THE BEHAVIOUR AND FINANCIAL PERFORMANCE OF INDIVIDUAL INVESTORS IN KENYA

BY

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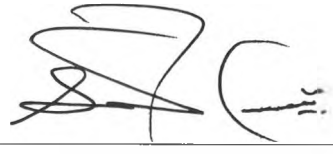
DECLARATION

This research project is my original work and has not been presented for a Degree in any other university.

Signature:  10/11/2011

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DEDICATION

I dedicate this research project to my children Mary and Paul for the time I took away from them as I studied for this course and to my partner Agnes for her support during the study.

ACKNOWLEDGEMENT

I wish to acknowledge the invaluable guidance and assistance received from personalities from various quarters who either directly or indirectly made this possible. To them all, I will always remain indebted. I suppose there are a few personalities who deserve special mention.

I start by glorifying God for the gift of life, strength and the opportunity to undertake this work due to his will and acceptance. May I then proceed to express gratitude to my late parents Paul and Mary Odera for the role they played in my life. I am sure they are happy for me wherever they are.

I am most grateful to my supervisor Dr. Josiah Aduda for not only supervising me on this project but also for the knowledge he imparted to me as a lecturer in both undergraduate and postgraduate studies. My I in the same breath pass my regards to all the lecturers who took me through the course.

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ABSTRACT

While conventional academic finance emphasizes theories such as Modern Portfolio Theory (MPT) and the Efficient Market Hypothesis (EMH), the emerging field of behavioral finance investigates the cognitive factors and emotional issues that impact the decision-making process of individuals, groups, and organizations. This paper presents some general principles of behavioral finance including: overconfidence, cognitive dissonance, regret theory, and prospect theory. The paper seeks to identify such behaviors from individual investors as they set out to make their investment decisions.

The research also goes ahead to identify the companies that majority of the individuals sampled either buy or sell shares on. An analysis of the so identified companies on firm specific variables such as abnormal returns and measures risk such as volatility and market capitalisation will be used to reveal the financial performance of the investors. From this, the research will determine whether the individual investors were poised for no gains at all or benefited from long term or short term gains. The paper uses both questionnaire survey and secondary data from the NSE and CMA to identify the individual investor behaviors and determine their financial performance respectively.

From this research, the researcher hopes to provide strategies to assist individuals to resolve the mental errors and emotional pitfalls by recommending some important investment approaches for those who invest in stocks. This will enable the fund managers as a result of being able to set better investment outcomes, achieve better advisory relationships with their clients. The researcher will also be able to contribute literature which will form the basis of future more advanced research work on the field of behavioral finance.

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ABBREVIATIONS

BM Book-to Market Ratio

CAPM Capital Asset Pricing Model

CMA Capital Markets Authority

EMH Efficient Market Hypothesis

GDP Gross Domestic Product

MPT Modern Portfolio Theory

NASI Nairobi All Share Index

NSE Nairobi Stock Exchange

SPSS Statistical Package for Social Sciences

CHAPTER ONE

1.0 INTRODUCTION

1.1 Back ground of the Study

During the 1990s, a new field of Finance known as behavioural finance began to emerge in many academic journals, business publications, and even newspapers. The foundations of behavioural finance, however, can be traced back over several years. Several original books written in the early years marked the beginning of behavioural finance school. Originally published in 1841, MacKay's 'Extraordinary Popular Delusions and the Madness of Crowds' presents a chronological timeline of the various panics and schemes throughout history. This work shows how group behaviour applies to the financial markets of today. Le Bon's work, 'The Crowd: A Study of the Popular Mind', discusses the role of 'crowds' (also known as crowd psychology) and group behaviour as they apply to the fields of behavioral finance, social psychology, sociology and history. Selden's book, 'Psychology of the Stock Market' was one of the first to apply the field of psychology directly to the stock market. This classic discusses the emotional and psychological forces at work on investors and traders in the financial markets. These three works along with several others form the foundation applying psychology and sociology to the field of finance.

Behavioural finance is the study of the influence of psychology on the behaviour of financial practitioners and the study of subsequent effect of markets "Behavioural finance is the study of how psychology affects financial decision making and financial markets." Shefrin (2001). Much of economic and financial theories presume that individuals act rationally and consider all available information in the investment decision-making process. Behavioural finance, throws more light on why people buy or sell stocks – and even why they do not buy stocks at all. There is also emerging evidence that institutional investors behave differently from individual investors, mainly because they are agents acting on behalf of the ultimate investors. Markets are neither perfectly efficient nor completely inefficient and evidence was mounting that even the Capital Asset Pricing Model (CAPM) is not a good description of reality. Behavioural finance attempts to

better understand and explain how emotions and cognitive errors influence investors, Statman (1999). Barberis and Thaler (2002) contend that, behavioural finance argues that some financial phenomena can plausibly be understood using models in which some agents are not fully rational. The field has two building blocks: limits to arbitrage, which argues that it can be difficult for rational traders to undo the dislocations caused by less rational traders; and psychology, which catalogues the kinds of deviations from full rationality we might expect to see.

Selden (1996) wrote Psychology of the Stock Market. He based his book upon the belief that the movements of prices on the exchanges are dependent to a very considerable degree on the mental attitude of the investing and trading public. Festinger et al. (1956) introduced a new concept in social psychology: the theory of cognitive dissonance that when two simultaneously held cognitions are inconsistent, they will produce a state of cognitive dissonance. Because the experience of dissonance is unpleasant, the person will strive to reduce it by changing their beliefs. Tversky and Kahneman (1973) introduced the availability heuristic: a judgmental heuristic in which a person evaluates the frequency of classes or the probability of events by availability i.e. by the ease with which relevant instances come to mind. The reliance on the availability heuristic leads to systematic biases.

