THE SUBSCRIPTION RATE OF INITIAL PUBLIC OFFERING`S AND THE LONG TERM PERFOMANCE IN THE AFTER MARKET AT THE NAIROBI SECURITIES EXCHANGE

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DECLARATION

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This research project is my original work and has not been submitted for the award of degree in any other university.

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DEDICATION

This study is dedicated to my dear parents and brothers for their unwavering support and encouragement throughout the study period.

May the blessings of the Almighty God be upon them.

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ABSTRACT

The Nairobi securities exchange has witnessed an increase in the number of companies having initial public offerings. Most of these IPO`s have generated a lot of interest and excitement from investors leading to them being oversubscribed, meaning that the investor demand for shares offered during an IPO exceeded the number of shares being offered by companies. The reason why there is great demand for the shares on offer during IPO`s could be linked to investor`s expectations. Investors expect the securities offered during IPO`s are going to bring positive returns in future. This return is measured by an appreciation of the share price and the dividends received. In investing investors have different investment horizons, some investors have a short term investment horizon others medium, and for others a long term investment horizon. The focus of this study is on the long term investing for a period of three after the IPO and the returns after the three year period. The study looks at the relationship between the investor demand for IPO`s which is the subscription rate and the long term return of shares given by the difference between the offer price and the price of the shares three years later plus the dividends received for the period 1992 to 2009 at the Nairobi securities exchange. The findings are that, IPO`s in Kenya are usually oversubscribed driven by investors who are over optimistic about the performance of the shares at the NSE. From the study the subscription rate of the sample is 272.49%. In the sample of study, seventeen IPO`s are oversubscribed; two are fully subscribed while three are undersubscribed. The long term returns from the study are 37.5%. Long term period is defined as a period longer than thirty six months. Fourteen IPO`s have positive long term returns, while eight IPO`s have negative long term returns. Twelve of the seventeen IPO`s which are oversubscribed have positive returns while five have negative returns. The fully subscribed all have negative returns while a third of the undersubscribed offerings have negative returns; hence an oversubscribed seasonal offering is more likely to give a positive return than an undersubscribed and fully subscribed offering. Over the long run there is a weak positive relationship between the subscription rate and the long term returns. The subscription rate is a poor predictor of the expected returns over the three year period. There is only a slight difference between the three year returns and the first day returns with the three year returns being slightly higher than the first day returns. There is wide variation in the returns of individual IPO`s and even the subscription rates of IPO`s. To an investor IPO`s produce both positive and negative returns in the long run with the positive returns being more than half of the sample at 63.64%. Hence IPO`s are more likely to produce a positive return over the three year period than negative returns factoring in capital gains and dividends received during the period; thus investors should hold on to the securities.

TABLE OF CONTENTS

ABBREVIATIONS

CMA - Capital markets authority

NSE - Nairobi securities exchange

IPO - Initial public offering

IPO`s - Initial public offerings

LBO - Leveraged buyout

SPSS - Statistical packages for social sciences

HFCK - Housing finance corporation of Kenya

KCB - Kenya commercial bank

NBK - National bank of Kenya

ARM - Athi River Mining

NIC – National industrial credit

KENGEN- Kenya electricity generating company

LIST OF TABLES AND FIGURES

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

An initial public offering (IPO) is a company's first offerings of shares to the public and is sometimes referred to as an unseasoned offering. When a corporation first decides to issue stock to the public in order to raise funds, it engages in an IPO, which is a first-time offering of shares by a specific firm to the public (William, Gordon, & Jeffery, 2006). All securities undergo a single primary offering in which the issuer receives the proceeds of the offering and investors receive the securities. Thereafter whenever the securities are bought or sold the transactions occurs in the secondary market (kidwell, Blackwell, Whidbee & Peterson, 2008).

There are many reasons for a company going public; An IPO facilitates raising new corporate cash. If a privately held company wants to raise cash by selling new stock, it must either go to its existing owners, who may not have any money or may not want to put more money in this particular firm or else shop around for wealthy investors. However it is usually quite difficult to get outsiders to put money into a closely held company because if the outsiders do not have voting control (more than 50% of the stock) then the inside stockholders/ managers can take advantage of them. Going public brings with it both public disclosure of information and regulation by the regulatory authorities, this greatly reduces this problem and thus makes people more willing to invest in the company which makes it easier for the firm to raise capital (Michael & Eugene, 2010).

IPO`s are useful in establishing a value for the firm. If a company wants to give incentives in form of stock options to key employees, it is useful to know the exact value of those options. Employees much prefer to own a stock that is publicly traded and therefore liquid. The issue price during an IPO is an estimation of the price of the stock of the firm which is used to value a firm, once those shares are listed it becomes very easy to determine the value of the firm simply by looking at the price in the stock exchange (Michael & Eugene, 2010).

To the founders of the company an IPO increases liquidity and allows founders to harvest their wealth. The stock of a private or closely held corporation is illiquid. It may be hard for one of the owners who want to sell some shares to find a ready buyer and even if a buyer is located there is no established price on which to base the transaction an IPO simplifies this by listing the shares on the stock market one can get the price of the shares very quickly at any given point (Michael & Eugene, 2010).

An IPO also Permits founders of the company to diversify. As a company grows and becomes more valuable its founders often have most of their wealth tied up in the company. By selling some of their stock in public offering they can diversify their holdings thereby reducing the risk of their personal portfolios. There are other benefits that accrue to a company by carrying an IPO; they facilitate merger negotiations and also increases potential markets for the company i.e. many companies report that it is easier to sell their products and services to potential customers after they become publicly traded (Michael & Eugene, 2010).

In Kenya IPO`s are governed by the capital markets authority (CMA) through various Acts which form the regulatory framework within which IPO`s are carried out in the country. Authority must be obtained from the CMA before a firm can go on ahead with an IPO.CMA (2002)" The Authority shall be the competent authority to grant approval for all public offers and listing of securities on any securities exchange in Kenya." There are stringent rules and requirements put in place to protect the interests of investors before a firm can be able to offer an IPO these requirements govern all aspects of the IPO especially disclosures made in the prospectus to the potential investors by the company and the financial strength and prospects of the issuing firm.

The lead underwriter must determine the offer price at which the shares will be offered at the time of the IPO. The price that investors are willing to pay per share is influenced by prevailing market and industry conditions. If other publicly traded firms in the same industry are priced high relative to their earnings or sales then the price assigned to shares in the IPO will be relatively high. Before a firm goes public it attempts to gauge the price that will be paid for its shares this is done during the road show where the lead underwriter solicits indications of interest in the IPO by investors.

A few months before the IPO the issuing firm with the help of the underwriter develops the prospectus and files it with the capital markets authority. The prospectus contains detailed information about the firm and includes financial statements and discussions about the risks involved. It is intended to provide the potential investors with the information they need to decide whether to invest in the firm. Once the CMA approves the prospectus it is sent to institutional investors who may want to invest in the IPO and it will also be available to the general public (Padberg, 2007). CMA Act (2002)"The issuer shall, before the time of publication of the prospectus, obtain approval of the Authority that the Information Memorandum complies with these Regulations and shall deliver a copy thereof to the Registrar for registration".

An IPO's success or failure is known by its subscription rate. The subscription rate is the investors demand for IPO. If the demand for the IPO exceeds the supply an IPO is said to be oversubscribed while if the demand equals the supply the issue is said to be fully subscribed if the demand is less than the supply the issue is said to be under subscribed. Most issuing firm will determine the threshold by which they define the success or otherwise of an IPO. Many IPO`s are oversubscribed with investors wishing to purchase more shares than are available. In such a case the investment bank will allocate shares to the investors on a pro rata basis. If demand is high enough, the banks may increase the offering price, if demand is low, they will either reduce the offering price or withdraw the IPO. Sometimes low demand is specifically due to concern over the company's future prospects, but sometimes low demand is caused by a fall in the general stock market. Thus the timing of the road show and offering date are important. If all goes well with the road show, the investment bank will finalize the offering price on the evening before the actual offering date (Michael & Eugene, 2010).

