THE EFFECT OF INITIAL PUBLIC OFFERING ON LONG-RUN STOCK PRICE PERFORMANCE OF COMPANIES LISTED AT THE NAIROBI SECURITIES EXCHANGE

BY

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DECLARATION

This research project is my original work and has not been presented for an award of any degree in any university.

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DEDICATION

I dedicate this paper to my fiancée Jane Munyiva for your love and care has kept me going. To my brother Caleb for sacrificing a lot for me, indeed, "to those whose much has been given much will be required". To my dear parents, brothers and sisters, for never ending encouragement for which I am greatly indebted

ABSTRACT

Long run performance of IPOs has elicited much research the world over. Much interest by scholars has been on the anomalies on initial over performance and long run under performance. It is amazing to note that majority of recent IPOs in Nairobi Stock Exchange have been highly oversubscribed with Eveready recording over 800%, yet research on IPOs point that IPOs underperform the market in the long run. The objective f the study was to determine the effect of IPOs on long-run stock price performance of companies listed at NSE.A total of eight companies which made IPOs between 2006-2011 where considered representing 13.11% of the population. Data used was purely secondary data from the NSE website and Central Bank. Collected data was analyzed using Mean Adjustment Buy Hold Returns and Cummulative Abnomal Returns and test of significance at 95% confidence level. The research established that IPOs of Eveready East Africa had highest subscription of 830%, Scan Group with 620%, Safaricom with 532%, Kenya RE with 405%, Access Kenya with 363%, KENGEN with 333%, Co-Operative Bank Ltd with 80% and BRITAM with 60% hence research established that IPOs where averaged oversubscribed by 402.8%. The study confirmed that IPOs Over performed the market by 0.537% using MABHR methodology. However interestingly, using CAR, IPOs over performed the market by 1.186% presenting a difference of 0.649% from results of MABHR methodology. Testing at 95% confidence level there was significance difference between MABHR and CAR in long run IPOs performance hence the study confirmed that different results are obtained if different methodologies are used. To improve on IPOs performance the CMA and NSE should encourage and provide favorable environment for more private companies to list in the NSE by relaxing the regulations in trading. To promote true and correct pricing of shares, the minimum shares traded should be raised so as to encourage individual and small & medium enterprises investors to use institutional investors to trade at the stock market. Since institutional investors are more enlightened on the correct valuation of shares, individual and SME investors will gain from the expertise of the institutional investors. The CMA should have strict mechanism to ensure that poor IPOs are not offered in the market especially during hot IPO periods. Oversubscription by the companies will be eliminated since the companies with highest subscriptions performed poorly compared to less subscriped IPOs. This will promise and ensure that investors are protected from companies that want to take advantage of over valuations in the market arising from the IPOs.

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LIST OF ABBREVIATIONS

ASE   – Athens Stock Exchange

BHAR   – Buy and Hold abnormal Returns

BRITAM   – British American Investment Company Limited

CAPM   – Capital Asset Pricing Model

CAR   – Cumulative Average Adjusted Returns

CMA   – Capital Markets authority

CTAR   – Calendar Time Abnormal Returns

DASS   – Delivery and Settlement System

EMH   – Efficient Market Hypothesis

FTSE   – Financial Times Security Exchange

IPO   – Initial Public Offering

KENGEN   – Kenya Electricity Generating Company

KLM   –Koninklijke Luchtvaart Maatschappij

MAIR   – Market Adjusted Initial Return

MENA   – Middle East and North Africa

NSE   – Nairobi Securities Exchange

WAN   –Wide Area Network

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CHAPTER ONE

INTRODUCTION

1.1   Background of the Study

Initial Public Offer (IPO) is the first sale of stock by a private owned firm to the public with an aim of raising more capital for expansion and growth (Odongo, 2012). A private owned company opts to issue an IPO in a bid to raise financial resources to warrant its growth and expansion strategies. It is to this effect that a company becomes public and its shares, after it being listed in the Nairobi Securities Exchange, become public and available to be traded. Ritter (1998) defines stock performance as a measure of returns on shares over a period of time and therefore, stock price performance measures the performance of stock based on their market prices. Studies on the performance of IPOs show that they are underpriced in the short-run (Wachira, 2012; Zulu, 2009; Kiran & Phil, 2011) and that the IPOs underperform in the long-run (Wairia, 2010; Alvarez & Gonzalez, 2001).

Fama (1965) argued that in efficient markets, security prices are rarely far above or below their expected level in the market. These are pioneered by markets that are efficient and do not hold in inefficient markets. The theory therefore presupposes that in efficient markets, returns from stocks are normal and no instances of abnormal returns. To the contrary, studies show a deviation of the IPO prices from the expected levels giving way for abnormal returns meaning therefore, that the markets are inefficient (Wairia, 2010 & Tsangarakis, 2004). Proponents of the random walk theory (Horne & Parker, 1967; Malkiel, 1973) assert that stock prices move randomly giving no advantage to any trading strategy aimed at gaining abnormal returns. In this case, it is not possible to analyze the trend of stock performance because the returns are random and uncertain. Prospect theory presents investors as rational who value gains than losses and make decisions based on belief of the gains expected.

1.1.1 Initial Public Offering

In Kenyan stock markets, an initial public offering is the sale of a company's stock for the first time to the public by a private company (Rohini & Phil, 2011). The main aim is to raise more capital from the public and, or provide an exit strategy for some of the companies' current owners besides other rationales that drive a company to trade its shares in the public (Rohini & Phil, 2011) among other various reasons which might prompt a company to make a decision to issue an IPO. Studies put forward four important rationales for going public.

Firstly, the cost of capital structure advocated by Scott (1976) and Modigliani and Miller (1963) argued that companies carry out a public offering when external equity will lessen their cost of capital, and for this reason, maximize the value of the firm. Secondly, Mello and Parsons (2000) and Zingales (1995) argued that an IPO permits insiders to cash out. Black and Gilson (1998) argued that the IPO provides venture capitalists the opportunity to exit, thus providing an attractive harvest strategy. Thirdly, IPOs may facilitate takeover activity. This is consistent with Zingales (1995) argument that an IPO can serve as a first step en route to having a company taken over at an attractive price.

Finally, IPOs may serve as a strategic move; through increasing the ownership base of the firm (Chemmanur & Fulghieri, 1999). Maksimovic and Pichler (2001) suggest that an IPO can boost the media hype or reputation of the firm going public. Existing literature uses initial mispricing to measure short-run performance (Tsangarakis, 2004; Kiran& Phil, 2011; Wachira, 2012) and the long-run underperformance to measure long-run performance (Kooli & Suret, 2002; Alvarez & Gonzalez, 2001; Wairia, 2010).

1.1.2 Long-Run Stock Price Performance

Stock price is the cost of purchasing a stock on an exchange (Ritter 1998). Therefore, stock price performance refers to the behavior exhibited by stock price. The different behavior of stock price in the economy is seen to be attributed to economic variables such as; information on money supply, inflation, output, and the central bank's discount rate (Warner & Watts, 1987). Stock prices can also be affected by a number of factors

including volatility of the market, current economic conditions and popularity of the company.Warner and Watts (1987) argued that the stock price performance is of importance to various players in the economy ranging from companies, investors, investment analysts and consultants.

Their study exhibited the importance of the stock price performance as an aid in understanding the efficiency of the management. They demonstrated that there exists a relationship between the share price performance and the company management, which is also of importance to the investment analysts and consultants in giving advice on the stock price performance to their clients. Goergen, Khurshed and Mudambi (2007) showed that stock price performance can be measured using the returns on the stocks invested. They suggested that the models to be used to calculate these returns include; simple returns, market adjusted returns, cumulative abnormal returns and buy and hold return.

1.1.3 Effects of IPOs on Stock Price Performance

Theories have been put forward to explain share price behavior in the long-run. According to Fama (1965), the market prices fully reflect the available share information hence in the efficient market, trading of stocks is at fair value and there is no chance of overpricing or under-pricing. The prospects theory by Kahneman and Tversky (1979) explains the rationale behind oversubscription of IPOs. It suggests that investors tend to be risk averse in realms of gains but tend to be risk seekers in times of crisis. Studies conducted show that the models used will determine the extent of long-run performance of IPOs (Wairia, 2010).

Tsangarakis (2004) and Zulu (2009) studied the price performance of IPOs of stocks in Greece and Lusaka over a period of three years after their placement respectively, and concluded that holding the stock for the entire period after their placement yielded significant gains. Alvarez and Gonzalez (2001) studied long-run performance of IPOs in Spanish capital market and found out that long-run underperformance is non-existent. Georgen, Khurshed and Mudambi (2007) in their study of the long-run underperformance

of IPOs in U.K found out that, small companies behave differently from large companies and suffer from worse long-run performance than large companies.

Kooli and Suret (2002) on their study of aftermarket performance of IPOs in Canada found out that investors experienced loss in the long-run of five years. Wachira (2012) in his study on long-run performance of IPOs in the NSE further proved the overpricing of IPOs. He found that IPOs yielded significant returns on their initial placement.

1.1.4 IPOs and Long-Run Stock Price Performance

Initial empirical evidence on long-run stock price performance indicates that IPO firms severely underperform their comparable benchmarks. Ritter (1991) provides an analysis on a sample of 1,526 IPO firms from 1975 to 1984. These firms significantly underperform a group of comparable firms matched by size and industry three years after going public. Loughran (1993) compares the return of a portfolio of IPO firms' stocks with the Nasdaq index return and reports an almost -60% underperformance. Loughran and Ritter (1995) show that IPOs conducted from 1970 to 1990 underperform non-issuing firms of similar size by more than -50% over a five-year horizon after the offering.

Ritter and Welch (2002) argue that statistical inference about long-run performance is problematic when stock returns on individual IPOs overlap. They first provide empirical evidence showing that IPO firms underperform by -23.4% on average over a three-year period when the market-adjusted return is applied to measure abnormal performance. Long-run performance of IPO firms would contradict market efficiency: post- IPO stock price performance should not be predictable. Ritter (1991) suggests that investors are irrationally over-optimistic about the future prospects of young and growth firms.

