

**THE EFFECT OF INITIAL PUBLIC OFFERINGS ON THE STOCK RETURNS OF
COMPANIES LISTED AT THE NAIROBI SECURITIES EXCHANGE**

BY:

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DECLARATION

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

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DEDICATIONS

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ABSTRACT

This study focuses on the effects of initial public offering on performance of stocks of companies listed at the Nairobi Securities Exchange. The literature reviews the effects of initial public offering on performance of stocks of companies quoted at the Nairobi Securities Exchange between 2006 and 2013. The study adopted a descriptive research design. The target population was the 62 listed companies at the NSE. Secondary data was gathered from past published scholarly articles explaining theoretical and empirical information on stock returns issues.

Descriptive analysis was used including the use of weighted means. The findings indicate that initial public offerings affect stock returns of companies listed in the NSE. The study found that the median initial return and value-weighted average returns yield further insights. The median return is lower than the (equal weighted) average return suggesting that the distribution of initial returns is skewed to the 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 an important determinant of initial return.

In Kenya, several studies have been undertaken in the past on stock price response to earnings announcements, the effects of election period on stock returns at the Nairobi Securities Exchange, the information content of annual reports and accounts of companies listed at the Nairobi Securities Exchange.

However, these studies focus on specific issues that may impact the stock returns. Consequently, there is lack of information on the extent to which IPOs influence stock returns at the Nairobi Securities Exchange (NSE) as well as exogenous factors that may have influenced the market return. Therefore, this study sought to evaluate the effects that IPOs had on the return of listed stocks at the NSE. In addition, the study assessed the effects of the turnover and volume traded on the stock return.

Results on long-run performance are model dependent and also depend on whether equal-weighted or value weighted BHARs are presented, but the benchmark calculations yield an equal weighted BHAR of almost exactly zero. Value-weighted BHARs and BHARs which control for industry sector are negative but not significantly different from zero. This will be a source of valuable information to the Capital Markets Authority, Nairobi Securities Exchange as well as investors for decision making.

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ABBREVIATIONS

AAR: Average Abnormal Returns

BHAR: Buy and Hold Average Return

CAAR: Cumulative Average Abnormal Returns

CFOs: Chief Financial Officers

EMH: Efficient Markets Hypothesis

IPO: Initial Public Offering

MABHR: Market Adjusted Buy and Hold Return

MIMS: Main Investment Market Segment

MM: Modigliani-Miller

MPT: Modern Portfolio Theory

NASI: Nairobi Securities Exchange All Share Index

NSE: Nairobi Securities Exchange

R&D: Research and Development

SPSS: Statistical Package for Social Science

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

An initial public offering (IPO) is generally perceived as one of the most important milestones in a firm's lifecycle. It allows the firm to access the public equity markets for additional capital necessary to fund future growth; while simultaneously providing a venue for the initial shareholders to sell their ownership stake. Kim and Weisbach (2005), Grundvall, Jakobsson and Thorell (2004) discussed additional motives that include: gaining of publicity and status, employee ownership and liquidity of shares. Edmonston (2009) defined initial public offering (IPO) or stock market launches as a type of public offering where shares of stock in a company are sold to the general public, on a securities exchange, for the first time. Through this process, a private company transforms into a public company. Initial public offerings are used by companies to raise expansion capital, to possibly monetize the investments of early private investors, and to become publicly traded enterprises.

A company selling shares is never required to repay the capital to its public investors. After the IPO, when shares trade freely in the open market, money passes between public investors. In Benveniste, Lawrence and Spindt's (1989) model of IPO underpricing, underwriters induce potential investors by deliberately underpricing so that they truthfully reveal their interest in an IPO. According to Gajewski and Gresse (2006), IPOs are underpriced as a means of improving the secondary market's liquidity, as a strategy of pre-IPO shareholders to maximize the sale price, as a tool for managing litigation risk (in some countries, especially the US and as a means of solving information related asymmetries. As a result of underpricing, there is very high

possibility of high initial returns if investors acquire shares from the primary market. This possibility of high returns tends to create interest among the investors to participate in an IPO.

1.1.1 Initial Public Offering

Initial public offering (IPO) is where shares of stock in a company are sold to the general public, on a securities exchange, for the first time. Through this process, a private company transforms into a public company, Edmonston (2009). Most studies in literature are generally focused on the reasons of the abnormal returns and performances of IPOs after trading. Findings, which had been found in different markets, sometimes conflict each other. This makes public offerings “a kind of puzzle” in the finance arena.

In literature, finding of empirical studies declare that IPOs provide abnormal returns in the short term. In other words, it is concluded that the stocks which will be offered in the market have been underpriced. On the other hand, it is difficult to determine the exact price of the stock which is not trading in stock exchanges yet. The agencies which ensure the sales of stocks want IPOs underpriced. By the way, Investors who buys IPO in determined lower price have the chance to obtain abnormal returns. However, the price of the valued stocks is expected to be balanced immediately in an efficient market (La Porta, 2000).

1.1.2 Stock Returns

Stock return is a measure of the return that a firm's management is able to earn on a common stock holders' investment. Return on common stock equity is calculated by dividing the net income minus the preferred dividends by the owner's equity minus the par value of any preferred

stock outstanding Baker (2006). Returns from such equity investments are subject to variation owing to the movement of share prices, which depend on various factors which could be internal or firm specific such as earnings per share, dividends and book value or external factors such as interest rate, GDP, inflation, government regulations and Foreign Exchange Rate (FOREX) (Dean, 2008).