In a study done by Agarwal, chunlin and Ghon (2003) in the Hong Kong stock market for IPO`s covering the years 1993-1997 they found out that there is a strong relationship between investor demand for IPO`s and the short and long-run post-issue performance of IPO`s. Investor demand for IPO`s is positively related to the initial returns of these firms. The returns of the first trading day indicate that the IPO`s with high investor demand are significantly underpriced while the IPO`s with low investor demand are overpriced. The

long-run size-adjusted excess returns of IPO`s are negatively related to investors demand. IPO`s with high investor demand have large positive initial returns but negative longer-run excess returns while IPO`s with low investor demand have negative initial returns but positive longer-run excess returns. Investors demand for an IPO is largely driven by investor's overreaction to the information about the prospects prior to the offerings. Hence, both high and low demand IPO`s are not priced at intrinsic values in early aftermarket trading but eventually their true values are reflected in the pricing process. The IPO market is subject to fads which are reflected in excess demand for IPO`s as explained by the bandwagon hypothesis.

The long term performance in relation to shares traded in the stock market relates to gain or loss in the value of a security held for a period of more than 36 months. The long term period involves more uncertainty than the medium term or short term period this is due to the fact that market trends are more easily predictable in the short term than in the long term. According to Hemant (2010) short term investment is anywhere between 1 year to 3 years. A period less than 1 year would come under Ultra Short Term period. An investment horizon of more than 5 years should fall under Long Term investments. A period between 3 to 5 years is combination of long term and short term and is classified as medium term investments. Holding a share in the long term could be viewed as long-term investing while holding it short term could be viewed as short term investing. Whether one holds a share in the long term or short depends on their attitude towards investing than an investing style. Other finance scholars view a long-term investment as being expected to be held for at least 10 years or through an entire business cycle. For the purpose of this study long term performance is taken to be any period longer than thirty six months.

Several papers have analyzed the long-run performance of IPO's. Ritter (1991), loughran, ritter and Rydqvist (1994) Aggarwal & Rivoli 1990 found that the long-term return to investing inIPO's is surprisingly low. Examining the shareholders return to owning a portfolio of IPO's for up to 5 years after the company went public these studies found annual returns to be in the range of 3-5% far below other benchmark returns. Given this returns the terminal value of an IPO portfolio after 5 years is only 70-80% of the value of

a portfolio that invested in the standard and poor 500 index. Most IPO`s can be categorized as small growth stocks and these stocks have historically had extremely low returns. IPO`s do quite poorly in the 5 year subsequent to their issuance, but similar small growth firms are more mature have done equally poor (Mark & Sheridan, 2002).

There is strong evidence that on average, IPO's of the firm performs poorly over a period of a year or longer. Thus from a long term perspective many IPO's are overpriced at the time of issue. Investors may be overly optimistic about the firms that go public to the extent that the investors base their expectations before the IPO, they should be aware that firms do not perform as well after going public as they did before. This weak performance may be partially attributed to irrational valuations at the time of the IPO, which are corrected over time. Another factor in the poor performance may be the firms managers who spend excessively and use the firms funds less efficiently than they did before the IPO (Gregoriou, 2006).

1.2   Statement of the Problem

In the recent past there has been an increase in the number of companies having initial public offering in the Nairobi securities exchange (NSE) and other stock exchanges in the east African region. The IPO's have either been oversubscribed or under subscribed leaning more to the earlier. IPO's can be a risky investment for the individual investor as it is difficult to predict whether there will be a price increase in the first day of trading and later on or whether there will be a price decline. This is due to the fact that there are no historical data with which an investor can use to analyze the company. This could lead to losses to the investor or gains. To the rational investor given his investment horizon he would be interested to know the performance of the share since he is interested in gains made on the share.

Could the success rate of the IPO be considered to be an indicator of subsequent performance of the share that has been listed at the Nairobi securities exchange. This research seeks to answer the question of whether the over subscription or under subscription could be relied as an indicator of the price movement of the stock in long term and act as a useful indicator of the investors on whether to hold on to the shares they

have been allocated or sell them depending on the subscription. The study could be a useful guide to other companies wishing to have initial public offering in the pricing of the shares.

IPO's are risky to the firm that is issuing the shares as an under subscription of the shares could see the firm incur high floatation costs and yet fail to meet the goal of the offering. Firms have options when raising funds for growth to either issue debt i.e. borrow or issue capitals i.e. sell shares. The performance of issued shares is a major concern to the management of listed companies and the shareholders and hence it is in their interest that IPO`s are successful and the shares price appreciates over time.

There are local studies that have been carried out on the area of IPO's in the country. Chelangat (2011) study focused on short run and long run IPO financial performance for firms quoted at the NSE. The study short run performance period was 7 days and 15 days while the long run period was 1year and 2 year respectively. The overall finding was that there is underperformance of IPO's in the long run taken to be 1 year and 2 year respectively. The findings were consistent with the study done by Agarwal, chunlin and Ghon (2003) that IPO`s under perform in the long term and have initial positive returns in the short run.

Cheluget (2008) did a study on investors demand for IPO`s and first day performance of shares at the Nairobi securities exchange. The population of study consisted of all quoted companies listed at the Nairobi securities exchange since its inception in 1954.For the analysis the study used regression analysis and correlation analysis. The findings were that there was an increase in 1st day return performance in the Kenyan market by 17.71%. His sample of study were all the shares that were listed at the NSE .This study is different from cheluget`s in that it focuses on the long term performance of the shares listed at the NSE.

Ngahu (2006) in his study of the relationship between pre issue book value per share and the issue price in the short run (1st day trading) price of IPO`s following listing at Nairobi securities exchange found out that the book value per share combined with the issue price has a significant relationship with the 1st trading price. The findings of this study were

that the average 1st day returns to be 22.57%.The major focus of this study was on the pricing of IPO`s in the local market to find out if there is underpricing of IPO`s.

All the above studies point to an interest on the area of IPO's locally and mirror the same interest internationally. These local studies give findings that are similar studies done elsewhere the difference being the methodology and the context. Previous studies done on the area of initial public offering have focused on first day returns and on the long term performance of the shares. There are no studies that have been done linking the subscription rate and the and long term performance of the shares at the Nairobi securities exchange. This research aims to bridge that gap. This research aims to conduct a survey of all the recent IPO`s in the country from the year 1992 to 2009 and the share movement of the shares listed in the long term i.e. after five years.

1.3   Objective of the Study

To establish the relationship between the subscription rate of shares offered through initial public offering and the performance of those shares in the long term at the Nairobi securities exchange.

1.3.1   Specific Objectives

i) The study seeks to find out whether the subscription rate can be relied upon as an indicator of the performance of the shares in the aftermarket at the Nairobi securities exchange.

ii) The study also seeks to find out whether an investor should hold on to securities offered through an IPO in the three year horizon.

iii) To compare the long term returns of shares and local studies on first day returns which have found to be exceptionally high.

1.4   Importance of the Study

1.4.1   Investors

The findings will help investors both institutional investors and the individual investors when investing in IPO's this will help maximize their gain from the investment they have

made through the IPO's The findings will enable them know the appropriate time horizon which they should hold onto the shares. The findings will also inform them whether investing at the NSE through an IPO is a good way to invest.

1.4.2 Financial analysts and investment advisors

The findings will help financial analysts who track the performance of shares be able to forecast the future performance of the shares that they track especially those that have been offered through IPO's. Investment advisors can better be placed to advise their clients in relation to their investment.

1.4.3 The capital markets authority and the Nairobi securities exchange

The study can help the capital markets authority in crafting better regulations or reviewing the existing regulations that can be put in place in allowing firms to list in the Nairobi securities exchange.

The findings will help the Nairobi securities exchange in their efforts of attracting more firms to list in the bourse and enhancing the credibility of the stock exchange in the country as they seek to list more firms in the exchange.

