SHORT-RUN AND LONG-RUN IPO FINANCIAL PERFORMANCE FOR FIRMS QUOTED AT THE NAIROBI STOCK EXCHANGE

BY

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DECLARATION

I, the undersigned, declare that this is my original work and has not been submitted to any other college, institution or university for examination.

Signed: _____ Date: 9/11/2011

Caroline Chelangat Koech

This project has been presented for examination with my approval as the appointed supervisor.

Signed: _____ Date: 9/11/11

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DEDICATION

This work is dedicated to the body of knowledge that it may broaden the knowledge base of the people who are interest to the learning more and staying informed.

It is also dedicated to my husband Kithinji and daughter Kagwiria.

ABSTRACT

Anecdotal evidence from the Nairobi Stock Exchange reveals that most of the IPOs are usually underpriced more so if the share price value at the end of 1st day of trading is checked against the offer price. The present study sought to establish both short-run and long-run performance of post-IPO share prices. The objectives of this study were: assess the extent of under pricing of IPO's in the Nairobi Stock Exchange; assess the short-run performance of IPOs for firms listed at the Nairobi Stock Exchange; and establish the long-run performance of IPOs for firms listed at the Nairobi Stock Exchange.

A descriptive survey research design was therefore undertaken in the study. The population of this study was firms that have gone public since 2001 in Kenya. There were eight such firms with complete data and were therefore studied. The daily share prices were collected from the NSE information desk for all the stocks. This data was organized using MS Excel Spreadsheets.

The study found that IPOs in Kenya were underpriced by an average of 57%. On the short-run performance of IPOs, the 7-day and 15-day abnormal returns showed the market performed better in the short-run as the cumulative abnormal returns (CAR) were 0.16 for the 15-day period. As regards the long-run performance of IPOs, the one-year and two year abnormal returns showed that there was underperformance of stocks in both periods (CAR of -0.52 for 1 year period; CAR= -1.18403 for 2 year period). The study concluded that there is a long-run underperformance of IPOs in Kenya. The study recommends the need for investors to take note of the fact that IPOs are usually underpriced in Kenya and can

therefore offer an avenue for short-term gains especially by disposing off the stocks on day 1 of trading or on day 15 of trading. The study suggests need for more studies to be carried out to determine the factors that influence long-run underperformance of stocks in Kenya as well as the determinants of short-run performance of stocks in Kenya.

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LIST OF ABBREVIATIONS

AIMS	Alternative Investment Market Segment
BHAR	Buy-and-Hold Abnormal Return
CAR	Cumulative Abnormal Return
EWBHAR	Equal-Weighted Buy-and-Hold Abnormal Return
EWCAR	Equal-Weighted Cumulative Abnormal Returns
FF	Fama French
FIMS	Fixed Income Market Segment
IPO	Initial Public offering
ISE	Instanbul Stock Exchange
MENA	Middle East and North Africa
MIMS	Main Investment Market Segment
MS	Microsoft
NSE	Nairobi Stock Exchange
PIPO	Privatization Initial Public Offering
ROA	Return on Assets
ROE	Return on Equity
SOE	State Owned Enterprises
UK	United Kingdom
USA	United States of America
VWBHAR	Value-Weighted Buy-and-Hold Abnormal Returns
VWCAR	Value-Weighted Cumulative Abnormal Returns

CHAPTER ONE

1.0 INTRODUCTION

1.1 Background of the Study

There are some motivations and benefits for the issuers behind the Initial Public Offering process. There is a significant information asymmetry between issuers and investors at the IPO. Rao (1993) stated that there was no news about issuing firms in the media until one year before the issue date. In the case of IPOs, usually there is little information about the private firm that is available to the public. Investors have to rely primarily on the financial statements in the offering prospects, which gives the issuers and the underwriters the incentive to report favorable accounting numbers. This leads to the thought that issuing firms have improvements in profitability before the offering and declines in profitability after the offering. Rangan (1997) and Teoh, Welch, and Wong (1997) tested earnings management hypothesis and found that issuers boost earnings relative to cash flows before the IPO.

1.1.1 Initial Public Offerings Performance

Several papers have analysed the long-run performance of Initial Public Offerings. These studies have investigated stock returns and operating performance after firms go public. Both kinds of studies have shown that IPO firms present less profitability compared to firms that have not gone public. Initial public offering (IPO) is a first-time offering of shares by a specific company to the public (Al-Barrak, 2005). The decision for private firms to go public is one of the most fundamental decisions that the company faces in its life. It is the decision that changes the whole structure of the company, and in many cases it ends up with the ownership power being transferred and taken away from the company's original owner. It is

not surprising then that the IPO topic has attracted the attention of scholars, investors, and decision makers. Consequently, a vast number of studies have been conducted on the IPO topic, and it has been growing at faster pace in recent years Shen & Wei, (2007); Pagano, Panetta & Zingales, (1998).

As regards stock returns, analysis has revealed that investors seem to incur losses due to holding shares in the firms that have recently carried out an IPO compared to those that have not done so. The strategy of investing in IPOs at the end of the first day of public trading and holding them for three years would produce a wealth of 83% compared to that obtained by investing during the same period in a group of control firms belonging to the same sector and with a similar market value Ritter, (1991). Ritter (1991) suggests that these low long-run returns of IPOs are in line with the going public of many firms coinciding with the existence of a relevant interest in certain sectors, which implies that investors may be periodically over-optimistic regarding the potential profits of new firms (windows of opportunity hypothesis). Taking as a starting point the work of Ritter (1991), several studies have shown the existence of negative long-run abnormal stock returns for firms at five years following the IPO. This phenomenon has been reported in both the USA and other markets. Recently, however, papers such as Brav et al. (2000) and Eckbo and Norli (2002) have shown that long-run underperformance disappears after controlling for the characteristics or risk of IPO firms. Brav et al. (2000) suggest that IPO returns are similar to non-issuing firm returns matched on the basis of size and book-to-market ratios and Eckbo and Norli (2002) show that IPO abnormal returns reflect less risk exposures due to both lower leverage and greater liquidity.

Jain and Kini (1994) explain a number of potential approaches for the decline in the post-issue operating performance of IPO firms. One of their approaches is related to the potential for increased agency costs when a firm makes the transition from private to public ownership. They explain that a second reason could be that managers' attempt to window-dress their accounting numbers prior to going public. The third explanation, according to them, for the decline in operating performance is that entrepreneurs time their issues to coincide with periods of unusually good performance levels.

Going public typically leads to a significant change in the company's ownership structure. The reduction in management ownership level as a result of going public is likely to lead to the agency problem described by Meckling and Jensen (1976). According to Jensen and Meckling (1976), management's incentives for the company change whenever there are new shareholders. The interests of managers and shareholders diverge as managers' stake decreases and ownership is dispersed in their theory.