Loughran and Ritter (1995) argue that the subsequent long-run underperformance of IPO stocks is due to misevaluation at the time of going public. They contend that investors appear to systematically overweight the growth prospect of IPO firms and underweight long-run mean-reverting trends. In the same vein, Jain and Kini (1994) observe that investors appear to value IPO firms based on the expectation that the projected earnings growth will continue forever although pre-IPO profit margins are not sustained over the

long-run. Jain and Kini (1994) find that these firms also exhibit a decline in post-issue operating performance relative to their pre-IPO level.

They provide three potential explanations for this phenomenon: (i) increased agency costs as a result of the reduction in management ownership when a firm goes public, (ii) overstated pre-IPO performance indicators, and (iii) the timing the offerings that coincides with periods of unusually good performance levels that cannot be sustained in the future. Brav and Gompers (1997) argue that bouts of investor sentiment are a possible explanation for long-run performance since non venture-capital-backed IPO stocks with smaller size are more likely to be held by individual investors. Overall, the timing of IPO issues is identified as the main cause of IPO firms' performance.

Since hot IPO issuing periods are often associated with poor subsequent long-run returns, IPO firms that are successfully timing new offerings to take advantage of a "window of opportunity" may suffer later (Ritter, 1991). Gompers and Lerner (2003) also note the clustering of issuing activities in time periods immediately preceding poor IPO performance. This argument is consistent with the observation by Schultz (2003) that IPOs are often concentrated at peak prices ex-post, which increases the likelihood of observing negative long-run abnormal returns

1.1.5 Nairobi Securities Exchange

Dealing in stock commenced in 1920's in Kenya when the country was a British colony. At that time there were no rules and regulations to govern stock broking activities since the market was informal. Trading was usually undertaken on a 'gentleman's agreement'. Francis Drummond in 1951 established the first professional brokerage firm. This firm and the then Finance Minister approached London Stock Exchange in 1953 with the idea of establishing a Stock Exchange in East Africa. The London Stock Exchange was excited by the idea and accepted to recognize the establishment of the Nairobi Stock Exchange as an overseas stock exchange.

Nairobi Stock Exchange was constituted as a voluntary association of stockbrokers registered under the Societies Act in 1954.It is worth noting that before Kenya's

independence, Asians and Africans were not permitted to deal in shares. The NSE witnessed its first privatization in 1988 when the government sold 20% of its holdings in Kenya Commercial Bank. Five years later, in 1994, the NSE was rated as the best performing market in the world with return of 179% in dollar terms. In the same year the NSE set up a computerized delivery and settlement system (DASS) and eight more stock brokers joined it.In 1996, NSE witnessed the largest share issue in its history.

The government privatized the Kenya Airways by selling 26% of its holdings to KLM and 51% to the public. In 2004, the East African Securities Association came into being. It consisted of Dar-es-Salaam Stock Exchange, the Uganda Securities Exchange and the Nairobi Stock Exchange. In May 2006, a demutualization committee to assist in demutualization process was formed by NSE. On Monday 11[th]September, 2006, live trading on the automated trading systems of the NSE was implemented. In the same year, trading hours increased by an hour to stand at three hours of trading a day. Around the same time, block trades board was removed and functionality for the trading of rights in the same way as equities was introduced.

In November 2006, a Memorandum of Understanding between the Nairobi Stock Exchange and Uganda Securities Exchange was signed on mass cross-listing. The implication was that companies could be listed in both exchanges. This contributed significantly towards the development of regional securities markets. NSE upgraded its website in 2007 to enhance easy and faster access to accurate, factual and timely trading information. In the same year, a Wide Area Network (WAN) platform was established which eliminated the need for brokers to send their staff to the trading floor to conduct business. Presently brokers mainly conduct trading from their offices.

In the year 2008, NSE All Share Index (NASI) was introduced as an alternative to the NSE 20 Share Index. It measures overall market performance and captures all the traded shares of the day. In the same year, NSE launched the NSE Smart Youth Investment Challenge that promotes investments among the Kenyan youth. In July 2011, the Nairobi Stock Exchange Limited changed its name to the Nairobi Securities Exchange Limited. The change of name allowed it to evolve into a full service securities exchange. In the

same year, the settlement cycle of equity moved from T+4 to T+3 meaning investors shall be getting their money three days after sale of their equity securities instead of four days.

In September 2011, the NSE changed from a company limited by guarantee to a company limited by shares. In October, the Broker Back Office commenced operations which facilitated internet trading. The following month the FTSE NSE Kenya 15 and FTSE NSE Kenya 25 Indices were launched. The introduction of these indices reflected the growing interest in new domestic investment and diversification opportunities in the East African region. Currently, NSE is composed of 21 member companies and 61 listed companies with average daily trading volume of 30 million shares, average equity turnover of 800 million Kenya shillings and market capitalization of approximately two trillion Kenya shillings. (NSE website)

1.2 Research Problem

During the pre-offer period, there are extensive marketing campaigns to make the offers appealing to the public (Wairia, 2010). According to winner's curse theory on IPO pricing, investors are categorized into two; informed and uninformed. Efficient market hypothesis presents that, in an efficient market the prices of securities reflect all the available information in the market and as such, they are fairly priced. On the other hand, proponents of random walk hypothesis believe that security prices are random and unpredictable. It therefore follows that information is key in making security investment decisions.

Kenyan investors have expressed great interest in investing in equities and especially IPOs as evidenced by the levels of over subscription, for instance, Safaricom and KENGEN IPOs which were subscribed by 532% and 333% respectively. This was attributed to the Capital Market Authority investor campaigns to sensitize the public on security investments (CMA website). Tsangarakis (2004) studied price performance of IPOs in Greece, in the long-run, where he considered the long-run within the first year of

trading. Similarly, Wairia (2010) in his long-run analysis of IPOs in NSE did an annual analysis for the third, fourth and fifth year of trading.

Generally, the studies established a long-run underperformance. IPOs provided significant excess returns in the three year following the offer, with highest returns on the first year and decrease in the second and the third year, then approximate the market movement thereafter. The research will analyze effects of IPOs on long-run performance in the first five years of trading to establish whether our study results are similar to those done on long-run performance of IPOs both locally and internationally. The monthly long-run studies for five years have not been conducted in Kenya's NSE hence forming my research gap. The study therefore, seeks to answer the following research questions. How do the stock prices of IPOs perform in the NSE? What are the effects of IPOs in their Fifth year of trading?

1.3 Research Objective

To investigate the effect of IPOs on Long-Run stock price performance of the NSE

1.4 Value of the Study

This study contributes to existing literature on IPOs by examining the existing IPOs performance theories and stock price performance within their second year of trading. It will also seek to confirm the empirical findings long-run performance of IPOs. The study will enable investors to evaluate the true success of an IPO from an informed point of view without being carried away by the intricacies of the second years of trading. Managers of companies wishing to go public will be in a position to value the IPOs appropriately. Lastly, it will enable investment analysts and consultants to advise their clients aptly on IPOs.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The literature review is organized into four main sections. The first section is the review of the theories that affect the individual variables that form part of the research question, that is, stock price performance and IPOs. The second section summarizes the determinants of stock price performance followed by a section on empirical evidence. Finally, the chapter concludes with summary literature review.

2.2 Theoretical Review

The first section is the review of the theories that affect the individual variables that form part of the research question, that is, stock price performance and IPOs.

2.2.1 Efficient Market Hypothesis

In Fama's (1965) dissertation, he stated that at any given time and in a liquid market, security prices fully reflect all available information. Therefore, in an efficient market, competition among the many intelligent participants leads to a situation where, at any point in time, prices of individual securities already reflect all available information. There are three forms of EMH, weak form EMH which postulates that future stock prices cannot be predicted from historical information about prices and returns. Semi-strong form suggests that stock prices react almost immediately to any new public information about the stock. Lastly, strong-form EMH states that stock prices adjust almost instantaneously not only to new public information but also to new private information.

Shostak (1997) however, discredits the EMH belief that all market participants have the same expectations of future security prices as this will kill trade, and its implication that buy and hold strategy is as good as any other trading strategy gives no scope for entrepreneurial trading. Malkiel (2003) also believed that security prices can be predicted. Researchers report significantly high returns on Monday (Kerubo, 2012; Kiymaz & Berument, 2003; Basher & Sadorsky, 2006) commonly termed as day-of the-

week effect and in January termed as the January effect (Thaler, 1987) which are inconsistent with EMH as it allows for trend analysis.

According to EMH, stocks always trade at the fair value, thus no chances of over or undervaluation. This implies that market prices fully reflect available information on the stock and therefore investors should expect a normal rate of return. The theory therefore suggests that, neither neither fundamental nor technical security analysis is worthwhile hence, supporting a passive portfolio management (Seneque, 1979).

2.2.2 Prospects Theory

Kahneman and Tversky (1979) developed prospect theory. They stated that people make decisions based on potential value of losses and gains rather than the final outcome, and that people evaluate such losses and gains using certain heuristics. Kahneman and Tversky (1979) argued that people when offered a choice formulated in one way might display risk aversion but when offered essentially the same choice formulated in a different way might display risk seeking behavior.

Benstein (2006) in support of the theory said that the problem of interpreting human behavior has to do with the problem of people making decisions on the basis of subjective assessments of probabilities, which may be quite different from the objective or true probabilities. This theory therefore implies that individuals tend to be risk averse in a domain of gains, or when things are going well, and relatively risk seeking in a domain of losses, as when a leader is in the midst of a crisis (Phung, 2010).

