REACTION OF SHARE PRICES TO ISSUE OF IPOs FROM THE NSE: EMPIRICAL EVIDENCE

BY

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DECLARATION

This research project is my original work and has not been presented to any other University for an examination.

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DEDICATION

I dedicate this work to my family for their understanding and support during the study period. To my wife Grace, Daughters; Joan, Jean and Joy, you are the team that inspired me through the journey to success and to you shall revert all the fruits. I love you team.

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ABSTRACTS

The Stock Exchange is a market that deals in the exchange of securities issued by publicly quoted companies and the Government. The major role that the stock exchange has played, and continues to play in many economies is that it promotes a culture of thrift, or saving. An initial public offering involves four groups - the issuing firm, the underwriter/investment bank, the initial buyers and the larger set of investors in the secondary market. These groups have varying amounts of information regarding the issuing firm. It may be the case that the issuer has better information on the value of the security than do the investors or underwriters

This research was on the event study methodology to study the relationship between the price movements for securities of companies quoted in the NSE and new IPO's. The study sought to establish if there exists a relationship between stock prices as may be influenced by the news of an initial public offerings in the Nairobi stock exchange. The event defined for these studies are issues of IPO's. The population of this study composed of all companies listed in the Nairobi stock Exchange (NSE). A portfolio of all the companies in the stock market was taken and a equal weighting assumed in the calculation of the mean portfolio daily return within the window period. The study time period was between 2004-2009.The secondary data was being obtained from the NSE informational database for the period 2004-2009. Data analysis was carried out using the comparison period return approach (CPRA) by Wooldridge (1983). The mean portfolio daily return was calculated for the IPO and comparison periods. For each day, t-statistics and test of significance was done using SPSS statistics analysis.

The study found that issuing of IPO's at NSE has both positive and negative effects on daily mean returns, negative effects are on the days nearing the IPO's event days which are as result of buyer and seller expectation in the market, while positive effects are in the days far from the IPO's event day which are result of buyer seller initiated trading

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LIST OF ACRONYMS

CPRA   - Comparison Period Return Approach

EMH   - Efficient Market Hypothesis

GAAP   - Generally Accepted Accounting Principles

IPO   - Initial Public Offer

NSE   - Nairobi Stock Exchange

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CHAPTER ONE: INTRODUCTION

1.1 Background

The Stock Exchange is a market that deals in the exchange of securities issued by publicly quoted companies and the Government. The major role that the stock exchange has played, and continues to play in many economies is that it promotes a culture of thrift, or saving. The very fact that institutions exist where savers can safely invest their money and in addition earn a return, is an incentive to people to consume less and save more. The Nairobi Stock Exchange was incorporated under the Companies Act of Kenya in 1991 as a company limited by guarantee and without a share capital. Prior to 1991, it was registered as a voluntary association of stockbrokers under the Societies Act in 1954. Currently, fourteen (14) stockbrokers and three (3) investment banks form the membership of the NSE. Common securities traded on the stock exchange include company shares, corporate bonds, and government debt in the form of treasury bonds (The NSE Hand book 2004 -2005).

The concept of security analysis in general and fundamental analysis is based on the assumption that investors are capable of formulating reliable estimates of stocks future behavior. Fundamental analysis assumes that by undertaking a careful analysis of the inherent characteristics of each of the firms in question, it is possible to distinguish the securities that are correctly priced from those that are not. Fundamental analysis is assumed to work away from the efficient market advocates who argue that the market is so efficient in processing new information that securities trade very close or to their correct values all the time. That is securities are rarely if ever substantially mispriced in the market place and no security however detailed is capable of identifying mispriced securities with a frequency greater than that which would be expected at random chance (Garfinkel, 1993).

It has been argued in efficient market theories that security prices are seldom far above or below their justified levels. These arguments have been for a long time been pioneered for markets described as efficient and this may not hold for inefficient markets which do not have sufficient information to allow intrinsic fundamental analysis to measure the value of stocks. The advocates of random walk theory argue that prices move up and down randomly giving no advantage to any trading strategy. The key research question is whether factors other than those

from within the organization would affect such price movement especially initial public offers (Moko, 1995).

An initial public offering involves four groups - the issuing firm, the underwriter/investment bank, the initial buyers and the larger set of investors in the secondary market. These groups have varying amounts of information regarding the issuing firm. It may be the case that the issuer has better information on the value of the security than do the investors or underwriters (Downes and Heinkel, 1982; Ritter, 1984; Hwang, 1988). Alternatively, it may be the case that the underwriters possess information superior to the issuer and investors (example, Baron, 1982; Rees, 1987). It may also be the case that the most important informational asymmetry may arise within a market group rather than between different groups (example, Rock, 1986). That is, investors are differentiated by their levels of information about the true value of the issue and may be categorized into "informed investors" and "uninformed investors", with the former having perfect information. As a result of this asymmetry, informed investors compete with uninformed investors only for "good" issues, creating adverse selection in which the probability of obtaining shares in "bad" issues is higher for uninformed investors. This adverse selection proposed by Rock (1986) is analyzed by Ritter (1984), Beatty and Ritter (1986), Koh and Walter (1989), Carter and Manaster (1990), McStay (1992), Keloharju (1993) and Lee, Taylor and Walter (1996; 1999).

This information asymmetry creates uncertainty to the investor who will then tend to under price the issue. Baron (1982), Rock (1986) and Grinblatt and Hwang (1989) present models that suggest a positive relation between the degree of investor uncertainty over issue value and the extent of under pricing. Empirical evidence between value uncertainty and under pricing is provided in Ederington (1974), Bear and Curley (1975), Beatty and Ritter (1986), Miller and Reilly (1987), Johnson and Miller (1988), and Carter (1992). Firms may also use under pricing as a signal of quality (Welch, 1989). However, Garfinkel (1993) does not find evidence to support the signaling hypothesis.

1.2 Statement of the Problem

Seguin and Smoller (1997) provide evidence that an inverse relationship exists between the offering price of an IPO and subsequent market performance. Specifically, they find that lower

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priced stocks have higher mortality rates. This study extends their research to determine whether a similar relationship exists between the offering price and success of IPOs (measured by aftermarket returns in Seguin and Smoller (1997) and by a successful offer in this study). Relying upon the Seguin and Smoller (1997) logic and results, we predict a positive relationship between the offering price and the probability of a successful IPO. Additionally, Seguin and Smoller (1997) posit that the market capitalization of the firm will be directly related to the success of the IPO.

Previous studies have been dismal on this topic with Ngahu (2006) studying book value per share issue price & 1st trading day prices of IPOs at NSE. Cheluget (2008) did a study on investor's demand for IPO's and first day performance: Evidence from Nairobi Stock Exchange. Simiyu (2008) did a study on pricing and performance of initial public offering (IPO): A comparison between state owned enterprises and privately owned enterprises at the NSE. It is evident that no research has been done on the relationship between the price movements for securities of companies quoted in the NSE and new IPOs.

When there are new IPOs in the market, the question comes up how the investors show their interest towards the IPOs. Do the investors mobilize their investments from secondary market to the IPO? Because of such fund mobilization, do the transaction volumes or other variables like market capitalization and total turnover of stock exchange face any pressure? This study tries to find out the answer whether because of investors' interest towards IPO creates a pressure on the performance of DSE variables like share price index, total turnover value (BDT), and market capitalization (BDT). This research was motivated by the need to bridge the gap in knowledge on the relationship between the price movements for securities of companies quoted in the NSE and new IPOs.

1.3 Objective of the Study

The objective of this study is to find out the reaction of stock price movements at the advent of IPOs in the NSE.

1.4 Importance of the Study

The findings of this study will be of interest to the management. The management of publicly quoted companies will be able to determine the relationship between the price movements for

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securities of companies quoted in the NSE and new IPOs. The government of Kenya will be enlightened in a bid to make policies relating to future IPOs. Knowledge of the effect of new IPOs on price movements will assist in ascertaining the appropriate guidelines to be in place for firms financing. The government will also be informed on how it can protect the investors and encourage more investments for the growth and development of the national economy.

These findings will enable financial consultants to offer proper services to their clients. The study will provide a current perspective of price movements in an expanding global economy. Investors may need to know the relationship between price movements and new IPOs for them to make informed choices. This study will prove important in providing such information to the investors.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter commences with outlining the concept of IPOs. The next section dwells on stock market characteristics and the price reactions to different market news. Factors affecting success of IPOs and concludes with a summary of literature review.

2.2 Initial Public Offerings (IPOs)

An initial public offering involves four groups - the issuing firm, the underwriter/investment bank, the initial buyers and the larger set of investors in the secondary market. These groups have varying amounts of information regarding the issuing firm. It may be the case that the issuer has better information on the value of the security than do the investors or underwriters (example, Downes and Heinkel, 1982; Ritter, 1984; Hwang, 1988). Alternatively, it may be the case that the underwriters possess information superior to the issuer and investors (example, Baron, 1982; Rees, 1987). It may also be the case that the most important informational asymmetry may arise within a market group rather than between different groups (example, Rock, 1986). That is, investors are differentiated by their levels of information about the true value of the issue into "informed investors" and "uninformed investors", with the former having perfect information. As a result of this asymmetry, informed investors compete with uninformed investors only for "good" issues, creating adverse selection in which the probability of obtaining shares in "bad" issues is higher for uninformed investors. This adverse selection proposed by Rock (1986) is analysed by Ritter (1984), Beatty and Ritter (1986), Koh and Walter (1989), Carter and Manaster (1990), McStay (1992), Keloharju (1993) and Lee, Taylor and Walter (1996; 1999).