1.4.4 Scholars

The findings will open further areas of research into the subscription rate and other variables that may affect the performance of the shares in the short term and in the long term.

CHAPTER TWO

LITERATURE REVIEW

2.1   INTRODUCTION

The chapter reviews the literature on IPO`s, subscription rate and the short term and long term performance of these shares offered through unseasoned offering at the Nairobi securities exchange. The chapter also looks at the major theories on IPO`s and reviews major studies done on the area of IPO`s.

2.2   Initial public offering

An initial public offering (IPO) also known as unseasoned offering is the first sale of a company`s shares to the public and the listing of the shares on a stock exchange. In some countries IPO`s are also referred to as flotation's. A firm's IPO is deemed to be one of the most important milestones in an organization's lifecycle (Andrews and Welbourne, 2000; Dunbar and Foerster, 2007; Khurshed, 2000; Nelson, 2003; Pagano, Panetta and Zingales, 1998). For one, to engage in an IPO signals the firm's need for additional resources to grow and prosper (Nelson, 2003). Furthermore, when firms move to public ownership, they also provide current investors, along with founders and other top management, a liquidity event, or the opportunity to 'cash out' (Wasserman, 2006; Zingales, 1995).

2.3   Types of IPO

2.3.1 Private placement

A private placement refers to the direct sale of newly issued securities by the issuer to a small number of investors through merchant bankers usually to institutional investors. The advantage of a private placement is the speed with which this process may be completed. If the issuing firm is thinking of selling stock at a higher price this can usually be gotten from the public than from selling a block of stocks to institutional investors through a private placement. Sometimes this is done as a bridge before a public offering – possibly a much larger offering but the discount in price is usually demanded by the investor of unregistered stock can be quite substantial (James, 2004).

2.3.2 Equity carve-outs

This occurs when a parent company sells shares of a subsidiary corporation to the public through an IPO. The parent company may sell some of the subsidiary shares it already owns, or the subsidiary may issue new shares. In either event the parent company almost always retains a controlling stake in the new public company (Graham & Smart, 2011).

2.3.3 Reverse LBOs

A formerly public company that had previously gone private through a leveraged buyout goes public again. Reverse LBOs are easier to price than traditional IPO`s because information exists about how the market valued the company when it was publicly traded (Graham & Smart, 2011).

2.3.4 Tracking stocks

These are equity claims based on and designed to mirror or track the earnings of wholly owned subsidiaries of diversified firms. They are hybrid securities because the tracking stock firm is not separated from the parent company in any way, instead remaining integrated with the parent both legally and operationally. In contrast both carve-outs and spin-offs result in legally separate firms (Graham & Smart, 2011).

2.3.5 The plain vanilla IPO

This IPO undertaken by a privately held company, mostly owned by management, who want to secure additional funding and determine the company`s fair market value In reverse-leveraged buyout, the proceeds of the IPO are used to pay off the debt accumulated when a company was privatized after a serious listing on an exchange. This process enables owners who own majority shares to privatize their publicly trading firms, which are undervalued in the market, thus realizing financial gains after the public was informed of the high intrinsic value of the private firm (Graham & Smart, 2011).

2.3.6 A venture capital-backed IPO

Refers to a company in which management has sold its shares to one or more groups of private investors in return for funding and advice. This provides an effective incentive scheme for venture capitalists to implement their exit strategy after they have

successfully transformed a firm in which they invested so that it is financially viable in the market (Graham & Smart, 2011).

2.3.7 A spin-off IPO

Denotes the process whereby a large company carves out a stand-alone subsidiary and sells it to the public. A spin-off may also offer owners of the parent firm and hedge funds the opportunity to capitalize mispricing in both the subsidiary and parent if the market is not efficient enough. Thus after the spin-off, there will be two public companies rather than one (Graham & Smart, 2011).

2.4 IPO`s and Subscription rate in Kenya

The subscription rate denotes the amount of shares applied for by investors during an IPO. An issue can be under subscribed, fully subscribed or oversubscribed. A fully subscribed IPO is one where all the shares being issued by a corporation are fully applied for under subscription is where the shares applied for are below 100%and oversubscription is where the shares applied for are above what is being issued i.e. the rate is above 100%.The interested public will be called upon to subscribe for shares during the subscription period which is the period of time the public is required to apply for the shares. The Safaricom IPO was held for a subscription period of close to one month in the year 2008 from the 28th of March to April 23rd 2008.

According to the Nairobi securities exchange listing manual where the issue is over-subscribed the formula for the allotment shall be disclosed in the prospects and shall be calculated in such a way that persons within the same category of applicants are treated in a fair and equal manner with regard to their applications and the allotment policy disclosed in the prospectus .

According to statistics from the Capital markets authority CMA bulletin (2009) the subscription rate for express Kenya in the year 2003 was 100% which is full subscription, Kengen in 2006 340% and co-operative bank in 2008 which had under subscription of 81%.There has been ten IPO`s from the year 2003-2009.Most of these IPO`s have been marked by oversubscription rather than under subscription.

2.5   Theory and Evidence on the Long-run Performance of IPO`s

Several authors have studied aftermarket long-run performance of IPO`s from a number of countries. In the U.S. empirical evidence shows that, in the long-run, IPO`s is underperformed relative to the overall market. Ritter (1991) find the matching firm adjusted cumulative average returns in three years –29.1%. Aggarwal and Rivoli (1990) reports market adjusted returns –13.7% from first day of trading to the 250 days of trading (Isnurhadi, syamsurijal, umarhamdan,diahherianto 2008).

In other countries, the findings are consistent with those of U.S. Levis (1993) reports a long-run underperformance of –30.59% by the third year after the offer in the U.K. Finn and Higham (1988) reports –6.5% one-year market adjusted returns in Australian. However, Dawson (1987) reports interesting evidence that in the long-run, IPO`s on average outperform the overall market by 18.20% in one year. Other researchers reporting similar results are Ljungqvist (1997) for Germany and Aussenegg (1999) for Poland (Isnurhadi et al 2008).

In contrast, Kim et al. (1995a) using a sample of 169 firms listed on the Korea Stock Exchange during period 1985-1989, report that Korean IPO`s outperform seasoned firms with similar characteristics. Lee et al. (1996), examination of Singapore IPO`s made between July 1st, 1973 and December 31st, 1992, shows that the long-run average returns for Singapore IPO`s are insignificantly different from an efficient market expectation (Isnurhadi et al 2008).

There were several studies comparing long term privatization IPO`s and private sector IPO`s. Menyah and Paudyal (1996) found that long-run performance of privatized IPO is 60.97% (significant) in contrast to only 3.01% (not significant) for private sector IPO. However, in Malaysia Paudyal et al. (1998) find that long-run performance over the first three years shows no significantly positive or negative performance for both privatization and private sector IPO`s. Furthermore, Dewenter and Malatesta (1997) find that based on data from eight countries, there are no significant differences in the underpricing of these two groups.   In summary, the international evidence of long-run IPO`s performance reveals mixed results. In developed capital market, it seems that in the long-run IPO`s

performances are significantly negative but in emerging capital markets it is in contrast (Isnurhadi et al 2008).

Two theories have been proposed to explain the phenomenon of the long-run underperformance of IPO`s. Miller (1977) present an explanation based on changes in the divergence of opinion among investors. According to him, IPO`s are usually subscribed by investors who are the most optimistic about the issue and their prices are set by this group rather than the appraisal of the typical investor. Further, the greater the uncertainty about the value of the IPO, the higher is the price that optimistic investors are willing to pay relative to pessimistic investors. If underwriter price on the basis of their own best estimates of the values of comparable seasoned securities, they will underprice new issues. In the long-run, as more information about the issuing firm becomes available, the divergence of opinion between these two groups of investors will narrow and, consequently, the market price will drop. Thus, Miller predicts that IPO`s will generate abnormal returns in the short-run but they will have smaller price appreciation than the seasoned firms (i.e. underperformance) in the long-run. He also expects an IPO's long-run return to be negatively related with its ex ante uncertainty (Isnurhadi et al 2008).