Firms are generally free to select the level of stock return (dividend) they wish to pay to holders of ordinary shares, although factors such as legal requirements, debt covenants and the availability of cash resources impose some limitations on this decision. It is thus not surprising that the empirical literature has recorded systematic variations in stock return behaviour across firms, countries, time and type of stock return (dividend). Variations amongst firms are noted, for example, in Fama and French (2001). They bring evidence to show that stock return paying firms tend to be large and profitable, while non-payers are typically small, less profitable but with high investment opportunities. La Porta, Lopez-de-Silanes, Shleifer and Vishny (2000) study the stock return policies of over 4000 firms from 33 countries around the world. It is found that stock return policies vary across legal regimes in a way that is consistent with the idea that stock return payment is the outcome of effective pressure by minority shareholders to limit agency behaviour. Thus, firms in common law countries with good legal protection of investors tend to have higher payout ratio compared with firms in countries with weaker legal protection.

1.1.3 Initial Public Offerings and Stock Returns

Initial public offerings (IPOs) of common shares earn a large positive abnormal return in the early aftermarket period. IPO underpricing is widely documented and appears to be

internationally omnipresent. Researchers also document that IPOs tend to underperform in the long run. However, international evidence on the long-run performance of IPOs is less extensive than the one on underpricing, and less unanimously conclusive. Moreover, entrepreneurs realize that acquirers can pressure targets on pricing concessions more than they can pressure outside investors. By going public, entrepreneurs thus help facilitate the acquisition of their company for a higher value than what they would get from an outright sale. In contrast, Black and Gilson (1998) point out that, entrepreneurs often regain control from the venture capitalists in venture capital backed companies in an IPO.

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.

There is strong evidence that on average, IPO's of a firm perform 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 due to a firm's managers' who spend excessively and use the firm's funds less efficiently than they did before the IPO, (Gregoriou, 2006).

1.1.4 Nairobi Securities Exchange

The stock market in Kenya is known as the Nairobi Securities Exchange (NSE). Constituting a voluntary association of stockbrokers, the NSE was formed in 1954. It has had a remarkable development to become amongst the most vibrant stock markets in Africa. According to the NSE website, its market capitalization saw tremendous improvement hitting Ksh.1.3 Trillion after the listing of Safaricom Ltd. Turnover at the NSE grew phenomenally from Ksh.2.9 billion in 2002 to Sh95 billion in 2006 while the number of CDSC accounts that were opened increased from 80,000 in 2005 to over 1,000,000 investors to date (www.nse.co.ke). Currently, there are 62 stocks listed in the NSE.

In the Commercial & Services sector, the stocks of Uchumi Supermarkets Ltd and Hutchings Biemer were suspended from trading. In the AIMS (Alternative Investments Markets Segment), Kenya Orchards and Baumann & Co. Ltd have been suspended. NSE has continued to play an

important role in economic development, especially concerning its role in financial intermediation. Securities traded at NSE are bonds and shares that constitute the markets two broad segments. The stock market is referred to as floating interest rates market, which is divided into two segments; the Main Investments Market Segment (MIMS) & Alternative Investments Market Segment (AIMS). MIMS has four segments namely Agricultural, Commercial and Services, Finance & Investment, and Industrial & Allied sector.

Characterized by its liquidity, market capitalization and turnover, the NSE may be classified as both emerging market and frontier market .The NSE is a model emerging market in view of its high returns, vibrancy and well developed market structure Ogunmuyiwa (2010). It is amongst the most vibrant in the African Bourse, and is the most developed security market in Eastern Africa. In the year 2009, the bourse introduced a market indicator named as the NSE All Share Index (NASI). Thus, it raises interest and sets a precedent for comparison with other emerging markets in Africa and the world at large. Bach, Judge & Dean (2008) define IPO success as the creation of market value above and beyond the resources invested in the venture since its inception.

The Nairobi Securities Exchange has had very few IPOs compared to developed markets. The IPOs have been highly oversubscribed with Barclays bank of Kenya recording a high of 613%, Eveready at over 800%, and Safaricom the biggest offer in the region at 382%. In all the oversubscribed offers, so much money was left ‘on the table’ and this results into hefty refunds to subscribersCheluget (2008). In 2006, there was resurgence in IPOs with Kenya Electricity

Generating Company (KenGen) over- exceeding market expectations by being oversubscribed and earning a premium from its first day of trading.

This IPO ushered in a new era for NSE with use of the Central Depository and Securities Corporation (CDSC). The CDSC operates a central depository system, provides central clearing, settlement and depository services for securities listed at NSE. After KenGen, the other IPOs were not received with as much enthusiasm until the Safaricom Limited one (with a sale of 10 billion ordinary shares at KShs 5.00 per share and listing of 40 billion ordinary shares) was advertised in 2008 and literally everyone wanted a stake in it. This led to banks and financial institutions coming up with innovative funding mechanisms to capitalize on this demand. This issue was oversubscribed leading to numerous refunds.