Kahneman and Tversky (1979) presented a critique of expected utility theory presented by Bernoulli (1954) as a descriptive model of decision making under risk and developed an alternative model, which they called the prospect theory. They found empirically that people underweight outcomes that are merely probable in comparison to outcomes that are obtained with certainty. They noted that people generally discard components that are shared by all prospects under consideration. They realized that under prospect theory, value is assigned to gains and losses rather than to final assets while probabilities are replaced by decision weights. The value function is defined on deviations from a reference point and is normally concave for gains (implying risk aversion), commonly convex for losses (risk seeking) and is generally steeper for losses than for gains (loss aversion). The theory, which they confirmed by experiment, predicts a distinctive fourfold pattern of risk attitudes: risk aversion for gains of moderate to high probability

and losses of low probability, risk seeking for gains of low probability and losses of moderate to high probability.

Thaler (1985) posits that there are circumstances when consumers act in a manner that is inconsistent with economic theory and he proposes that Kahneman and Tversky's prospect theory be used as the basis for an alternative descriptive theory. Topics discussed are: underweighting of opportunity costs, failure to ignore sunk costs, search behavior, choosing not to choose and regret, and precommitment and self-control. The paper introduced the notion of `mental accounting'. Mental accounting is the set of cognitive operations used by individuals and households to organize evaluate and keep track of financial activities.

In another landmark paper, Tversky and Kahneman (1982) introduced framing. They showed that the psychological principles that govern the perception of decision problems and the evaluation of probabilities and outcomes produce predictable shifts of preference when the same problem is framed in different ways. In 1985 Werner F. M. De Bondt and Richard Thaler published 'Does the stock market overreact?' in The Journal of Finance, effectively forming the start of what has become known as behavioural finance. They discovered that people systematically overreact to unexpected and dramatic news events resulting in substantial weak-form inefficiencies in the stock market. This they found to be both surprising and profound. Tversky and Kahneman (1986) argue that, due to framing and prospect theory, the rational theory of choice does not provide an adequate foundation for a descriptive theory of decision making. Yaari (1987) proposes a modification to expected utility theory and obtains a so-called 'dual theory' of choice under risk. De Bondt and Thaler (1987) report additional evidence that supports the overreaction hypothesis. Samuelson and Zeckhauser (1988) performed a series of decision-making experiments and found evidence of status quo bias.

Tversky and Kahneman (1992) superseded their original implementation of prospect theory with cumulative prospect theory. The new methodology employs cumulative rather than separable decision weights which applies to uncertain as well as to risky prospects with any number of outcomes, and it allows different weighting functions for gains and for losses. Plous (1993) wrote The Psychology of Judgment and Decision

Making which gives a comprehensive introduction to the field with a strong focus on the social aspects of decision making processes.

Odean (1998) tested and found evidence for the disposition effect, the tendency of investors to sell winning investments too soon and hold losing investments for too long. Kahnneman et al. (1998) propose a theory of security markets based on investor overconfidence about the precision of private information and biased self-attribution which causes changes in investors' confidence as a function of their investment outcomes leading to market under and over reactions. Odean (1999) demonstrated that overall trading volume in equity markets is excessive, and one possible explanation is overconfidence. Hong and Stein (1999) model a market populated by two groups of bounded-rational agents: 'news watchers' and 'momentum traders' which leads to under reaction at short horizons and overreaction at long horizons. Nofsinger and Sias (1999) found that institutional investors positive-feedback trade more than individual investors and institutional herding impacts prices more than herding by individual investors.

There is a commonly observed but unexpected negative correlation between perceived risk and perceived benefit. Finucane, et al. (2000) concluded that this was due to the affect-heuristic where peoples tend to derive both risk and benefit evaluations from a common source. Shleifer (2000) publishes Inefficient Markets: An Introduction to Behavioural Finance, a quality book that considers behavioral finance vis-à-vis the Efficient Market Hypothesis (EMH).

Psychological research has established that men are more prone to overconfidence than women especially in male-dominated areas such as finance, whilst theoretical models predict that overconfident investors trade excessively. Barber and Odean (2001) found that men trade 45 per cent more than women and thereby reduce their returns more so than do women and conclude that this is due to overconfidence. Grinblatt and Keloharju (2001) identified the determinants of buying and selling activity and found evidence that past returns, reference price effects, tax-loss selling and the fact that investors were reluctant to realize losses were all determinants of trading. Huberman (2001) provided compelling evidence that people had a propensity to invest in the familiar, while often ignoring the principles of portfolio theory.

1.2 Statement of the Problem

Investment in equities of companies listed in the Nairobi Stock Exchange by the local investors has gained currency in the country over the last few years. This research will be trying to find out what guides the investors' to participate in the equities market, the criteria they use in selecting their stock and their performance.

Lack of financial knowledge by a large number of stockholders in the Kenyan market should be a reason to want to know how the individuals go about making their investment decisions. It will be worth establishing whether the investors' investment decisions vary from the assumptions of rationality or not. The study will set out to test Statman's (1999) argument that market behavior diverge from the expected rational efficient market that standard finance is built and how investors actually behave. Barber and Odean (1999) disagreement with the assumption of modern financial economics that people behave with extreme rationality will be tested to establish whether it holds true in the Kenyan market.