According to the agency hypothesis, lower ownership retention by managers increases their incentives to undertake non-value maximizing project and to increase perquisite consumption. On the other hand, retaining higher ownership stake in the firm could mitigate the agency problem. This discussion implies that there could be such an expectation that the post-issue operating performance would decline. To explain the decline in the post-issue operating performance some researchers such as Jain and Kini (1994) and Kutsana et al. (2002) use the agency theory while other researchers such as Ca and Wei (1997) and

Mikkelson et al. (1997) insist that the explanations based on the agency theory are not effective.

An important explanation for the declines in the post-issue operating performance is the timing of offering. Issuers time their issues to coincide with periods of unusually good performance levels, which they know cannot be sustained in the future. Thus issuers take advantage of temporary improvements in performance to issue new shares when investors have overly optimistic expectations about the firms' future prospects. This is identified as window of opportunity by Ritter (1991) and Loughran and Ritter (1995). Brav and Gompers (1997), and Benning et al. (2005) further extended this debate. They all reached a conclusion that issuers take the advantage of windows of opportunity.

1.1.2 The Nairobi Stock Exchange

Nairobi Stock Exchange (NSE) is categorized into three market segments; Main Investment Market Segment (MIMS); Alternative Investment Market Segment (AIMS); and Fixed Income Market Segment (FIMS). The MIMS is the main quotation market. Companies listed under this segment are further categorized in four sectors that describe the nature of their business, namely: agricultural; industrial and allied; finance and investment; and commercial and services. The AIMS: provides an alternative method of raising capital to small, medium sized and young companies that find it difficult to meet the more stringent listing requirements of the MIMS; its geared towards responding to the changing needs of issuers; facilitates the liquidity of companies with a large shareholder base through 'introduction', that is, listing of existing shares for marketability and not for raising capital; and offers

investment opportunities to institutional investors and individuals who want to diversify their portfolios and to have access to sectors of the economy that are experiencing growth. The FIMS, on the other hand, provides an independent market for fixed income securities such as treasury bonds, corporate bonds, preference shares and debenture stocks, as well as short-term financial instruments such as treasury bills and commercial papers (NSE Handbook, 2009).

1.2 Problem Statement

Several studies have documented significant declines in operating performance after firms go public in various developing and developed economies. Jain and Kini (1994), Mikkelson et al. (1997) and Teoh et al. (1998) provide evidence for the USA; Coakley et al. (2004) for the UK; Wang (2005) for China; and Kim et al. (2004) for Thailand. The results of these studies are conflicting as far as their findings on the operating performance as well as share prices is concerned. Further, studies on developing economies and especially Africa are still very few. With the rising number of IPOs at the Nairobi Stock Exchange market in the recent past, it is important to undertake an analysis of the post-IPO share price performance of firms that have gone the IPO way over the 2000-2010 period.

Anecdotal evidence from the Nairobi Stock Exchange reveals that most of the IPOs are usually underpriced more so if the share price value at the end of 1st day of trading is checked against the offer price. In their first market debut after listing, the KenGen shares closed at nearly four times the issue price of Kshs.11.90. Safaricom issued its shares at a price of 5/=. The shares rose 50% on the first day of trading. These two examples underscore the fact that

IPO shares are usually underpriced but their performance in the short-run, medium term and the long-run still require further investigation.

A number of studies have been carried out on IPOs in Kenya. Examples include Okoth (2010) on the challenges faced by commercial banks in underwriting IPOs in Kenya, Karitie (2010) on long-run performance of IPOs, Bante (2010) on a comparative evaluation of the performance of IPOs of private and state-owned companies, Wachira (2010) on the determinants of the success of IPOs among listed companies, Kyaka (2010) on the relative importance of the factors influencing decision making in IPOs in Kenya, Nderi (2009) on firm specific determinants of IPO under pricing in Kenya, Rajab (2009) on the effect of IPOs on the performance of other stocks, Thuo (2009) on the short-run performance of IPOs, Chelgut (2008) on investor's demand for IPOs and 1st day performance, Simiyu (2008) on pricing and performance of IPOs, Gichuki (2008) on use of book building approach for valuation of IPOs, Leshore (2008) on medium term performance of IPOs, and Ndatimana (2008) on performance of IPOs. While most of these studies may have tackled the issue of IPO performance, the present study differs from the previous ones by focusing on a longer period (2000-2010). Another deviation is that the present study sought to establish both short-run and long-run performance of post-IPO share prices.

1.3 Objective of the Study

The objectives of this study were:

1. To assess the extent of over or under pricing of IPO's in the Nairobi Stock Exchange

2. To assess the short-run performance of IPOs for firms listed at the Nairobi Stock Exchange.
3. To establish the long-run performance of IPOs for firms listed at the Nairobi Stock Exchange.

1.4 Importance of the Study

This study is important to various stakeholders.

Investors

The study will give guidelines to investors to enhance their understanding of the behaviour of share prices after IPO's. This would assist the investors in making viable decisions while investing in the stock market.

Regulator

The market regulators namely the Capital Markets Authority (CMA) NSE would gain knowledge on how to handle future IPO's in regard to the regulations and making of policies. Due to making sound regulations and policies, this would result into improved confidence in investors in investing in the stock market.

Listed Companies

The companies will be able to appreciate the fundamentals surrounding the performance of IPOs and this would assist them in making sound decisions when to float their shares through IPO's. They would make viable decisions when setting the offer price of shares during IPOs.

Researchers/Academicians

The information so obtained would be useful to future researchers who want to advance the knowledge and literature in the market values after IPO's. It will also add to literature on the subject as reference material and stimulate further research in the area.

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter presents the literature review. First a theoretical framework is provided. This is followed by an empirical review and finally a summary of the chapter with a research gap identified.

2.2 Theoretical Literature

A common explanation for the abnormal first-day price behavior is the so-called "winner's curse". In Rock's (1986) model the IPO market contains two investor types; well-informed investors, who have superior knowledge about the true value of the issue and less-informed investors, who lack the special knowledge to correctly value the issue. This information asymmetry causes a "lemons problem" where the uninformed investors are left with the less successful IPOs. In order to keep badly informed investors interested in the IPO market, issuing firms are required to sell at a discount. An explanatory factor directly derived from this winner's curse is the size of the issue. The larger the issue the more professionally it is likely to be managed and the more information about the true value will be available. This wider spread of information decreases the information asymmetry among investors. Because of this lower information asymmetry, these larger IPOs have less reason to under price and are expected to show less initial outperformance. This theory does not however explain the long run performance of IPOs.

Several theories have been proposed to explain the phenomenon of the long-run underperformance of IPOs. Miller (1977) present an explanation based on changes in the divergence of opinion among investors. According to him, IPOs are usually subscribed by investors who are the most optimistic about the issue and their prices are set by this group rather than the appraisal of the typical investor. Further, the greater the uncertainty about the value of the IPO, the higher is the price that optimistic investors are willing to pay relative to pessimistic investors. If underwriter price on the basis of their own best estimates of the values of comparable seasoned securities, they will under price new issues. In the long-run, as more information about the issuing firm becomes available, the divergence of opinion between these two groups of investors will narrow and, consequently, the market price will drop. Thus, Miller (1997) predicts that IPOs will generate abnormal returns in the short-run but they will have smaller price appreciation than the seasoned firms (i.e. underperformance) in the long-run. He also expects an IPO's long-run return to be negatively related with its ex ante uncertainty.