Whereas the subscription rates to IPOs have been high in the past, studies 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 0.06% in three years after going public, compared to the market return of 0.3%. Njoroge (2004) while studying 1984-2001 using a sample of 14 IPOs observed that all the IPOs recorded an overall negative cumulative growth of -68.46%. Ndatimama (2008), using a sample of 15 covering the period of 1992-2007 employing the MABHR model produced mixed support. He found out that cumulative returns fall to -3.1% after 3 months, down further to -6.17% at the end of the first year. - 1.92%, 0.68%, -1.72% and 8.66% at the end of 2nd, 3rd, 4th and 5th years respectively. Using wealth relatives, Ndatimana (2008) found 1.08 at the 5th anniversary and -1.017 at the third anniversary. He concluded that any underperformance for the first 3 years reverses by the 5th year. Micki (2013) reports that the factors that contribute to the volatility of

stock returns of stocks listed at the NSE include: the demand and supply of the IPO shares, political stability in the country and future expected returns from the IPOs.

1.2 Research Problem

Over the last few years there has been an upsurge of IPO activity at the NSE. The reason for this popularity is because of the worldwide trend towards privatization. The IPOs at the NSE have been successful and have been characterized by massive oversubscriptions indicating their potential as well as the popularity. Most studies analyze the performance of companies around their Initial Public Offerings (IPOs). Braun and Larrain (2007) affirm that IPOs do not go unnoticed in emerging markets. They add that IPOs are focal points, particularly if they are listed alone and they can stir the whole market. A single large IPO can have a significant effect in a less developed market. The sheer size of these transactions attracts the attention of all big investors such as pension funds and international funds. Studies conducted in different countries have shown that share prices normally react to the arrival of news in the market such as announcement of earnings and dividends. Other researchers have found that both political and economic events usually have an impact on the share prices of companies listed in the Stock Exchanges.

Most Kenyan studies have focused on underpricing and performance of IPOs such as Ngahu (2006) on book value per share issue price and first trading day prices of IPOs at NSE, Cheluget(2008) on investor's demand for IPOs and first day performance: evidence from NSE, Ndatimama (2008) on performance of IPOs, Leshore (2008) on medium-term performance of IPOs, Simiyu (2008) on pricing and performance of initial public offering: a comparison between

state owned enterprises and privately owned enterprises at NSE, Thuo (2009) on the short-run performance of IPOs, Karitie (2010) on long-run performance of IPOs, Wachira (2010) on the determinants of the success of IPOs among listed companies and Kipng'etich et al (2011) on determinants of IPO pricing in Kenya. Due to this lack of sufficient literature the effect of IPOs on the stock returns at the NSE remains largely unexplained necessitating this study.

In Kenya, the behavior of share prices to announcement of operating results, events like elections have been studied. However, there is no empirical evidence that IPOs affect the stock returns of companies listed in the Nairobi Securities Exchange. Apparently, an IPO announcement is likely to influence investors in disposing off the shares in other listed companies in order to participate in the current IPO. This destabilizes the market leading to possible fluctuation in stock prices. This of course, is how inefficiency comes about. The investors, however, may lack information concerning the market response. This research therefore sets out to answer the following research question: Was there any effect of an IPO on the return of stocks of companies listed in the NSE?

1.3 Objective of the Study

To determine the effect of initial public offerings on the stock returns of companies listed at the Nairobi Securities Exchange.

1.4 Value of the Study

This study is intended to demonstrate the effect of initial public offerings on the stock returns of companies listed at Nairobi Securities Exchange to scholars, practitioners and students of research and the management of companies and the NSE. The management is hoped to be the

key beneficiary of this study. Owing to the major role that they play in the overall running of the organization and their financing decisions, this study is hoped to provide adequate knowledge on the effect of initial public offers on the returns of stocks listed at Nairobi Securities Exchange. Additionally, the findings of this study are also hoped to provide an insight on the various challenges that are accompanied with IPOs.

Scholars, practitioners and students of research are also expected to reap from the findings of the study on the effect of initial public offerings on the stock returns of companies listed at the Nairobi Securities Exchange. The study is expected to contribute to knowledge in the areas of IPO and stock exchange. The study will aim at contributing to the existing knowledge base / literature in Kenya especially in the stock exchange.

The study will also be of great help to policy makers as they will obtain knowledge on the effect of initial public offers on the returns of stocks listed at Nairobi securities exchange; they will therefore obtain guidance from this study in developing appropriate policies that will regulate the sector.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

In this chapter the researcher has tried to elaborate in brief some of the theories invented by past scholars and describe the effect of initial public offerings on the stock returns of companies listed at the Nairobi Securities Exchange. The chapter also tried to identify any research gaps that may have existed.

2.2 Theoretical Review

Theoretical review of the study is based on market efficient hypothesis which indicates that IPOs are among the most important practical factors that can be used to predict the market performance (Market index).

2.2.1 Random Walk Theory

The Efficient Markets Hypothesis (EMH), popularly known as the Random Walk Theory by Fama (1970), is the proposition that current stock prices fully reflect available information about the value of the firm, and there is no way to earn excess profits, more than the market over all, by using this information (Fama, 1970).

The primary purpose of EMH is to demonstrate that stock prices accurately and quickly reflect all available information in such a way that no one can earn abnormal returns. The time for adjusting any information is considered a critical factor. If the markets adjust more rapidly and accurately, it is considered more efficient.

Dyckman and Morse (2006) states that a security market is generally defined as efficient on condition that the prices of securities traded in the market act as though they fully reflect all available information, these prices react instantaneously, or nearly so and in an unbiased fashion to new information. Market efficiency does not imply that no investor can be at the market at any time period or that stock prices cannot deviate from true value and also that no group of investors will be able to beat the market in the long run. However, market efficiency should mean that no investor should beat the market consistently but if this occurs, then it should be as a result of luck and not investment strategies.