Werah (2006) did a study to survey the influence of behavioural biases on investor activities at the NSE. The study population composed of both individual and institutional investors at the NSE. Data was collected through questionnaires and an analysis was done to establish the influence of herd behaviour, mental accounting, loss aversion, anchoring, over reaction and under reaction, overconfidence, confirmation bias and regret aversion on investor activities at the NSE. The results obtained from the research suggested that the behaviour of investors at the NSE were to some extent irrational when considered from the rationality of the investors in their disregard of fundamental estimations as a result of herd behaviour, regret aversion, overconfidence and anchoring.

Mbaluka (2008) study established the existence of behavioral effects on individual investment decision making process. His results showed that investors had their rationality affected by psychological aspects. The study found out that investors did not invest as expected as they showed unwillingness to change their portfolio despite unattractive macroeconomic outlook. The endowment effect was identified with investors

in the experiment with 23% of them changing their portfolio mix while 77% failed to change even when the economic outlook demanded that change.

In view of this, it will be necessary to establish whether behavioural factors influence the performance and behavior of individuals investing at the NSE on their own account. Whereas many studies have been carried out in other developed financial markets, little is known about the performance and behavioral factors on individuals' investment decision making in Kenya. The studies that have been conducted in the area have mainly been of the Western culture based on individuals who profess very distinct behaviours from the Kenyan populace. The countries in which such studies have been conducted have attained higher levels of development than Kenya. Thus the individuals' in these countries usually have relatively high per capita incomes and their country's Gross Domestic Product (GDP) also tends to be high. This brings about a situation where the states of the economy will have a strong influence on the individuals' investment behaviours. From this it is clear that the benefits of studying Kenyan individual investors will provide an insight that will be entirely different from the Western culture. This will help come up with findings that will be relevant in the local set up.

1.3 Objectives of the Study

1.3.1Main Objective

To establish whether individual Kenyan investors in stocks are guided by their behavioural considerations when investing in equities of companies listed at the Nairobi Stock Exchange in disregard of the standard finance formulated investment practices and the implications of their decisions in regards to the financial performance of the companies their decisions were based upon.

1.3.2 Specific Objectives

The study will seek to find out how the individual investors make their investment decisions i.e. what factors do they take into consideration as they go about investing.

Find out whether the investors are familiar with the best investment practices that are ascribed to in the traditional standard finance.

The study will also seek to find out the results of the individuals' investment decisions. Whether they proved to be profitable or not as will emerge from the financial evaluation of the companies their investment activities were centered on.

1.4 Significance of the Study

Understanding the behavioural factors that underlie individual investors' decision making will help investment managers to set better investment outcome and achieve better advisory relationship with their clients.

The study will make a contribution to academic literature in the field of behavioural finance in Kenya particularly in investor psychology an emerging area where not a lot of research has been done.

The study will add to the existing body of knowledge in behavioural finance thereby providing a platform for further research in investor psychology, a raging debate in finance

CHAPTER TWO

2.0 LITERATURE REVIEW

2.1 Introduction

This chapter contains the documentation of a few theories on the field of behavioral finance highlighting the biases that individuals exhibit in their day today decision making activities. The chapter also delves into the empirical studies of similar studies that have been carried out by various researchers elsewhere that have a bearing on this particular study.

The section enumerates the general issues in the field that are deemed necessary in the understanding of the influence of behavioural finance in the contemporary set up. The chapter ends by acknowledging the departure from the commonly held view that investors are always rational guided by reason, logic and exercises independent judgments in decision making.

2.2 Review of Theories

Recent literature in empirical finance is surveyed in its relation to underlying behavioural principles which come primarily from psychology, sociology and anthropology, Shiller (2002). The behavioural principles are: prospect theory, regret and cognitive dissonance, anchoring, mental compartments, overconfidence, over and under reaction, representativeness heuristic, the disjunction effect, gambling behaviour and speculation, perceived irrelevance of history, magical thinking, quasi-magical thinking, attention anomalies, the availability heuristic, culture and social contagion, and global culture.

2.2.1 Prospect Theory

Allais (1953) reported examples showing that in choosing between certain lotteries, people systematically violated the theory. Kahneman and Tversky (1979) gave the following experimental evidence to illustrate one of Allais' examples. When their subjects were asked to choose between a lottery offering a 25% chance of winning 3,000 and a lottery offering a 20% chance of winning 4,000, 65% of their subjects chose the

latter, while when subjects were asked to choose between a 100% chance of winning 3,000 and an 80% chance of winning 4,000, 80% chose the former.

Expected utility theory predicts that they should not choose differently in these two cases, since the second choice is the same as the first except that all probabilities are multiplied by the same constant. Their preference for the first choice in the lottery when it is certain in this example illustrates what is called the "certainty effect", a preference for certain outcomes.

Prospect theory actually resembles expected utility theory in that individuals are represented as maximizing a weighted sum of "utilities", although the weights are not the same as probabilities and the "utilities" are determined by what they call a "value function" rather than a utility function.