Shiller (1990) proposed that market for IPOs is subject to fads. IPOs are underpriced by investment bankers to create the appearance of excess demand. Shiller's hypothesis anticipates that the long-run performance of IPOs should be negatively related to the short-run underpricing. Fads hypothesis from Miller (1977) is consistent with Aggarwal and Rivoli (1990) who establish the possibility that the aftermarket is not immediately efficient in valuing newly issued securities and that the abnormal returns that ensue to IPO investors are the result of a temporary overvaluation by investors in the early trading. Levis (1993) reports that the highest initial returns has the worst aftermarket performance. This is consistent with

Aggarwal, Leal and Hernandez (1993) finding for Brazil IPOs and Paudyal, Saadouni and Briston (1998) for Malaysian IPOs. In addition, Paudyal et al. (1998) found that the long-run performance of IPOs is positively related to the underwriter reputation.

Wang (1999) study developed a theoretical model, which describes the mechanism and causation of hot and cold market and their relationship to IPO underpricing. Empirical tests were conducted on a sample of 1,382 IPOs issued in the United States from 1st January 1988 to 30th June 1999. The empirical tests examined the propositions derived from the model, namely underpricing behavior and role of risk premium factor as well as risk-free interest rates in the hot and cold markets. The study demonstrated that interest rates and bond rating spread are highly correlated to the hot or cold markets thus can be used as a proxy of hot or cold market cycle. The study concluded that both interest rate and percentage of underpriced issues in the cold market are significantly higher than that in the hot market. It is also concluded that underpricing is higher in the hot market than in the cold market.

Loughran and Ritter (2002) adopted the behavioral perspective in their development of a 'prospect theory model' of complacency about banks 'leaving money on the table' among decision-makers at firms involved in IPOs. They assumed that the decision-maker's initial valuation beliefs are reflected in the mean of the indicative price range reported in the issuing firm's IPO registration statement. This belief serves as a benchmark against which the gain or loss from (as opposed to the expected utility of) the outcome of the IPO can be assessed. Thus the decision-maker is said to 'anchor' on the mean of the indicative price range. The offer price for an IPO routinely differs from this anchor value, either because the bank

'manipulated' the decision-maker's expectations by low-balling the price range, or in reflection of information revealed during marketing efforts directed at institutional investors. Assuming the latter is the case, offer prices appear only to 'partially adjust' Hanley (1993) to such information in the sense that large positive revisions from the anchor value are associated with large initial price increases from the offering price during the first day of trading. The decision-making unit in this setting is the Chief Executive Officer of the issuing firm or a management group that might include other influential members such as a venture capitalist. It is safe to assume that the decision-maker has an equity stake in the firm, a varying proportion (in a cross-section of firms) of which is sold in the IPO. Thus the decision-maker perceives a positive revision from the anchor value of the firm as a wealth gain. Similarly, a positive initial return is perceived as a wealth loss under the assumption that shares could have been sold at the higher first-day trading price.

Ma and Shen (2003) offered a new explanation for the long-run underperformance of IPO stocks using prospect theory. According to this theory, uncertain outcomes enter an investor's utility function through a nonlinear transformation of their probabilities. Small probability events are given more weight than in expected utility theory, whereas median and large probability events are given less weight. IPO stocks have more extreme positive returns; hence they are valued more in prospect theory than in expected utility theory. They tested the theory with Ritter's (1991) IPO sample. Using parameter values consistent with previous experimental studies, they found that investors value IPOs the same as seasoned stocks in a prospective utility setting, even though the formers' long-run average returns are much lower than the latters'.

Ljungqvist and Wilhelm (2003) also derived a behavioral measure of the IPO decision-maker's satisfaction with the underwriter's performance based on Loughran and Ritter's (2002) prospect theory of IPO underpricing. They assessed the plausibility of this measure by studying its power to explain the decision-maker's subsequent choices. Controlling for other known factors, IPO firms are less likely to switch underwriters for their first seasoned equity offering when behavioral measure indicated they were satisfied with the IPO underwriter's performance. Underwriters also appeared to benefit from behavioral biases in the sense that they extracted higher fees for subsequent transactions involving satisfied decision-makers. Although the tests suggest there was explanatory power in the behavioral model, they did not speak directly to whether deviations from expected utility maximization determine patterns in IPO initial returns.

2.3 Post-issue Performance of IPOs

The reasons for going public involve the trade-offs between the benefits of being publicly traded and the associated costs Chemmanur and Fulghieri, (1999). Financial economists have proposed several benefits of going public. For the entrepreneurs, they gain from having a more diversified portfolio Benninga, Helmantel and Sarig, (2005). Furthermore, Holmström and Tirole (1993) and Bolton and von Thadden (1998) contend that increased monitoring by outsiders and increased liquidity could positively affect firm value. Having shares sold publicly also facilitates firm valuation by investors Benveniste and Spindt, 1989; Dow and Gorton, (1997); Subrahmanyam and Titman, (1999) who, in turn, can use the market price information to make future investment and compensation decisions.

However, there are also numerous costs of going public to the original owners. They have to give up control and increase disclosure of inside information to outsiders which, in turn, can reduce the firm's competitive advantage. More importantly, there is also a cost of separating ownership and control (i.e., the agency cost of equity) Jensen and Meckling, 1976). The agency cost of equity, along with information asymmetry, can potentially lead to a situation in which entrepreneurs may attempt to expropriate wealth from new outsider shareholders. This expropriation of wealth can lead to high levels of underpricing at the initial public offering and poor long-run performance.

There is empirical evidence that firms time the decisions to go public Ritter, (1984). Ritter (1991) finds that IPO firms during 1975-1984 exhibit poor market performance against matching firms for three years after initial public offerings. Loughran and Ritter (1995) further document a poor long-run underperformance for a 5-year horizon. Jain and Kini (1994) document a significant decline in operating performance after initial public offerings of firms that went public during 1976-1988. The decline in post-issue investment levels is also documented world-wide by Loughran, Ritter and Rydqvist (1994) and Pagano, Panetta and Zingales (1998).

Ritter (1991) concludes that investors are often too optimistic about the potential of young firms and that companies take advantage of these "windows of opportunity." Jain and Kini (1994) contend that poor operating performance is a function of information asymmetry and agency conflicts. For instance, managers may try to manipulate accounting numbers prior to public offerings or they may go public during a period of unusually high performance that

cannot be sustained in the future. Consequently, IPOs tend to exhibit poor post-issue operating performance.