The theory asserts that the stock market context does not mean, neither should it be taken to imply, that the price movements are whimsical and chaotic Mlambo (2003). All it means is that period-to-period price changes should be statistically independent and unforecastable if they are properly anticipated. Price movements are a perfectly rational response to information but since there is no reason to expect new information to be non-random, price changes based on this information is supposed to be random and uncorrelated to any observable trend (Fama, 1970).

The theory argues that the share price movements are independent of one another and unrelated. This happens in an efficient market where the current prices of securities represent unbiased estimates of their intrinsic values. The random walk theory holds that the prices move in a random manner hence, it is not possible to predict future prices. The price movement, whether up or down, occurs as a result of new information and since investors cannot predict the kind of new information (whether good or bad), it is not possible to predict future price movement.

The random walk theory clearly conflicts with technical analysis. The theory says that previous price changes or changes in returns are useless in predicting future prices, which implies that the work of a technical analyst is unnecessary. According to Fisher & Jordan (1995); Mlambo (2003) the random walk theory is a special case of a more general efficient market hypothesis and the two positions complement each other.

Lumby (1994) asserts that the theory of market efficiency and stock prices behavior is inseparable. In Lumby (1994), the efficient market has been defined as a market where prices of a company's shares (or other financial securities) rapidly and correctly reflect all relevant information as it becomes available. No undervalued securities exist in such a market hence, the share prices can be relied upon to correctly reflect the true economic worth of the shares. Jensen (1978) points out that a market is efficient with respect to information if it is impossible to make abnormal economic profits by trading on the basis of that information.

In an efficient market, competition among the many intelligent participants leads to a situation where, at any point in time, actual prices of individual securities already reflect the effects of information based both on events that have already occurred and on events which as of now the market expects to take place in the future. In other words, in an efficient market at any point in time the actual price of a security will be a good estimate of its intrinsic value.

2.2.2 The MM Capital Structure Irrelevant Theory

According to MM (1958) capital structure irrelevance theory, the total cash flows a company makes for all investors (debt holders and shareholders) are the same regardless of capital

structure. Changing the capital structure does not change the total cash flows. Therefore the total value of the assets that give ownership of these cash flows should not change. The cash flows will be divided up differently so the total value of each class of security (e.g. shares and bonds) will change, but not the total of both added together.

Looking at this another way, if you wanted to buy a company free of its debt, you would have to buy the equity and buy, or pay off, the debt. Regardless of the capital structure you would end up owning the same streams of cash flows. Therefore the cost of acquiring the company free of debt should be the same regardless of capital structure.

Furthermore, it is possible for investors to mimic the effect of the company having a different capital structure. For example, if an investor would prefer a company to be more highly geared this can be simulated by buying shares and borrowing against them. An investor who would prefer the company to be less highly geared can simulate this by buying a combination of its debt and equity. MM (1958) theory depends on simplifying assumptions such as ignoring the effects of taxes. However, it does provide a starting point that helps understand what is, and is not, relevant to why capital structure does seem to matter to an extent. The different tax treatments of debt and equity are part of the answer, as are agency problems (conflicts of interest between shareholders, debt holders and management).

There are extensions to MM (1963) theory which suggests that the actions of market forces, together with the tax treatment of debt and equity income in the hands of investors, means that for most companies the gains that can be made by adjusting capital structure will be fairly small. Given

that companies would not deliberately adopt inefficient capital structures, we can assume that all companies have roughly equivalently good capital structures - so from a valuation point of view we can reasonably assume that capital structure is irrelevant.

2.3 Empirical Review

Nyamute (1998) went on to carry out a study on the relationship of the NSE index of major economic variables: inflation rate, money supply, treasury bills rate and exchange rate. He found out that these variables have an impact on the performance of the stock exchange (as measured by the stock index); the treasury bills and the exchange rates were generally more significant than either the inflation or money supply.

Robert et al. (2002) found out that price drops at issue announcement and increases with time from the last information release. Michael and Robert (1988) used the intraday price data to determine announcement effects on new equity issues. They found out that the issue size, intended use of proceeds and estimated profitability of new investment are uncorrelated with the announcement effect.

Lowry and Schwert (2002) noted 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. The findings of Rajan and Servaes (1997, 2003), Lee and Thaler (1991), Lerner (1994), and Pagano, Panetta, and Zingales (1998) suggested that IPO volume is related to various forms of market irrationality.

Consistent with this finding, Lerner, Shane and Tsai's (2003) results suggested that periods of low IPO volume represent times when private firms "cannot" have access to the equity markets on favorable terms. Pagano et al. (1998) found that companies are more likely to have IPOs when the average market-to-book ratio of public firms in their industry is higher. Empirically it has been widely observed that on an average, IPOs are underpriced. However, the large underpricing in IPOs in emerging capital markets cannot be deemed as normal underpricing that is observed in the developed capital markets.

According to Reilly and Brown (2003) the primary application is to use index values to compute total returns and risk for an aggregate market or some components of a market over a specified time period and use the computed returns as a benchmark to judge the performance of individual portfolio. A basic assumption in evaluating portfolio performance is that any investor should be able to experience a risk adjusted rate of return comparable to the market by randomly selecting a large number of stocks or bonds from the total market hence a superior portfolio manager should consistently do better than the market.