Shiller (1990) proposed that market for IPO`s is subject to fads. IPO`s are underpriced by investment bankers to create the appearance of excess demand. Shiller's hypothesis anticipates that the long-run performance of IPO`s should be negatively related to the short-run underpricing. Fads hypothesis from Miller (1990) is consistent with Aggarwal and Rivoli (1990) who establish the possibility that the aftermarket is not immediately efficient in valuing newly issued securities and that the abnormal returns that ensue to IPO investors are the result of a temporary overvaluation by investors in the early trading. Levis (1995) reports that the highest initial return has the worst aftermarket performance. This is consistent with Aggarwal et al. (1993) finding for Brazil IPO`s and Paudyal et al. (1998) for Malaysian IPO`s. In addition, Paudyal et al. (1998) found that the long-run performance of IPO`s is positively related to the underwriter reputation. (Isnurhadi et al 2008).

Going public when the shares are overvalued implies that the issuer will have poor-IPO stock returns as investors adjust the price to the appropriate level. There is ample

evidence that IPO`s generate poor raw long-run stock returns (Ritter and Welch 1995). More controversially is whether these returns are abnormally poor. Loughran and Ritter (1995) estimated that the average annual returns over a five year horizon starting from the first day closing were 5 percent less than a comparable risk-adjusted benchmark. Evidence of underperformance is further support for issuers successfully timing the market when sentiment is too high. In order for IPO`s to generate abnormally poor returns investors must be optimistic about issuers than the industry as a whole. Evidence cited in the preceding section showed that industry values declined post IPO and that alone would lead to poor returns. Rajan and servaes 1997 estimated that analyst's earnings forecasts at the time an IPO for other industry firms were too optimistic by about 5 percent. However the forecasts for issuers were an incremental 2 to 3 percent too high. Lowry (2003) found that current IPO volume was inversely related to the subsequent raw returns of contemporaneous issuers and the entire market, meaning that more firms went public when the market was overvalued (Draho, 2004).

Time varying under performance further supports the notion that investor sentiment affects IPO timing firms that went public during a period of heavy IPO generated the worst long run abnormal returns, whereas IPO`s that occurred in cold markets showed no sign of underperforming(loughran and ritter 1995; helwege and liang 2004).Positive sentiment could result in overvaluation, inducing more firms to go public. Poor long run returns would result as the market corrects the initial pricing error. Fewer firms would find it attractive to go public when valuations are in line with fundamentals .those that do are properly priced and produce normal returns (Draho, 2004).

2.6 Empirical evidence

Ngahu (2006) in his study of the relationship between pre issue book value per share and the issue price in the short run (1st day trading) price of IPO`s following listing at Nairobi securities exchange found out that the book value per share combined with the issue price has a significant relationship with the 1st trading price. The findings of this study were that the average 1st day return to be 22.57%.This is consistent with other studies that have shown that IPO`s are normally underpriced and hence the positive first day returns.

Cheluget (2008) did a study on investors demand for IPO`s and first day performance of shares at the Nairobi securities exchange. The population of study consisted of all quoted companies listed at the Nairobi securities exchange since its inception in 1954.For the analysis the study used regression analysis and correlation analysis. The findings were that there was an increase in 1st day return performance in the Kenyan market by 17.71%. His sample of study were all the shares that were listed at the NSE .This study is different from cheluget`s in that it focuses on the short term and long term performance of the shares listed at the NSE.

Mukiria (2010) focused on whether there existed a relationship between the offering price and the success of IPO`s measured by aftermarket returns. The study predicted a positive relationship between the offering price and the probability of a successful IPO. The findings of the study were issuing IPO`s at the NSE has both positive and negative effects on daily mean returns.Negative effects are on the days nearing the IPO event days which are as a result of buyer and seller expectation in the market, while positive effects are in the days far from the IPO event day which are a result of buyer initiated trading.

Investor demand for IPO`s and aftermarket performance: evidence from the Hong Kong stock market Agarwal, chunlin and Ghon (2003) the study examined the relationship between investor demand for IPO`s prior to offerings and aftermarket performance of IPO`s firm from 1993 to 1997.The sample consisted of 256 IPO`s during the period of study. The IPO`s were categorized into three separate groups depending on the investor demand i.e. low demand IPO portfolio, high demand IPO portfolio and medium-demand IPO portfolio. The findings were that high demand IPO`s are associated with high initial returns, and low demand IPO`s are associated with low returns. The study used regression model to analyze the data and the long run performance was taken to be 1, 2 and 3 years and the data analyzed after those years. In the 2 year period results revealed that the two year size-adjusted excess return of the after excluding the first trading day the return of the overall sample was -27.68%. At three years the high and low demand IPO portfolios produce negative returns of -71.28% and -54.00% respectively.

2.7 Conclusion

The chapter has established that the performance of shares in the short run especially on the first day of trading experience high returns in the long run however the performance is not good. In the U.S., empirical evidence shows that, in the long-run, IPO`s is underperformed relative to the overall market. Ritter (1991) find the matching firm adjusted cumulative average returns in three years −29.1%. Aggarwal and Rivoli (1990) reports market adjusted returns −13.7% from first day of trading to the 250 days of trading (Isnurhadi et al 2008). However from the studies that have been done there is a gap in that there are no studies that have linked the subscription rate with the performance of the shares especially in the long-run in the Kenyan setting.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1   Research Design

The study is a survey, which aims to find out whether there is a relationship between the subscription rate of IPO`s at the Nairobi securities exchange and the performance of shares in the long-run once listed at the NSE. For data to be included in the study it must have been reliable, its source must have been verified and must be suitable for the study and must also be adequate. For this study the shares that have been listed at the NSE and later de listed have been omitted. The companies whose data cannot be obtained due to lack of relevant information will be omitted from the study to give appropriate findings and conclusion.

3.2   Population of Study

The population of study will comprise of all IPO`s carried out at the Nairobi securities exchange covering the period between the years 1992 to 2009 a period of seventeen years. The year 2009 is considered to be the upper limit for the focus of the study for the reason that any IPO after this year would not be 3 years old.1992 is chosen as the lower limit of the study as this is the period in which information relating to shares issued can be obtained from the NSE with certainty.

3.3   Sample

The study focuses on a period of seventeen years which is a small sample of all the IPO`s that have been carried out at the NSE Since the formal establishment of the bourse in the year 1954.

3.4   Data Collection

The major source of data for the study is mainly secondary data. The data is to be obtained from the Nairobi securities exchange. From newspapers, online reports from investment banks and from the capital markets authority library and similar studies done in the market and also individual companies and image registrars.

3.5 Measurement of Variables

3.5.1 IPO Subscription Rate

This variable will be measured as a percentage of total shares offered for IPO that investors have subscribed for at the close of the IPO. This is summarized below:

$$\text{Subscription Rate} = \frac{\text{Total Amount of money raised during an IPO} \times 100\%}{\text{Amount of money expected to be raised in an IPO}} \quad \dots\dots\dots\dots\text{i}$$

The amount expected to be raised during an IPO is given by the product of the offer price of an IPO and the number of shares floated. The average subscription rate for the period 1992-2009 will be obtained by the summing all the individual IPO`s subscription rates and dividing the totals by the sum of the IPO`s. The following formula is a measure of the average rate of subscription for all IPO`s.

$$\overline{X}_{SR} = \frac{X_1 + X_2 + X_3 \text{---------} Xn}{N}$$

Where;

$\overline{X}_{SR}$ - Arithmetic mean of the subscription rates

X1+X2+X3-----+Xn-Sum of the subscription rates of IPO`s (1992-2009) given as a percentage.