2.4 Empirical Literature

Smith (2009) carried out a study to identify the best specified and most powerful method of abnormal performance detection and to apply this method to examine the price performance of IPOs. Matched by size, industry, and book-to-market ratios the study explored which of the resulting seven portfolios and matched-firm methods of abnormal performance detection produced the best specified and most powerful test statistics. Additionally, the study analyzed IPO price performance to determine if IPOs generate abnormal performance. The analysis was conducted using the event study approach for the research design along with the buy and hold abnormal return (BHAR) method of calculating abnormal returns. The findings were that (a) all of the matched-firm methods of abnormal performance detection were well specified and powerful (matching by industry affiliation generated the best power and specification results) and (b) that the IPOs generated statistically significant abnormal price performances occurring in: (a) short term analyses, (b) longer-term analyses, and (c) analyses of the lockup and quiet periods.

Li and Hovey (2009) carried out an empirical study that examined the underpricing and aftermarket long-term performance of IPOs in China and IPO underpricing. Corporate governance aspects that may play a role in IPOs, such as ownership structure and external directors, were studied. The study showed that firms with higher initial IPO returns are valued more highly by investors, day-one, day ten and day twenty one returns are correlated

with long-term performance. Furthermore, the study found out that the ownership structure has a bearing on corporate governance, both foreign and legal person ownership have a positive influence on long-run performance. Management ownership may moderate State influences, but do not influence legal persons'. Conversely, state ownership has a negative bearing. Outside directors have no significant influence, nor has the issue stock exchange. The underwriter has a positive relationship with day-ten and 21 returns only. Larger firms and firms with growth potential are considered more highly by the market. Thus the study demonstrated that firms with higher initial IPO returns are valued more highly by investors long-term, as are firms with foreign and legal person holdings; the market expects these to enhance performance in the long-term. Management ownership is valued when associated with state ownership. Larger firms are considered more highly by the IPO market in China. The findings demonstrated that initial IPO returns influence the market value long-term and that the ownership structure has a measurable bearing on long-term performance. In particular, firms with foreign holdings are considered more highly by the IPO market.

Labidi and Triki (2010) used a sample of 159 IPOs from 2000 to 2010, to examine the determinants of IPO underpricing and long-term under performance. They used the ordinary least squares procedure to estimate linear regressions. They found that IPO initial returns are highly related to oversubscription levels and listing lags hence contradicting the idea of a voluntary underpricing. They also showed that IPOs with higher early-market return volatility have significantly lower long-term performance one year after issuance. This result supports the idea that investors' divergence in opinions represents a plausible explanation of long-term underperformance in the Middle East and North Africa (MENA) region.

How, Ngo and Verhoeven (2010) used a sample consisting of 743 Australian IPO firms listed between 1992 and 2004. In this paper they had two research aims. First, they tested whether the dividend decision of newly listed firms could explain the well-documented IPO long run performance. Their findings support the hypothesis that dividend initiating firms perform significantly better than non-initiating firms up to five years following the initiation. This finding is robust to whether they measured firm performance by stock returns (BHARs and CARs) or profitability ratios (ROA and ROE); the presence of control variables in the regression; whether or not a management forecast of dividend was provided in the prospectus; and more importantly, the use of the calendar time Fama and French (1995) three factor portfolio regression approach. Their findings therefore suggest that the initial dividend decision is a corporate initiative that has a positive impact on IPO long run performance. Naturally, they could not rule out the posibility that the observed price drifts could result merely from chance or misspecified asset pricing models. Their second aim was to empirically discriminate between dividend signalling and free cash flow arguments through an examination of post-initiation protiftability ratios. Results support dividend signalling theories, indicating that dividend payers are more profitable and more likely to report increases in profitability in the years following dividend initiation.

Dong and Michel (2011) examined the relation between an ex ante measure of IPO growth prospects, the industry-level longterm analyst earnings growth forecast and short- and long-run IPO performances, using a sample of 7,608 IPOs from 1982 to 2007. They found that before the Internet bubble period (1999-2000), IPOs in industries with high growth prospects earn high short-run and long-run returns up to three years after the IPO. Industry growth has

the largest economic impact on long-run performance among all factors considered including underwriter quality and offer proceeds. However, during the Internet bubble period, the effect of industry growth on long-run performance dramatically reverses so that IPOs in high-growth industries underperform in the long run. For both the short-run and long-run returns in both periods, the industry growth effects are stronger when returns are value-weighted, suggesting that the effects are higher for larger IPOs which should be more representative of their industries. Their results are most consistent with investors' tendency to under react to growth prospects of the IPO in normal times, which leads to superior long-run performance for firms in high-growth industries; and their tendency to overreact to the same information during a pronounced market bubble. In the post-bubble period, there is some evidence that the negative relation between industry growth and long-run performance lingers, with much reduced magnitude. In addition, post-bubble IPO withdrawals are more likely to be observed in high growth industries, in contrast with the negative association between withdrawal and industry growth prior to and during the bubble. Therefore, post-bubble investors appear to have distaste for IPOs in high growth industries, presumably a spill-over effect of the Internet bubble bursting. It is testified that there exists poor post-IPO long-run performance in many stock markets.

Bai and Wei (2004) examined Chinese IPOs' long-run performance based on the data of IPOs in the Chinese stock market. In this study, the empirical methods of style matched portfolios and Fama-French three-factor model were employed. It was found that IPOs' long-run performance is better than that of matched non-IPOs in Chinese stock market, and the

abnormal returns of IPOs cannot be reasonably explained by F-F three-factor model. In addition, the long-run performance of IPOs is related with their first day returns.

Alanazi, Liu and Forster(2009) examined changes in the Saudi listed firms' performance around their initial public offerings. They found that Saudi IPOs exhibit a sharp decline in the post-IPO performance compared to the pre-IPO period as measured by the ROA and ROS. They also found that the performance deterioration is significantly associated with the IPO event. Surprisingly, the performance decline comes with a significant increase in sales and capital expenditures, which do not support the lack of opportunities theory. Instead Saudi firms' performance decline can be attributed to the owners' desire to cash out as the windows of opportunity theory suggests.

Alanazi et al (2011) studied a sample of 21 privatized and IPO Saudi firms. Consistent with the relative literature on privatization and IPOs, they documented two contrasting outcomes. First, they found that Saudi State Owned Enterprises (SOEs) and the private joint stock companies were showing a large improvement after-IPO as compared to the pre-IPO financial performance. On the contrary, they found a financial performance deterioration among the family owned businesses or the limited liability type of firms after the IPO compared to the pre-IPO level as measured by the return on assets (ROA) and return on sales (ROS).