Babich and Sobel (2004) claim the prospect of a future IPO affects the daily operational and financial decisions made by many owners of privately growing companies. Based on this notion, they model the behavior of an owner as making decisions to maximize the expected present value of IPO proceeds. Although exact values were not determined, the research proved the existence of optimal thresholds for the following variables: capacity level, previous period sales, previous period profit, risk free rate, and current demand. Rosen, Smart and Zutter (2005)

provide empirical support through their analysis of the banking industry, finding that banks that go public tend to have higher profits and more leverage in addition to being greater in size than their counterparts that chose to remain private.

Baker and Stein (2004) developed a model that helps to explain that an increase in liquidity predicts lower subsequent returns in both firm level and aggregate data. They posit that irrational investors participate only on over-valued markets because of short sales and they over react to private signals about future fundamentals and this leads to sentiment shocks. They find that measure of equity insurance and share turnover are highly correlated and that sentiment indicators from market liquidity may be responsible for low expected returns. DeLong et al. (1990) suggest that noise traders can affect stock prices because the risk aversion of irrational speculators keeps them away from taking large arbitrage positions.

Brealey and Myers (2005) noted that Going public marks a watershed in the life cycle of a firm, while increased equity can support the firm's future plans of growth, the tradeoff for the firm is that of increased public scrutiny. They document that in USA; the firms may seek private equity in their initial years and only go for public issues later. In their study of Italian firms, Pagano, et al (1998) found that firms going public are not necessarily seeking money for growth but are usually trying to rebalance their accounts after high investment and growth. The post-IPO period sees a reduction in leverage as well as investment. According to their findings, going public is a conscious choice that some firms make while some others preferred to remain private. Thus going public is not a natural element in the life cycle of a firm.

In contrast, Gatchev, Spindt and Tarhan (2009) found the use of equity to be more pronounced with smaller firms as well as those with high growth or low profit levels when excluding financial firms. Although the two data samples suggest different relationships, these characteristics seem to be influential in the IPO decision.

Latham and Braun (2010) specifically look at the effect of ownership and leverage on the decision to continue versus withdraw an IPO. First, the results indicate that the probability of going through with an IPO in poor public equity markets decreases as the CEO holds too little or too much ownership, implying an inverse U-shaped relationship. Secondly, firms with higher levels of debt tend to continue with an IPO despite the less than ideal conditions in order to raise the necessary proceeds to deleverage their balance sheets.

2.4 Summary of Literature Review

The literature and theories indicate that investors generally attempt to beat the market by identifying undervalued shares and buying them before their prices rise and look for overvalued shares in order to sell them before their prices fall Fisher and Jordan(2005). Baker and Stein (2004) developed a model that helps to explain that an increase in liquidity predicts lower subsequent returns in both firm level and aggregate data. They posit that irrational investors participate only on over-valued markets because of short sales and they over react to private signals about future fundamentals and this leads to sentiment shocks.

Limited empirical studies analyzed this issue. Existing empirical evidence is based mainly on data from developed countries. For example Kim and Sorensen (1986),Bhandari (1988), Friend

and Lang (1988), Titman and Wassels (1988), Lucas and Mc Donald (1990), HovaKimian et al (2001), Baker and Wurgler (2002) and Welch (2004) focus on united states and Japanese manufacturing corporations. Thus, there is a conspicuous gap in the empirical research on effect of IPO on stock returns.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter sets out various stages and phases that were followed in completing the study. It involves a blueprint for the collection, measurement and analysis of data. Therefore in this section the research identifies the procedures and techniques that were used in the collection, processing and analysis of data. Specifically the following subsections are included; research design, target population, data collection instruments, data collection procedures and finally data analysis.

3.2 Research Design

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. The key assumption of the event study methodology is that the market processes information about the event in an efficient and unbiased manner, Barber and Lyon (1997) and (Lyon, Barber and Tsai, 1999).

Researchers often choose to use the event study methodology to examine the direction, magnitude and speed of price reactions to the various phenomena in corporate finance. Event studies also serve an important purpose in capital market research as a way of testing market efficiency. Systematically, non-zero abnormal security returns that persist after a particular type of corporate event are inconsistent with market efficiency. Accordingly, event studies focusing

on long- horizons following an event can provide key evidence on market efficiency. Brown and Warner, (1980), (Fama, 1991).

3.3 Target Population

Target population in statistics is the specific population about which information is desired. According to Ngechu (2004), a population is a well-defined or set of people, services, elements, and events, group of things or households that are being investigated. This definition ensures that population of interest is homogeneous. And by population the researcher means complete census of the sampling frames. Population studies are more representative because everyone has equal chance to be included in the final sample that is drawn according to Mugenda and Mugenda (2003). The population of interest of this study was all the 62 listed companies at the NSE.

3.4 Sample and Sampling Methods

The sample of data which was used in this current study comprised IPOS and stock returns of all the companies that have issued IPOs for the period covering 2006 to 2013 and data will be obtained from NSE and CMA data bank.

3.5 Data Collection

The study used secondary data sources to gather information relevant in achieving the research objectives. The secondary data was collected from the NSE on their annual reports on the relationships between stock returns and volatility of IPOs at the Nairobi Securities Exchange.