X1- IPO/IPO`s conducted in the year 1992

Xn- IPO/IPO`s conducted in the year 2009

N-The sum of all IPO`s (1992-2009)

3.5.2 Share Performance in the long term

This will be measured by the return to shareholder at the end of 3 years following the close of the IPO. The return will be the difference between the IPO price and the share price at the end of three years divided by the IPO share price. This is summarized below:

$$\text{Long Term Returns} = \frac{\text{Share price at the end of 3years- IPO price} \times 100\%}{\text{IPO price}} \quad \dots\dots\dots\text{ii}$$

Since/the return on shares must be relative to the IPO price the following formula is used.

$$SP = \frac{(P_1 + D - P_0)}{P_0} * 100\%$$

Where;

SP is Share performance/Return on share, Po is price of the share during an IPO, P_1 is share price at the end of a period in this case three years after the IPO and D is dividends received during the period.

To simplify the model P_1 and Po are used for the analysis this figures are the raw returns obtained from the NSE for each of the shares during the IPO and three years after the IPO.

$$SP = \frac{P_1 - P_0}{P_0}$$

In the above formula the Share Performance (SP) – Is the simple rate of return of an investment and measure`s the capital gain or loss and the income from investment during a period as a percentage of the shilling amount invested.

The return on share is converted to a percentage by multiplying by 100% for uniformity purposes; the subscription rate is also converted into a percentage hence the two variables will all be percentages.

SP*100%

The mean return on the shares is obtained using the formula given below. The mean return is the sum of all return on all shares expressed as a percentage under the period of study divided by the total number of shares.

$$\overline{X}_{SP} = \frac{R_{S1} + -------- R_{SN}}{N}$$

Where;

X_{SP} is the mean return on shares, R_{S1} is return on share 1, R_{SN} is the return on share N and N is the number of shares.

3.6   Data analysis method

To achieve the objective of the study a model is formulated to relate the subscription rate of IPO`s and the long term performance of the shares at the NSE. The model seeks to find out whether the relationship postulated between the two variables is statistically significance as postulated in the title of the study. Regression analysis will be conducted using SPSS to come up with an equation that best explains the relationship between the two variables and also explains the strength between the two variables the model can also be used to predict the long term performance of shares given the subscription rate. Measures of central tendency and descriptive statistics will be used to describe the data. Averages have been used is because they are affected less by chance than individual returns hence they are better guides for performance evaluation and for estimating future returns.

The study will employ econometric method in formulating a regression model which would be analyzed through the use ordinary least square regression (OLS).   The dependent variable is the share performance in the long term while the independent variable is the subscription rate. The model to be used is shown below:

$SPlt = \beta_{0 +} \beta_1 SR + U$

Where:

$SPlt$ = Share Performance in the long term

SR = Subscription rate

U= Error term

β_0 , β_1 , and β_2 are parameters of the estimate.

The significance test will done to determine whether the subscription rate of IPO`s and the long term performance of the shares is statistically significant.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION AND PRESENTATION

4.1 INTRODUCTION

This chapter focuses on data analysis, interpretation and presentation of the data collected. The objective of the study was to establish the relationship between the subscription rate of shares offered through IPO`s and the long term returns of the shares at the NSE. The statistical package SPSS was used to analyze the data. Regression analysis was done to determine the nature of the relationship. The statistical package was used to regress the share performance in the long term (Y) as the dependent variable against the subscription rate (X) independent variable.

The first trading day for the shares is taken as day 1 of the first year to be able to get the long term price three years later; this is due to problems of missing data and uncertainty regarding some data especially for the years before the year 2000. If the date of interest fell on a non-trading day at the NSE then the previous trading day share price was used.

Table 4.1 Summary of the subscription rate and the long term returns (1992-2009)

	No of IPO`s(1992-2009)	IPO`s with Positive returns	IPO`s with Negative returns
Oversubscribed	17	12	5
Fully subscribed	2	0	2
Under subscribed	3	2	1
Total	22	14	8

Source: Research findings, 2013

From the above table 17 IPO`s which is 77.27% of all the IPO`s conducted in the years 1992-2009 were oversubscribed out of this 17 IPO`s 9, which is 70.59% had positive returns while 5 which is 29.41% had negative returns hence an oversubscribed offer was more likely to have a positive return. Two IPO`s were fully subscribed and all of them had negative returns in the long run. Three IPO`s are undersubscribed, of this two have a positive return which is 66.67% and two which is 33.33% had negative returns.

Oversubscribed IPO`s and undersubscribed offers are more likely to have a positive return while fully subscribed offers are more likely to have negative returns in the long run. An investor who wishes to get positive return out of their investment should hold on to shares which are oversubscribed during an IPO since they are likely to have a positive return in the 3 year horizon.

4.2   Mean IPO`s subscription rate and mean long term returns

The objective of the study was to find the relationship between subscription rate and the long term performance of shares offered through an IPO. The descriptive statistics for the IPO`s that took place at the NSE from the years 1992-2009 is given in the table below.

Table 4.2 Mean subscription rate and mean share returns in the long term

	Subscription rate (%)	**Long term returns (%)**
Mean	272.49	37.50
Standard Deviation	201.49	104.42
N	22	22

Source: Research findings, 2013

From table 4.2 the IPO`s for the years of study are oversubscribed. In this sample investor demand far exceeded the number of shares on offer by 172.49%.The long term return for the period from the data is computed as 37.50. This indicates that the return for the period is positive.

The standard deviation of the subscription rate is 201.49 while the standard deviation of the long term returns is 104.42. From the sample of study individual IPO`s diverges from the mean subscription rate by 201.49 while that of average return is 104.42.There is much dispersion of the long term returns as compared to the subscription rate as shown in appendix 2.

4.3   First day returns and long term returns

This study has found the long term return for the IPO`s in the sample to be 39.50%. Ritter (2011) found the average first day returns to be 18% for the years 1980-2010 on a large sample of 7531 IPO`s. Appendix 3 details the first day returns for the 1992-2009 sample,

the mean first day returns has been found to 17.61 for twenty one of the IPO`s. Cheluget (2008) found the first day returns to be 17.71%. Hence there is only a slight difference between the first day returns and the three year returns.

4.4   Individual IPO`s subscription rate and the long term performance of shares

Graph 1: IPO`s subscription rate and the long term returns 1992-1997
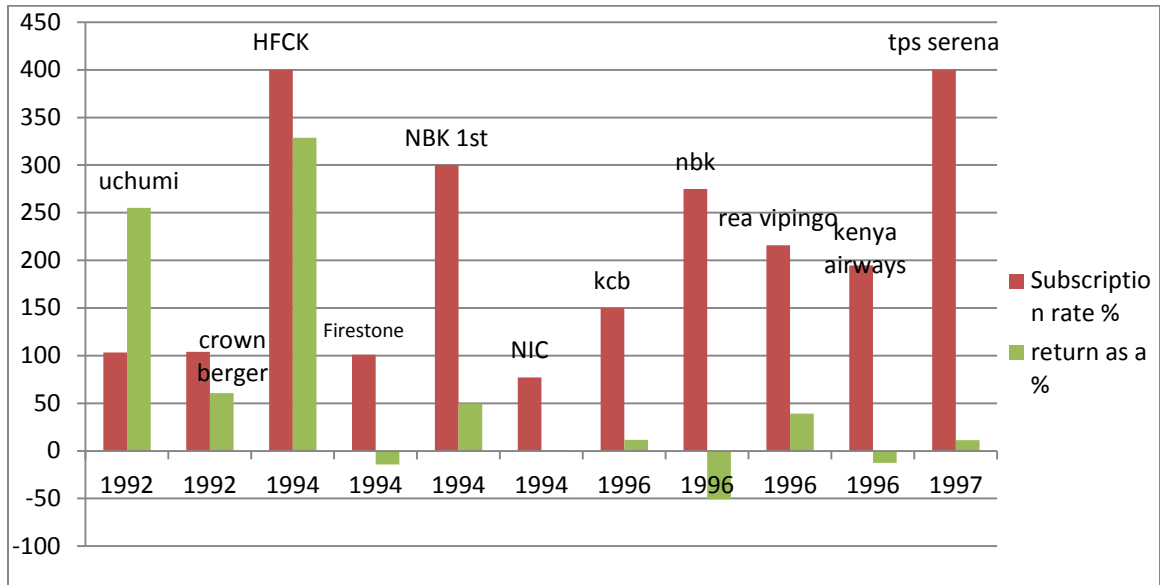
Source: Research findings, 2013

The bars charts gives a pictorial representation of eleven individual IPO`s subscription rates and the long term returns from the years 1992-1997.From the graph, the subscription rates for ten out of eleven IPO`s are oversubscribed while only one is undersubscribed the NIC IPO in 1994. Long term returns for eight IPO`s were negative while three IPO`s had positive returns. Only two IPO`s have returns above one hundred per cent meaning that the stock price plus the dividends had doubled from the IPO price.

