that Scan group, Access Kenya, Kenya Re, Safaricom, Cooperative bank, Britam and the NSE had underperformed since they had negative cumulative abnormal returns in all the days. The findings also established that Kengen had under performed in day 3, 7 and 15 while Eveready had underperformed in day 5, 7 and 15. Further, the finding revealed that there was no significant variability between IPO underpricing and short-run performance of companies listed at the Nairobi Securities Exchange

5.3 Conclusion

Based on the study findings it can be concluded that 67% of the IPOs that were issued at the NSE between 2006 and 2014 generated a negative market adjusted return in day 3 and positive adjusted market return in day 5, day 7 and 15. The study also concludes that 67% of the firms generated negative mean adjusted returns in day 3 and positive mean market adjusted in day 3, 5 and 7. Thus, the conclusion that there is a short-run underperformance of IPOs underpricing at the Nairobi Securities Exchange

The study further concludes that most of the IPOs that were issued at the NSE over the period between 2006 and 2014 earned positive abnormal returns in day 3, day 5 and day 15 and negative abnormal returns in day 7. The study also concludes that 50% of the firms had a positive average abnormal return in day 3 and 5 and a negative average abnormal return in day 7 and 15 with negative cumulative average returns in all the considered days.

The study also concludes that there is an insignificant variability between IPO underpricing and short-run performance of companies listed at the Nairobi Securities Exchange.

5.4 Recommendations for Policy and Practice

The study concluded that 67% of the IPOs conducted at the NSE generated negative market and mean adjusted returns in day 3 and positive returns in the other days. The study therefore recommends that companies issuing IPO should come up with an effective price to ensure that they minimize the effect of short run performance of IPOs underpricing.

The study also recommends that various policy making organizations like the capital markets authority and the Nairobi securities exchange should come up with effective policies on initial public offerings and the pricing of initial public offerings.

The study also recommends that investors should carry out due diligence to establish whether IPO prices are underpriced or overpriced before they buy shares of a company in an IPO.

5.5 Limitation of the Study

This study covered the period between 2006 and 2014 and the various IPO that took place during that period. However, initial public offerings have been conducted in Kenya since independence and several firms conducted the exercises. Therefore, the study and its findings is limited to the study period and the 9 listed firms which had conducted an IPO within the considered study period.

The study also covered the short run performance and considered 5 event days thus the findings are only limited to short run performance and not long run performance. In addition, the study findings are limited to Kenya and Nairobi Securities exchange since share prices and returns vary across counties and stock exchanges.

5.6 Suggestions for Further Research

This study explored the relationship IPO underpricing on short- run performance of the shares of firms that are listed at the NSE using 5 days, which comprised of Day 1, 3, 5, 7 and 15. Therefore, the study recommends similar study but using additional days from day 1 to day 15 rather than specific days since share prices are available on daily basis. The study also recommends an additional study on the IPO underpricing on long - run performance of the shares of firms that are listed at the NSE using annually and monthly data to establish the relationship.

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APPENDICES

Appendix I: Initial public offerings in Kenya between 2006 and 2014

COMPANY	YEAR	ISSUED SHARES	OFFER PRICE (KES)	CLOSING PRICE AFER THE FIRST DAY TRADING(KES)
Nse	2014	194,625,000	9.50	17
Britam Kenya Ltd	2011	1,891,451,850	9	8
Co-operative Kenya	2008	700,000,000,	9.5	10.45
Safaricom Ltd	2008	40,000,000,000	5	7.35
Kenya Re	2007	240,000,000	9.5	15.75
Access Kenya	2007	218,467,081	10	14
Eveready East Africa Ltd	2006	210,000,000	9.5	11
Kengen	2006	2,198,361,465	11.90	40
Scangroup		284,789,128	10.45	15

Source: Capital Market Authority

Appendix II: Number of IPOs per Year

YEAR	NO. of IPOs
2006	3
2007	2
2008	2
2011	1
2014	1
TOTAL	9

Source: www.nse.co.ke

Appendix III: NSE 20 Share Index Data

Company	NSE INDEX DAY 1	NSE INDEX DAY 3	NSE INDEX DAY 5	NSE INDEX DAY 7	NSE INDEX DAY 15
Ken Gen	4447.99	4411.81	4383.83	4322.91	4280.96
Scan Group	4489.6	4486.07	4486.07	4507.99	4839.24
Eveready	5624.84	5525.4	5487.73	5560.44	6085.59
Access Kenya	5043.35	5065.62	5068.68	5074.08	5124.14
Kenya Re	5274.53	5334.03	5371.72	5403.17	5484.63
Safaricom	5445.67	5309.08	5320.13	5307.71	5152.03
Co-op Bank	3367.24	3406.34	3459.97	3589.16	3455.88
Britam	3400.68	3398.66	3444.7	3507.77	3323.44
NSE	5182.89	5161.21	5182.98	5209.1	5257.81