3.6 Data Analysis

The data obtained was analyzed using Statistical Package for Social Science (SPSS). Quantitative analysis will involve the use of means, relative frequencies, mode, median and standard deviation, Kothari (2004). Regression analysis was used to analyze the data and find out the effect of Initial Public Offers on the returns of stocks listed at the Nairobi Securities Exchange. In this research, a dynamic econometric model will be employed to assess the effect of initial public offers on the returns of stocks listed at the Nairobi Securities Exchange.

The estimation window was 12 months; the event window was 30 days while the post-estimation window was 20 days. Abnormal Returns are the crucial measure to assess the impact of an event. The general idea of this measure is to isolate the effect of the event from other general market movements. The abnormal return of firm i and event date τ is defined as the difference of the realized return and the expected return given the absence of the event:

$$AR_{it,t+k} = R_{i,t} - E[R_{i,t} | X_t]$$

Cumulating abnormal returns across time yields the cumulative abnormal return measure:

$$CAR_{it,t+K} = \sum_A R_{it,t+k}$$

The second measure, the buy-and-hold abnormal return (BHAR), is defined as the difference between the realized buy-and-hold return and the normal buy-and-hold return:

$$BHAR_{it,t+K} = \prod_k (1 + AR_{i,t+k})$$

Null Hypothesis: Event has no impact on returns –i.e., no abnormal mean returns, unusual return volatility, etc.

The focus is usually on mean returns.

Parametric Test:

Traditional t-statistics (or variations of them) are used:

$$t_{CAR} = \frac{\overline{CAR}_{i\tau}}{\left(\sigma(CAR_{i\tau})/\sqrt{n}\right)}$$

or

$$t_{BHAR} = \frac{\overline{BHAR}_{i\tau}}{\left(\sigma(BHAR_{i\tau})/\sqrt{n}\right)}$$

Non- Parametric Test:

It's free of specific assumptions about return distribution.

Intuition: Let $p = P(CAR_i \geq 0)$, then under the usual event studies hypothesis, we have $H_0: p \leq 0.5$ against $H_1: p > 0.5$. (Note if distribution of CAR_i is not symmetric, we need to adjust the formulation of p .)

Popular Tests: Sign Test (assumes symmetry in returns) and Rank Test (allows for non-symmetry in returns), (Corrado, 1989).

Let N_+ be the number of firms with $CAR > 0$, and N the total number of firms in the sample.

Then, H_0 can be tested using

$$J = \left[\frac{N_+}{N} - 0.5 \right] \sqrt{2N} \sim^A N(0, 1)$$

CHAPTER FOUR: DATA ANALYSIS AND DISCUSSION

4.1 Introduction

This chapter deals with data analysis and interpretation of results from the regression analysis done as well as the results of analysis of the share prices. The sample of data which will be used in this current study will comprise IPOS and stock returns of all the companies that have issued IPOs for the period covering 2006 to 2013.

4.2 Abnormal Returns

Results on the abnormal returns of the IPOs in the present dataset are reported in two stages: initial returns and long-term returns are examined separately. The analysis is split in this way because existing research suggests that the initial return is abnormally positive yet the long-term return is abnormally negative. If studied together, the one will mask the effect of the other.

The closing price on the first trading day is arguably the most appropriate place to begin measurement of long-run performance of IPOs for a second reason: in many cases it is not possible for non-specialist investors to buy stock at the offering price so the abnormal return measured from the closing price of the first day's trading is an achievable return whereas in some cases the return measured from the offering price may not be.

4.2.1 Initial Returns

Initial return is defined as the return from buying shares at the offering price and selling them at the closing price on the first day of trading. The index over the sample period was 0.045%, far

lower than the initial returns on IPOs, so any adjustment according to a model of expected returns would make virtually no difference. The median initial return and value-weighted average returns yield further insights. The median return is lower than the (equal weighted) average return suggesting that the distribution of initial returns is skewed to the right, as expected. Over the entire sample, the equal-weighted average initial return exceeds the valueweighted average by a factor of 1.75, which suggests that IPO offer is an important determinant of initial return.

Table 4.1: Initial returns

Year	Equal- median weighted return	Value weighted average initial return	12 month BAHR on initial return	Share (%)
2006	107.4	107	103.349	12.46
2007	102.7692	102	100.4256	3.31
2008	114.2214	110	106.1503	26.18
2009	117.2546	114	112.2214	34.17
2010	120.2353	110	118.1503	40.18
2011	131.2021	120	127.2214	42.34

Table 4.2 Long-Run BAHRs

Year	BAHR Statistic
2006	1.19
2007	0.54
2008	-0.99
2009	0.64
2010	-0.43
2011	0.65

The critical values t-statistic come from the standard normal distribution, so if the test is H_0 : no abnormal performance vs H_1 : negative abnormal performance (one sided) then $t_{sa} < -1.645$ is significant at 5% Whereas results on initial abnormal returns in Tables 4.1 above conform very closely with results of earlier studies, the present results on long-run abnormal returns clearly do not. Average abnormal BAHRs vary quite wildly during the sample period, but the aggregate average abnormal performance, roughly -1%, is remarkably close to zero. In other words the IPOs in the sample tended to provide roughly the same holding period return as the

stock index over the relevant period. These returns were calculated from the closing price on the first day of trading – this means, since the average initial (raw) return was 3.70%, that if an investor had been able to buy each IPO at the offer price rather than the first trading day's closing price, the IPOs in the sample would have proved superior investments. Brav and Gompers (1997) have suggested that much of the underperformance identified in earlier IPO research disappears when BAHRs are value-weighted.