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While under pricing of an issue is related to uncertainty, the valuation of the security is also related to the fundamentals of the firm. Since Graham and Dodd's (1934) seminal work on determining the fundamental worth of a company, various articles have examined the link between accounting numbers and valuation. Ou and Penman (1989) show that current accounting numbers can be used to predict the probability of the direction of future earnings, and this prediction of future earnings is associated with future returns. Chan, Hamao and Lakonishok (1993) examine the relationship between four fundamental variables and expected returns in the Japanese stock market. The four variables are earnings yield, cash flow yield, size (market capitalization of equity) and book-to-market ratio. They find that the book-to-market ratio and cash flow yield are associated with expected returns.

Ernst and Young (2008) canvassed the views of corporate-level executives at outperforming companies as well as the external perspective of global institutional investors. The results provide insights into pre- and post-IPO practices associated with an outperforming public company as well as the "measures that matter" to institutional investors. According to institutional investors, on average 60% of their IPO investment decisions are based on financial performance measures and 40% on non-financial. The three most important financial measures are earnings per share growth (selected by 45% of investors), EBITDA growth (44%), and profitability growth (41%).

According Ernst and Young (2008) Ninety-five percent of investors cite management credibility and experience as a key non-financial metric. Half of investors cite effectiveness of performance-based compensation policies as an investment factor, due to its bearing on a firm's ability to recruit and retain highly talented senior management. Reflecting this, over half of executives surveyed said building a strong management team is an important factor in building and realizing shareholder value post-IPO. Twenty percent began building the right team more than 20 months before the IPO, while 33% had started 12 to 24 months before listing. He also found out that investors also identified corporate strategy execution (87%), quality of corporate strategy (79%), corporate governance (74%) and brand strength (74%) as key non-financial measures. Two-thirds of companies surveyed had implemented strategic planning, corporate tax planning,

internal control systems, financial accounting and reporting issues at least 12 months prior to the IPO. Seventeen percent had started strategic planning more than 20 months prior. Senior executives cited the importance of building financial and accounting systems early, but identified numerous challenges. The three most cumbersome issues were adjusting historical financial statements to comply with local requirements (selected by 40% of respondents); dealing with consolidated subsidiary financial statements (35%); and adjusting historical financial statements to comply with foreign listing requirements (34%).

Executives of outperforming Ernst and Young found out that companies cite the change in composition and structure of the company board as one of the most beneficial changes for post-IPO value. However, only a third had prepared board composition more than six months prior to listing. Many executives found recruiting independent board members more difficult than anticipated and suggested more time should have been allocated to this. The three most challenging corporate governance issues are recruiting qualified independent board members (selected by 48% of respondents); enhancing internal controls (47%); and forming a qualified audit committee (31%).

Building an investor relations team is generally one of the later steps in the IPO process. However 24% of executives surveyed had already started to build an investor relations team more than six months prior to the IPO. Two-thirds of institutional investors cited quality of investor relations guidance as a key measure in their portfolio allocations but only half of executives felt well prepared on this front. High performing companies quickly delegate communications responsibilities to their investor relations team, focus on creating a high-quality road show (identified as a key non-financial metric by 88% of investors), and keep investors well-informed (Ernest and Young, 2008)

Gil Forer adds: "Executives who have overseen successful IPOs focus on being a public company - not just becoming one. They position themselves as public entities long before the event. Post-IPO, they deliver shareholder value by meeting targets consistently, attracting the right investors, effectively communicating to stakeholders and most importantly by delivering operational excellence. The IPO may be the most important transaction in a company's history to date, but for an exceptional enterprise it's often just one more milestone along the road to market leadership."

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To measure IPO success, the existing literature uses initial mispricing (Beatty and Ritter 1986; Muscarella and Vetsuypens 1989a and 1989b; Hanley 1993) and the long-run market performance (for example, Ritter 1991; Loughran and Ritter 1995; Brav and Gompers 1997; Loughran and Ritter 2000). However, because aftermarket trading data are not available for our sample of micro-IPOs, we are not able to use these measures of success. Instead, we define a successful offering as one that breaks escrow and allows the firm to receive at least the minimum capital sought.

2.3 Stock Market Characteristics in Developing Countries

Dickinson and Muragu (1994) examined Nairobi Stock Exchange using the autocorrelation and ran tests. The period of their data continues the work of Parkinson, (1987) starting in the 1979 and ending in the 1989. Their data include weekly prices of the 30 most actively traded stocks. Contrary to Parkinson (1978), Dickinson and Muragu (1994) find that the results support the weak-form of efficient market hypothesis at NSE.

Similar findings on NSE were provided by Kiweu (1991). Using price data collected from NSE, he calculated the weekly returns and performed serial correlation and the run test on the return series. The empirical evidence showed that there were no reported patterns in share price movement. Osei, (2002) tested information efficiency at Ghana Stock exchange between 1991 and 1997 using seventeen companies listed in Ghana Stock Exchange. The assessment of the market response to information was done by measuring abnormal returns over a 17-week event window when the annual earnings information is released using an event study methodology. The study established that the market continues drifting up or down beyond the announcement week. This is inconsistent with the EMH which states that the reaction of market prices to new information must be instantaneous and unbiased. The conclusion is that the Ghana Stock Market is inefficient with respect to annual earnings information releases by the companies listed on the exchange. This differs with findings by Dickinson and Muragu, (1994) at NSE, an emerging market.

Olowe (1999) carries out tests using monthly data on 59 randomly selected securities from 1981-92 on the Nigerian Stock Exchange. He finds the Nigerian market to conform to weak-form efficiency in joint Q-tests of partial autocorrelation coefficients for ten lags in the return data,

though he argues that poor informational flows and inefficient communications systems cast doubts on the ability of the market to pass higher hurdles of efficiency.

Stiglitz (1981) argue that inefficient capital markets in developing countries tend to be characterized by their small size with low volume of transactions. He says that this suggests that reaction of share prices to new information may not be immediate and thus prices may not fully reflect all available information. This may thus explain the findings by Osei, (2000) at Ghana Stock Exchange.

2.4 Institutional Features of IPO market

This section presents some of the key features of the listing requirements and institutional features of the IPO market. These are described in considerable detail in Koh and Walter (1989) and Lee, Taylor and Walter (1996). Firms seeking listing on the stock exchange market must fulfill certain criteria. They must have been in operation for at least five years, show profits in the last three years, disclose past and future dividends, show healthy working capital, debt-equity ratio and asset backing.

The firm commitment method is used in underwriting in Kenya. The firm that invites the public to apply for its shares must state the offer price in the prospectus. In the event that the share issue is oversubscribed, the underwriter will allocate the shares in an even-handed manner to all share applicants. Underwriters do not allocate shares to preferred clients as practiced in the United States, where offer prices are based on indications of interest made prior to the issue (Hanley and Wilhelm, 1995). Details of the rationing process, which is conducted by way of a public ballot, are publicly disclosed for most initial public offerings.

2.5 The butterfly effect

The butterfly effect was first described by Lorenz at the December 1972 meeting of the American Association for the Advancement of Science in Washington, D.C. The engine of the butterfly effect is driven by the snowball effect hidden in weather systems, more formally known as positive feedback loops. In case of the weather, temperature changes lead to convection currents which lead to more temperature changes which lead to stronger convection currents, this process continues for days and sometimes for months until you have mild storms in most cases

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and sometimes hurricanes and in extreme cases tornadoes. In case of the actual snowball from the snowball effect, the bigger the snowball gets, the more snow it accumulates as it rolls down the hill and hence the rate of increase in its size increases with each successive roll down the slope. The stock markets work in somewhat of a similar fashion. Good news on the economic and corporate earnings front creates buying euphoria which increases stock prices, higher stock prices through the wealth effect stimulate greater consumption and which in turn boosts the economy resulting in more good economic news and more buying euphoria. The length of this market cycle ranges between, two to six years.

Running in parallel to the market cycle is the IPO cycle; the jury is still out on the whether it is IPO activity that drives the market or the market that drives IPO activity. However, there is a relative consensus on the fact that a large highly successful IPO or a series of relatively successful IPOs have a positive impact on the overall market sentiment. And since the market is a non linear complex dynamical system, under the right conditions a bad IPO at the peak or a good IPO at the bottom can reverse the direction of the market.

Like all activities in the market, IPO are driven by agents or financial intermediaries, and as most people here would suspect, the track record and incentive structure of the agent has some bearing on how successful the IPO is going to be. IPOs backed by institutional private equity investors are more successful in terms of post IPO price appreciation as compared to non-PE IPOs. According to a study covering 3,485 IPOs from 1988 to 1999, private equity backed IPOs yielded an average return of 29% in any given year compared to 15% return provided by non PE-backed IPOs (Abraaj Capital, 2005).

2.6 Investor Behavior

Much economic theory is based on the belief that individuals behave in a rational manner and that all existing information is embedded in the investment process. This assumption is the crux of the efficient market hypothesis. But, researchers questioning this assumption have uncovered evidence that rational behavior is not always as prevalent as we might believe. Behavioral finance attempts to understand and explain how human emotions influence investors in their decision-making process.