Marisetty and Subrahmanyam (2005) documented the effects of group affiliation on the initial performance of the 2,713 initial public offerings (IPOs) made in India under three

different regulatory regimes during the period 1990-2004. They distinguished between two competing hypotheses regarding the effect of group affiliation on a firm's initial performance in the stock market: the certification hypothesis according to which group membership is a positive signal of firm quality, and the "tunneling" hypothesis, under which group membership affords more opportunities for the controlling shareholders to misappropriate the firm's resources, and is thus, a negative signal of firm quality. The results showed that the average underpricing of group companies is higher than that of stand-alone companies. In particular, the underpricing is high for companies affiliated to private foreign and private Indian groups. The evidence in support of the certification hypothesis was reinforced when they tested the ex post performance of all IPOs: they found that, over time, group-affiliated companies had a higher probability of survival and success than their stand-alone counterparts. Groups appeared to support their affiliates to maintain their reputation in the eyes of investors. However, the long-term stock market performance of firms in all categories was negative or insignificantly different from zero. Further, the long-term performance of group companies was somewhat worse than their stand-alone counterparts. They concluded that the higher underpricing of IPOs of group affiliated companies was due to investor overreaction, and may be the result of strategic behaviour on the part of the groups to eliminate competition from lower quality issues.

Kurtaran and Er (2008) analyzed the post-issue operating performance of initial public offerings at the Istanbul Stock Exchange (ISE) as a developing market. They documented a general decline in operating performance subsequent to the IPO. They then explored the relationship between managerial ownership and the change in the post-issue operating

performance. They found a positive relation between the post-issue operating performance and the management ownership structure after the issue, but no relation between post-issue operating performance and underpricing level. Finally, they examined post-issue market-to-book ratio and price/earnings ratios to test the market expectations and their results indicated post-issue declines in both ratios.

Hoque and Lasfer (2010) carried out a study on insider trading and the long-run performance of IPOs. Using different methodologies they found significant impact of insider trading activity on the long-run performance of IPOs. They showed that, at the aggregate, insiders are net sellers in IPOs that generate positive long-run returns, while they are net buyers in those that underperform. When they analysed individual trades, they found that they adopted contrarian strategies, but their information effectiveness was weak. They bought in underperforming IPOs, but while share prices increased significantly on the announcement date, they became negative in the post trade period. These buy trades were consistent with the price support hypothesis, but, since prices do not revert, their signal were not effective. In contrast, they sold in over performing IPOs, but the announcement and post-event period were mainly insignificant, suggesting that insiders sell when their IPO reaches its optimal value, and the pre-trade returns drive the excess performance of net sell IPOs. Overall, unlike previous evidence, the direction of stock price reaction to insider trading in IPOs was not consistent with the expected performance, because the valuation uncertainty of IPOs makes the precision of the information content of insider trading weak and the profitability of insiders low. Thus, the results did not support strongly the agency conflict, and the trading on private information hypotheses, and in terms of signalling, insider trades reflected more the past than the future performance.

Simutin (2009) explored the determinants of IPO prices and studies the relationship between price choice of firms going public and post-issue stock performance and firm characteristics. He found that IPO prices positively related to median industry prices, underwriter reputation, and book-to-market ratio of the firm going public. He further showed that raw and risk-adjusted stock returns of IPOs monotonically increase with the ratio of offer price to average industry price. The difference in returns between IPOs with the highest and lowest relative offer prices averaged 9% during one year following the issuance, and exceeded 60% over five years. The group of IPOs with high relative prices did not exhibit any underperformance relative to matches at any horizon. He also documented a positive relation between underpricing and relative offer prices. He further showed that firms with high relative prices generate better earnings after going public. These firms have larger market betas around the IPO, and spend considerably more on investment during five years following the offering.

Fernando, Krishnamurthy and Spindt (1999) investigated whether IPO offer prices are related to ownership structure, IPO underpricing and firm performance, and found strong evidence that they are. They found that institutional ownership increases with offer price. Controlling for firm size, offer fraction, underwriter reputation and other variables thought to influence IPO underpricing is a U-shaped function of offer price. Their findings were consistent with the characterization of high-priced IPOs as targeted towards institutions in which case underpricing compensates the institution for information and future monitoring services. Firms could choose lower prices and discourage institutional investment to either preserve private control benefits or to avoid potentially costly investor myopia. Their results also

suggest that the offer price is positively related to the likelihood that the firm will remain viable after five years.

Gonzalez and Alvarez (2005) analyzed the performance of banks that went public in the period 1996-2003 for a sample of 48 banks in 18 countries. Results showed that there was no decline in the post-issue operating performance of IPO banks. This result was different from the one obtained for non-financial firms. Moreover, the change in return on assets after the IPO is unrelated to the level of profitability prior to the IPO. The changes in the return on assets after going public seem to be explained, to a large extent, by the institutional characteristics of the financial systems, such as bank activity restrictiveness and regulatory requirements regarding the amount of capital.

Bommel and Vermaelen (2003) carried out an empirical test of the 'market feedback hypothesis', a theory suggesting that information aggregated in the IPO process is used for the firm's investment decision. They examined the relationship between post-IPO unexpected capital expenditures and feedback generated during the IPO process for 1,543 IPOs between 1987 and 1995. Feedback was measured by (i) the unexpected price adjustment made at the end of the waiting period and (ii) the unexpected initial return. Consistent with the hypothesis, they found that positive feedback is followed by positive abnormal capital expenditures. A long-term event study found no significant difference in stock returns between positive and negative feedback IPOs. This suggests that firms should not ignore market feedback as there is no evidence for a feedback related bias in post-IPO stock prices.

Chang, Lin Tam and Wong (2009) examined the cross-sectional determinants of post-IPO long-term stock returns in China. They found that the aftermarket P/E ratio has the most robust negative association with post-IPO stock returns. The negative relation indicated that the market corrects the aftermarket overvaluation of IPO firms in the long run. Underwriter reputation has a positive effect on post-IPO stock returns while board size has a negative impact, consistent with the views that reputable underwriters mitigate the information asymmetry in IPO pricing and over-sized boards reduce the effectiveness of corporate governance. However, they found little evidence indicating that the equity ownership structure is significantly associated with post-IPO stock returns.

Suherman (2009) examined the long-run performance for up to three years after listing of a sample of 101 firms that made initial public offerings during the period 1999 to 2005 in Jakarta Stock Exchange. Insignificant underperformance was found for equal-weighted cumulative abnormal returns (EWCARs) and value-weighted cumulative abnormal returns (VWCARs). Significant underperformance was found for equal-weighted buy-and-hold abnormal returns (EWBHARs). Significant outperformance was found for value-weighted buy-and-hold abnormal returns (VWBHARs). As he attempted to explain the long-run performance of Indonesian IPOs, he found that initial returns, post-IPO institutional ownership, and age of the firm are long-run performance related.

Khurshed, Paleari, and Vismara (2005) studied the post-issue operating performance of UK Initial Public Offerings. Using several measures, they found that the performance of firms going public on the official List deteriorates significantly after the issue. On the contrary,

IPO-firms on the Alternative Investment Market (AIM) use the IPO as springboard for growth without sacrificing their profitability. The AIM is, indeed, the first market where operating performance is not found to be declining after the IPO. The listing on the AIM does not affect significantly the leverage of the firms, but gives the opportunity to raise fresh funds, both at the time of the initial offering and through further (debt or equity) capital raisings. Conversely, the permanent decrease in leverage after the IPO on the official list characterizes the flotation on this market as a mean to rebalance the firms' capital structure.