The weights are, according to Kahneman and Tversky (1979) determined by a function of true probabilities which gives zero weight to extremely low probabilities and a weight of one to extremely high probabilities. That is, people behave as if they regard extremely improbable events as impossible and extremely probable events as certain. However, events that are just very improbable are given too much weight; people behave as if they exaggerate the probability. Events that are very probable are given too little weight; people behave as if they underestimate the probability. If expected utility function is modified only by substituting the Kahneman and Tversky weights for the probabilities in expected utility theory, it might help explain a number of puzzling phenomena in observed human behaviour towards risk. The Kahneman-Tversky weighting function may explain observed overpricing of out-of-the money and in-the-money options. The reference point is the individual's point of comparison, the "status quo" against which alternative scenarios are contrasted. Taking value as a function of wealth, the Kahneman-Tversky (1979) value function is upward sloping everywhere, but with an abrupt decline in slope at the reference point. For wealth levels above the reference point, the value function is concave downward, just as are conventional utility functions. At the reference point, the value function may be regarded, from the fact that its slope changes abruptly there, as infinitely concave downward. For wealth levels below the reference point, they found evidence that the value function is concave upward, not downward. People are risk

lovers for losses, they asserted. Perhaps the most significant thing to notice about the Kahneman-Tversky value function is just the discontinuity in slope at the reference value, the abrupt downward change in slope as one move upward past the reference value. This discontinuity means that, in making choices between risky outcomes, people will behave in a risk averse manner, no matter how small the amounts at stake are. Benartzi and Thaler show (1995) that if people use a one-year horizon to evaluate investments in the stock market, then the high equity premium is explained by myopic loss aversion. Moreover, prospect theory does not suggest that in this case riskless real interest rates need be particularly high.

2.2.2 Theory of Regret

This theory states that an individual evaluates his or her expected reactions to a future event or situation (e.g. loss of KSh5,000 from selling the stock of Safaricom Ltd). Bell (1982) described regret as the emotion caused by comparing a given outcome or state of events with the state of foregone choice. E.g. "when choosing between an unfamiliar brand and a familiar brand, a consumer might consider the regret of finding that the unfamiliar brand performs more poorly than the familiar brand and thus be less likely to select the unfamiliar brand" Inman and McAlister (1994)

Regret theory can also be applied to the area of investor psychology within the stock market. Whether an investor has contemplated purchasing a stock or mutual fund which has declined or not, actually purchasing the intended security will cause the investor to experience an emotional reaction. Investors may avoid selling stocks that have declined in value in order to avoid the regret of having made a bad investment choice and the discomfort of reporting the loss. In addition, the investor sometimes finds it easier to purchase the "hot or popular stock of the week". In essence the investor is just following "the crowd". Therefore, the investor can rationalize his or her investment choice more easily if the stock or mutual fund declines substantially in value. The investor can reduce emotional reactions or feelings (lessen regret or anxiety) since a group of individual investors also lost money on the same bad investment.

2.2.3 Mental Compartments

In the Wharton 1995 Survey of Derivatives Usage by U.S. Non-Financial Firms, Bodnar and Marston (1996) studied 350 firms: 176 firms in the manufacturing sector, 77 firms in the primary products sector, and 97 firms in the service sector. When asked by the Wharton surveyors what was the most important objective of hedging strategy, 49% answered managing "volatility in cashflows," 42% answered managing "volatility in accounting earnings," and only 8% answered managing "the market value of the firm" (1% answered "managing balance sheet accounts and ratios"). Fifty percent of the respondents in the survey reported frequently hedging contractual commitments, but only 8% reported frequently hedging competitive/economic exposure. It is striking that only 8% reported that their most important objective is the market value of the firm, since maximizing the market value of the firm is, by much financial theory, the ultimate objective of the management of the firm. It is of course hard to know just what people meant by their choice of answers, but there is indeed evidence that firms are driven in their hedging by the objective of hedging specific near-term transactions, and neglect consideration of future transactions or other potential factors that might also pose longer run risks to the firm.

2.2.4 Overconfidence, Over- and Under-Reaction and the Representativeness Heuristic

Many empirical findings show that humans tend to be overconfident in the assessment of their own abilities. Their evaluation of probabilities for an event to occur differs. It depends on whether in their mind they expect an event principally, or whether they do not. One result of this is too little diversification in their asset allocation, because of overconfidence in what investors are familiar with. So for example people tend to buy more shares of their home-country because they have a feeling of familiarity which makes them more comfortable. Another example would be the irrational investment in the company that people work for. Most researchers present the evidence that people tend to build their confidence intervals much too narrow. Mahajan (1992) defines overconfidence as “an overestimation of the probabilities for a set of events. Operationally, it is reflected by comparing whether the specific probability assigned is

greater than the portion that is correct for all assessments assigned that given probability."

There is now an abundant literature that theoretically argues that individuals can be overconfident and that this overconfidence will be exhibited in their investing behavior. For example, several researchers have formulated trading models where a type of trader is mistaken about either the precision of his knowledge and/or his assessment of the riskiness of the expected return. Although these models take different approaches in modeling overconfidence, they make similar predictions about how overconfident individuals behave. Specifically, individuals are posited to:

Own riskier portfolios because they underestimate the risks Benos (1998), De Long et al. (1990a), Kyle and Wang (1997), Odean (1998), and Wang (1998)

Misprice fundamental information causing market prices to be different than their fundamental valuation Hirshleifer, and Subrahmanyam (2001).Trade frequently because they are certain of their abilities and they are not tentative Benos (1998), Kyle and Wang (1997), Odean (1998), and Wang (1998, 2001) and underreact to or are slow to respond to more relevant information, which leads to buying (selling) past winners (losers) De Long et al. (1990b), Hirshleifer, and Subrahmanyam (1998), Hirshleifer et al. (1994) and Odean (1998)