In 2001 Dalbar, a financial-services research firm, released a study entitled *Quantitative Analysis of Investor Behavior*, which concluded that average investors fail to achieve market-index returns. It found that in the 17-year period to Dec 2000, the SandP 500 returned an average of 16.29% per year, while the typical equity investor achieved only 5.32% for the same period - a startling 9% difference! It also found that during the same period, the average fixed-income investor earned only a 6.08% return per year, while the long-term Government Bond Index reaped 11.83%. There are a myriad of possible explanations.

2.6.1 Regret Theory

Fear-of-regret, or simply regret, theory deals with the emotional reaction people experience after realizing they have made an error in judgment. Faced with the prospect of selling a stock, investors become emotionally affected by the price at which they purchased the stock. So, they avoid selling it as a way to avoid the regret of having made a bad investment, as well as the embarrassment of reporting a loss (Miller and Reilly, 1987).

What investors should really ask themselves when contemplating selling a stock is, "What are the consequences of repeating the same purchase if this security were already liquidated and would I invest in it again?" If the answer is "no", it's time to sell; otherwise, the result is regret of buying a losing stock and the regret of not selling when it became clear that a poor investment decision was made - and a vicious cycle ensues where avoiding regret leads to more regret. Regret theory can also hold true for investors who find a stock they had considered buying but did not went up in value. Some investors avoid the possibility of feeling this regret by following the conventional wisdom and buying only stocks that everyone else is buying, rationalizing their decision with "everyone else is doing it". Oddly enough, many people feel much less embarrassed about losing money on a popular stock that half the world owns - like AOL and Yahoo - than about losing on an unknown or unpopular stock.

2.6.2 Mental Accounting

Humans have a tendency to place particular events into mental compartments, and the difference between these compartments sometimes impacts our behavior more than the events themselves. An investing example of mental accounting is best illustrated by the hesitation to sell an investment that once had monstrous gains and now has a modest gain. During an economic boom and bull market, people get accustomed to healthy, albeit paper, gains. When the

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market correction deflates investor's net worth, they're more hesitant to sell at the smaller profit margin. They create mental compartments for the gains they once had, causing them to wait for the return of that gainful period (Miller and Reilly, 1987).

2.6.3 Prospect/Loss-Aversion Theory

Prospect theory suggests people express a different degree of emotion towards gains than towards losses. A loss always appears larger than a gain of equal size - when it goes deep into our pockets, the value of money changes. Prospect theory also explains why investors hold onto losing stocks: people often take more risks to avoid losses than to realize gains. For this reason, investors willingly remain in a risky stock position, hoping the price will bounce back. Gamblers on a losing streak will behave in a similar fashion, doubling up bets in a bid to recoup what has already been lost. So, despite our rational desire to get a return for the risks we take, we tend to value something we own higher than the price we would normally be prepared to pay for it. The loss-aversion theory points to another reason why investors might choose to hold their losers and sell their winners: they may believe that today's losers may soon outperform today's winners. Investors often make the mistake of chasing market action by investing in stocks or funds which garner the most attention. Research shows that money flows into high-performance mutual funds more rapidly than money flows out from funds that are underperforming (Hwang, 1988).

2.6.4 Anchoring

In the absence of better or new information, investors often assume that the market price is the correct price. People tend to place too much credence in recent market views, opinions and events, and mistakenly extrapolate recent trends that differ from historical, long-term averages and probabilities. In bull markets, investment decisions are often influenced by price anchors, prices deemed significant because of their closeness to recent prices. This makes the more distant returns of the past irrelevant in investors' decisions (Hwang, 1988).

2.6.5 Over-/Under-Reacting

Investors get optimistic when the market goes up, assuming it will continue to do so. Conversely, investors become extremely pessimistic amid downturns. A consequence of anchoring, placing too much importance on recent events while ignoring historical data, is an over- or under-reaction to market events which results in prices falling too much on bad news and rise too much

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on good news. At the peak of optimism, investor greed moves stocks beyond their intrinsic value. When did it become a rational decision to invest in stock with zero earnings and thus an infinite price-to-earnings ratio? Extreme cases of over- or under-reaction to market events may lead to market panics and crashes (Hanley and Wilhelm, 1995).

2.6.6 Overconfidence

People generally rate themselves as being above average in their abilities. They also overestimate the precision of their knowledge and their knowledge relative to others. Many investors believe they can consistently time the market. But in reality there is an overwhelming amount of evidence that proves otherwise. Overconfidence results in excess trades, with trading costs denting profits.

2.6.7 Counterviews: Is Irrational Behavior an Anomaly?

As mentioned earlier, behavioral finance theories directly conflict with traditional finance academics. Each camp attempts to explain the behavior of investors and the implications of that behavior. So, who is right? The theory that most overtly opposes behavioral finance is the efficient market hypothesis (EMH), associated with Eugene Fama (Univ. Chicago) and Ken French (MIT). Their theory that market prices efficiently incorporate all available information depends on the premise that investors are rational. EMH proponents argue that events like those dealt with in behavioral finance are just short-term anomalies, or chance results, and that over the long term these anomalies disappear with a return to market efficiency.

Thus, there may not be enough evidence to suggest that market efficiency should be abandoned since empirical evidence shows that markets tend to correct themselves over the long term. In his book "Against the Gods: The Remarkable Story of Risk", Peter Bernstein makes a good point about what is at stake in the debate.

Behavioral finance certainly reflects some of the attitudes embedded in the investment system. Behaviorists will argue that investors often behave irrationally, producing inefficient markets and mispriced securities - opportunities to make money. That may be true for an instant. But, consistently uncovering these inefficiencies is a challenge. Questions remain over whether these behavioral finance theories can be used to manage your money effectively and economically. That said, investors can be their own worst enemies. Trying to outguess the

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market does not pay off over the long term. In fact, it often results in quirky, irrational behavior, not to mention a dent in your wealth. Implementing a strategy that is well thought out and sticking to it may help you avoid many of these common investing mistakes (Masaki, 1991).

2.7 Steps to Ensuring Successful IPO

Giannini (1999) provides 12 steps to assure a successful IPO. The first step is cleaning up the balance sheet. The first financial statements given to potential investors or buyers set the stage. Subsequent revisions are at best viewed with skepticism. Loans to the company from shareholders should be replaced by bank debt, even if the shareholder has to pledge the company's payoff as additional collateral for the new bank loan. Receivables due from officers or shareholders should also be cleared up.

The second step is doing tax planning now. Taxes can total over 50% of the proceeds of a sale. Devastating tax bills down the road can be significantly reduced. Electing to be taxed as a subchapter S corporation, if qualified, can make a big difference if done early enough, as can transferring stock or assets to trusts, partnerships or family members early, while values are defensively lower. Six months before going public or selling at Ksh.10/share is not the time to try to move stock out at Ksh2.

The third step is to have auditable financials. Audited financials add value and may make the difference between doing the deal or not. (For almost all IPO's at least two full years of audited statements are mandatory). If your financials aren't audited, at a minimum have a credible CPA observe year-end inventory and file it away. The cost is nominal, and it usually makes a retroactive audit possible if other accounting records are in order. A "big five" auditor adds perceived quality and value, but count most in an IPO. Some will give emerging companies reasonable "starter" rates. It doesn't cost to ask. Established regional auditors can do the same job, usually with less bureaucracy and lower fees. The trade-off is prestige and image. Also remember that auditors don't necessarily replace your accountants.

The fourth step is to manage income statements. Investors, buyers and underwriters all look for consistent earnings and growth. Earnings and growth to a degree can be managed within the bounds of generally accepted accounting principles (GAAP). Tax deferral is no longer the main objective. Spikes and dips in year to year profits reduce credibility and value, but in a smaller

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company can be smoothed out by increasing or decreasing reserves, giving or postponing bonuses or capitalizing or expensing, where the option exists. Also, within bounds of accounting rules it is perfectly legitimate for financial reports to be different from tax returns. Income statements can be "recast" after the fact to add back discretionary expenses such as excess owners' compensation and perks. If an IPO is the objective, however, high-ticket perks should be eliminated now because you can't use recast financials in an IPO. If private investment or sale is a more likely goal, at least keep discretionary expenses readily identifiable so recast statements are easy to track and reconcile. Try recasting past years now to see how they look.

The fifth step is to fill gaps in management. Most investors, underwriters and buyers consider management their top priority. Fill gaps in management, either internally or from the outside, sooner rather than later, and give people already on board the right titles. Companies with no Vice Presidents make management look thin, and managers with 60 days tenure aren't particularly inspiring. Also, credentials are important. Seek outside help to determine what's customary given your circumstances and considered acceptable to investors, buyers or underwriters. Also, consider using "phantom" stock instead of conventional options or issuing actual shares, but in either case have a clear understanding as to how vesting will be affected by a sale or change of control.

The sixth step is to add outside directors. Outside directors are an economical way to obtain valuable advice, contacts and insight from the objective perspective of people not involved in the day to day crunch. For an IPO, "name" outside directors with attention-getting credentials, affiliations or accomplishments enhance perceived value and marketability. They should not, however, have just joined the board and should own some stock or at least options. Finding and recruiting the right outside directors requires focused time and effort. A "name" law firm can also add credibility and value, and a "name" firm attorney on the board is a plus, if they will do it. The trade-off is that they can be overly conservative as well as expensive. If your present attorney is not seasoned in securities transactions or acquisitions, meet with one or more others respected in the financial circles in which you anticipate dealing. Then try one for some nominal corporate work before you really need them.