Table 4.3: Summary AAR and CAAR Initial Public Offer for 30 days trading period

Day	AAR %	t value	CAAR%	t value
1	0.1457	0.0938	0.1358	0.0938
9	1.3587	1.7056^c	2.3786	0.5532
10	1.68883	2.0310^b	4.0634	0.8710
18	-1.6666	-2.0786^b	4.1874	0.6584
30	-0.1518	-0.2556	4.6130	0.6167

a– Significant at 1% level; b – Significant at 5% level; c – Significant at 10% level.

Table 4.3 and appendix 2 attached indicate AAR and CAAR Initial Public Offer for 30 days trading period. IPOs during the first sub period had more than one per cent positive returns for 5 trading days and it had more than one per cent of negative returns for 6 trading days. It also experienced more than half a per cent (but less than 1%) returns for 22 trading days, among them 15 were positive and 7 were negative. During the event window AARs for 23 days were positive with less than half a per cent return and for 19 days they were negative with less than half a per cent.

The IPOs had positive abnormal return at 0.1457% on the first day of trading, but it was not statistically significant. AAR on 10th day of trading stood positive at 1.68883% and it was significant at 5% level. Positive abnormal returns on 9th and 14th days were recorded at 1.3587 and 1.4143% respectively, which were significant at 10% level.

AARs for only 8 days were statistically significant. Four of the 8 significant abnormal returns were spread over the first half of the event window and the remaining stood in the second half of the event window. The overall results of the AAR showed more positive returns than negative returns and also with high rates. CAAR stood positive in the first two days of trading. Due to high negative return on the third trading day (-1.5001%) it decreased and became negative on third day and it was continued for two more days. After 5th day of trading, no negative CAAR was found in the event window. In 6th and 7th trading days there were around one per cent positive returns and hence CAAR had an increase and became positive on 6th day of trading.

It had over one per cent positive return on 9th and 10th days (1.3587 and 1.6847%). Due to high positive returns, CAAR increased to 4% on 10th trading day. It reached 6% on 14th trading day. Due to continuous and high negative returns, CAAR decreased to 5.7331% 4.1874% and 3.8589% on 16, 18 and 19th trading days respectively.

CAAR increased and it reached 4% again on 21st trading day. Except on 22nd day it continued to be over 4%. Due to fluctuations in returns, CAAR also fluctuated from 3% to 5% till 30th trading day. CAAR on the last day and most of the trading days of the event window were positive but they were not statistically significant.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This study was carried out to identify the effect of initial public offerings on the stock returns of companies listed at the Nairobi securities exchange. The sample of data which was used in this current study comprised IPOS and stock returns of all the companies that have issued IPOs for the period covering 2006 to 2013.

5.2 Summary

The results indicate that initial public offer affect stock returns of companies listed in the NSE.

The study found that the median initial return and value-weighted average returns yield further insights. The median return is lower than the (equal weighted) average return suggesting that the distribution of initial returns is skewed to the 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 an important determinant of initial return.

IPOs in the sample tended to provide roughly the same holding period return as the stock index over the relevant period. These returns were calculated from the closing price on the first day of trading – this means, since the average initial (raw) return was 3.70%, that if an investor had been able to buy each IPO at the offer price rather than the first trading day's closing price, the IPOs in the sample would have proved superior investments.

IPOs during the first sub period had more than one per cent positive returns for 5 trading days and it had more than one per cent of negative returns for 6 trading day. CAAR on the last day and most of the trading days of the event window were positive but they were not statistically significant.

According to the study hypothesis testing indicated that average abnormal BAHRs vary quite wildly during the sample period, but the aggregate average abnormal performance, roughly -1%, is remarkably close to zero. In other words the IPOs in the sample tended to provide roughly the same holding period return as the stock index over the relevant period. These returns were calculated from the closing price on the first day of trading – this means, since the average initial (raw) return was 3.70%, that if an investor had been able to buy each IPO at the offer price rather than the first trading day's closing price, the IPOs in the sample would have proved superior investments

5.3 Conclusion and Recommendations

Results on long-run performance are model dependent and also depend on whether equal-weighted or value weighted BHARs are presented, but the benchmark calculations yield an equal weighted BHAR of almost exactly zero. Value-weighted BHARs and BHARs which control for industry sector are negative but not significantly different from zero. Ibbotson and Ritter suggest that since the long-run holding periods which are investigated must overlap, and since the number of independent observations is therefore limited, the evidence on negative long-run abnormal returns must be considered tentative and must be treated with caution.

IPOs in the information technology related subsector yielded by far the highest initial return on their first day of trading, but, especially when controlling for industry sector in the measurement of abnormal return, long term returns were extremely poor. During the period spanned by the sample, (2008), it is easy to imagine that this sector could have received the most speculative interest from unconventional (noise) traders. Even if it is the case that noise traders exerted an identifiable influence on observed market prices in one sector over one period, however, the results presented in this paper do not suggest that efficient markets anomalies are pervasive with respect to IPOs.

The matter of long-run performance is germane to research on IPO performance more broadly. Positive and highly significant initial abnormal returns for IPOs (meaning returns over the first day or two of trading), are an empirical phenomenon almost universally accepted, and confirmed in the present dataset. There has grown a large theoretical literature which seeks to explain this phenomenon. Frequently the premise is that IPOs are underpriced by firm owners and/or their advisers, and the theories seek to explain this underpricing. If, however, it is confirmed that IPOs perform poorly during the early years of trading, then this basic premise in the analysis of initial returns must be faulty.