2.2.3 Random Walk Hypothesis

Fama (1965) stated that in an uncertain world, the intrinsic value of a security can never be determined exactly and therefore, there is room for disagreement among market participants which gives rise to discrepancies among actual price and intrinsic values. Actions by the many intelligent traders to take advantage of such discrepancies will neutralize the behavior in price series. Although uncertainty concerning intrinsic value will remain, actual prices of securities will wander randomly about the intrinsic value. Horne and Parker (1967) asserted that a technical trader who relies exclusively upon past

price trends to predict future price changes cannot realize greater profits than those who buy and hold.

In fact they show more profits under buy and hold strategy than those of trading rules. This is in line with Malkiel (1973) that stock prices are uncertain and unpredictable. Contrary to studies that support random walk hypothesis, Lo, Andrew, Mcckinlay and Craig (2002) presented a study and tests supporting the existence of trends in the stock markets and those stock markets are somewhat predictable. The theory therefore implies that, statistically, stock price fluctuations are independent over time. For investors, economists and financial theorists, technical or charting trading rules will not result in average profit that is greater than that obtainable with a simple buy and hold strategy (Horne & Parker, 1967).

2.2.4 Winner's Curse Hypothesis

Rock (1986) categorized investors into two types; informed and uninformed. Informed investors are knowledgeable about the future prospects of the shares being sold and will only attempt to buy when the issue is underpriced. Uninformed investors, on the other hand, do not know which issues are underpriced or overpriced, and therefore do not discriminate between issues when they apply for IPOs. They will be allocated only a small fraction (or none at all if the demand is too strong) of the most desirable new issues, while they are certain to get full allotment of the least attractive new issues.

The uninformed investors face a winner's curse: if they get all of the shares that they demand, it is due to the fact that the informed investors do not want them. Due to this adverse selection problem, the uninformed investors will exit the market unless IPOs are sufficiently underpriced on average to compensate them for their informational handicap. Thaler (1998) in his study argued that even if companies bid somewhat less than the estimate their expert provided, the companies whose experts provided high estimates will tend to bid more than the companies whose experts provided lower estimates.

He further emphasized that the firm that wins the auction will be the one whose experts provided the highest estimates. If this happens, the winner of the auction is likely to be a

loser. Therefore, information inadequacy plays a key role in generating the estimates which is in concurrence with the winner's curse hypothesis. Cox and Isaac (1984) argued that the winner's curse cannot occur if all the bidders are rational and hence evidence of a winner's curse in the market settings would constitute an anomaly. However, acting rationally in a common value auction can be difficult. Rational bidding requires first distinguishing between the expected value of the stock, conditioned only on the prior information available, and the expected value conditioned on winning the offer.

Deeds and Decarolis (1999) stated that under-pricing is a rational strategy by companies to reduce the effect of this information asymmetry between informed and uninformed investors. In fact, the issuing companies under-price their securities to increase the level of participation in public market. Thus, the winner's curse theory implies that, if one is bidding for something and wins then, he obviously bid higher than the competitor. He either knew more than the competitor or better understood the true value, or he knew less than the competitor and bid too much, hence suffering the winner's curse. As a result, investors will only buy shares if the IPOs are underpriced sufficiently to compensate them for the risk.

2.3 Determinants of Stock Price Performance

A company IPO performance is determined by the Age of the company, Issues size, Firm size, Subscription Level and Investor Sentiment factors which can be controlled internally or externally.

2.3.1 Age of the Company

Kiran and Phil (2011) defined the age of a company as the difference between the incorporation date of a company and its listing date irrespective of the company's name change and shifting over from private to public. Their study highlighted that an increase in the company's age results in an increase in the raw returns of the stock. According to Carter (1998) older companies have longer operating histories and face less uncertainty. This observation was also echoed by Ritter (1998) who argued that younger companies have shorter operating history and are subject to great deal of uncertainty. Therefore,

IPOs have to be highly discounted to compensate investors for that uncertainty. However, Zaluki and Kect (2012) did not find evidence to support the relationship. Waelchli and Loderer (2009) attested that getting older slows performance, regardless of whether the measure of a firm's age is from the time of listing or the time of incorporation. They also observed that, the variability of stock returns is negatively related with age of the company.

2.3.2 Issue Size

This refers to the offer size of a company, that is, the total number of shares a company is selling in their IPO (Kiran& Phil, 2011). They established a positive relationship between the issue size and the price of the stock. In contrast, Zaluki and Kect (2012) established a negative relationship in the short-run. Megginson and Weiss (1991) studied issue size and under-pricing of IPOs and found out that it is related to proxy for asymmetric information. They therefore, concluded that offer size is inversely related to degree of under pricing.

2.3.3 Firm Size

Existing research shows that firm size has a significant impact on IPO pricing. Ritter (1984) argued that larger companies are easier to value because of ease of forecasting cash flows. According to Rock (1986), to lure relatively uninformed investors, investment banker's under-price IPOs to cushion against potential losses experienced by uniformed investors due to Winner's curse. Ann and Chan (2008) posit that greater uncertainty of the firm's value encourage investors to demand for lower IPO price as an incentive for risk taken. Teker and Ekit (2003) in their study proposed that a firm with larger amount of total assets experience less uncertainty regarding its perpetuity, and hence commanding less under-pricing, consequently higher offer price. According to Dalton (2003), the size of the IPO firm has important implication for pricing as it is an important determinant of stability of the firm.

2.3.4 Subscription Level

Subscription level of IPOs depicts the total demand of the issue generated in market. It is calculated by dividing total demand of the issue by total offer size (Kiran&Phil, 2011). From their study, there is a positive relationship between subscription level and raw returns of IPOs. Similar results are reported by Bansal and Khanna (2012). Kenourgios et al (2007) posit that the oversubscription is a pure signal to the investors that the share is underpriced. When investors realize that the offer price is too low, a large oversubscription for the firm's shares is observed. Labidi and Triki (2010) found an oversubscription of 26.81 times in Middle East and North Africa region, MENA with average initial returns of 78.3% in the period between January 2000 and June 2010. Cen (2009) provided evidence to the effect that oversubscription is a manifestation of stimulated attention by over-optimistic investors.

2.3.5 Investor Sentiment

Baker and Wurgler (2007) observed that investor sentiment is a belief about future cash flows and investment risks that is not justified by the facts at hand. Behavioral finance literature shows that investor sentiments are as a result of trade noise which makes them to suffer psychological bias, such that, their trading behavior cannot be explained by rational expectation theory. Behavioral biases have become popular for explaining asset pricing that are inconsistent with a rational decision-making framework (Cornelli, 2005). According to Brown and Cliff (2005), excessive optimism drives asset values above fundamentals. Ljungqvist (2006) argued that investors are willing to pay premium in excess of their rational belief if sentiment is biased towards newly issued stocks.

2.4 Empirical Literature

This chapter discussed all past researches which have being done in relation to the IPOs issues in the long run.

2.4.1 International Empirical Literature

Alvarez and Gonzalez (2001) studied long-run performance of IPOs in Spanish capital market to provide evidence on the long-run performance of IPOs and the influence of prospectus on the long-run performance. Their sample consisted of 56 companies for the

period 1987 to 1997. They calculated returns for the first day of trading and long-run returns of the IPOs for the 12th, 36th and 60th months after the first day of trading using the following models; buy and hold returns, calendar time portfolios and the Fama and French three-factor model. Buy and hold returns indicated negative abnormal returns that were occasionally significant in the periods of 36th and 60^{th}months. Calendar time portfolios and Fama and French three-factor model based on mean monthly returns stated the non-existence of long-run underperformance. They concluded that long-run underperformance wasnon-existent. However, the magnitude of abnormal returns depended on the method used and to a lesser extent, on the weighting method as well as benchmark used for the adjustment of the IPO returns.

Kooli and Suret (2002) sought to investigate the aftermarket performance of IPOsand the long-run stock price behavior of unseasoned new issues in Canada. They sampled 445 Canadian IPOs for the period 1991 to 1998. They used three measures to evaluate the long-run performance of IPOs; cumulative average adjusted returns (CARs), buy and hold abnormal returns (BHARs) and the Calendar time abnormal returns (CTARs). Kooli and Suret found out that investors who purchased immediately after the listing and held shares for five years suffered a loss of 24.66% on an equally weighted basis or 15.16% on a value-weighted basis relative to investment in the controlled companies. The high initial prices on the first day of trading may have been due to myopia of investors who were unable to comprehensively grasp the extent to which IPO companies engaged in earnings management.

Tsangarakis (2004) carried out a research to investigate the price performance of IPOs of stocks in Greece in a different institutional setting. He studied the price behavior of the newly offered shares over the period that extends from their public placement to the end of the first year of their formal trading on the Athens Stock Exchange (ASE). The research was based on all the IPOs and associated listings of main and parallel markets at ASE that took place during the period 1993-1997, a total of 108 companies. The average simple return for the 1st day of listing, 1st, 2nd and 12th months after listing are 9.07%, 39.10%, 38.22% and 78.51% respectively. These suggested that investors who subscribed

to Greek IPOs and paid the offer price realized substantial gains if they held the stock for 12 months. Market adjusted returns also showed substantial wealth gains signifying presence of under-pricing of Greek IPOs.

Goergen, Khurshed and Mudambi (2007) conducted a study to find out the long-run under-performance of UK IPOs by relating it to the pre-IPO financial performance of the firm as well as the managerial decisions taken before the IPO. A three-year share return of UK IPOs was studied using the following methods; buy and hold return, cumulative abnormal return and Fama and French three-factor return. They found that the percentage of equity issued and the degree of multi nationality of a firm are the key predictors of its performance after the IPO. Furthermore, small companies behaved differently from large companies and suffered from worse long-run performance than large companies.

Zulu (2009) studied share performance of IPOs in the Lusaka Stock Exchange to provide additional international evidence on the IPOs by examining initial performance and short-run pricing. Twelve IPOs listed in the Lusaka Stock Exchange over the period 1994 to 2008 were studied together with the stock market index, foreign investment flows and stock market trading volumes. The raw returns, adjusted returns of the first day, one year and three year returns were analyzed. The findings indicated a significant under-pricing of the initial performance of the IPOs. The results showed an under-pricing of 35.11% at the end of the first day, 91.02% at the end of the first year and 107.66% at the end of three years. This showed an upward trend in return consistent with the findings of Tsangarakis (2004) in Greece.