Raising the company's pubic profile is the seventh step. Good, credible, business publicity beyond just trade press adds value. A smaller but interesting private company can orchestrate

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more coverage in the business press than it would ordinarily expect. Local newspapers and business publications are good, but many relatively small companies also show up in national publications, such as Inc., Forbes, and Business Week; and not by accident. Enlist the services of a financial or business Public Relation firm or consultant, who knows the ropes, or make it a priority and do it yourself. Also, household name customers, the more the better, add perceived credibility, even if they only account for a small percentage of sales. Have as many as you can.

The eighth step is to position the company for the right comparison. Investors and buyers judge by comparison. Maintain a running comparison of your operating and financial statistics vs. those of your peers and competitors. Prospectuses and annual reports are excellent sources, as are trade associations and bankers' industry profile books. A fair comparison may require changing your accounting categorizations. If so, do it before giving out financials showing unfairly, for example, that your gross margins don't measure up to others in your industry.

Study security analysts' reports on companies in your industry and determine: a) which similarities you want to reinforce, b) which you should distance yourself from; and c) how to accomplish that. Also, try to determine a range of values for your business in the context of a sale, financing or IPO, based on what you can glean from public and trade sources. Do not, however, fall into the trap of believing your company will be valued at the same multiple as public companies many times its size and/or with other significantly different characteristics.

The ninth step is to document the competition. Many company descriptions or business plans lack a truly realistic assessment of the competition. Investors can sense when a company is in denial. A product or service with no meaningful competition is extremely rare. Even if it is unique, there usually are or will be alternatives to fill the need. Accordingly document the facts on actual and potential competitors and an objective comparison of similarities and differences, strengths and vulnerabilities, in a form understandable by someone outside your industry and believable by someone in it.

Then, examine your company as an investor would. Be the first to do "due diligence" on your own company. Investors, buyers and underwriters all have comprehensive evaluation screens that go well beyond financial records. Put your company through such a process before an investor does. Make it one that covers operations, marketing, personnel and technology as well

as legal, regulatory, environmental, insurance, contractual, credit and accounting issues. Have a professional outsider do it to make it objective, and develop a program to fix what the exercise indicates needs attention. Contemplating an IPO? Make a dry run. Try drafting parts of a prospectus, providing the data required by regulations. The result will show what needs to be done and what will have to be disclosed when the time comes.

Then, one needs to understand investors' needs. Every investor, buyer or underwriter has certain criteria which they are not going to negotiate away. A buyer, lender or private investor has requirements for returns on investment or debt service; minority equity investors need an exit strategy, and underwriters a stock that's going to perform. Specific criteria will vary by industry, the economy and the type of investor, but they are always there. Understanding such criteria well before negotiations begin will give you time to arrange things to maximize the probability of a transaction meeting both your objectives and the investor's or buyer's needs.

Lastly, one should be prepared for the unsolicited approach. Unsolicited approaches by bona fide buyers do occur, and range from bargain hunters to the opportunity of a lifetime. Since the latter are usually motivated by buyers or investor's immediate needs or circumstances, they tend not to wait around.

In addition to the eleven steps described above, you can prepare yourself by having established relationships with financial advisors who know your business, whom you trust and to whom you can turn for counsel on a quick reaction basis. Even with an offer in hand, it's seldom downhill to the finish line. An expression of interest or an offer is just the beginning of the process. How it's handled can make a huge difference in how it turns out. Even the largest corporations almost invariably retain an investment banker as a financial advisor (in addition to attorneys and accountants), even when they already know the investor or buyer.

2.8 Factors affecting success of IPOs

In this section, we review the current theoretical literature as it pertains to the IPO factors analyzed in this study. The specific areas addressed are: (1) the costs of going public; (2) ownership structure and governance issues; (3) pricing issues; and (4) the stage at which firms go public via an IPO.

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2.8.1The Cost to Go Public

Bhagat and Frost (1986), Ritter (1987), Barry, Muscarella, and Vetsuypens (1991), Aggarwal and Rivoli (1991), Lee et al. (1996), and Chen and Ritter (2000) have all studied the costs of raising capital. All of these studies find evidence of economies of scale in the offering process. That is, very large issues tend to enjoy a relatively lower cost of going public and very small issues tend to pay a relatively larger price to conduct an IPO. Additionally, for issues that are neither very large nor very small, Chen and Ritter (2000) document that over 90 percent of the issues pay a gross underwriter spread of exactly 7 percent. The literature on the costs of going public cost is descriptive in nature. As such, this study reports the summary statistics of the total expenses required to take the firm public.

Jensen and Meckling (1976) argue that agency costs exist with the separation of ownership and management. In a recent article, Ang, Cole, and Lin (2000) provide compelling evidence for Jensen and Meckling's theoretical arguments using small business data. Among the evidence provided in Ang, Cole, and Lin (2000), it is reported that the ownership share of the primary owner, the insider ownership, and whether a firm is family-owned all decrease agency costs. In an IPO setting, and specifically addressing insider ownership, Mikkelson, Partch, and Shah (1997) (using U.S. data) and Goergen (1998) (using U.K. and German data) show that operating performance over the first ten years of public trading is unrelated to the ownership position of officers and directors.

Extending the work of Jensen and Meckling (1976) and Ang, Cole, and Lin (2000), we hypothesized that firms with greater insider ownership and family-owned firms would be positively related to the probability of success. Extending the work of Frye (1998) who finds that large block-holdings lead to more uncertainty, we predicted the size of the largest block of ownership to be negatively related to the probability of success.

2.8.2 Governance Issues

Board of director literature (for example, Lipton and Lorsch 1992; and Jensen 1993) argues that the optimal size of corporate boards is between seven and nine members. The function for the optimal size is concave downward. As such, the extant theory suggests that the utility of the board size increases until at least seven members are reached.

Thus, due to the firms in our sample and the concave nature of board of director utility functions, we hypothesize that there will be a direct relationship between the number of directors and the likelihood of a successful offer. This prediction is an extension of the empirical findings of Frye (1998) who finds a positive relationship between the number of outside board members and firm performance of large IPOs.

2.8.3 Pricing Impacts on Going Public

Seguin and Smoller (1997) provide evidence that an inverse relationship exists between the offering price of an IPO and subsequent market performance. Specifically, they find that lower priced stocks have higher mortality rates. This study extends their research to determine whether a similar relationship exists between the offering price and success of IPOs (measured by aftermarket returns in Seguin and Smoller (1997) and by a successful offer in this study). Relying upon the Seguin and Smoller (1997) logic and results, we predict a positive relationship between the offering price and the probability of a successful IPO.

Additionally, Seguin and Smoller (1997) posit that the market capitalization of the firm will be directly related to the success of the IPO. They were surprised by their empirical results that indicate market capitalization is not related to IPO performance. Relying on the original logic of Seguin and Smoller, the study predicted a positive relationship between market capitalization and issue success. However, remembering their empirical finding, the study was prepared to find no such relationship.

2.84 The Business Life Cycle and Going Public

In a theoretical model, Maug (2000) argues that the optimal time for insiders to take a firm public is when they have lost comparative advantage over outside investors in gathering information pertaining to the firm's growth prospects. Maug argues that in life cycle phases where firm-specific information is most critical (for example, developmental and start-up phases), insiders have an advantage in gathering information about the company. When this is not the case, outside investors have the advantage, and it is more likely that the firm will go public once the insider advantage is lost.

Prior to operations and finishing the development stage, insiders maintain a competitive informational advantage. Following Maug's logic, the study predicts firms in the early stages of the life cycle will be in the optimal position to stay private and will thus be associated with failed public offerings.

2.8.5 Other factors

The final set of variables the study considers relates to the signaling literature (for example, Leland and Pyle 1977). The basis for the signaling argument is that insiders in the firm can provide a costly or verifiable signal that validates firm quality. Investors can observe these signals and mitigate the classic adverse selection lemons problem noted by Akerlof (1970). The signaling variables include the current number of employees; the after-tax earnings from the prior year; the net tangible book value; total debt; and executive remuneration in the previous year.

Firms with more employees (often used as a proxy for size in the literature) may be viewed by potential investors as more established/less risky businesses and as such should be positively related to the chance of success. Assuming a risk verse utility function, investors should prefer firms with a successful track record. To measure the historical performance of each company, the study uses after-tax earnings from the prior year and net tangible book value. Because the after-tax earnings captures only one year of performance, the study includes tangible book value in an effort to cumulate historical performance. Tangible book value is defined as total assets (exclusive of copyrights, patents, goodwill, research and development, and similar intangible items) minus total liabilities.

The acquisition of external debt financing sends two signals to potential investors, depending on the source of the debt. In the case of institutional lending, firms must have successfully gone through the borrowing process. This includes presenting enough information (and perhaps collateral) to the institution to convince the bank loan officer that any asymmetry of information has been reduced to an acceptable level. That is, the firm has already convinced an institution that the marginal costs associated with adverse selection and moral hazard are less than the marginal benefits of making the loan. Potential equity investors can free-ride; essentially using the bank's screening process to screen the small firm at no cost.

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Personal outstanding debt can be seen as a signal that the firm's management is confident in its ability to pay back the debt over some specified amount of time. All of the firms in our sample with outstanding personal debt owed it to either a member of management, a member of the board, or both. Thus, by taking a risk with their personal wealth (and potentially risking financial ruin), these managers signal that they are extremely confident in future firm performance. In both cases (that is external and personal debt); the study predicted a direct relationship between the amount of debt held by the firm and the probability of acquiring outside equity capital.