Source.www.nse.co.ke

Appendix IV: Stock Price Data

Company	IPO Year	IPO PRICE	Day 1 Date	Day 1 stock price	Day 3 Date	Day 3 stock price	Day 5 Date	Day 5 stock price	Day 7 Date	Day 7 stock price	Day 15 Date	Day 15 stock price
KENGEN	2006	11.90	17/05/2006	40	17/05/06	39.25	23/05/06	39.75	25/05/06	36.25	6/06/06	30.50
SCAN GROUP	2006	10.45	29/08/06	15	31/08/06	17.95	4/09/06	21.5	6/09/06	22.75	18/09/06	29.75
EVEREADY	2006	9.5	18/12/06	11	20/12/06	17.5	22/12/06	16.8	28/12/06	18.10	10/1/07	15.10
ACCESS KENYA	2007	10	4/06/07	13.45	06/06/07	14	08/06/07	12.55	12/06/07	12.7	22/06/07	13.35
KENYA RE	2007	9.5	27/08/07	16	29/08/07	14.25	31/08/07	16.25	4/09/07	17.25	14/09/07	16.8
SAFARICOM	2008	5	09/06/08	7.35	11/06/08	6.95	13/06/08	7.45	17/06/08	7.8	27/06/08	7.25
CO-OP BANK	2008	9.5	22/12/08	10.45	24/12/08	10.10	30/12/08	10.40	02/01/09	10	14/01/09	9.5
BRITAM	2011	8	8/09/11	8.45	12/09/11	7.45	14/09/11	6.35	16/09/11	5.35	28/09/11	6.35
NSE	2014	9	9/9/14	16.25	11/9/14	19.6	15/9/14	23.25	17/9/14	21.75	29/9/14	23

Source: www.nse.co.ke

Appendix V: Research Data

Company	Date	Rit	Mit	E[R]	AR	t-stat	CAR	t-stat
Kengen	Day 3	-1.91%	-0.82%	5.16%	-1.27%	-0.06497	-1.27%	-0.0650
Kengen	Day 5	1.26%	-0.64%	16.16%	2.67%	0.13616	1.39%	0.0712
Kengen	Day 7	-9.66%	-1.41%	-30.49%	-8.68%	-0.44288	-7.28%	-0.3717
Kengen	Day 15	-18.85%	-0.98%	-4.51%	-18.85%	-0.96243	-26.13%	-1.3341
Scan group	Day 3	16.43%	-0.08%	17.27%	-0.83%	-0.08056	-0.83%	-0.0806
Scan group	Day 5	16.51%	0.00%	17.33%	-0.82%	-0.07904	-1.65%	-0.1596
Scan group	Day 7	5.49%	0.49%	17.71%	-12.21%	-1.18184	-13.86%	-1.3414
Scan group	Day 15	23.53%	6.85%	22.67%	0.86%	0.08303	-13.00%	-1.2584
Eveready	Day 3	37.14%	-1.80%	20.01%	17.13%	1.13207	17.13%	1.1321
Eveready	Day 5	-4.17%	-0.69%	15.54%	-19.70%	-1.30240	-2.58%	-0.1703
Eveready	Day 7	7.18%	1.31%	7.52%	-0.34%	-0.02229	-2.91%	-0.1926
Eveready	Day 15	-19.87%	8.63%	-21.92%	2.06%	0.13587	-0.86%	-0.0567
Access Kenya	Day 3	3.93%	0.44%	4.50%	-0.57%	-0.03689	-0.57%	-0.0369
Access Kenya	Day 5	-11.55%	0.06%	5.48%	-17.03%	-1.10590	-17.60%	-1.1428
Access Kenya	Day 7	1.18%	0.11%	5.36%	-4.18%	-0.27129	-21.78%	-1.4141
Access Kenya	Day 15	4.87%	0.98%	3.11%	1.76%	0.11449	-20.02%	-1.2996
Kenya Re	Day 3	-12.28%	1.12%	-1.88%	-10.40%	-0.94358	-10.40%	-0.9436

Source: Capital Market

Kenya Re	Day 5	12.31%	0.70%	11.12%	1.19%	0.10802	-9.21%	-0.8356
Kenya Re	Day 7	5.80%	0.58%	14.87%	-9.07%	-0.82291	-18.29%	-1.6585
Kenya Re	Day 15	-2.68%	1.49%	-13.49%	10.81%	0.98014	-7.48%	-0.6783
Safaricom	Day 3	-5.76%	-2.57%	-4.92%	-0.84%	-0.06733	-0.84%	-0.0673
Safaricom	Day 5	6.71%	0.21%	15.97%	-9.26%	-0.74639	-10.10%	-0.8137
Safaricom	Day 7	4.49%	-0.23%	12.66%	-8.17%	-0.65816	-18.27%	-1.4719
Safaricom	Day 15	-7.59%	-3.02%	-8.29%	0.71%	0.05699	-17.56%	-1.4149
Co-op	Day 3	-3.47%	1.15%	0.00%	-3.46%	-0.49783	-3.46%	-0.4978
Co-op	Day 5	2.88%	1.55%	0.09%	2.80%	0.40249	-0.66%	-0.0953
Co-op	Day 7	-4.00%	3.60%	0.54%	-4.54%	-0.65324	-5.21%	-0.7486
Co-op	Day 15	-5.26%	-3.86%	-1.12%	-4.14%	-0.59609	-9.35%	-1.3447
Britam	Day 3	-13.42%	-0.06%	-10.09%	-3.33%	-1.12130	-3.33%	-1.1213
Britam	Day 5	-17.32%	1.34%	-16.68%	-0.64%	-0.21548	-3.97%	-1.3368
Britam	Day 7	-18.69%	1.80%	-18.86%	0.17%	0.05718	-3.80%	-1.2796
Britam	Day 15	15.75%	-5.55%	15.81%	-0.06%	-0.02137	-3.86%	-1.3010
NSE	Day 3	17.09%	-0.42%	27.83%	-10.74%	-0.61761	-10.74%	-0.6176
NSE	Day 5	15.70%	0.42%	12.05%	3.65%	0.21002	-7.09%	-0.4076
NSE	Day 7	-6.90%	0.50%	10.52%	-17.41%	-1.00161	-24.50%	-1.4092
NSE	Day 15	5.43%	0.93%	2.53%	2.90%	0.16687	-21.60%	-1.2423

Source: Capital Market Authority