Chi and Padgett (2002) studied the short-run and long-run performance of Chinese privatization initial public offerings (PIPOs), using data for 340 and 409 new issues on the Shanghai and Shenzhen Stock Exchanges respectively, from 1 January 1996 through 31 December 1997. The average market-adjusted initial return was found to be 127.31%, and the initial returns on both stock exchanges were not significantly different from each other. The average market-adjusted buy and hold return over the three years after listing was 10.26%, which was significantly different from zero at the 1% level. They then used cross-sectional analysis to explain the long-run supernormal performance of Chinese PIPOs, and found that government ownership, the offering size and the feature of belonging to a high-tech industry are the main determinants of the long-run performance. In addition, firms that perform better in the long-run tend to make more Seasoned Equity Offerings (SEOs), and the underpricing of IPOs is negatively related to their long-run performance. From the foregoing empirical review, the following hypotheses will be tested:

H_{01}: There is a short-run underperformance of IPOs at the Nairobi Stock Exchange

H_{02}: There is a long-run supernormal performance of IPOs at the Nairobi Stock Exchange.

2.5 Summary

The above review has shown the theories that relate to issuance of IPO. The theories better explain why firms issue IPOs, the explanations for the under-pricing as well as explanations on long run performance of IPOs. The empirical review has shown the studies done in the area as well as pointed out the gaps left for future studies. This study therefore seeks to bridge the gap by focusing on the short-run and long-run performance of IPOs in Kenya.

CHAPTER THREE

3.0 RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the method that was used to carry out the study. It contains research design to be used in the study, the target population, sample size and sampling method, data collection and analysis methods and tools.

3.2 Research Design

The study investigated the performance of post-IPO share prices in Kenya. A descriptive survey research design was therefore undertaken in the study. A survey is present-oriented research that seeks to accurately describe the situation as it is. Descriptive research is defined as a process of data collection to test the hypothesis or answer questions concerning the current status of the subject study (Mugenda and Mugenda, 2003). This method was selected because it enabled the researcher to meet the objectives of the study.

3.3 Population and sample

The population of this study was firms that have gone public since 2001 in Kenya. A copy of such firms was collected from Faida Investment Bank, which is a member of the Nairobi Stock Exchange and from it, there had been 10 firms listed on the NSE between 2001 and 2010. The population was therefore the 10 stocks. A further scrutiny showed that two of these firms were not listed through IPO hence was dropped from the final sample giving a sample of 8 firms. These were then used in the analysis.

3.4 Data Collection

Data were collected from secondary sources. The daily share prices were collected from the NSE information desk for all the stocks. This data was organized using MS Excel Spreadsheets. The price data were collected for IPO prices, prices on 1st day of trading, prices on 7th day of trading and prices on 15th day of trading. Further, share price data was collected at the end of 1 year and end of 2 years of trading for all the 8 companies.

3.5 Data Analysis

The market measures of performance were used in this study. These are because most of the empirical results on short-run and long run performance of IPOs have favoured their use (Aktas et al, 2003). The most favoured market performance measure is the cumulative abnormal returns as it can show the returns in terms of periods which can be broken into short-run and long-run periods. In order to determine the short-run performance of IPOs in Kenya, the study analyzed short term performance of IPOs using market adjusted stock returns with traditional event study methodology. The study focused on 1-day, 7-day and 15-day cumulative abnormal returns (CARs) in order to assess short term performance. In order to establish the long-run performance of IPOs, the study used 1 –year and 2-year cumulative abnormal returns (CARs) to evaluate the long-run performance of post-IPO share prices. The return on a security or index was defined as:

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

where $P_{i,t}$ and $P_{i,t-1}$ are the prices of the security or index at the end of the current and previous periods, respectively. The benchmark-adjusted return for stock *i* in event month *t* was defined as:

$$ar_{i,t} = r_{i,t} - r_{m,t}$$

where $r_{i,t}$ is the return for firm *i* in period *t* and $r_{m,t}$ is the return on a benchmark for the same period. The average adjusted return for a portfolio of *n* stocks in period *t* is the mean of the benchmark-adjusted returns. The cumulative adjusted return was therefore the sum of the average adjusted returns for each period.

CHAPTER FOUR

4.0 DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the results of the data analysis. The results are presented as follows. Section 4.2 shows the level of IPO underpricing in Kenya. Section 4.3 presents results on short-run IPO performance while section 4.4 shows the results on the long-run IPO performance. Appendices A-I show the data.

4.2 IPO Underpricing Levels

Table 4.1 shows the level of IPO underpricing in Kenya. The table shows year of IPO, offer prices, price on 1st day of trading and the subsequent underpricing.

Table 4. 1: Level of IPO Underpricing at the Nairobi Stock Exchange

	Year of IPO	Offer Price	Price on Day 1	Price change (%)
MUMIAS	2001	6.25	6.25	0
KENGEN	2006	11.90	40.00	236
SCANGROUP	2006	10.45	15.00	44
EVEREADY	2006	9.50	11.00	16
ACCESS KENYA	2007	10.00	13.45	35
KENYA RE	2007	9.50	16.00	68
SAFARICOM	2008	5.00	7.35	47
COOP	2008	9.50	10.45	10
All IPOs				**57**

The results show that of all the stocks, Mumias was the only stock which was not underpriced as the offer price was the same as the price on first day of trading. The rest of the stocks were underpriced with Kengen leading at 236%. On average, the eight stocks were

underpriced by an average of 57%. These results show therefore that 87.5% of the IPOs since 2001 were underpriced. Thus, most IPOs in Kenya are underpriced.

4.3 Short-run IPO Performance

The performance of IPOs in Kenya were analysed to establish how they perform in the short-run. This analysis was done for 7-day and 15-day performance. The initial and abnormal returns are shown in Table 4.2.

Table 4. 2: Short-run Performance of IPOs at the Nairobi Stock Exchange

	Seven Day Initial Return	Seven Day Market Return	Seven Day Abnormal Return	Fifteen Day Initial Return	Fifteen Day Market Return	Fifteen Day Abnormal Return
MUMIAS	0.02	(0.01)	(0.17)	0.01	(0.04)	0.16
KENGEN	(0.09)	(0.03)	(0.31)	(0.20)	(0.05)	0.04
SCANGROUP	0.52	0.00	0.36	0.98	0.08	0.48
EVEREADY	0.65	(0.01)	0.46	0.42	0.07	(0.04)
ACCESS KENYA	(0.06)	0.01	(0.21)	(0.01)	0.02	(0.16)
KENYA RE	0.08	0.02	(0.05)	0.05	0.04	(0.24)
SAFARICOM	0.06	(0.03)	(0.15)	(0.01)	(0.05)	0.22
COOP	(0.04)	0.07	(0.10)	(0.09)	0.03	(0.30)
Cumulative Returns	**1.12**		**-0.17**	**1.15**		**0.16**

From the 7-day abnormal returns, there was underperformance of Mumias, Kengen, Access Kenya, Kenya Re, Safaricom, and Cooperative bank. Only Scangroup and Eveready performed better. Thus, there was a 7-day short-run underperformance in 75% of the IPOs while only 25% of the IPOs performed better.