2.9 Empirical studies

Lowry and Schwert (2002) noted that IPO volume tends to be higher following periods of especially high initial returns, and their findings suggest that this relation is driven by information learned by the investors during the registration period. The findings of Rajan and Servaes (1997, 2003), Lee and Thaler (1991), Lerner (1994), and Pagano, Panetta, and Zingales (1998) suggested that IPO volume is related to various forms of market irrationality. Consistent with this finding, Lerner, Shane and Tsai's (2003) results suggested that periods of low IPO volume represent times when private firms "cannot" have access to the equity markets on favorable terms. Pagano et al. (1998) found that companies are more likely to have IPOs when the average market-to-book ratio of public firms in their industry is higher. Empirically it has been widely observed that on an average, IPOs are underpriced. However, the large underpricing in IPOs in emerging capital markets cannot be deemed as normal underpricing that is observed in the developed capital markets.

Masaki (1991) studied the behaviour of share prices in the NSE in an empirical investigation into the behaviour of annual corporate earnings among Kenyan publicly quoted companies. Masaki found out that the corporate earnings had a negative serial correlation while the runs test and the computed mean autocorrelation coefficients were not significant so as to initiate any doubt for lack of independence. Masaki also concluded that successive changes in the reported annual corporate earnings for Kenyan publicly quoted companies are essentially independent and can be well approximated by a random-walk. His findings were also consistent with the studies in other countries.

Moko (1995) looked at the relationship between offering price at the subscription rate of initial public offering at the NSE. He found out that there was a significantly large return for the initial subscribers, adjusted for market effects in the short-run following the offering. The result of his study showed that discount on new issues had an association with the rate of subscription.

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

2.10 Summary Literature Review

From the reviewed literature, two information related factors that affect IPOs are cited. The first one is information asymmetry. That is, investors are differentiated by their levels of information about the true value of the issue into "informed investors" and "uninformed investors", with the former having perfect information. This information asymmetry creates uncertainty in the investor who will then tend to under price the issue. Baron (1982), Rock (1986) and Grinblatt and Hwang (1989) present models that suggest a positive relation between the degree of investor uncertainty over issue value and the extent of under pricing. The second factor is financial performance measures. The expected returns provide insights into pre- and post-IPO practices associated with an outperforming public company as well as the "measures that matter" to institutional investors (Ernst and Young, 2008).

The developing countries stock markets exhibits mixed characteristics where Ghana and NSE (Nigeria), Stock Markets shows inefficiency while NSE (Nairobi) conforms with efficient market hypothesis. These reactions of share prices to new information may not be immediate and thus prices may not fully reflect all available information. Seguin and Smoller (1997) provide evidence that an inverse relationship exists between the offering price of an IPO and subsequent market performance. This study seeks to determine whether a similar relationship exists between the stock price movements and securities of companies quoted in the NSE.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter addresses the research methodology and research design. The population of study and data collection also form part of this chapter. Data analysis concludes this chapter.

3.2 Research Design

This research was on the event study methodology (Dolley, 1993; Fama, 1969) to study the relationship between the price movements for securities of companies quoted in the NSE and new IPOs. This was what research would have to study and convey information that potentially influences the stock prices. The events defined or these studies are issue of IPOs (Barness and Shingung, 2002).

3.3 Population

The population of this study composed of all companies listed in the Nairobi stock Exchange (NSE). The study was a census of all the quoted companies in the NSE and hence no sampling was done. The study time period was between 2004-2009.

3.4 Data collection

In order to achieve the set objectives of this study secondary data used. The secondary data was be obtained from the NSE informational database for the period 2004-2009.

3.5 Data analysis

Data analysis was carried out using the comparison period return approach (CPRA) by Wooldridge (1983). The study determined prices effects of IPO announcement by testing the statistical difference of the mean daily return of the event period (observation period with the mean daily return of the comparison period. The comparison period for this study comprised of 45 surrounding days before the event study and 45 surrounding days after the IPO window. The advantage of this approach is that the event study approach tests for short-term movements in stock prices that are outside of the historical pattern, taking into account statistical errors in the estimates of the historical relationship.

The study intends to determine 102 daily returns surrounding each stock around the IPO announcement; that is 45 days abnormal returns for pre announcement period and the IPO day and 45 days abnormal returns post announcement period. Data from secondary source will be analyzed using the chart shown below;
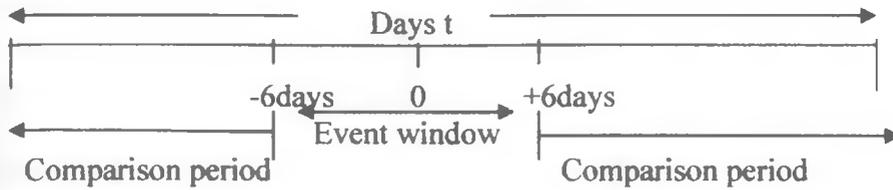
The portfolio daily returns on the stock were computed on each day surrounding the issue by using the following formula;

$$R_x = \frac{P_x - P_{x-1}}{P_{x-1}}$$

R_x – rate of return for each share on day t

P_x = closing price on share on day t

P_{x-1} = closing price on share on day t-1 (Previous day)

The mean portfolio daily return was also calculated for the IPO window and comparison periods. For each day, t-statistics and test of significance shall be done using SPSS statistics analysis software, the difference between the two period was computed to establish whether excess return around the announcement date are different from returns during the window period, the sign of the excess return shall determine the effect; if positive or negative. The weights for the portfolio stocks was assumed to be equal in the analysis and the mean portfolio daily return was calculated within the window period.

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CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter presents information as was collected from NSE relating to share price on period surrounding IPO's. Analysis and interpretation of the responses to effects of IPO's on share prices.

4.2 Data Analysis and Interpretation

Data collected from NSE was analyzed using the comparison period return approach. The study determined price effects against IPO announcement by testing the statistical difference of the mean daily return of the event period (observation period with the mean daily return of the comparison period). The comparison period for this study comprised of 45 surrounding days before the event study and 45 surrounding days after the IPO window. The advantage of this approach is that the event study approach tests for short-term movements in stock prices that are outside of the historical pattern, taking into account statistical errors in the estimates of the historical relationship.

The mean portfolio daily return was calculated for the IPO window and comparison periods. For each day, t-statistics and test of significance was done using SPSS statistical package for social science. The difference between the two period was computed to establish whether excess return around the announcement date are different from returns during the window period. The part presented the analysis adjusted mean return, market portfolio and SAR and the analysis of the above using skewness, mean, kurtosis, standardized range and standard deviation.

Table 4. 1: Kengen statistics

Performance Measure	Mean	Std. Deviation	Skewness	Kurtosis	Range
R_{mt}	0.007711	0.013878	-0.951	2.564	0.0613
R_{it}	0.260471	0.978987	4.009	16.358	4.301
AR_{it}	0.182353	0.969943	3.177	11.655	4.292

					4.3843
SAR$_{it}$	0.186135	0.990804	3.177	11.654	

From the findings in table of statistics the study found that the various measure of market performance was very sensitive to announcement of KENGEN IPO , the daily mean return had a mean of 0.26 and a strong standard deviation of 0.98 ,this information indicated that market was very sensitive to various changes , the same trend was observed in the adjusted mean return which had a mean of 0.18 slightly below the mean for normal return the same was also supported by strong standard deviation of 0.97.

The study analyzed the daily mean return for 45 days before and after kengen IPO by making a trend line of the value for mean return. The data on mean return was obtained from NSE.

Figure 4. 1: Graph for Mean Daily Return for Kengen IPO

mean daily return

According to the above figure, the mean return fluctuated positively after the short period surrounding the KENGEN IPO. This confirms that KENGEN IPO had a positive effect on share prices.

Table 4. 2: Eveready IPO Statistics

	Mean	Std. Deviation	Skewness	Std. Error of Skewness	Kurtosis	Std. Error of Kurtosis	Range
R$_{mt}$	0.012233	0.023053	-0.859	0.55	0.861	1.063	0.0895
R$_{it}$	0.306426	0.151652	4.009	0.55	16.358	1.063	5.0596
AR$_{it}$	0.258806	0.131805	3.174	0.55	11.719	1.063	5.0275
SAR$_{it}$	0.224726	0.982766	3.174	0.55	11.719	1.063	4.3655

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From the results in table above the study found that the market was sensitive to various changes as shown by the different measures of performances. The mean abnormal returns 0.28 and also supported by standard deviation of 0.13. From the above information of Eveready IPO the study found that the market was very sensitive to changes that were being brought about by Eveready IPO.