Kiran and Phil (2011) looked at price performance of IPOs in India stock market to gauge under-pricing in the National Securities Exchange and the factors that influence IPOs price performance. The study was based on secondary data and considered IPOs that had traded for six months for short-run and three years for long-run analysis. The study considered data from 1999 to December 2008, an account of 244 companies for long-run analysis and period 1999 to 2005 a total of 65 companies for short-run analysis. They calculated simple returns; market adjusted excess returns and annualized returns. The findings of the study showed very high returns on the first day of listing and returns

outperformed the market index an evidence of IPO under-pricing. Thereafter, the returns showed a declining trend and ultimately matched that of the market in the long-run. Under-pricing, therefore, was not only present in National Securities Exchange, but was severe in the short-run which tended to normalize in the long-run.

2.4.2 Local Empirical Literature

Kipng'etich, Kibet, Guyo and Kipkoskey (2010) studied determinants of IPOs in Kenya .They explored the extent to which investor sentiment, post-IPOs ownership retention, firm size, board prestige and age of a firm affect IPOs pricing. They considered a sample of 13 IPOs out of 15 IPOs listed in NSE between 1st January, 1994 and 31st December, 2008 in Kenya. They used secondary data i.e. NSE database, company IPO prospectus and websites of investment banks. They analyzed data using both descriptive statistics and multiple regression analysis. Average under-pricing of 49.44% was observed in Kenyan IPOs for the period under study. It was concluded that public information disclosed in the prospectus was insignificantly mirrored in IPO offering prices.

Wairia (2010) investigated the long-run performance of IPOs at NSE. The study relied on secondary data of all companies that issued IPOs in NSE from 2001 to 2008, an account of six companies. Mean adjusted buy and hold return, cumulative abnormal return models were used for analysis. According to the study, the IPOs underperformed the market in the long-run, though, study results depended on the model used.

Wachira (2012) in his study to evaluate the short-run performance of the IPOs at the NSE found out that 75% of the eight companies studied had their relative value above those of related companies within the same sector, thirty days after issuing an IPO. The study considered eight Kenyan companies that had issued their IPOs between 2005 and 2011. He used market to book ratios and market capitalization measures to come up with conclusive evidence, a deviation from most of the studies on IPO performance. The findings concluded that IPOs yielded significant initial excess returns, an indicator that within the short-run; the company will attract funding for further growth and instill confidence to the current and prospective investors.

Odongo (2012) carried out a study to determine the relationship between IPO mispricing and long-run performance of companies listed in NSE. The study was based on a population of 58 companies listed in NSE and a sample of twelve companies listed in 1996 to 2012 was considered. Descriptive statistics was carried out for analysis. The result depicted a positive relationship between offer prices in the first day price with a significance level of +0.021. The value showed a significant effect of the offer price on the performance of share price in the market. It also showed a negative relationship between under-pricing and performance of shares with a negative coefficient of -0.158, which showed that lower offer prices have higher degrees of under-pricing.

2.5 Summary of Literature Review

The theoretical framework, information is of utmost importance to potential investors in making their investment decisions involving IPOs. It is observed that investors process similar information differently, as a result, making different decisions on a given stock as put forward by the proponents of prospects theory. Investors are also differentiated by their level of information about the true value of the issue. The empirical studies on the topic indicated a long-run underperformance of the IPOs.

The research intended to study the effects of IPOs on long-run stock performance which was analyzed monthly for five years and three years of trading as opposed to previous studies which analyzed long-run performance within the first year or annually, thus the gap that forms my study.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

Research methodology describes what was done to solve the research problem. The chapter is subdivided into five sections. The first being research design, population of the study, then sample, data collection techniques and data analysis techniques.

3.2 Research Design

A research design is a systematic plan on how a study or a scientific problem will be carried out. The design of a study defines the study type of the problem. This was an analytical study designed to test the stock price performance of IPOs at the NSE in the long-run which sixty one companies will be considered by September 2014 in order to give a five and three years gap to test the long-run performance.

3.3 Population of the Study

The population of the study comprised all the sixty one listed companies at the NSE as at September 2014. As at the time of the study three of the sixty one companies; CMC, Rea Vipingo and Access Kenya shares were suspended from trading. The companies are categorized according to the industry and type of equity. The industries are: Agriculture, automobiles and accessories, banking, commercial and services, construction and allied, energy and petroleum, insurance, investment, manufacturing and allied and telecommunication and technology.

3.4 Sample

The study covered companies that are listed in the period 2006 to 2012 so as to give a two year allowance for the long-run study of companies listed in 2012. A total of eight companies will be studied which represented 13.11% of the population. The choice of study period provided the most recent data that is most valuable for our study.

Table 3.1: Companies and Date of issues

COMPANY	DATE OF ISSUE
KENGEN	11th May 2006
Scan Group	29th August 2006
Eveready East Africa	18th December 2006
Access Kenya Group	4th June 2007
Kenya Reinsurance Corporation	27th August 2007
Safaricom	9th June 2008
Co-Operative Bank of Kenya	22nd December 2008
BRITAM	8th September 2011

Source: NSE

3.5 Data Collection Techniques

Secondary data will be obtained from NSE website, NSE price lists and the Central Bank of Kenya website for the period 2006 to 2014. The data collected pertained to the issuing companies, dates of IPOs, share prices, market indices and interest rates of treasury bills for the period of analysis.

3.6 Data Analysis

The data collected was analyzed using tables and figures. Mean Average Buy and Hold Returns (MABHR), Abnormal Returns (AR) and Cumulative Abnormal Returns (CAR) was used to calculate the performance of the stocks. T-statistic for CAR was computed the test for its significance. MABHR is used by investors who buys stocks and holds them for a long period of time, regardless of fluctuations in the market. CAR is used t measure the expected stock returns. The long-run covered the stock price performance five years after and the closing of the first day of trading. MABHR, AR and CAR was used to measure long-run performance.

3.6.1 Mean Adjusted Buy and Hold Return Model.

The following model used by Ritter (1991) was used to calculate MABHR:

$$\text{MABHR}_i = \sum_{t=2}^{8} \left(In \frac{P_{it}}{P_{it-1}} - In \frac{M_{it}}{M_{it-1}} \right)$$

Where MABHR_i denoted the market adjusted buy and hold return for a firm "i" over "n" month period. P_{it} and M_{it} denoted the closing price in month "t" of the stock "i" and the closing index in the corresponding month respectively. A month was defined as full calendar trading day's period. The mean MABHR was computed as the arithmetic average of abnormal return on the sample size "n" using the model:

$$\text{MABHR}_{ipo,\,t} = \frac{1}{n} \sum_{t=1}^{n} MABHR_{it}$$

Where $\text{MABHR}_{IPOs,\,t}$ is the mean market adjusted buy and hold return from all IPOs in the sample period "t", "n" is the sample size and MABHR_{it} is the market adjusted buy and hold return for the firm "i" during the period "t".

$$\text{t- Statistic} = \text{MABHR}_{Ipo,\,t} *= \sqrt{\frac{nt}{S_{dt}}}$$

Where $\text{MABHR}_{ipo,\,t}$ is the average bench mark adjusted return for the month "t" for the Sample, "nt" is the number of observations in the month "t" and "S_{dt}" is the cross sectional standard deviation of the market adjusted buy and hold return for the month "t".

3.6.2 Market Model

The market model used was AR and CAR, the abnormal return is the difference between the actual return and the expected return.

Step 1

Monthly benchmark adjusted returns were calculated as the monthly raw returns on an IPO stock minus the benchmark returns. Following Ritter (1991), the benchmark-adjusted returns for stock "i" in event month "t" was defined as;

$$AR_{it} = R_{it} - R_{bt}$$

Where R_{it} is the return for stock "i" in event month "t" and R_{bt} is the market return in the event month "t".

Step 2

The average benchmark-adjusted return on a portfolio of "n" stocks for event month "t" is the equally-weighted arithmetic average of the benchmark-adjusted returns:

$$\text{AR}_t = \frac{1}{n}\sum_{t=1}^{n} AR_t$$

Step 3

A cumulative average abnormal return (CARs) was calculated. They can be understood as consistency checks for the buy-and-hold abnormal returns. It was calculated by summing up the abnormal returns from the eight selected firms and equally weighing them to get the average.

$$\text{CAR}_{it} = \frac{1}{N}\sum_{t=1}^{N} AR_t$$

Corrado and Zivney (1992) model will be used to calculate the t- statistic

$$\text{T-Statistics} = AR_t * \sqrt{\frac{n_t}{s_{dt}}}$$

Where AR_t is the average market adjusted return for n months, n_t is the number of observations in n months and S_{dt} is the cross sectional standard deviation of the adjusted returns for n months.