From the 15-day abnormal returns, the study noted that there was underperformance of various stocks. These were Eveready, Access Kenya, Kenya Re, and Cooperative Bank. Thus, 50% of the stocks underperformed in the short-run.

Overall, the market performed better in the short-run as the cumulative abnormal returns (CAR) were 0.16 for the 15-day period while underperformance for the 7-day period (CAR= -0.17).

4.4 Long-run IPO Performance

The long-run performance of IPOs was analysed for 1 and 2 year abnormal returns. The results are shown in Table 4.3.

Table 4. 3: Long-run Performance of IPOs at the Nairobi Stock Exchange

	One Year Initial Returns	One Year Market Return	One Year Abnormal Returns	Two Year Initial Returns	Two Year Market Return	Two Year Abnormal Returns
MUMIAS	(0.60000)	(0.15508)	(0.52)	(0.26560)	0.675866	(1.18)
KENGEN	(0.35000)	0.16347	(0.83)	(0.38125)	0.162446	(0.82)
SCANGROUP	0.75000	0.18809	0.22	1.15000	0.035455	0.83
EVEREADY	(0.33636)	(0.05923)	(0.43)	(0.68182)	(0.404316)	(0.60)
ACCESS KENYA	1.49071	0.05910	1.19	0.78439	(0.420074)	0.88
KENYA RE	(0.01563)	(0.16880)	0.09	(0.30313)	(0.412285)	(0.21)
SAFARICOM	(0.61905)	(0.45914)	(0.00)	(0.25170)	(0.220098)	(0.34)
COOP	(0.13876)	(0.04973)	(0.24)	0.81340	0.287155	0.26
Cumulative Returns	**0.18091**		**(0.52004)**	**0.86429**		**(1.18403)**

From the one-year abnormal returns, the results show that 62.5% of the stocks underperformed. These were Mumias, Kengen, Eveready, Safaricom, and Cooperative Bank. The results also reveal that 37.5% of the IPOs performed better after 1 year. Overall, there was underperformance of stocks after one year given the negative CAR of -0.52.

The two-year abnormal returns show that 62.5% of the IPOs underperformed. These stocks were Mumias, Kengen, Eveready, Kenya Re, and Safaricom. The 2-year cumulative abnormal returns show that there was an underperformance of stocks (CAR= -1.18403).

4.5 Discussion of Findings

This study has shown that the IPOs in Kenya are underpriced by 57%. This is higher than in most countries. For instance, in Pakistan it is 34.52% (Sohail and Raheman, 2009), 35% in China (Qiao, 2008), and 16.67% in Mauritius (Kumar, 2007).

The results also showed that most IPOs performed better in the short-run, especially on day 15 after listing. This corroborates with earlier studies that found that in the short-run, IPOs perform better. For the long-run performance, it was noted that there was underperformance. This is also consistent with prior studies on the long-run performance of IPOs.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The chapter presents the summary of research findings, the conclusions of the study, recommendations for policy and practice and suggestions for further research.

5.2 Summary of Findings

The study found that IPOs in Kenya were underpriced by an average of 57%. It was noted that 87.5% of the IPOs since 2001 were underpriced. The most underpriced IPO was Kengen (236%) while the least underpriced was Mumias (0%).

On the short-run performance of IPOs, the 7-day abnormal returns showed that 75% of the IPOs underperformed while only 25% of the IPOs performed better. From the 15-day abnormal returns, the study noted that 50% of the stocks underperformed in the short-run. Overall, the market performed better in the short-run as the cumulative abnormal returns (CAR) were 0.16 for the 15-day period while underperformance for the 7-day period (CAR= -0.17).

As regards the long-run performance of IPOs, the one-year abnormal returns showed that 62.5% of the stocks underperformed. Overall, there was underperformance of stocks after one year given the negative CAR of -0.52. The two-year abnormal returns show that 62.5% of the IPOs underperformed. The 2-year cumulative abnormal returns show that there was an underperformance of stocks (CAR= -1.18403).

5.3 Conclusion

The study concludes that most of the IPOs in Kenya are underpriced by about 57%. This appears high but is consistent with prior studies. The short-run performance analysis shows that the IPOs perform worse on day 7 and better on day 15. The study concludes there IPOs in Kenya perform better in the short run given the high returns on the first day of trading and the high abnormal returns on day 15. Hypothesis 1 is therefore accepted.

The long run analysis showed an underperformance of IPOs. The stocks performed poorly after one year and worse still after the second year. The results lead to the conclusion that there is a long-run underperformance of IPOs in Kenya. This is consistent with prior studies on the performance of IPOs. Hypothesis 2 is therefore accepted.

5.4 Policy Recommendations

The study recommends the need for investors to take note of the fact that IPOs are usually underpriced in Kenya and can therefore offer an avenue for short-term gains especially by disposing off the stocks on day 1 of trading or on day 15 of trading.

The wisdom of buying IPOs and holding on to them for a longer period, say 1 or 2 years, is challenged. Investors need to be careful on how long they held onto the stocks. Further, those wishing to invest in stocks should give the IPOs some time as in the long-run the shares will underperform and therefore be good buys.

5.5 Limitations

The sample period and the sample IPOs was small thus limiting the results. The study studied a shorter period and this might limit the application of results to all IPOs in Kenya. Further, the study results are based on 8 firms and this could limit the applicability of results.

Secondly, the researcher faced a major challenge while collecting data. Given that the data is sold and not for free, getting data for a large sample period requires a lot of money which was a major challenge. Furthermore, some of the data for the period before 2000 are either missing or non-existent. This was the main reason the sample period chosen was small.

5.6 Suggestions for Further Research

The study suggests need for more studies to be carried out to determine the factors that influence long-run underperformance of stocks in Kenya as well as the determinants of short-run performance of stocks in Kenya. This will enhance the knowledge of why the IPOs behave the way they do.