A satisfactory theory of IPO performance would not explain why IPOs are underpriced at issue, but why the open market price jumps up irrationally when the stock starts trading, only for these initial gains to be dissipated slowly over subsequent years. This would appear to be a far more perplexing puzzle. The study findings on shortrun over performance and long run underperformance of IPOs suggests that theoretical research is incomplete or misguided if it seeks only to explain IPO underpricing.

5.4 Limitations of the Study

The main limitation of the study was the number of firms selected (9) for analysis, the time period (8 years). The daily data for the firms and variables was numerous and from multiple sources hence the need to limit the variables and firms. Furthermore, no much attention has been given to the relative change of IPO performance with respect to the different subperiods of the analysis' horizon.

The study covered a period of ten years from January 2006 to December 2013. Other studies carried out covered more years, for instance Onyuma (2009) which covered twenty six years. It is possible that a longer period could register different results. Processing the data to generate the required information proved to be a hardy task; developing the regression model was time consuming. The findings were more difficult to characterize in a visual way.

Another limitation of the study is the assumption that other corporate events, for example stock splits, bonus rights issues and debt issue announcements, during the estimation period and event window did not occur and if they did, there was no contamination of results. This could be unrealistic.

5.5 Suggestions for Further Study

The stock market reaction upon the announcement reflects the changes in expected future cash-flows that will accrue to the shareholders of the firms involved and is a proxy of expected value. A further study should be conducted on the effect of mergers on stock returns focusing on shareholders wealth.

Proper study of few IPOs is done by going through the companies' past financials, business structure, investments, expansion strategies, growth potential and valuations. Further studies should define the various public issues with the need for the company to take out an IPO. There is need to go on further to explain the advantages of an IPO and analyse in detail the IPO Scenario as well as go on to explain the evolution of the IPO in Kenya and explain how the scene has changed dramatically.

This study recommends that further studies be done on the effect of Initial Public Offerings on financial and share performance of the companies listed at the NSE. This includes daily and yearly assessment and ratio analysis. This is because this study focused on the effect of IPOs on company's share performance and daily share prices, market index and trading volumes were used thus therefore, a yearly overview could be an interesting study to identify the effects on company's financial and share performance. Also, other studies on other events announcement on share prices and traded volumes should be done so as to show clearly the effect of events announcement on traded volumes.

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APPENDICES

Appendix I: Equity Issues (IPO's) 2006-2013

COMPANY	SHARES ON ISSUE	TYPE OF ISSUE	YEAR OF STUDY	ISSUE PRICE	SUBSCRIPTION LEVEL
KENGEN	300 000 000	IPO	2006 APRIL	11.90	833%
SCANGROUP	69 000 000	IPO	2006 JUNE	10.45	620%
EVEREADY	63 000 000	IPO	2006 AUGUST	9.50	830%
ACCESS KENYA	80 000 000	IPO	2007 MARCH	10	363%
KENYA RE	240 000 000	IPO	2007 JULY	9.50	334%
SAFARICOM	10 000 000 000	IPO	2008 JUNE	5.00	532%
CO- OPERATIVE	701 000 000	IPO	2008 OCTOBER	9.50	81%
DEACONS KENYAN	12 800 000	IPO	2010 NOVEMBER	62.50	87.5%
BRITISH AMERICAN	660 000 000	IPO	2011 SEPTEMBER	9.00	60%

Source: Capital Markets Authority

Appendix II: AAR and CAAR Initial Public Offer for 30 days trading period

Day	AAR %	t value	CAAR%	t value
1	0.1457	0.0938	0.1358	0.0938
2	0.8064	0.6040	0.9422	0.4293
3	-1.5001	-1.4184	-0.5579	-0.2380
4	0.1859	0.2136	-0.3720	-0.1278
5	-0.2622	-0.2819	-0.6342	-0.2167
6	0.9983	0.7788	0.3641	0.1041
7	0.9131	1.2280	1.2773	0.3407
8	-0.2574	-0.2636	1.0199	0.2480
9	1.3587	1.7056^c	2.3786	0.5532
10	1.68883	2.0310^b	4.0634	0.8710
11	0.5567	0.5910	4.6200	0.9575
12	0.1781	0.1758	4.7981	0.9491
13	0.1023	0.1545	4.9004	0.9529
14	1.4143	1.7413^c	6.3147	1.1436

15	-0.1508	-0.1955	6.1640	1.0530
16	-0.4309	-0.6799	5.7331	0.9646
17	0.1209	0.1637	5.8540	0.9720
18	-1.6666	-2.0786^b	4.1874	0.6584
19	-0.3285	-0.5351	3.8589	0.6027
20	-0.3046	-0.4067	3.5543	0.5359
21	0.5914	0.9416	4.1457	0.6327
22	-0.2161	-0.4505	3.9296	0.5880
23	0.4905	0.6542	4.4201	0.6603
24	0.0484	0.0708	4.4685	0.6503
25	-0.2424	-0.3838	4.2261	0.5998
26	-0.3289	-0.3630	3.8972	0.5331
27	1.0037	1.2030	4.9009	0.6438
28	0.1352	0.2121	5.0360	0.6710
29	-0.2713	-0.4414	4.7648	0.6486
30	-0.1518	-0.2556	4.6130	0.6167

a– Significance at 1% level; b – Significance at 5% level; c – Significance at 10% level.