3.6.3 Test of Significance

According to Ritter (1991) a T-test was conducted at 95% confidence level to find if there was significant MABHR and CAR after IPOs announcement.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSION

4.1 Introduction

This chapter presents the data analysis, results and discusses the findings of the research. The study used IPOs for the period 2006 to 2011 in table 4.1. Since the long run period used in the study was 3 and 5 years, only IPOs after 2006 were used. Monthly market prices were used to compute the IPO returns and monthly market indices were used to compute market returns. Market-adjusted returns were calculated as the return on an IPO minus the return on the NSE 20 share index. The monthly return was measured by comparing the closing price in the last day of trading on which the stock is traded with the closing price in the previous month. The total number of IPOs used was eight as per table below:

Table 4.1: IPOs between 2006- 2011

No	Company	Date of issues	Subscription Rate (%)
1.	KENGEN	11th May 2006	333%
2.	Scan Group	29th August 2006	620%
3.	Eveready East Africa	18th December 2006	830%
4.	Access Kenya Group	4th June 2007	363%
5.	Kenya Reinsurance Corporation	27th August 2007	405%
6.	Safaricom	9th June 2008	532%
7.	Co-Operative Bank Ltd	22nd December 2008	80%
8.	BRITAM	8th September 2011	60%

Source: NSE

4.2 Findings

The Market Adjusted Buy and Hold Returns (MABHR) and Cumulative Average Returns for the 8 IPOs for 36 months, 48 months and 60 months of trading, allowing for the first month after first trading day were as shown in appendix II. The summary statistics f MABHR and CAR

4.2.1 Mean Adjusted Buy and Hold Returns

Table 4.2 below presents a summary of MABHR for each of the IPOs. From the table it is evident that Scan group, Access Kenya, Co-Operative Bank Ltd and BRITAM over performed the market by 1.423% 1.240%, 0.418% and 1.230% respectively for the 36 months of trading. KENGEN, Eveready East Africa, Kenya RE and Safaricom underperformed the market in 36 months of trading by -1.909%, -3.276%, -0.832% and -0.710% respectively. However, BRITAM over performance was high at 1.230% in 36 months and Eveready East Africa under performance was high at -3.276%

Table 4.2: Statistics for MABHR.

No.	IPO	36 Months	48 Months	60 months
STATISTICS FOR MABHR
1.	KENGEN	-1.909 %	-1.650 %	-0.967%
2.	Scan Group	1.423 %	1.590 %	1.423 %
3.	Eveready East Africa	-3.276 %	-3.382 %	-3.642 %
4.	Access Kenya Ltd	1.240 %	1.565 %	1.287 %
5.	Kenya RE	-0.832 %	-0.902 %	-0.890 %
6.	Safaricom	-0.710 %	-1.075 %	-1.375 %
7.	Co-Operative Bank Ltd	0.418 %	0.690 %	1.003 %
8.	BRITAM	1.230 %		
	Mean	**-0.302 %**	**-0.452 %**	**-0.452 %**
	STDEV	**0.0169**	**0.0183**	**1.832**

Source: Research Findings

From the table 4.2 it is evident that Scan group, Access Kenya, Co-Operative Bank Ltd over performed the market by 1.590% 1.565% and 0.690% respectively for the 48 months of trading. KENGEN, Eveready East Africa, Kenya RE and Safaricom underperformed the market in 48 months of trading by -1.650%, -3.382%, -0.902% and -1.075% respectively. However, Scan Group over performance was high at 1.590% in 48 months and Eveready East Africa under perfomance was high at -3.382%.

From the table 4.2 it is evident that Scan group, Access Kenya, Co-Operative Bank Ltd over performed the market by 1.423% 1.287% and 1.003% respectively for the 60 months of trading. KENGEN, Eveready East Africa, Kenya RE and Safaricom underperformed the market in 60 months of trading by -0.967%, -3.642%, -0.890% and -

1.375% respectively. However, Scan Group over performance was high at 1.423% in 60 months and Eveready East Africa under perfomance was high at -3.642%.

Figure 4.1 Statistics for MAHBR
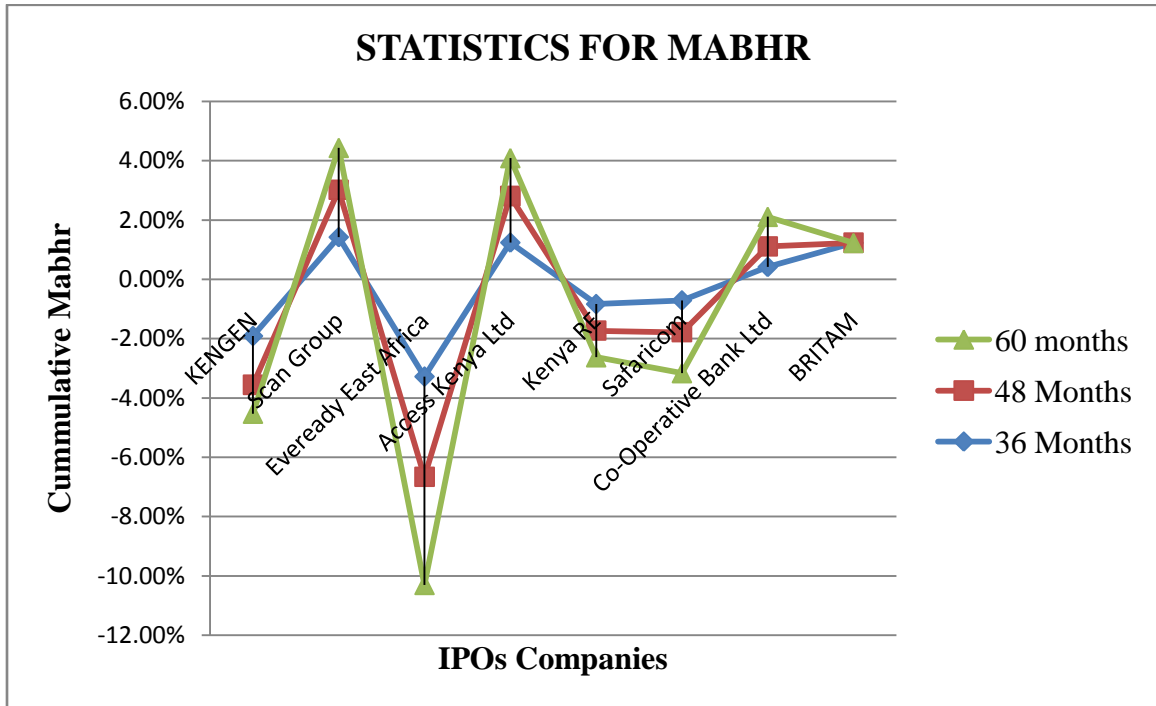
Source: Research Findings

4.2.2 Cumulative Abnormal Returns

Using Cumulative Average Returns (CAR), a mean of 0.148% was observed with a standard deviation of 1.62. Table 4.3 below presents a summary of CAR for each of the IPOs. From the table it is evident that Scan group, Access Kenya, Co-Operative Bank Ltd and BRITAM over performed the market by 1.608%, 1.787%, 0.284% and 0.967% respectively for the 36 months of trading. KENGEN, Eveready East Africa, Kenya RE and Safaricom underperformed the market in 36 months of trading by -1.145%, -2.917%, -0.512% and -0.954% respectively. However, Access Kenya over performance was high at 1.787% in 36 months and Eveready East Africa under performance was high at -2.917%.

From the table 4.3 it is evident that Scan group, Access Kenya and Co-Operative Bank Ltd over performed the market by 1.990%, 1.928% and 0.409% respectively for the 48

months of trading. KENGEN, Eveready East Africa, Kenya RE and Safaricom underperformed the market in 36 months of trading by -1.020%, -3.004%, -0.745 % and -1.245% respectively. However, Scan Group over performance was high at 1.990 % in 48 months of trading and Eveready East Africa under performance was high at -3.004%.

Table 4.3: Statistics for CAR.

| STATISTICS FOR CAR				
No.	IPO	36 Months	48 Months	60 months
1.	KENGEN	-1.145 %	-1.020 %	-0.123 %
2.	Scan Group	1.608 %	1.990 %	1.608 %
3.	Eveready East Africa	-2.917 %	-3.004 %	-3.291 %
4.	Access Kenya Ltd	1.787 %	1.928 %	1.731 %
5.	Kenya RE	-0.512 %	-0.745 %	-0.520 %
6.	Safaricom	-0.954 %	-1.245 %	1.590 %
7.	Co-Operative Bank Ltd	0.284 %	0.409 %	0.783 %
8.	BRITAM	0.967 %		
	Mean	**-0.110 %**	**-0.241 %**	**0.254 %**
	STDEV	**0.0159**	**0.0181**	**0.254**

Source: Research Findings

From the table 4.3 it is evident that Scan group, Access Kenya, Co-Operative Bank Ltd and Safaricom over performed the market by 1.608%, 1.731%, 1.590% and 0.783 % respectively for the 60 months of trading. KENGEN, Eveready East Africa and Kenya RE underperformed the market in 60 months of trading by -0.123%, -3.291% and -0.520%. However, Access Kenya over performance was high at 1.731% in 60 months and Eveready East Africa under performance was high at -3.291%.

Figure 4.2 Statistics for CAR
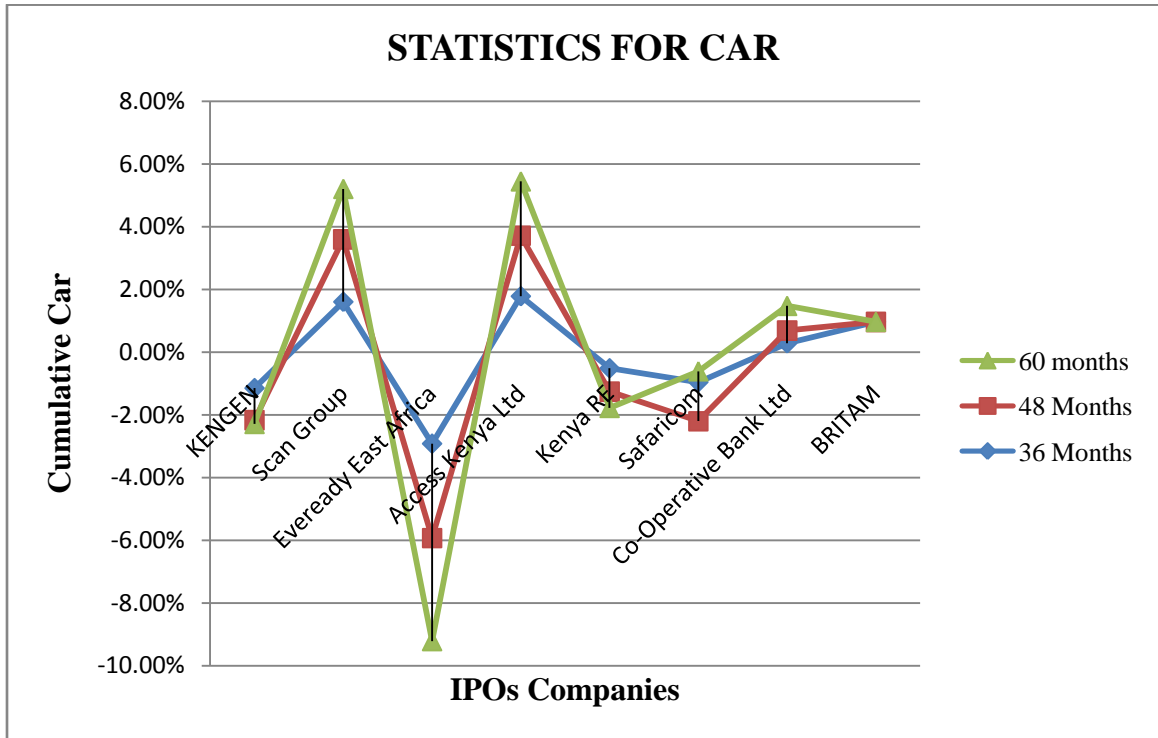
STATISTICS FOR CAR