Graph 2: Individual IPO`s subscription rate and the long term returns 1997-2008
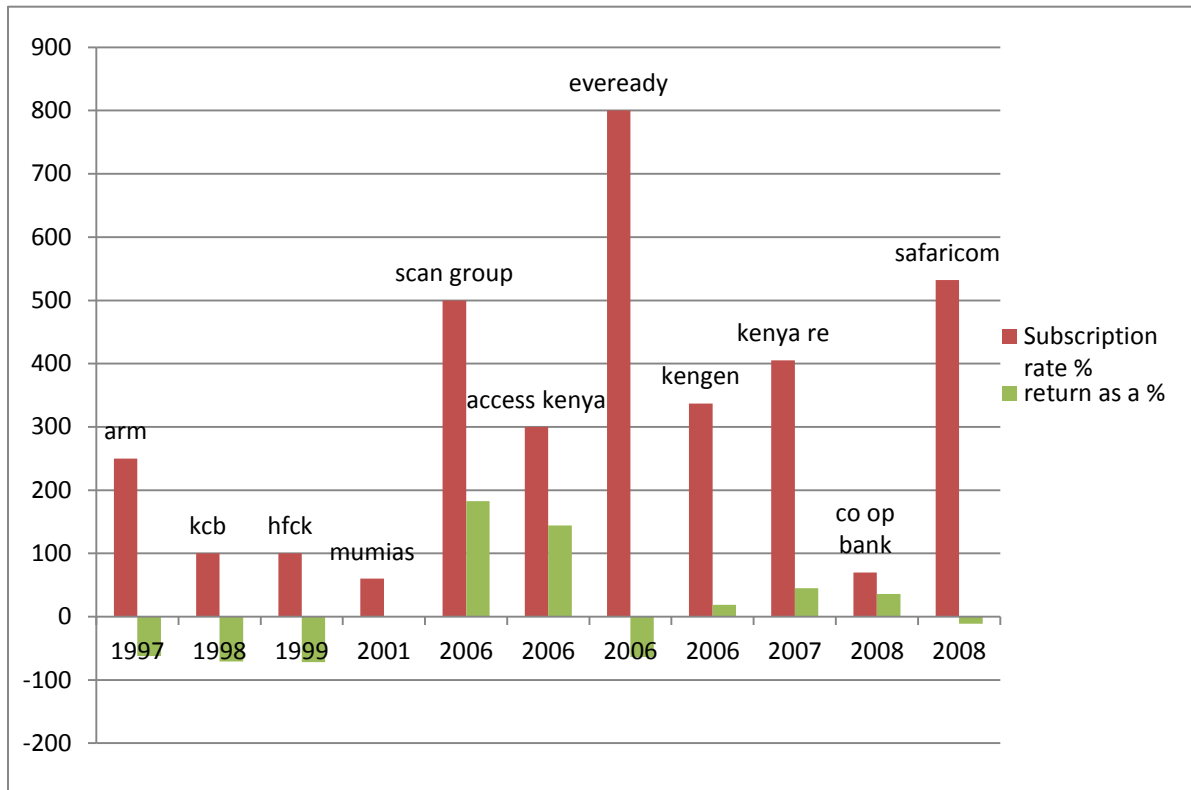
Source: Research findings, 2013

Seven IPO`s are oversubscribed from graph 2; two IPO`s are fully subscribed while two are undersubscribed. The ARM, KCB 4th issue, HFCK 2nd issue, Mumias, Eveready, and Safaricom IPO`s have negative returns this is more than half of the IPO`s represented in the graph. Given the negative returns visible from the graphs, IPO`s do not appear to be profitable ventures after three years and an investor would be wise not to hold the shares for the three year horizon. The positive returns are not very impressive since only the Uchumi, scan group and access Kenya IPO`s have returns of more than 100%. The subscription rate for the Eveready IPO is the highest at 800%, while that of Mumias sugar is the lowest at 60%, of note is that these two IPO`s have negative returns in the long term.

Table 4.1 gives a summary of the IPO`s and the long term returns. In the long term fourteen IPO`s which are 63.64% of all IPO`s have positive returns while eight IPO`s have negative returns which are 36.36% of the sample. Appendix 3 gives the first day returns of the IPO`s conducted in the years of study of this sixteen which is 72.72% have positive first day returns while 27.27% have negative and zero returns. An investor is better of disposing shares on the first day since they are more likely to gain a positive return than over the three year horizon.

The research analysis of the study above detail the descriptive statistics of the subscription rate and the long term return which do not provide a deep insight into the relationship between the two variables of study. The tables below are the SPSS analysis summary taking the long term return on share as the dependent variable and the subscription rate as the independent variable

4.5 The relationship between the subscription rate and the long term performance of shares listed through IPO`s

Table 4.3: Relationship between the subscription rate and long term performance of shares

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.125ᵃ	.016	-.034	106.155891

a. Predictors: (Constant), Subscription rate %

b. Dependent Variable: return as a %

Source: Research findings, 2013

Table 4.3 presents the correlation and coefficient of determination between the long term returns and the subscription rate. From the analysis output, the R value is given as 0.125. The R value is the linear correlation between the observed and model predicted values of the dependent variable. An R value of 12.5% shows that the relationship between the subscription rate and the long term returns is a weak positive relationship and the

regression line does not fit the data points. The long term share performance and the subscription rate are weakly correlated.

From table 4.3 R value, only 12.5% of the long term returns of the shares after an IPO can be attributed to the subscription rate. A co efficient of determination of 12.5% is very low and shows that relationship between the long term returns and the subscription rate and is weak positive relationship. The regression equation explains only 12.5% of the model leaving 87.5% unexplained.

The coefficient of determination R square explains the extent to which changes in the dependent variable can be explained by the change in the independent variable or the percentage of variation in the dependent variable (share performance in the long term) that is explained by the independent variable (subscription rate). The R square value is 1.6%.

In an earlier study by Cheluget (2008) the study found the relationship between the subscription rate and the average first day returns to be 4.8% which is also a weak positive relationship. Hence the subscription rate is weakly related to both the first day returns and the long term returns.

Table 4.4: Analysis of variance (ANOVA)

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3587.982	1	3587.982	.318	.579[b]
	Residual	225381.464	20	11269.073		
	Total	228969.446	21			

a. Dependent Variable: return as a %

b. Predictors: (Constant), Subscription rate %

Source: Research findings, 2013

4.6 TEST OF SIGNIFICANCE

Table 4.4 presents the analysis of variance. From the table the significance value of the F statistic is 0.318 which is greater than 0.05. A value of 0.318 is not statistically

significant and hence the variations in the hypothesized regression model can be explained to chance and not because of the values. Hence the subscription rate does not adequately explain the long term returns in the shares offered through IPO`s. This means that there are other variables that explain the long term returns performance of shares; the subscription rate is not also the only variable that explains the long term return in the shares. From a firm and general economic point of view it is plausible that some fundamental changes would have happened over the life of a firm to affect the valuation of the firm in the long term and investors would have followed the movement of the shares to come at a correct point of valuation of the true value of the shares and the future prospects of the company. Any price mismatch between the IPO price and the true market value would already been factored in the price.