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APPENDICES

Appendix A: IPO Prices Data

Company	Year	IPO Price	Date-1	Day-1 Price	Date-7	Day-7 Price	Date-15	Day-15 Price
MUMIAS	2001	6.25		6.25		6.35		6.30
KENGEN	2006	11.90	17-05-06	40.00		36.25		32.00
SCANGROUP	2006	10.45	29-08-06	15.00		22.75		29.75
EVEREADY	2006	9.50	18-12-06	11.00	28-12-06	18.10	09-01-07	15.65
ACCESS KENYA	2007	10.00	04-06-07	13.45	12-06-07	12.70	22-06-07	13.35
KENYA RE	2007	9.50	27-08-07	16.00	04-09-07	17.25	14-09-07	16.80
SAFARICOM	2008	5.00	09-06-08	7.35	17-06-08	7.80	27-06-08	7.25
COOP	2008	9.50	22-12-08	10.45	02-01-09	10.00	14-01-09	9.50

Appendix B: NSE Index, Initial Returns and Market Returns Data

Company	NSE Index Day 1	NSE Index Day 7	NSE Index Day 15	IR Day 1	IR Day 7	IR Day 15	MR Day 7	MR Day 15
MUMIAS	1,466.83	1,451.59	1,408.90	-	0.02	0.01	(0.01)	(0.04)
KENGEN	4,447.99	4,322.91	4,204.34	2.36	(0.09)	(0.20)	(0.03)	(0.05)
SCANGROUP	4,489.60	4,507.99	4,839.24	0.44	0.52	0.98	0.00	0.08
EVEREADY	5,624.84	5,560.44	6,026.51	0.16	0.65	0.42	(0.01)	0.07
ACCESS KENYA	5,043.35	5,074.08	5,124.14	0.35	(0.06)	(0.01)	0.01	0.02
KENYA RE	5,274.53	5,403.17	5,484.63	0.68	0.08	0.05	0.02	0.04
SAFARICOM	5,445.67	5,307.71	5,152.03	0.47	0.06	(0.01)	(0.03)	(0.05)
COOP	3,367.24	3,589.16	3,455.88	0.10	(0.04)	(0.09)	0.07	0.03

IR = Initial return
MR = Market return

Appendix C: Short Run ER, AR, and CAR Data

Company	ER-Day 7	ER-Day 15	AR-Day 7	AR-Day 15	CAR-Day 7	CAR-Day 15
MUMIAS	0.19	(0.16)	(0.17)	0.16		
KENGEN	0.22	(0.24)	(0.31)	0.04		
SCANGROUP	0.16	0.50	0.36	0.48		
EVEREADY	0.19	0.47	0.46	(0.04)		
ACCESS KENYA	0.16	0.15	(0.21)	(0.16)		
KENYA RE	0.12	0.29	(0.05)	(0.24)		
SAFARICOM	0.21	(0.24)	(0.15)	0.22		
COOP	0.05	0.21	(0.10)	(0.30)		
All IPOs					**(0.17)**	**0.16**

ER = Expected return
AR = Abnormal return
CAR = Cumulative Abnormal returns

Appendix D: End Year Prices, NSE Index and Initial Return Data

Company	1st Day Trading Date	Price End Year 1	Price End Year 2	NSE Index End Yr 1	NSE Index End Yr 2	IR Year 1	IR Year 2
MUMIAS	14-11-01	2.50	4.59	1,239.36	2,458.21	(0.60000)	(0.265600)
KENGEN	17-05-06	26.00	24.75	5,175.11	5,170.55	(0.35000)	(0.381250)
SCANGROUP	29-08-06	26.25	32.25	5,334.03	4,648.78	0.75000	1.150000
EVEREADY	18-12-06	7.30	3.50	5,291.69	3,350.63	(0.33636)	(0.681818)
ACCESS KENYA	04-06-07	33.50	24.00	5,341.41	2,924.77	1.49071	0.784387
KENYA RE	27-08-07	15.75	11.15	4,384.21	3,099.92	(0.01563)	(0.303125)
SAFARICOM	09-06-08	2.80	5.50	2,945.35	4,247.09	(0.61905)	(0.251701)
COOP	22-12-08	9.00	18.95	3,199.79	4,334.16	(0.13876)	0.813397

IR = Initial return

Appendix E: End Year MR, ER, AR and CAR Data

Company	MR-1	MR-2	ER-1	ER-2
MUMIAS	(0.15508)	0.675866	-0.079956451	0.918429284
KENGEN	0.16347	0.162446	0.48246966	0.441351445
SCANGROUP	0.18809	0.035455	0.5259284	0.323349135
EVEREADY	(0.05923)	(0.404316)	0.089271593	-0.08529331
ACCESS KENYA	0.05910	(0.420074)	0.298190931	-0.099936336
KENYA RE	(0.16880)	(0.412285)	-0.104180725	-0.092698774
SAFARICOM	(0.45914)	(0.220098)	-0.61680911	0.085884892
COOP	(0.04973)	0.287155	0.106043334	0.557232833
All IPOs				

MR = Market return
ER = Expected return
AR = Abnormal return
CAR = Cumulative Abnormal returns

AR-1	AR-2	CAR-1	CAR-2
(0.52)	(1.18)		
(0.83)	(0.82)		
0.22	0.83		
(0.43)	(0.60)		
1.19	0.88		
0.09	(0.21)		
(0.00)	(0.34)		
(0.24)	0.26		
		(0.52)	**(1.18)**

Appendix F: 7 Day Regression Market Model from MS Excel

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.190642
R Square	0.036345
Adjusted R Square	-0.15639
Standard Error	0.320056
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.019317	0.019317	0.188576	0.682205
Residual	5	0.512179	0.102436		
Total	6	0.531496			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.167262	0.122674	1.363468	0.230916	-0.14808	0.482604	-0.14808	0.482604
-0.01039	-1.74071	4.008512	-0.43425	0.682205	-12.0449	8.563497	-12.0449	8.563497

Appendix G: 15 Day Regression Market Model from MS Excel

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.737219
R Square	0.543492
Adjusted R Square	0.45219
Standard Error	0.303616
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.548736	0.548736	5.952703	0.058667
Residual	5	0.460913	0.092183		
Total	6	1.009649			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.065114	0.121627	0.535354	0.61535	-0.24754	0.377767	-0.24754	0.377767
-0.03949	5.606776	2.298032	2.439816	0.058667	-0.3005	11.51406	-0.3005	11.51406

Appendix H: One Year Regression Market Model from MS Excel

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.525636
R Square	0.276293
Adjusted R Square	0.131552
Standard Error	0.694874
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.921699	0.921699	1.908876	0.225635
Residual	5	2.414246	0.482849		
Total	6	3.335945			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.193845	0.269306	0.719795	0.503882	-0.49843	0.886117	-0.49843	0.886117
-0.15508	1.765596	1.277916	1.381621	0.225635	-1.51939	5.050584	-1.51939	5.050584

Appendix I:Two Year Regression Model from MS Excel

SUMMARY OUTPUT

Regression Statistics	
Multiple R	0.380479
R Square	0.144764
Adjusted R Square	-0.02628
Standard Error	0.737802
Observations	7

ANOVA

	df	*SS*	*MS*	*F*	*Significance F*
Regression	1	0.460707	0.460707	0.846341	0.399799
Residual	5	2.721757	0.544351		
Total	6	3.182464			

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.290403	0.312128	0.930399	0.394869	-0.51195	1.092754	-0.51195	1.092754
0.675866	0.929217	1.010054	0.919968	0.399799	-1.66721	3.525642	-1.66721	3.525642