Source: Research Findings

4.2.3 Summary Statistics for MABHR and CAR

The summary statistics means for the data for 60 months are presented in tables 4.4 below. All the 8 IPOs have a mean MABHR of 0.067%, standard deviation of 1.72. Using MABHR, Scan group, Kenya RE, Safaricom, Co-Operative Bank Ltd and BRITAM outperformed the market with mean of 1.961%, 0.458%, 0.983%, 1.253%, 0.632% respectively. Kengen, Eveready East Africa and Access Kenya under-performed the market by -0.124%, -3.544%, and -1.082% respectively. However, Scan Group Ltd over performance mean was high at 1.961% and Eveready East Africa under performance mean was high at -3.544%.

Using CAR, Scan group, Kenya RE, Safaricom, Co-Operative Bank Ltd and BRITAM outperformed the market with mean of 2.237%, 0.571%, 0.804%, 1.106% and 0.657% respectively. KENGEN, Eveready East Africa and Access Kenya underperformed the market by -0.147%, -3.189%, and -1.853% respectively. However, Scan Group Ltd over performance mean was high at 2.237% and Eveready East Africa under performance

mean was high at -3.544%. Seven IPOs had celebrated their fifth anniversary only BRITAM had celebrated third anniversary

Table 4.4: Summary Statistics.

		Summary Statistics	
No.	IPOs	MABHR	CAR
1.	KENGEN	-0.124%	-0.147%
2.	SCAN Group.	1.961%	2.237%
3.	Eveready E.A	-3.544%	-3.189%
4.	Access Kenya	-1.082%	-0.853%
5.	Kenya RE	0.458%	0.571%
6.	Safaricom	0.983%	0.804%
7.	Co-operative Bank	1.253%	1.106%
8.	BRITAM	0.632%	0.657%

Source: Research Findings

Scan group Ltd over performed the market in the third, fourth and fifth year. Using MABHR Scan group over performed by 1.423 %, 1.590 % and 1.423 % respectively while using CAR it over performed by 1.608 %, 1.990 % and 1.608 % respectively. This shows that the returns increased after third year and declined after the fourth year. However, the returns were positive and therefore the IPO over performed the market.

KENGEN IPO underperformed the market by -1.909%, -1.650 % and -0.967 % in the three years and -1.145 %, -1.020 % and -0.123 % measured by MABHR and CAR respectively. Comparing with the three year trading results whose MABHR and CAR shows that the returns declined after every year hence the returns were negative and therefore the IPO underperformed the market. BRITAM was the only IPO that had celebrated three years anniversary by the time of the study. For the three years trading, the MABHR was 1.230 % where as the CAR was 0.967 %.

Finger 4.3: Summary Statistics

Summary Statistics
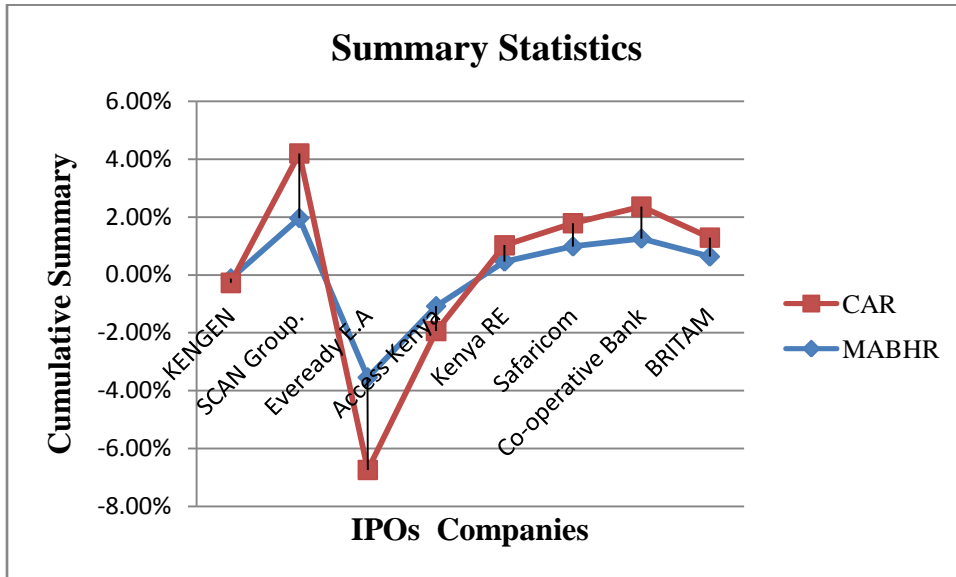
Source: Research Findings

Individual company's correlations as presented in Appendix III reveal that Kenya Re, Eveready and KenGen were negatively correlated with the Index, while Scangroup, Safaricom, Co-Operative Bank and Access Kenya were positively correlated with the market index. The study noted that Scangroup, Safaricm, Co-Operative Bank and Access Kenya outperformed the market and they were positively correlated with the market Index. It is thus plausible to conclude that when a share movement is positively correlated with the index, the share is likely to over perform the market. Appendix 1 to 4 represent the data and computations for each of the eight IPOs.

4.3 Test of Significance

T-test was conducted at 95% confidence level and concluded that there was significant difference on MABHR and CAR for five years after IPOs announcement for Scan Group, Eveready EA, Access Kenya, Kenya RE, Safaricom and Co-Operative Bank. There was significant difference on MABHR and CAR for three years after IPOs announcement for BRITAM

4.4 Interpretation of the Findings

All commercial and services segment IPOs which included Scan group, Safaricom, Co-Operative Bank and Access Kenya outperformed the market while Industrial and allied IPOs underperformed the market for the 60 months of trading. All Industrial and Allied segment IPOs represented by KENGEN and Eveready underperformed the market in 36 months and 60 months of trading. The statistics for the three, four and five years are shown in table 4.2 and table 4.3 for MABHR and CAR respectively. Using CAR & MABHR methodology, individual company's correlations as presented in Appendix III reveal that Kenya Re, Eveready and KENGEN were negatively correlated with the market index, while Scan group and Access were positively correlated with the market index.

The study noted that Scan group and Access Kenya outperformed the market and they were positively correlated with the market index. It is thus plausible to conclude that when a share movement is positively correlated with the index, the share is likely to over perform the market. Figures 4.1,4.2 and 4.3, Tables 4.2, 4.3, 4.4 represent the data and computations for each of the eight IPOs. All commercial and services segment IPOs which included Scan group, Kenya RE, Safaricom, Co-Operative Bank and BRITAM outperformed the market using both MABHR and CAR while Access Kenya underperformed the market for the 60 months of trading. All Industrial and Allied segment IPOs represented by KENGEN and Eveready East Africa underperformed the market in 60 months of trading for both MABHR and CAR.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter makes the research summary, conclusion and recommendation on the analyzed data to determine the effect of IPOs on long-run stock price performance on companies listed in the NSE and had issued IPOs between 2006-2011.

5.2 Conclusion

This study investigated the effects of IPOs on long run stock price performance in companies listed in the NSE in Kenya. It was intended to investigate the extent to which IPOs overperfomend and underperformed the market in five years trading. The data collected was purely secondary and was presented using tables and fingers. The findings show that using MABHR, Scan group, Kenya RE, Safaricom, Co-Operative Bank Ltd and BRITAM outperformed the market with mean of 1.961%, 0.458%, 0.983%, 1.253%, 0.632% respectively. Kengen, Eveready East Africa and Access Kenya under-performed the market by -0.124%, -3.544%, and -1.082% respectively

Using CAR, Scan group, Kenya RE, Safaricom, Co-Operative Bank Ltd and BRITAM outperformed the market with mean of 2.237%, 0.571%, 0.804%, 1.106% and 0.657% respectively. KENGEN, Eveready East Africa and Access Kenya underperformed the market by -0.147%, -3.189%, and -1.853% respectively. Using MABHR methodology IPOs over performed the market by 0.537% while using CAR methodology IPOs over performed the market by 1.186%.

The results of the study disputes assertion by Jumba (2002), Njoroge (2004) and Ndatimana (2008) conclusion that IPOs at the NSE underperform the market in the Longrun using MABHR methodology. The study however disputes assertion by Jumba (2002) and Njoroge (2004) that all the IPOs underperform the market in the long run using CAR methodology. Notably, Scangroup & Access IPOs outperformed the market both measured by MABHR and CAR. Seven companies had celebrated 5th anniversary only BRITAM had celebrated the 3rd anniversary. The study found out that KENGEN

underperformed the market both on 3rd, 4th and 5th anniversary. The study confirms that any underperformance within three years is reversed on 5th anniversary as put by Ndatimana (2008).