Table 4.5: Subscription rate and long term returns model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	19.827	38.642		.513	.614
	Subscription rate %	.065	.115	.125	.564	.579

a. Dependent Variable: return as a %

Source: Research findings, 2013

Table 4.5 gives the hypothesized equation of the two variables. The general form of the regression equation from the output is in the form of **y= 19.827 + 0.065SR or Splt=19.827+0.065SR.**

Where Splt = Share performance in long term

SR = subscription rate

For a one unit (percentage increase) in the subscription rate on average the expected value of the long term performance or return of the share is expected to increase by 0.065 or 6.5%.This means that an increase in the subscription rate by 100% will result in an increase of only 6.5% in the long term returns. Oversubscription modestly helps to lift the

expected long term returns on shares offered on IPO`s. The standard error of the estimate is 38.642 this means that even if the null hypothesis were true, we would expect the repeated samplings of the intercept to vary on average by 38.642 sampling error. The value of the beta is 0.125 for one standard deviation increase in X we expect Y to increase by 0.125 of a standard deviation. One standard deviation increase in X is associated with 12.5% of a standard deviation increase in Y. Given the objective of the study is to find the nature of the relationship between the long term returns and the subscription rate, there is a positive relationship between an increase in the subscription rate and the long term return.

Table 4.6 – Residual statistics

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	23.718765	73.664513	37.499545	13.07120	22
Residual	-137.34451	282.7972	0E-7	103.59754	22
Std. Predicted Value	-1.054	2.767	.000	1.000	22
Std. Residual	-1.294	2.664	.000	.976	22

 a. Dependent Variable: return as a %

Source: Research findings, 2013

From the table 4.6 there is a wide variation in the residual statistics which range from a minimum of -137.345 to a positive 282.7972 this figures confirms the existence of outliers which can bias the regression model. With the objective of the study being to find the nature of the relationship between the long term returns of shares offered through IPO`s and the subscription rate. The analysis find that there are wide variations in the subscriptions rates compared to the long term returns an oversubscribed IPO does not mean high positive returns or negative returns. The presence of these outliers is confirmed from Appendices 2 and 3.

CHAPTER FIVE

SUMMARY AND CONCLUSIONS

5.1   Summary of findings and discussions

The study sought to find out whether the subscription rate can be relied upon as an indicator of the performance of the shares in the aftermarket at the Nairobi securities exchange after being listed. The objective was to find out whether initial investor demand during an IPO which could lead to an oversubscribed offer, fully subscribed offer or an undersubscribed offer translates to similar performance in the return on share in the long term. An oversubscribed and fully subscribed offers are successful unseasoned offerings and the study sought to find out whether this success translates to the long term return in the share or an undersubscribed offering which could be viewed as unsuccessful offer translates to poor returns .The study also sought to find out whether an investor should hold the shares offered in an IPO over the three year horizon given the expected three year returns. The study also sought to compare the long term returns of shares and first day returns which have been found to be exceptionally high.

From the findings the mean subscription rate for IPO`s carried between the years 1992-2009 was found to be 272.5% while the mean long term returns for the shares offered through IPO`s was found out to be 37.5% Appendix 1. The relationship between the subscription rate and the long term return is a weak one as given by the R value of 0.125 which is a weak positive relationship. From the findings the subscription rate is a poor predictor of the long term performance of the shares. From the two means computed in the study we can conclude that the average long term return does not mirror the subscription rate. The average investor demand does not correspond to the actual returns in the long term. Twelve IPO`s which is more than half of all the IPO`s in the years of study had negative returns by the third year after the IPO without incorporating the dividends received during the period. It is only when the dividends received during the three year period are incorporated in the study does the IPO`s with negative returns fall to eight. The Eveready IPO stands out in that it recorded the highest subscription rate at

eight hundred percent and has among the highest negative returns at a negative sixty eight percent Appendix 2.

The two highest returns from the study are from HFCK first issue in 1994 at 328.57% and scan group in the year 2006 at 182.78% return. A local study by Cheluget (2008) found the average first day returns to be 17.71% the three year returns according to the findings of the study on the other hand is 37.5%. The three year returns are slightly higher than first day returns, but given that one has to wait for three years to earn the return a shrewd investor would be better of selling their shares on the first day and reaping the initial benefits and then purchasing the shares later on when the price has fallen below the offer price and selling them later at a future time horizon when the price appreciates.

For an investor who purchases each and every share offered during IPO`s in the years of study intending to dispose them at the three year horizon they would not stand gain a high return in the three year horizon. The study also corroborates the findings by Mukiria (2010) that IPO`s have both positive and negative returns. From the sample half of the IPO`s have negative returns looking at the capital gains only while the other half has positive returns. The returns are however positive for fourteen of the twenty two IPO`s while eight have negative returns when the dividends received over the year period are incorporated in the study. Ritter (2011) update on IPO`s found the 1980-2010 first day return 18.0% and the 3 year return to be 20.8% the market adjusted returns for the same period was -19.7%, this mirrors the local studies that have found that the IPO`s have positive first day returns but in the long run the performance is negative or has very low positive returns.

5.2   The findings of the study have the following implications

The 3 year investment horizon for IPO`s is profitable for investors on average but the return does not correspond to the initial investor demand hence the IPO`s underperform compared to the initial investor demand shown at the beginning. This could indicate that on average that IPO`s are normally underpriced producing an initial positive return as has been found by other studies 17.71% as given by Cheluget (2008). This also echoes

Chelangat (2011) whose study focused on the short run IPO performance consisting of 7 and 15 days and long term performance of 1 and 2 years, the finding was that IPO`s underperform in the long term. The studies were also consistent with agarwal, chunlin and Ghon 2003.

According to the Impresario hypothesis the market for IPO`s is subject to fads and IPO`s are underpriced by firms and investment bankers to create the appearance of excess demand. The hypothesis predicts that the company with the highest investor demand should subsequently have the lowest returns this could be true in the case for the Eveready, Safaricom and Kenya airways IPO`s which had the highest subscription rate and have all negative returns in the third year after the IPO. This could point to fads in the IPO market as hypothesized by the impresario theory.

The findings could also indicate a divergence of opinion in that most retail investors in Kenya are very bullish about IPO`s and do not take time to find out more about the companies and their long term prospects leading to oversubscription. The Kenyan retail investor may not be well informed about the stock market due to information asymmetries and they tend to overreact to price changes and hence most IPO`s by the third year have negative returns since they might be interested in cutting their loses early rather than waiting for a period any longer to see whether the fortunes of the company and the overall market may improve. The years 1994, 1996 and 2006 has the highest number of IPO`s and this could point to periods where firms attempt to time their IPO`s to take advantage of swings in investor sentiment. This confirms the existence of windows of opportunity hypothesis within the Kenyan stock market.

Further for IPO`s with negative returns and yet the subscription rate was very high it could point to a misuse of funds by firms and hence a poor performance of the share. A successful IPO could convince the managers that they are on the right track and that their stewardship of the business is right and hence they do not adopt fast to a changing environment and hence a poor financial performance and a share price below the IPO offer price. Policy makers and firm managers should consider the green shoe option for IPO`s depending on the financial needs of firm so that excess funds generated during IPO`s can be utilized by firms instead of being refunded to investors.

5.3   Limitations of the study

The study uses a linear regression model, for linear regression models a larger sample is often desirable compared with the sample of 22 IPO`s used in this study. There were challenges of obtaining the data from the NSE and the validity and reliability of the data especially for the years before the year 2000 was difficult. The data so obtained had to be cross checked against copies of old newspapers from the media houses and caution must be taken with limitations of such data.