The fact that both overreaction and under-reaction are observed in financial markets has been interpreted by Fama (1997) as evidence that the anomalies from the standpoint of efficient markets theory are just chance results. Shiller sent out questionnaires to 2,000 wealthy individual investors and 1,000 institutional investors; there were 605 completed responses from individuals and 284 responses from institutions. One of the questions asked was: "Did you think at any point on October 19, 1987 that you had a pretty good idea when a rebound was to occur?" Of individual investors, 29.2% said yes, of institutional investors, 28.0% said yes. These numbers seem to be surprisingly high: one wonders why people thought they knew what was going to happen in such an unusual situation. Among those who bought on that day, the numbers were even higher, 47.1% and 47.9% respectively. The next question on the questionnaire was "If yes, what made

you think you knew when a rebound was to occur?" Here, there was a conspicuous absence of sensible answers; often the answers referred to "intuition" or "gut feeling." It would appear that the high volume of trade on the day of the stock market crash, as well as the occurrence, duration, and reversal of the crash was in part determined by overconfidence in such intuitive feelings.

Tversky and Kahneman (1973) describe representative heuristic as "A person who follows this heuristic evaluates the probability of an uncertain event, or a sample, by the degree to which it is similar in its essential properties to the parent population and reflects the salient features of the process by which it is generated"

They found out that people tend to see patterns in small series of randomly drawn numbers and when making decisions, people attempt to impose some order or structure on the information that they see. The representative bias, they realized may partly arise due to a framing problem i.e. rather than frame the skill versus luck decision in terms of what may actually be a random outcome may instead appear to be logical sequence.

Thus representativeness has been seen to be the tendency to form judgments that are based on stereotypes. A conclusion on how a particular stock will perform in future is likely to be made on the basis of how it has performed in the past.

2.2.5 The Disjunction Effect

Tversky and Shafir (1992) asked their subjects whether they would take one of the bets in tossing in which one has equal chances to win $200 or lose $100. Those who took the one bet were then asked whether they then wanted to take another such bet. If they were asked after the outcome of the first bet was known, then it was found that a majority of respondents took the second bet whether or not they had won the first. However, a majority would not take the bet if they had to make the decision before the outcome of the bet was known. This was found to be a puzzling result: if one's decision was the same regardless of the outcome of the first bet, then it would seem that one would make the same decision before knowing the outcome. Tversky and Shafir gave their sense of the possible thought patterns that accompany such behaviour: if the outcome of the first bet is known and is good, then subjects think that they have nothing to lose in taking the

second, and if the outcome is bad they will want to try to recoup their losses. But if the outcome is not known, then they have no clear reason to accept the second bet.

The disjunction effect might help explain changes in the volatility of speculative asset prices or changes in the volume of trade of speculative asset prices at times when information is revealed. Thus, for example, the disjunction effect can in principle explain why there is sometimes low volatility and low volume of trade just before an important announcement is made, and higher volatility or volume of trade after the announcement is made.

2.2.6 Herding

Herding is "A group of investors trading in the same direction over a period of time" Welch (1999). In recent empirical studies evidence can be found that institutional "Herding" is a common and relevant phenomenon in stock markets, contributing to excess volatility. As it is an expensive process to continuously valuate assets and search for new investment opportunities, there is a high temptation to just follow the lead of other institutional investment companies only because of their renowned name or their past successes. An interesting study conducted at the University of Bamberg shows evidence that "Herding" is of quite some importance in many different asset-classes, such as Bond Markets and not solely bound to the stock market Oehler and Goeth (2002)

2.3 Review of Empirical Studies

In a study of the behaviour and performance of individual investors in Japan by Kim and Nofsinger (2003), specific investor behaviours such as overconfidence, feedback trading and the disposition effect were identified. The study found that Japanese individual investors owed stocks with high risk, large book-to-market (BM) ratios, high trading volume, and earn low returns. Given the hypothesized positive risk/return relationship and the documented success of value firms, they were curious that investors could hold higher systematic risk firms and value firms and yet still underperform. Further, in their full sample period, they also found that individual investors made poor trading choices i.e., individuals sold (bought) stocks that did well (poorly), and that they bought and sold past winners. Their findings were consistent the predictions of overconfidence models.

When they differentiated their sample into separate bull and bear market sub-periods, they found that individuals preferred stocks with high systematic risk (beta) during the bear market, but not during the bull market. In contrast, during the bull market they found a strong relationship between individual investor ownership and BM, but no relationship between individual ownership and beta. They realized that Japanese individual investors held value stocks during market advance and risky stocks during market declines i.e. they tilted towards value and risk at the wrong times.

This behaviour they found to be the opposite of what a market timer would have wanted to do. This explains how the appearance of holding higher risk stocks and value stocks, in aggregate, can still result in lower performance. These findings, while somewhat perplexing, may be consistent with a model by Kahneman et al. (2001) that suggests that overconfident investors may ignore systematic indicators such as the beta of expected returns during bull markets. Instead, overconfident investors rely on their own misguided convictions of mispricing measures during high valuation periods.

They also found that individual investor trading activity was greater during the bull market. Additionally, some of the mixed results from the full sample became clearer in the sub-period tests. The buying behaviour of past winners was stronger during the bull market, but individual investors appeared to do the opposite i.e., they bought losers and sold winners during the bear market. Their finding that individual investors were experiencing poor portfolio performance from their trades was is even more pronounced during the bull market period.