Hence investors who purchase IPO shares in the aftermarket price should hold their portfolios for periods longer than five years for them to realize high returns than the market. The study confirms Ritter (1991) assertion that IPOs could perform well in some periods than in others like Safaricom and Co-operative bank. Out of the eight IPOs in the study, three were issued in year 2006 while two were issued in year 2007. Scan group and Co-Operative Bank which had the highest returns were issued in this period, reporting 2.237% and 1.106% respectively. Eveready which was issued between Scan group and Access had the highest subscription at 800% but reported the worst performance at -3.189% while using CAR. This shows that the IPO may have been timed to benefit from the hot IPO period of 2006-2011.

5.3 Summary

This study analyzed the effect of long run performance of IPOs at the NSE for the Period 2006-2011. According to the study, using MABHR methodology, the IPOs over performed the market in the long run while the IPOs over performed the market using CAR methodology. This confirms Gompers and Lerner (2003) assertion that divergent long-run performance results are observed depending on the empirical methodology applied.

5.4 Policy Recommendations

The government should encourage and provide favorable environment for more private companies to list in the NSE by relaxing the regulations from the CMA. To promote true and correct pricing of shares, the minimum shares traded should be raised so as to encourage individual and small & medium enterprises investors to use institutional investors to trade at the stock market. Since institutional investors are more enlightened on the correct valuation of shares, individual and SME investors will gain from the expertise of the institutional investors.

The CMA should have strict mechanism to ensure that poor IPOs are not offered in the market especially during hot IPO periods. This will promise and ensure that investors are protected from companies that want to take advantage of over valuations in the market arising from the IPOs.

5.5 Limitations of the Study

The NSE has had few IPOs since its inception in 1954. For the period of study only eight IPOs were considered, although this translated to 13.11% of all the companies trading at the exchange as at 1st September 2014, in comparison to developed markets, the results could be different. Share prices since inception of the NSE is scanty and unreliable. Therefore a comprehensive study of all the IPOs is not possible since data collected could be unreliable and biased.

The data used in the study was average monthly data. If daily, weekly data was used this could have given different results. Comparing IPOs with the market indices may lead to unqualified conclusions. Better comparison may be obtained by comparing an IPO with a matching firm in the stock exchange. However, it is difficult to evaluate which trading firms would be equal to a specific IPO.

The listed companies in the NSE had performed very poorly in their profitability which resulted to suspension from trading. Access Kenya Ltd had being suspended from trading while Eveready East Africa Ltd winded up its operation due to continuance negative profitability business.

5.6 Suggestions for Further Research

Research is recommended to establish the extent to which investors hold on to IPO shares and the reasons for holding the shares.

A further research may be done to unveil the reasons that hinder private companies from raising IPOs at the NSE.

In future, a similar study can be done to test the performance with long run period being more than five to ten years.

A further research can be done to investigate whether IPOs of certain segments perform better than others.

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APPENDIX I:

Initial Public Offerings (IPOs) at NSE (2006 -2012)

Year	Company	Shares Floated	Issue price (KES.)	Subscription rate (%)	Amount raised (KES.)	Date/month of First Trading on the NSE
2006	KENGEN	658,900,000	11.90	333	7,800,000,000	11th May
	Scan Group	69,000,000	10.45	620	721,050,000	29th August
	Eveready East Africa	63,000,000	9.50	830	556,800,000	18th December
2007	Access kenya Group	80,000,000	10.00	363	800,000,000	4th June
	Kenya Reinsurance Corporation	240,000,000	9.50	405	2,280,000,000	27th August
2008	Safaricom Ltd	10,000,000,000	5.00	532	50,000,000,000	9th June
	Co-operative Bank of Kenya	701,300,000	9.50	80	5,358,801,800	22nd December
2011	BRITAM Company	660,000,000	9.00	60	5,940,000,000	8th September

Source: NSE 2013

APPENDIX II: Market Adjusted Buy and Hold Returns (MABHR) and Cumulative Average Returns.

	KENGEN		Scan Group		Eveready E. Africa		Access K. Group		Kenya RE.		Safaricom		Co-Op Bank		BRITAM	
Month	MAB HR	CAR	MAB HR	CAR	MAB HR	CAR	MAB HR	CAR	MAB HR	CAR	MAB HR	CAR	MAB HR	CAR	MAB HR	CAR
1.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.	0.126	-0.123	0.006	0.006	-0.255	-0.224	0.020	0.021	-0.112	-0.109	-0.010	-0.008	0.019	0.020	0.029	0.028
3.	-0.086	-0.082	0.060	0.065	-0.213	-0.196	0.199	0.229	-0.037	-0.038	-0.021	-0.025	-0.056	-0.052	0.293	0.263
4.	-0.102	-0.102	0.004	0.004	-0.127	-0.111	-0.032	-0.032	0.120	0.128	0.005	0.005	-0.070	-0.061	0.020	0.022
5.	-0.062	-0.066	0.057	0.050	0.054	0.053	0.055	0.054	-0.083	-0.076	0.190	0.200	0.223	0.203	0.132	0.145
6.	-0.092	-0.096	-0.020	-0.021	-0.137	0.053	0.135	0.139	0.025	0.024	-0.122	-0.112	-0.121	-0.114	0.101	0.108
7.	-0.138	-0.136	0.002	0.002	0.026	-0.129	-0.151	-0.114	0.019	0.020	-0.091	-0.090	-0.129	-0.125	-0.205	-0.214
8.	-0.095	-0.091	0.100	0.116	-0.016	0.026	-0.151	-0.114	0.019	0.020	-0.091	-0.090	-0.020	-0.108	-0.120	-0.112
9.	-0.319	-0.279	-0.031	-0.030	-0.031	-0.016	-0.151	-0.114	0.019	0.020	-0.091	-0.090	0.357	0.332	0.021	-0.020
10.	0.209	0.216	0.042	0.043	-0.050	-0.031	-0.151	-0.114	0.019	0.020	-0.091	-0.090	-0.207	-0.208	0.019	0.019
11.	-0.245	-0.207	-0.055	-0.051	-0.067	-0.049	-0.151	-0.114	0.019	0.020	-0.091	-0.090	-0.132	-0.126	-0.026	-0.026
12.	0.376	0.462	0.144	0.148	0.098	0.099	-0.151	-0.114	0.019	0.020	-0.091	-0.090	0.005	0.006	-0.021	-0.020
13.	0.030	0.029	-0.009	-0.008	0.027	0.029	0.082	0.083	-0.070	-0.066	-0.039	-0.039	-0.125	-0.137	0.065	0.068
14.	-0.076	-0.075	0.091	0.077	-0.091	-0.090	-0.078	-0.075	-0.161	-0.148	0.174	0.191	0.070	0.071	-0.152	-0.155
15.	0.081	0.087	0.019	0.020	0.151	0.141	0.042	0.041	0.041	0.040	0.127	0.139	-0.029	-0.027	-0.042	-0.042
16.	0.060	0.062	-0.039	-0.040	-0.222	-0.214	-0.098	-0.089	0.119	0.121	-0.063	-0.063	-0.007	-0.007	-0.143	-0.149
17.	-0.058	-0.054	0.057	0.053	0.023	0.022	-0.279	-0.219	0.029	0.026	0.404	0.500	0.157	0.174	-0.180	-0.171
18.	-0.020	-0.019	-0.042	-0.032	-0.344	-0.321	0.250	0.230	-0.066	-0.052	0.018	0.024	-0.091	-0.090	-0.021	-0.020
19.	-0.015	-0.016	-0.078	-0.083	0.170	0.180	0.065	0.067	0.297	0.346	0.060	0.065	-0.213	-0.196	0.199	0.229

	KENGEN		Scan Group		Eveready E. Africa		Access K. Group		Kenya RE.		Safaricom		Co-Op Bank		BRITAM	
Month	MAB HR	CAR	MAB HR	CAR	MAB HR	CAR	MAB HR	CAR	MAB HR	CAR	MAB HR	CAR	MAB HR	CAR	MAB HR	CAR
20.	-0.039	-0.040	0.132	0.144	-0.078	-0.075	-0.039	-0.040	0.029	0.031	0.004	0.004	-0.127	-0.111	-0.032	-0.032
21.	0.010	-0.008	0.019	0.020	0.029	0.028	-0.139	-0.118	0.104	0.099	0.057	0.050	0.054	0.053	0.055	0.054
22.	-0.043	-0.045	-0.021	-0.025	-0.056	-0.052	0.293	0.263	0.257	0.226	-0.034	-0.038	0.021	0.022	-0.042	-0.042
23.	-0.005	-0.005	0.005	0.005	-0.070	-0.061	0.020	0.022	-0.175	-0.178	-0.078	-0.083	-0.344	-0.327	-0.143	-0.149
24.	-0.006	-0.007	0.190	0.200	0.223	0.203	0.132	0.145	-0.167	-0.157	-0.151	-0.114	0.019	0.020	-0.091	-0.090
25.	0.021	0.020	-0.122	-0.112	-0.121	-0.114	0.101	0.108	-0.058	-0.057	0.019	0.020	-0.091	-0.090	-0.129	-0.125
26.	-0.046	-0.045	-0.066	-0.065	-0.129	-0.125	-0.205	-0.214	-0.134	-0.145	0.019	0.020	-0.091	-0.090	-0.020	-0.108
27.	0.006	0.005	-0.014	-0.014	-0.020	-0.108	-0.120	-0.112	0.095	0.098	0.019	0.020	-0.091	-0.090	0.357	0.332
28.	-0.021	-0.019	0.002	0.002	0.357	0.332	0.021	-0.020	0.107	0.108	0.019	0.020	-0.091	-0.090	-0.207	-0.208
29.	0.035	0.032	-0.074	-0.078	-0.207	-0.208	0.019	0.019	0.171	0.181	0.019	0.020	-0.091	-0.090	-0.132	-0.126
30.	-0.151	-0.114	0.011	0.101	-0.132	-0.126	-0.026	-0.026	-0.075	-0.074	-0.072	-0.073	0.091	0.077	-0.091	-0.090
31.	0.078	0.082	-0.097	-0.104	0.005	0.006	-0.021	-0.020	0.019	0.020	0.080	0.086	0.019	0.020	0.151	0.141
32.	0.000	0.00	-0.039	-0.039	-0.125	-0.137	0.065	0.068	-0.037	-0.037	0.061	0.062	-0.039	-0.047	-0.222	-0.214
33.	-0.025	-0.022	0.174	0.191	0.070	0.071	-0.152	-0.155	-0.197	-0.196	-0.059	-0.057	0.057	0.056	0.025	0.027
34.	-0.054	-0.041	0.127	0.139	-0.029	-0.027	-0.042	-0.042	-0.005	-0.005	-0.018	-0.016	-0.042	-0.032	-0.344	-0.321
35.	0.076	0.090	-0.063	-0.063	-0.007	-0.007	-0.143	-0.149	-0.091	-0.097	0.057	0.053	-0.222	-0.214	-0.205	-0.214
36.	-0.056	-0.045	0.404	0.500	0.157	0.174	-0.180	-0.171	-0.205	-0.193	-0.042	-0.032	0.023	0.022	-0.120	-0.112
37.	-0.031	-0.031	0.018	0.024	-0.091	-0.090	-0.021	-0.020	-0.037	-0.037	-0.078	-0.083	-0.344	-0.321		
38.	0.070	0.083	-0.040	-0.041	0.151	0.141	0.065	0.068	-0.197	-0.196	0.132	0.144	-0.051	-0.038		
39.	-0.025	-0.024	0.054	0.053	-0.222	-0.214	-0.152	-0.155	-0.005	-0.005	0.019	0.020	-0.062	-0.045		
40.	-0.067	-0.061	-0.034	-0.038	0.021	0.022	-0.042	-0.042	-0.091	-0.097	-0.034	-0.038	0.021	0.022		