Figure 4. 2: Graph for Mean Daily Return for Eveready IPO
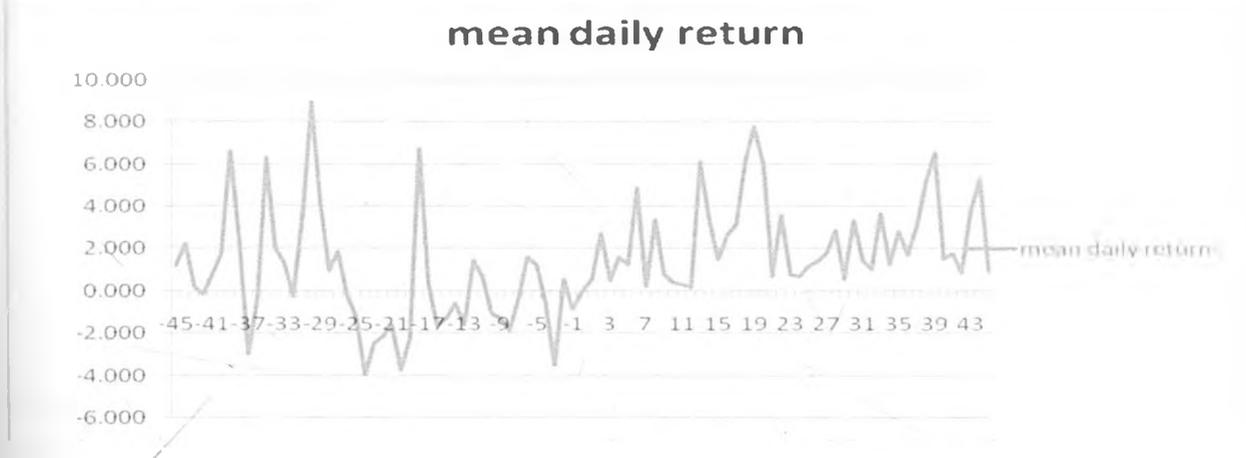
According to figure mean return, was found to be negatively fluctuating before the Eveready IPO from where then it started fluctuating upward which was an indication that the market was being positively influenced by Eveready IPO, this confirms that Eveready IPO had a positive effects on share prices.

Table 4. 3: Scan group statistics

	Mean	Std. Deviation	Skewness	Kurtosis	Range
R_{mt}	0.016315	0.038628	2.831	9.505	0.1718
R_{it}	0.278847	0.048003	4.009	16.358	4.6042
AR_{it}	0.239043	0.02912	3.283	12.302	4.5906
SAR_{it}	0.228094	0.981982	3.283	12.302	4.3804

From the results in table above the study found that the market was sensitive to various changes as shown by the different measures of performances being sensitive to changes brought by scan group IPO announcement. The mean abnormal returns 0.23 and also supported by standard

deviation of 0.02. From the above information of scan group IPO the study found that the market was very sensitive to changes that were being brought about by scan group IPO announcement as shown by various market performance measures.

Figure 4. 3: Graph for Mean Daily Return for scan IPO
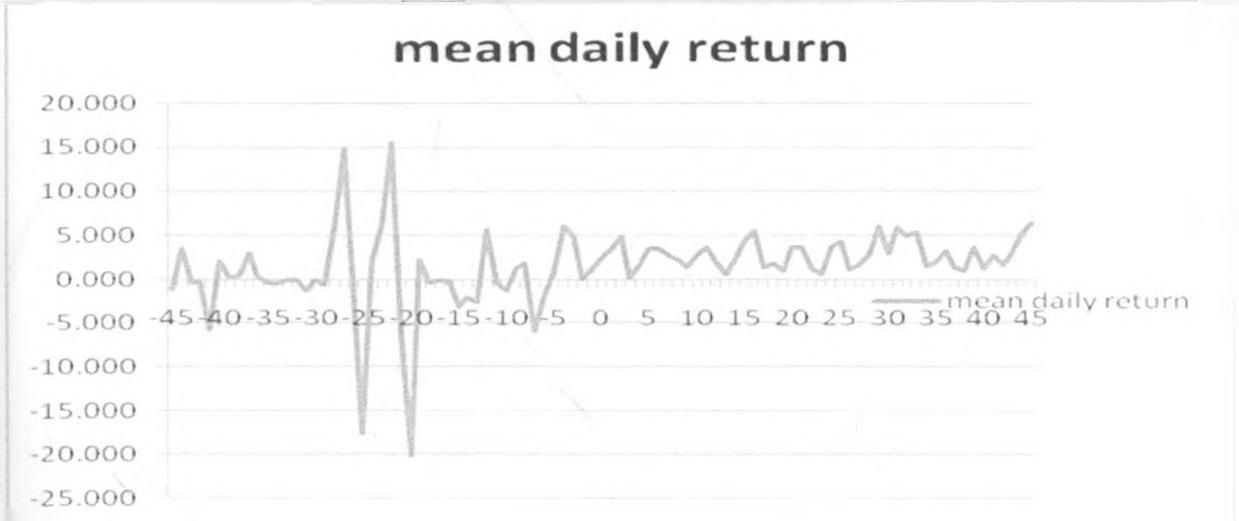
From the above figure on mean daily return for scan group IPO, the study found that scan group IPO had a positive impact on means daily return which I an indication that the IPO announcement had a positive impact on share price.

Table 4. 4: Safaricom IPO statistics

	Mean	Std. Deviation	Skewness	Kurtosis	Range
R_{mt}	0.008271	0.015888	-1.155	3.233	0.0711
R_{it}	0.315882	0.173176	4.005	16.335	5.1567
AR_{it}	0.216059	0.160647	3.24	11.993	5.145
SAR_{it}	0.209208	0.123842	3.24	11.993	4.9818

According to the table above the study found that the market was very sensitive to various measure of market performance, the daily mean return had a mean of 0.31 and a standard deviation of 0.17, this information indicated that market was very sensitive to various changes, the same trend was observed in the adjusted mean return which had a mean of 0.21 slightly below the mean for normal return. The same was supported by standard deviation of 0.16. From the above information relating to Safaricom IPO the study found that the market was very

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sensitive to changes that were being brought about by Safaricom IPO.

Figure 4. 4: Mean daily return for Safaricom IPO
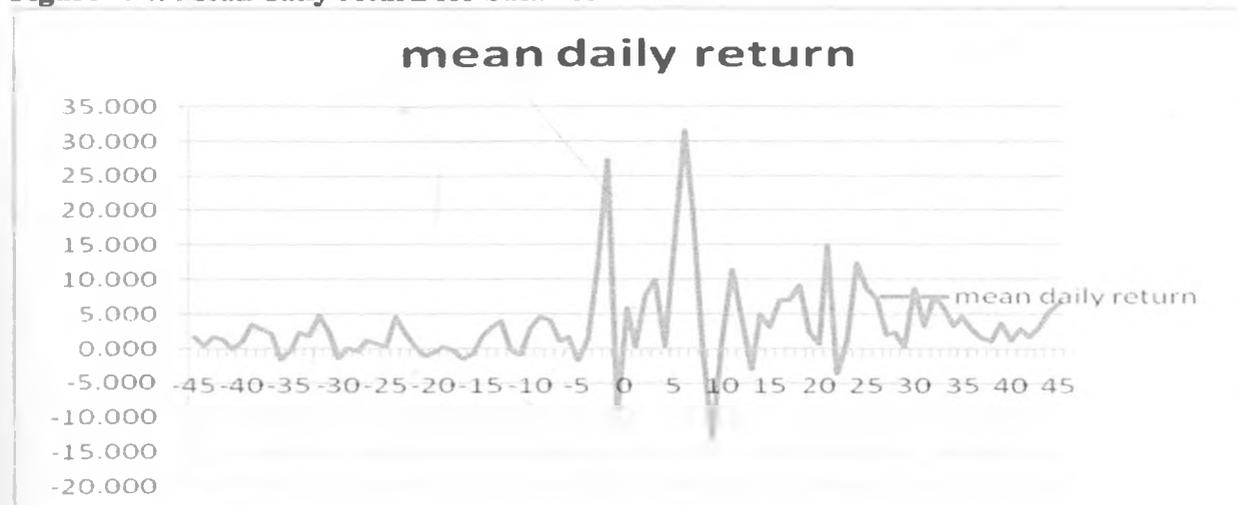
From the above figure the study found that major price fluctuation were observed in the period surrounding the Safaricom IPO, the study found that Safaricom IPO had a positive effects on the share price as shown by positive fluctuation in mean daily return after the announcement of Safaricom IPO.

Table 4. 5: Co-operative IPO statistics

	Mean	Std. Deviation	Skewness	Kurtosis	Rage
R_{mt}	0.009289	0.017843	-1.155	3.233	0.0798
R_{it}	0.375941	0.395962	4.005	16.335	6.136
AR_{it}	0.304529	0.370765	3.202	11.876	6.122
SAR_{it}	0.217637	0.979602	3.202	11.876	4.3749

According to the table above the study found that that the market was very sensitive to various measure of market performance, the daily mean return had a mean of 0.37 and a standard deviation of 0.39, this information indicated that market was very sensitive to various changes, the same trend was observed in the adjusted mean return which had a mean of 0.30 slightly

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below the mean for normal return also the same was supported by standard deviation of 0.37. From the above information of co-operative IPO the study found that the market was very sensitive to changes.

Figure 4. 5: Mean daily return for Co-operative IPO
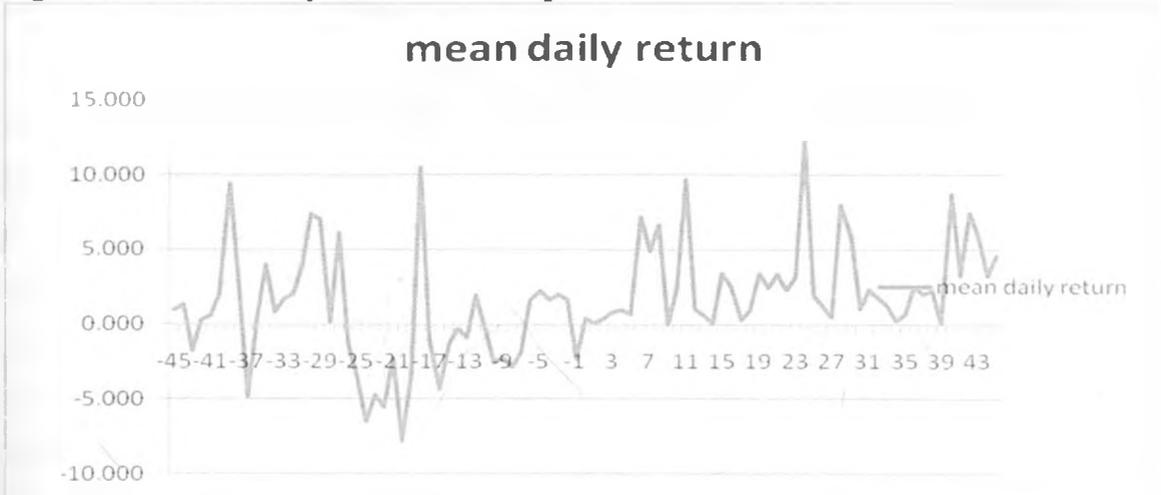
In days before co-operative announcement there we negative fluctuation in the mean daily mean, after the co-operative announcement the study found that positive fluctuation in the mean daily return, an indication that the IPO had a positive effect on the price of shares.