In conclusion, their evidence indicated that Japanese individual investors were owned risky and high book-to-market stocks, traded frequently, made poor trading decisions, and bought recent winners. These behaviours differed between bull and bear markets.

Empirical tests on the behaviour of individual investors have been done predominately on U.S. individual investor portfolios. The empirical evidence from individual investor portfolios supports the predictions of the overconfidence models. For example using a sample of portfolio holdings of 78,000 U.S. households over the 1991-97 period, Barber

and Odean (2000, 2001) show that overconfident individual investors trade too much and hold high-risk portfolios. In an attempt to identify the prior performance of stocks that individual investors trade, Bange (2000) finds that individuals buy (sell) past winners (losers), which is also consistent with overconfident behaviour. The behaviour is also known as positive feedback (or momentum) trading. As argued by Barber and Odean (2001) , overconfident investors believe too much in their ability to interpret anecdotal and ambiguous information so they will often be slow to acknowledge and process statistical and relevant information (such as corporate earnings) and the information of others (such as rational informed investors). As a result, overconfident investors will underreact to information, which is consistent with buying (selling) past winners (losers).

Although not directly linked to the overconfidence models, two other findings are applicable. In his examination of individual investors, Odean (1999) shows that excessive trading is especially problematic for traders because the stocks they purchased underperform the stocks they sold. Apparently, overconfident investors are not only harmed by trading costs, but also by poor choices. The other important finding is that investors are sometimes disposed to selling their winners and holding their losers—a behavior that Shefrin and Statman (1985) call the "disposition affect." They suggest that investors may sell winners to realize gains because they want to experience pride, and that they will hold onto losers because they don't want to feel regret.

Even though the individual investor literature continues to grow, very little has been done in empirically assessing the behaviour of individuals in non-U.S. settings. An important exception is the series of papers by Grinblatt and Keloharju (2000, 2001a, 2001b) that study trading behavior in Finland. They find many of the behaviours previously identified using U.S. investors.

Specifically, individual investors exhibit patterns of excess trading, the home bias, and the disposition effect. However, Finland is considered a Western culture society, like the U.S. Our study of investor behaviour in a different culture, an African culture to be specific, may be considered an out of sample test in that regard.

The difference in environments can be quite dramatic between cultures. These differences are frequently expressed in cognitive studies as an individualism-collectivism continum Hofstede (1980). African cultures tend to be based on a more socially collective paradigm than Western cultures. In African cultures, family or other group members will step in to help out any group member who encounters a large catastrophic loss. In individualist Western cultures, a person making a risky decision will be expected to personally bear the adverse consequences of their decisions. Collective oriented societies allow for the social diversification of risky decisions in a similar manner to the purchase of an insurance policy. Therefore, because the impact of a catastrophic loss is different between the African and Western cultures, the perception of this type of risk may be different. Stulz and Williamson (2001) argue that these cultural differences affect investor protection. Investors are likely to behave differently under different investor protection environments.

2.4 Chapter Summary

Over the last forty years, standard finance has been the dominant theory within the academic community. However, scholars and investment professionals have started to investigate an alternative theory of finance known as behavioural finance. Behavioural finance makes an attempt to explain and improve people's awareness regarding the emotional factors and psychological processes of individuals and entities that invest in financial markets. Behavioural finance scholars and investment professionals are developing an appreciation for the interdisciplinary research that is the underlying foundation for this evolving discipline. It is believed that the behaviours described in this paper are exhibited within the stock market by many different types of individual investors, groups of investors and entire organizations.

The debate between the two schools of finance should address which behavioural finance themes are relevant enough today to be taught in the classroom and published in new editions of finance textbooks. "A concept such as prospect theory deserves mention by finance academics and practitioners in order to offer students an alternative viewpoint of finance" Ricciardi and Simon (2000).

CHAPTER THREE

3.0 Research Methodology

3.1 Introduction

This chapter contains information on how the research was conducted. It details the research design that was adopted to ensure that there was clarity on how the information required was obtained. It is in this chapter that the source of information that was used to address the research problem was identified. The population of study used to address the research problem was determined here. Since it would not have been practical to obtain information from the whole population of study, it was prudent to come up with a representative sample in which the research would focus on for the purpose of obtaining information and drawing inferences which would then be analyzed using predetermined techniques to obtain a solution to the research problem.

3.2 Research Design

The study adopted an exploratory approach using descriptive survey design to investigate the behavioural factors that affected investment decision making by individual investors and consequently their financial performance was determined as was deduced from the financials of the companies their investment were directed to. Descriptive survey designs are usually used in preliminary exploratory studies to allow researchers gather information, summarize, present and interpret findings for the purposes of drawing conclusions. Consequently, the research conducted a survey on individuals' investment decisions in trading shares of companies listed at the Nairobi Stock Exchange (NSE).

3.3 Population of Study

The target population of this study was individuals who traded shares at the NSE as part of their investment portfolios. There were about 919,727 investors at the NSE as at 30.03.2011 with 870,203 being the total number of individual investors. This represented 94.6% of the total investors, Capital Markets Authority (CMA) Quarterly Statistical Bulletin (2010) whose investments cut across all the 55 companies listed in the NSE, CMA Annual Reports and Statement of Accounts (2011)

3.4 Sample Size and Sampling Technique

For the purpose of determination of individual investment behaviour, it was not be practical to study the entire population of the individual investors owing to a number of constraints which included; time shortage, huge costs involved, human effort required to collect information among others. We as such as such selected a sample of 50 individual investors to represent all the individual investors' in the country. The sample was obtained by presenting 5 questionnaires each to 10 identified stock brokerage firms. This sample was considered appropriate as the variability of retail investors is usually deemed to be low.