	KENGEN		Scan Group		Eveready E. Africa		Access K. Group		Kenya RE.		Safaricom		Co-Op Bank		BRITAM	
Month	MAB HR	CAR	MAB HR	CAR	MAB HR	CAR	MAB HR	CAR	MAB HR	CAR	MAB HR	CAR	MAB HR	CAR	MAB HR	CAR
41.	-0.052	-0.049	-0.078	-0.083	-0.344	-0.327	-0.143	-0.149	-0.037	-0.037	-0.078	-0.083	-0.344	-0.327		
42.	-0.112	-0.109	0.132	0.144	-0.061	-0.048	-0.180	-0.171	-0.197	-0.196	0.060	0.065	-0.213	-0.196		
43.	0.057	0.060	0.019	0.020	-0.063	-0.055	-0.156	-0.157	-0.005	-0.005	0.004	0.004	-0.127	-0.111		
44.	0.092	0.099	0.174	0.191	0.152	0.158	-0.041	-0.040	-0.091	-0.097	0.057	0.050	0.054	0.053		
45.	0.020	0.022	-0.020	-0.021	0.054	0.053	-0.206	-0.204	-0.134	-0.145	-0.034	-0.038	0.021	0.022		
46.	-0.093	-0.091	0.002	0.002	-0.137	0.053	-0.120	-0.112	0.095	0.098	-0.078	-0.083	-0.344	-0.327		
47.	-0.001	-0.01	0.100	0.116	0.026	-0.129	0.020	-0.019	0.107	0.108	0.057	0.053	-0.222	-0.214		
48.	-0.010	-0.010	-0.031	-0.030	-0.016	0.026	0.019	0.019	0.171	0.181	-0.042	-0.032	0.023	0.022		
49.	0.021	0.020	0.042	0.043	-0.031	-0.016	-0.026	-0.026	-0.075	-0.074	-0.078	-0.083	-0.344	-0.321		
50.	-0.046	-0.045	-0.055	-0.051	-0.050	-0.031	-0.021	-0.020	0.019	0.020	0.132	0.144	-0.051	-0.038		
51.	0.006	0.005	0.144	0.148	-0.067	-0.049	0.065	0.068	-0.037	-0.037	0.019	0.020	-0.062	-0.045		
52.	-0.021	-0.019	-0.009	-0.008	0.098	0.099	-0.152	-0.155	-0.197	-0.196	-0.034	-0.038	0.021	0.022		
53.	0.035	0.032	0.091	0.077	0.027	0.029	-0.042	-0.042	-0.005	-0.005	-0.078	-0.083	-0.344	-0.327		
54.	-0.151	-0.114	0.019	0.020	-0.091	-0.090	-0.143	-0.149	-0.091	-0.097	-0.031	-0.031	0.018	0.024		
55.	0.078	0.082	-0.039	-0.040	0.151	0.141	-0.180	-0.171	-0.134	-0.145	0.070	0.083	-0.040	-0.041		
56.	0.000	0.00	0.057	0.053	-0.222	-0.214	-0.205	-0.214	0.095	0.098	-0.025	-0.024	0.054	0.053		
57.	-0.025	-0.022	-0.042	-0.032	0.023	0.022	-0.120	-0.112	0.107	0.108	-0.067	-0.061	-0.034	-0.038		
58.	-0.054	-0.041	-0.078	-0.083	-0.344	-0.321	0.021	-0.020	0.171	0.181	-0.052	-0.049	-0.078	-0.083		
59	0.076	0.090	0.132	0.144	-0.051	-0.038	0.019	0.019	-0.075	-0.074	-0.151	-0.054	0.069	0.069		
60.	-0.056	-0.045	0.019	0.020	-0.062	-0.045	-0.026	-0.026	0.019	0.020	-0.151	-0.159	0.059	0.069		

Source: Research Findings

APPENDIX III: Individual Company Statistics

Individual Company Statistics						
Kengen						
CAR	Average	-1.14		-1.05		-1
	Std. Dev	0.56		0.45		
MBHR	Average		-2.26		-2.56	
	Std. Dev		0.49		0.42	-1
Scan Group						
CAR	Average	2.60		2.40		
	Std. Dev	0.22		0.17		1
MBHR	Average		2.22		1.87	1
	Std. Dev		0.10		0.08	
Eveready E.A						
CAR	Average	-4.61		-3.48		
	Std. Dev	0.20		0.12		-1
MBHR	Average		-5.15		-4.67	-1
	Std. Dev		0.19		0.13	
Access Kenya						
CAR	Average	2.72		2.10		
	Std. Dev	0.10		0.08		1
MBHR	Average		2.05		2.00	1
	Std. Dev		0.18		0.12	
Kenya Re						
CAR	Average	-0.89		1.00		
	Std. Dev	0.13		0.09		-1
MBHR	Average		-1.31		-0.25	-1
	Std. Dev		0.04		0.01	
Safaricom						
CAR	Average	-0.30		0.12		
	Std. Dev	1.56		0.14		-1
MBHR	Average		-1.58		-1.47	-1
	Std. Dev		0.33		0.21	
Co-Operative Bank Ltd						
CAR	Average	0.74		0.68		1
	Std. Dev	0.26		0.21		
MABHR	Average		1.06		0.98	1
	Std. Dev		0.29		0.21	

Source: Research Findings.

APPENDIX IV: LISTED COMPANIES IN THE NSE AS AT SEPTEMBER 2014.

AGRICULTURAL

1. Eaagads Ltd
2. Kapchorua Tea Co. Ltd
3. KakuziLtd
4. Limuru Tea Co. Ltd
5. Rea Vipingo Plantations Ltd
6. Sasini Ltd
7. Williamson Tea Kenya Ltd

TELECOM.& TECHNOLOGY

8. Safaricom Ltd

AUTOMOBILES &ACCESSORIES

9. Car and General (K) Ltd
10. CMC Holdings Ltd
11. Sameer Africa Ltd
12. Marshalls (E.A.) Ltd

BANKING

13. Barclays Bank Ltd
14. CFC Stanbic Holdings Ltd
15. I&M Holdings Ltd
16. Diamond Trust Bank Kenya Ltd
17. Housing Finance Co Ltd
18. Kenya Commercial Bank Ltd
19. National Bank of Kenya Ltd
20. NIC Bank Ltd
21. Standard Chartered Bank Ltd
22. Equity Bank Ltd
23. The Co-operative Bank of Kenya Ltd

COMMERCIAL AND SERVICES

24. Express Ltd
25. Kenya Airways Ltd
26. Nation Media Group
27. Standard Group Ltd
28. TPS Eastern Africa (Serena) Ltd
29. Scangroup Ltd
30. Uchumi Supermarket Ltd
31. Hutchings Biemer Ltd
32. Longhorn Kenya Ltd

INSURANCE

33. Jubilee Holdings Ltd
34. Pan Africa Insurance Holdings Ltd
35. Kenya Re-Insurance Corporation Ltd
36. Liberty Kenya Holdings Ltd
37. British-American Invest Co.(K) Ltd
38. CIC Insurance Group Ltd

INVESTMENT

39. Olympia Capital Holdings ltd
40. Centum Investment Co Ltd
41. Trans-Century Ltd

MANUFACTURING AND ALLIED

42. B.O.C Kenya Ltd
43. British American Tobacco (K) Ltd
44. Carbacid Investments Ltd
45. East African Breweries Ltd
46. Mumias Sugar Co. Ltd
47. Unga Group Ltd

48. Eveready East Africa Ltd

49. Kenya Orchards Ltd

50. A.Baumann CO Ltd

CONSTRUCTION AND ALLIED

51. Athi River Mining Ltd

57. Bamburi Cement Ltd

ENERGY AND PETROLEUM

52. KenolKobil Ltd

53. Total Kenya Ltd
54. KenGen Ltd
55. Kenya Power & Lighting Co Ltd
56. Umeme Ltd
Source: NSE 2014

58. Crown Berger Ltd

59. E.A.Cables Ltd

60. E.A.Portland Cement Ltd

GROWTH ENTERPRISE MARKET SEGMENT

61. Home Afrika Ltd