5.4   Suggestions for further research

The study only looked at one variable that affects the investor demand for shares given in this study by the long term returns. A study can be conducted to test the subscription rate and the returns in the short term and even a period in the long term longer than three years. There is also the need to include other variables that affect the share return in the long term like the earnings per share, economic growth, volumes of trade at the stock exchange, taxation and other variables. A multiple regression model would be better at explaining the returns of shares in the long term due to environmental changes both internal and external of the firms. Market adjusted values could also be incorporated in a study in the long term so as to give a better picture of the returns compared to absolute values used in the study. A study can be conducted on the profitability of firms after IPO`s compared to firms in the same industry that never conducted IPO`s to gauge whether monies raised during IPO`s improve the profitability of firms or not.

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APPENDICES

APPENDIX 1: DESCRIPTIVE STATISTICS OF THE SUBSCRIPTION RATE AND THE LONG TERM RETURNS

The average subscription rate for the period 1992-2009 and the long term returns

Average Subscription rate share performance long term

	SR (%)	SP (%)
∑SR & SP	5994.23	262.49
Mean	272.49	19.15
Variance	40600.21	8765.72
Standard deviation	201.49	93.63
N	22	22

APPENDIX 2: SUMMARY OF THE LONG TERM RETURNS (1992-2009).

Year of issue	Name of company	Issue price(Po)	Price 3 years later(P1)	Capital gain(P1-Po)	Dividends(D)	Return (%)(P1+D-Po)/Po*100%	Return (%)
1992	Uchumi	14.5	40.5	26	11	37	255.17
1992	crown berger	16	22	6	3.7	9.7	60.63
1994	HFCK-1st issue	7	27	20	3	23	328.57
1994	firestone	33.5	22.5	-11	6.25	-4.75	-14.18
1994	NBK-1st isssue	10	12.2	2.2	2.75	4.95	49.5
1994	NIC	52	47	-5	5.05	0.05	0.10
1996	KCB-3rd issue	50	44.25	-5.75	11.5	5.75	11.50
1996	NBK-2nd issue	15	5.85	-9.15	1.5	-7.65	-51
1996	Rea vipingo	10.5	12.5	2	2.1	4.1	39.05
1996	Kenya Airways	11.25	8.1	-3.15	1.75	-1.4	-12.44
1997	TPS Serena	13	12.95	-0.05	1.5	1.45	11.15
1997	ARM	12.25	4.35	-7.9	0.3	-7.6	-62.04
1998	KCB 4th issue	65	19	-46	0	-46	-70.77
1999	HFCK-2nd issue	14	3.1	-10.9	0.88	-10.02	-71.57
2001	Mumias	6.25	3.63	-2.62	2.6	-0.02	-0.32
2006	Scan group	10.45	27.5	17.05	2.05	19.1	182.78
2006	Access Kenya	10	24.1	14.1	0.3	14.4	144
2006	Eveready	9.5	3	-6.5	0.45	-6.05	-63.68
2006	KENGEN	11.9	12.3	0.4	1.8	2.2	18.49
2007	Kenya RE	9.5	12.3	2.8	1.5	4.3	45.26

2008	Co-operative bank	9.5	12.2	2.7	0.7	3.4	35.79
2008	Safaricom	5	3.95	-1.05	0.5	-0.55	-11

APPENDIX 3: INITIAL PUBLIC OFFERINGS (IPO`S) AT NSE (1990 – 2008) SUBSCRIPTION RATES.

Year	Company	Shares applications received	Issue price (KES.)	Subscription rate (%)	Amount raised (KES.)	Date/month of First Trading on the NSE
1990	KCB- second IPO	9,000,000	33.00	147	297,000,000	Dec.1990
1991	KFC	3,261,970	12.50	110	40,800,000	Jan. 1992
1992	UCHUMI	16,000,000	14.50	103.2	232,000,000	Jan. 1993
1992	CROWN BERGER	8,638,000	16.00	104	138,000,000	Jan. 1993
1992	HFCK	18,000,000	7.00	400	126,000,000	Jan. 1993
1993	EA OXYGEN	1,600,000	26.50	100	42,400,000	Mar.1993
1993	CMC	2,000,000	10.00	100	20,000,000	Apr.1993
1994	FIRESTONE	40,000,000	33.50	101	1,420,000,000	Dec.1994
1994	NBK	40,000,000	10.00	300	400,000,000	Dec.1994
1994	NIC	179,299,286	52.00	77	718,000,000	Dec.1994
1995	REA VIPINGO*	1,200,000	8.50	1100	102,000,000	
1996	REA VIPINGO	8,000,000	10.50	216	84,000,000	May. 1996
1996	KQ	235,423,896	11.25	194.6	2,664,000,000	Jun. 1996
1996	NBK- second IPO	40,000,000	15.00	275	600,000,000	Jun. 1996
1996	KCB- third IPO	11,880,000	50.00	150	560,000,000	Nov.1996

1997	TPS	12,893,000	13.00	400	167,609,000	Jul.1997
1997	ARM	23,000,000	12.25	250	281,750,000	Dec.1997
1998	KCB- fourth IPO	28,050,000	65.00	100	1,823,250,000	Jun.1998
1998	HFCK	30,000,000	14.00	100	420,000,000	Apr.1998
2000	AFRICAN LAKES	4,000,000	94.50	150	378,000,000	Mar. 2001
2001	MUMIAS	300,000,000	6.25	60	1,125,000,000	Nov. 2001
	ICDCI*	8,951,572	37.00	64	331,208,164	
2006	KENGEN	658,900,000	11.90	333	7,800,000,000	11th May. 2006
	SCAN GROUP	69,000,000	10.45	620	721,050,000	29th Aug. 2006
	EQUITY BANK**				0	7th Aug. 2006
	EVEREADY EAST AFRICA	63,000,000	9.50	830	556,800,000	18th Dec. 2006
2007	ACCESSKENYA GROUP	80,000,000	10.00	363	800,000,000	4th Jun. 2006
	KENYA REINSURANCE	240,000,000	9.50	405	2,280,000,000	27th Aug. 2007
2008	Safaricom Ltd	10,000,000,000	5.00	532	50,000,000,000	9th June 2008
	Co-operative Bank of Kenya	701,300,000	9.5	80.43	5,358,801,800	22nd Dec2008
2011	CFC Insurance					April 21 2011

	Holdings**					
	TransCentury Ltd**					July 14 2011
	British American Investment Company					8th September 2011

Note:

(*) listing by Private placement

(**) listing by introduction

APPENDIX 4: SUMMARY OF THE SUBSCRIPTION RATE AND THE FIRST DAY RETURNS (1992-2009).

Year of issue	Name of company	Subscription rate (%)	issue price	1st day share price	return	Return (%)
1992	Uchumi	103.2	14.5	17.75	3.25	22.4
1992	crown berger	104	16	17	1	6.25
1994	HFCK-1st issue	400	7	10.5	3.5	50
1994	firestone	101	33.5	34	0.5	1.5
1994	NBK-1st isssue	300	10	15	5	50
1994	NIC	77	52	56	4	7.7
1996	KCB-3 rd issue	150	50	5.23	-44.77	-89.5
1996	NBK-2nd issue	275	15	5.32	-9.68	-64.5
1996	Rea vipingo	216	10.5	12	1.5	14.3
1996	Kenya Airways	194.6	11.25	12.55	1.3	11.6
1997	TPS Serena	400	13	16.37	3.37	25.9
1997	ARM	250	12.25	9.6	-2.65	-21.6
1998	KCB 4th issue	100	65	19	-46	-70.77
1998	HFCK-2nd issue	100	14	3.1	-10.9	-77.86
2001	Mumias	60	6.25	6.25	0	0
2006	Scan	620	10.45	15	4.55	43.5

	group					
2006	Access Kenya	363	10	13.45	3.45	34.5
2006	Eveready	830	9.5	11	1.5	15.8
2006	Kengen	337	11.9	40	28.1	236.1
2007	Kenya RE	405	9.5	16	6.5	68.4
2008	co operative bank	80.43	9.5	9.55	0.05	0.5
2008	Safaricom	532	5	7.35	2.35	47