This sample helped to reduce the time of study as it facilitated faster collection and analysis of data. The sample also significantly reduced the research costs as it was confined to a smaller manageable sample which was handled by fewer project assistant researchers who it was easier to train and supervise.

The systematic sampling technique was used to randomly select 5 respondents from each of the 10 brokerage firms. A respondent was selected at systematic intervals whereby every third customer in a brokerage firm was given a questionnaire to complete in a given day. The process was faster in firms with high customer traffic but slower in other firms. On average the time of completion of the questionnaires was dependent on the individual customers.

3.5 Data Collection

Data on individual investor behaviour entailed selection of primary data by an exploratory survey method. A semi-structured questionnaire consisting of both open-ended and close-ended questionnaire was used to collect the data. The questionnaires were very simple but comprehensive thus the respondents did not experience any difficulties completing them. The questionnaire sought to collect background information of the respondents which included the respondent's age, gender, education back ground, employment status and their investment horizon and key considerations they took into account as they bought and sold shares.

On the performance of the individual investors, the research made use of secondary data that was collected from the NSE as well as from the CMA. From the two sources the research specifically obtained monthly stock return data, annual individual stock ownership report, and financial statement reports for some of the firms listed in the NSE that had been highly traded into by the respondents.

3.6 Data Analysis

The data collected from the questionnaires was coded and entered in the latest SPSS version 17 for analysis. Frequency charts and tables were used to present the findings which facilitated discussions and helped to draw conclusions on the individual investment behaviours.

The secondary data from obtained from NSE and CMA was used to calculate abnormal returns using the NSE All Share Index (NASI) size and book-to-market equity return. From the data the research also looked at four firm specific variables which helped to draw conclusions on the performance of individuals. These included two measures of risk (volatility and market capitalization), book-to-market ratio and a trading volume measure.

The abnormal returns for the each of the three firms identified was found by using the NASI index by taking the firm's return less the return on the market index. The abnormal return was then taken as the firm's return less the return from the NASI index.

On the other measures, the volatility was calculated as the standard deviation of monthly returns measured over the year, the firm's market capitalization was taken from the NSE and the book-to-market ratio measured each year was the book value of equity divided by the market value of the shares outstanding for the firm. This standardized monthly volume was then be averaged for the year and reported as mean monthly turnover.

The results obtained from the above analysis helped draw conclusions on the firm specific performance variables specified above which when related to the individual investors investment behaviour helped to explain how good or bad their decisions were.

3.7 Data Validity and Availability

To ensure the data collected was representative of the target audience, we devised means that ensured as much information as possible was obtained from the individual investors' who had been picked up at random. The secondary data for measuring performance had been documented and was readily available with the NSE and CMA. This comprised of data that had been audited and released to the public for consumption. Primary data on the other hand for determining the behaviour of individual investors was obtained from the investors themselves as they queued to be served in the their respective brokerage firms.

CHAPTER FOUR

4.0 DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

This chapter presents data analysis and findings obtained through the use of the questionnaire (Appendix 1) and data from the CMA and NSE. The main objective was to identify and establish whether individual Kenyan investors in stocks were guided by their behavioural considerations when investing in equities of companies listed at the NSE in disregard of the standard finance formulated investment practices and the implications of their decisions in regards to the financial performance of the companies their decisions were based upon. The study was guided by the objectives of finding what factors investors take into consideration as they go about their investment decisions in equities, whether they are familiar with the best investment practices that are ascribed to in the traditional standard finance and to find out whether their investment decisions proved to be good financial decisions as will emerge from the financial evaluation of the companies their investment activities were based on. It was on the basis of these objectives that data was analyzed and discussions made in this study that had 50 investors sampled.

4.2 Response Rate

Fifty (50) questionnaires were issued. Out of these, forty three (43) were returned. This makes a response rate of 86 percent. The researcher deemed this sufficient for analysis. Table 4.1 represents the questionnaire response rate.