Figure 4. 6: Mean daily returns and t-statistics and significance
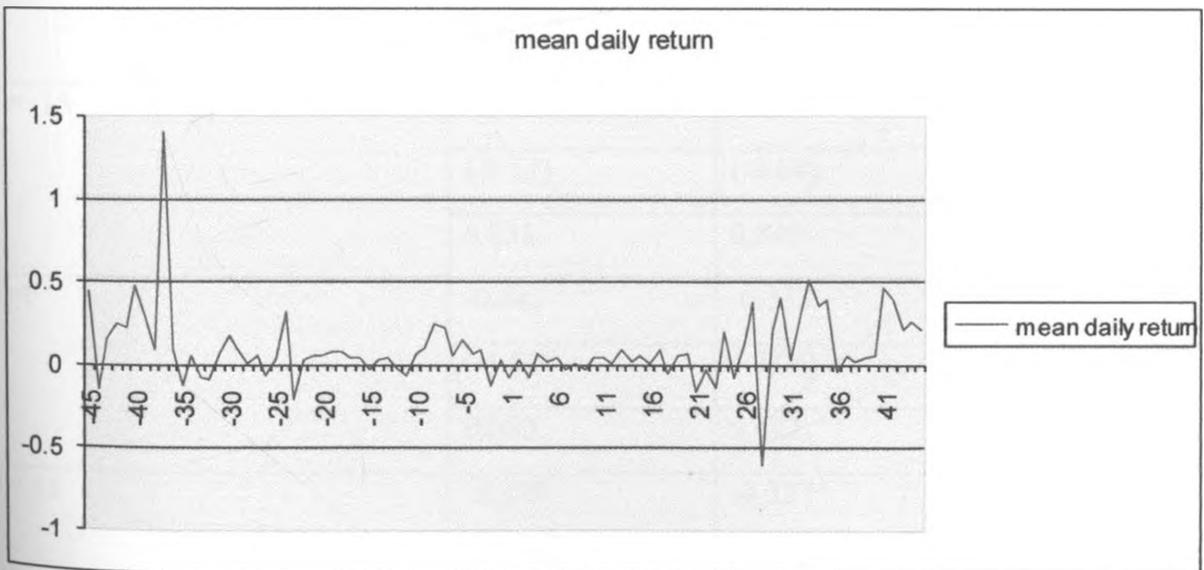
From the above figure it was observed that at earlier day of IPO's announcement the market was performing very well and the IPO had no effects on the daily mean return of the stock trading in the market, nearing the IPO event day the mean day return decreased suggesting that investors in the market are not active on the stock in the market as they are waiting the announcement of IPO's to invest in when the price are yet to rise up. After the IPO's announcement the mean daily returns are low suggesting that most of the people are waiting for price of the issued stock to rise and then sell at higher prices. After few weeks of trading the seller expectation are frustrated by the market and the mean daily return fall down below zero only to start rising significantly due to seller initiated trades, this also attracts many investors and the market returns to normalcy due to seller buyer initiated trades. From the above finding the study found that IPO's in Kenya have negative effects on mean daily returns on days nearing the event window while it had positive effects on days a way from the vent window this could be attributed to seller buyer initiated trades.

Table 4. 6: Predictability of Subsequent Returns Using Trade Imbalances

Dependent variable : Cumulative return	Independent variable ;trade imbalances as of event day t		
	t=1	t=2	t=3
T= -45	-0.339	-0411	0.323
	(1.08)	(-7.29)	(-6.99)
	0.018	0.457	0.437
T= -15	-0.457	-0.521	-0.403
	(-1.51)	(-8.64)	(-6.94)
	0.035	0.542	0.433
T=0	-0.543	-0.333	-0.201
	(-1.830	(-2.96)	(-1.95)
	0.050	0.122	0.057
T= 15	-0.259	-0.327	-0.262
	(-0.77)	(-2.58)	(-2.38)

	0.010	0.095	0.085
T= 45	-0.105	-0.234	-0.219
	(-0. 34)	(-1.71)	(-1.83)
	0.002	0.044	0.050

For a sample of 7 initial public offerings between 2004 and 2009, cross-sectional regressions are estimated to determine the link between trade imbalances and subsequent returns. This table presents estimated slope coefficients, t-statistics (in parentheses) and R^2 from regressions of the form:

$$CR_{j(t, T)} = \alpha + \beta \, IMBAL_{jt} + \varepsilon_j$$

Where imbalance jt is the cumulative trade imbalance for firm j over the first t trading days calculated as the difference between all sellers initiated trade volume and all buyer initiated trade volume. The difference is then standardized by dividing by the number of shares outstanding. CRj (t, T) is the cumulative bid-to-bid return for firm j from the close of trading day t to the close of day T.

Table 4. 7: Duration of Stabilization and Use of the Over-allotment Option

	Intercept	OA	OAFULL	OASHRS	Adj R^2
1	23.82	10.50			5.7
	(7.27)	(2.16)			
2	24.46		15.92		11.4
	(8.98)		(2.970		
3	24.26			80.84	6.0
	(7.82)			(2.21)	

This table reports results of three cross-sectional regressions that examine the relation between the length of the stabilization period and the exercise of the over-allotment option. All 7 IPO's

issued between 2004 and 2009 that had zero or negative 90 day returns and over-allotment option information are included. The dependent variable (Edate) is the first day that the bid price dropped below the issue price. In model 1, the independent variable (OA) equals one for the 7 IPO's that exercised the over-allotment option, zero otherwise. In model 2, the independent variable (OAFull) equals one for the 9 IPO's that used the full 15% over-allotment, zero otherwise. In model 3, the independent variable (OAShrs) is the number of shares purchased through the over-allotment option, as a percentage of total shares issued. T-statistics are in parentheses.

Table 4. 8: Joint Frequency Distribution of Trade Size and Buy

Trade size		Trade Direction		
	Buy	Interminable	Sell	Total
Large trades	2680	65.0	18882	21627
	(5.5)	(0.1)	(38.7)	(44.40
	22.0	69.9	51.8	
Small trades	9493	28	17594	27115
	(19.5)	(0.1)	(36.1)	(55.6)
	78.0	30.1	48.2	
Total	12173	93	36478	48742
	(25.0)	(0.2)	(78.4)	(100.0)

The data in the above table shows the joint frequency distribution of trades by size and buy: sell direction for 7 IPO's. All 7 IPO's issued between 2004 and 2009 are included. All transactions in the first 45 before and after days of trading are included. Trades are classified as small if they are less than a firm-specific size threshold. The Lee-Ready (1991) algorithm is used to classify trades as seller- or buyer-initiated. Trades are classified as indeterminable if the prevailing quote is non-tradable (e.g. during trading halts or fast trading conditions), if it is the first trade of the year, or if it carries an out-of-sequence code. Percentages of total sample are in parentheses, percentage of column total is italicized.

The first OLS regression calculates the mean daily returns for the 45 days before and after trading days around the event day and tests whether each trading day's mean return is significantly different from zero. The mean return series is similar to the mean return pattern presented by Weiss (1989) and Peavy (1990). Like these earlier studies, it was found that the price decline in shares of IPO's to be pervasive. The study found a temporary positive average

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mean return of 0.7 percent on first two day. By day 45, however, the average mean return for our 7 IPO's is 6.8 percent. The mean daily return is higher for the first three months. This indicates distributional skewness, with large negative returns in a small number of funds.

There are good reasons to expect low volume in the first days of trading in IPO's. If traders have rational expectations about an imminent price decline, few will buy. Moreover, if investors participate willingly and with full information in the pre-issue, few will sell. Daily volume of buys do not equal sells until the second month of trading. Since short-sellers cannot enter the market at this early stage of trading, the large selling activity during the initial aftermarket strongly suggests the presence of flippers.

The average spread on the first day is 12.6 cents per share while the spread averaged over days 40 to 45 is 17.5 cents per share, an increase of nearly 40 percent. When we regress the daily cross-sectional average spread against a linear time-trend, the estimated intercept is 13.1 cents per share, with a slope of 0.047 cents per share (t-statistic = 20.85), indicating an average increase in the spread of approximately 0.05 cents per day. The R^2 for the regression is 0.816, suggesting a large proportion of the day-to-day variation is captured by the linear model. By day 45, the percentage of firms with the minimum spread drops below 60 percent. Again, the evidence suggests that bid-ask spreads are initially narrower than their free market levels. The bid-ask spread results are consistent with extensive price stabilization in the first few weeks of trading. The relation between order imbalances over the first trading days and the eventual aftermarket performance measured on day 45. Whether order imbalances over the first few trading days convey information about either the magnitude or timing of subsequent price declines.

CHAPTER FIVE: DISCUSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents discussions of the key findings presented in chapter four, conclusions drawn based on such findings and recommendations there-to. This chapter will thus be structured into discussion, conclusion, recommendations and areas for further research. The discussion was based on the objective of the study which was to find out if there exists a reaction of stock price movements at the advent of IPO's in the NSE.

5.2 Discussion

From the findings it was found that at earlier days of IPO's announcement the market was performing normally with minimal effects from the IPO announcement, nearing the IPO event day the market price of stocks in negatively affected by IPO's as seen by declining mean daily return as it nears the event day, suggesting that investors in the market are not active on the stock currently in the market and most of them are waiting the announcement of IPO's to invest in when the price are yet at low price so as to leap the benefits when price shoots up. After the IPO's announcement the mean daily returns are low which could be explained by the fact that most of the sellers in the market are not active in selling their stock as they are waiting for price to rise and sell when the price are higher. After few weeks of trading the seller expectation are frustrated by the market anomalies and the mean daily return fall down below zero only to start rising significantly after a few weeks due to seller initiated trades, this in turn attracts so many investors and the market returns to normalcy due to seller buyer initiated trades, this results to positive effects of IPO's due to seller buyer initiated trades and in the long run the market return to normalcy.

The study found a temporary positive average mean return of 0.7 percent on first two day. By day 45, however, the average mean return for our 7 IPO's is 6.8 percent. The mean daily return is higher for the first three months. This indicates distributional skewness, with large negative returns in a small number of funds. The reasons to expect low volume in the first days of trading in IPO's are due to the expectation of the sellers and investor on the performance of IPO's. If traders have rational expectations about an imminent price decline, few will buy. Moreover, if investors participate willingly and with full information in the pre-issue, few will sell. Daily

volume of buys do not equal sells until the second month of trading. Since short-sellers cannot enter the market at this early stage of trading, the large selling activity during the initial aftermarket strongly suggests the presence of flippers.

The R^2 for the regression is 0.816, suggesting a large proportion of the day-to-day variation is captured by the linear model. By day 45, the percentage of firms with the minimum spread drops below 60 percent. Again, the evidence suggests that bid-ask spreads are initially narrower than their free market levels. The bid-ask spread results are consistent with extensive price stabilization in the first few weeks of trading. The relation between order imbalances over the first trading days and the eventual aftermarket performance measured on day 45. Whether order imbalances over the first few trading days convey information about either the magnitude or timing of subsequent price declines.

5.3 Conclusion

From the findings of the study, the study concludes that issuing of IPO's at NSE has both positive and negative effects on daily mean returns, negative effects are on the days nearing the IPO's event days which are as result of buyer and seller expectation in the market, while positive effects are in the days far from the IPO's event day which are result of buyer seller initiated trading.

5.4 Recommendations

The study recommends that investors should participate in the stock markets during issue of IPOs but should also target other stocks in the market as this may provide opportunity for investment through under pricing of these stocks as investors scamper for the IPO. The announcement of IPO should be used as information in the market that posit value and that can be traded. The management of NSE should improvise ways to reduce the market anomalies presenting inefficient market characteristics to give investor confidence of the market.

5.5 Areas of Further Research

This study recommends that further studies be done on the stock splits effects on stock prices of firms quoted in the Nairobi Stock Exchange. This owes to the fact that splits would increase the number of shares without a consequent increase in market capitalization.

5.6 Limitations of the study

The main limitation was on availability of data for analysis as it required financial resources to obtain. The analysis tool was not easily accessible and required adequate orientation for the researcher to be able to apply it for analysis. This meant an input of more data analysis time. The use of secondary data helped achieve the research results as stipulated in this report and thus the efforts to detail all the relevant information materialised.

The weights for the stocks were assumed to be equal for the purpose of the analysis but the results may be different if the actual weights of the portfolio were taken.

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APPENDICES

Appendix I: Companies Listed on the Nairobi Stock Exchange

AGRICULTURAL

i)   Unilever Tea Kenya Limited

ii)   Kakuzi Limited

iii)   Rea Vipingo Plantations Limited

iv)   Sasini Tea and Coffee Limited

COMMERCIAL AND SERVICES

v)   Car and General (K) Limited

vi)   CMC Holdings Limited

vii)   Hutchings Biemer Limited

viii)   Kenya Airways Limited

ix)   Marshalls (EA) Limited

x)   Nation Media Group

xi)   T.P.S Limited

xii)   Uchumi supermarket Limited

FINANCE AND INVESTMENT

i)   Barclays Bank Limited

ii)   C.F.C Bank Limited

iii)   Diamond Trust Bank Kenya Limited

iv)   Housing Finance Company Limited

v)   I.C.D.C Investments Company Limited

vi)   Jubilee Insurance Company Limited

vii)   Kenya Commercial Bank Limited

viii)   National Bank of Kenya Limited

ix)   N. I .C Bank Limited

x)   Pan Africa Insurance Holdings Limited

xi)   Standard Chartered Bank Limited

INDUSTRIAL AND ALLIED

i)   Athi River Mining Limited

ii)   B.O. C Kenya Limited

iii)   Bamburi Cement Limited

iv)   British American Tobacco Kenya Limited

v)   Carbacid Investment Limited

vi)   Crown Berger Limited

vii)   Olympia Capital Holdings Limited

viii)   E.A Cables Limited

ix)   E.A Portland Cement Limited

x)   E.A. Breweries Limited

xi)   Firestone E.A. Limited

xii)   Kenya Oil Co. Limited

xiii) Mumias Sugar Company Limited

xiv)   Kenya Power and Lighting Limited

xv)   Total Kenya Limited

xvi)   Unga Group Limited

ALTERNATIVE INVESTMENT

i)   A. Baumann and Company Limited

ii)   City Trust Limited

iii)   Eaagads Limited

iv)   Express Limited

v)   Wiliamson Tea Kenya Limited

vi)   Kapchorua Tea Company Limited

vii)   Kenya Orchards Limited

viii) Limuru Tea Company Limited

ix)   Standard Group Limited.

xii)   Kenya Oil Co. Limited

xiii)   Mumias Sugar Company Limited

xiv)   Kenya Power and Lighting Limited

xv)   Total Kenya Limited

xvi)   Unga Group Limited

ALTERNATIVE INVESTMENT

i)   A. Baumann and Company Limited

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iii)   Eaagads Limited

iv)   Express Limited

v)   Wiliamson Tea Kenya Limited

vi)   Kapchorua Tea Company Limited

vii)   Kenya Orchards Limited

viii)   Limuru Tea Company Limited

ix)   Standard Group Limited.

Appendix II: Mean daily returns and t-statistics and significance

Day	mean daily return t-statistics	mean daily return t-significance	Day	mean daily return t-statistics	mean daily return t-significance	Day	mean daily return t-statistics	mean daily return t-significance
-45	0.44	1.72	-15	-0.02	-0.51	16	0.01	0.06
-44	-0.14	-0.55	-14	0.04	1.10	17	0.10	1.08
-43	0.15	0.58	-13	0.05	1.28	18	-0.05	-0.57
-42	0.25	0.95	-12	-0.02	-0.57	19	0.06	0.58
-41	0.23	0.90	-11	-0.06	-1.61	20	0.07	0.62
-40	0.48	1.87	-10	0.07	1.63	21	-0.16	-1.52
-39	0.30	1.15	-9	0.11	2.83	22	-0.02	-0.21
-38	0.10	0.40	-8	0.25	0.95	23	-0.13	-1.24
-37	1.40	5.40	-7	0.23	0.90	24	0.20	1.83
-36	0.10	0.98	-6	0.06	0.59	25	-0.07	-0.66
-35	-0.12	-1.07	-5	0.15	0.58	26	0.13	1.21
-34	0.06	0.59	-4	0.07	1.63	27	0.38	3.49
-33	-0.07	-0.64	-3	0.10	0.98	28	-0.60	-2.33
-32	-0.08	-0.71	-2	-0.12	-1.07	29	0.22	0.86
-31	0.07	0.64	-1	0.04	0.42	30	0.40	1.54

-30	0.18	1.71	1	-0.07	1.63	31	0.04	0.15
-29	0.09	0.87	2	0.03	0.75	32	0.31	1.20
-28	0.01	0.12	3	-0.07	-1.64	33	0.51	1.98
-27	0.06	0.59	4	0.07	1.85	34	0.36	1.40
-26	-0.06	-0.64	5	0.02	0.47	35	0.39	1.50
-25	0.04	0.42	6	0.05	1.24	36	-0.04	-0.14
-24	0.32	3.32	7	-0.03	-0.68	37	0.06	0.67
-23	-0.21	-2.20	8	0.01	0.20	38	0.02	0.47
-22	0.03	0.28	9	-0.03	-0.89	39	0.05	0.48
-21	0.06	0.67	10	0.05	0.48	40	0.06	0.57
-20	0.06	0.67	11	0.05	0.48	41	0.46	1.40
-19	0.08	0.83	12	0.01	0.10	42	0.39	1.50
-18	0.08	1.94	13	0.09	0.89	43	0.22	0.25
-17	0.05	1.29	14	0.02	0.25	44	0.26	0.57
-16	0.05	1.29	15	0.06	0.57	45	0.21	0.10