Table 4.1 Response Rate

	Number issued	Number returned	Percentage (%)
Questionnaires	50	43	86

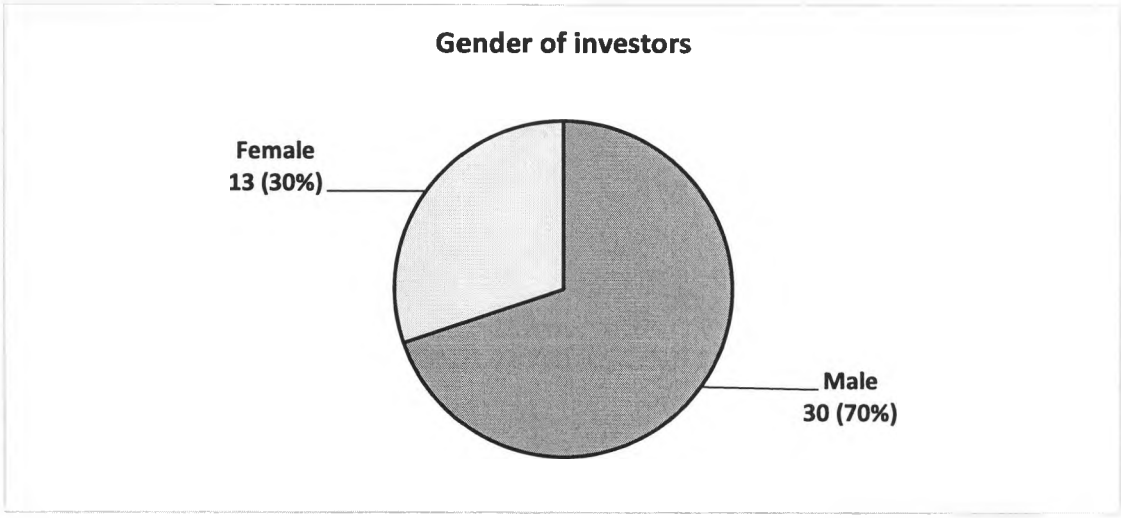
4.3 Demographic Information

The investors sampled in this study were required to give some demographic information on their age, origin and educational level. The findings obtained are presented in Figure 4.1 to 4.3.

4.3.1 Gender of investors

The research sought to establish the gender of the investors sampled. The majority of the investors interviewed were males (70 percent). This shows that males were the most active traders in the stocks market as shown in Figure 4.1.This is an indication of overconfidence on the part of the males in the assessment of their abilities to outperform the stock market.

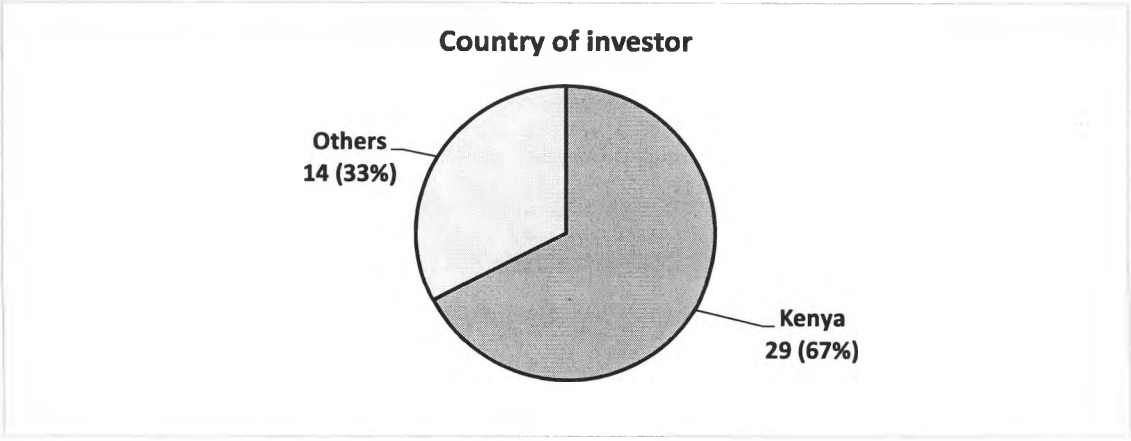
Figure 4.1: Gender of investors



4.3.2 Country of investors

The question sought to know the country of origin of investors. Most of the investors were Kenyans (67 percent). It was concluded that most of the investors were Kenyans and understood the Kenyan stock market well enough to contribute significantly to the study. The findings are presented in Figure 4.2.

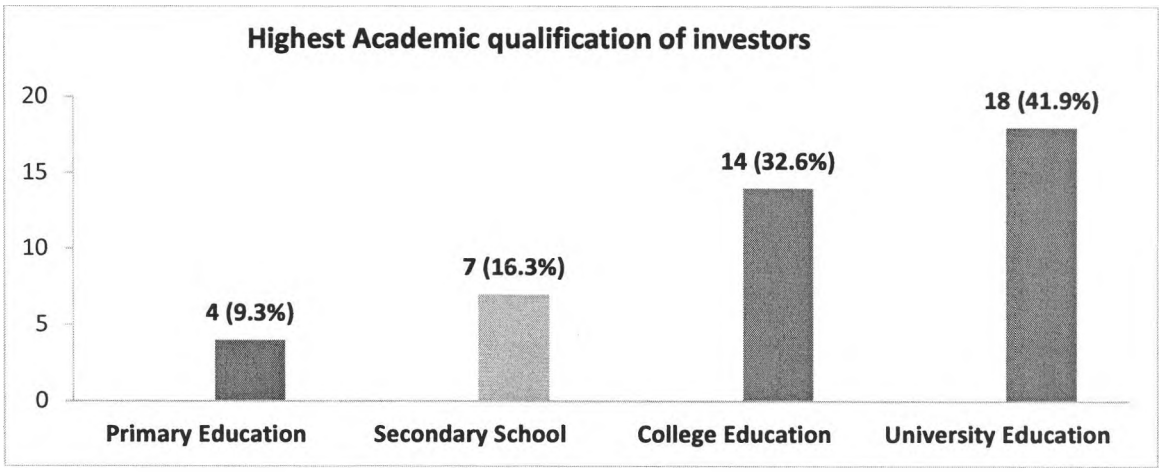
Figure 4.2: Country of investors



4.3.3 Level of education attained by individual investors

The study sought to establish the level of education of investors in the Stock Market. As shown in Figure 4.3, the majority of investors had attained university education at 41.9 percent. This was followed by those who had attained college education at 32.6 percent and secondary education at 16.3 percent. Those with primary level education were the least at 9.3 percent. This shows that the investors sampled in this study had sufficient levels of education and were thus in a position to know of the standard finance advanced investment practices.

Figure 4.3 level of education

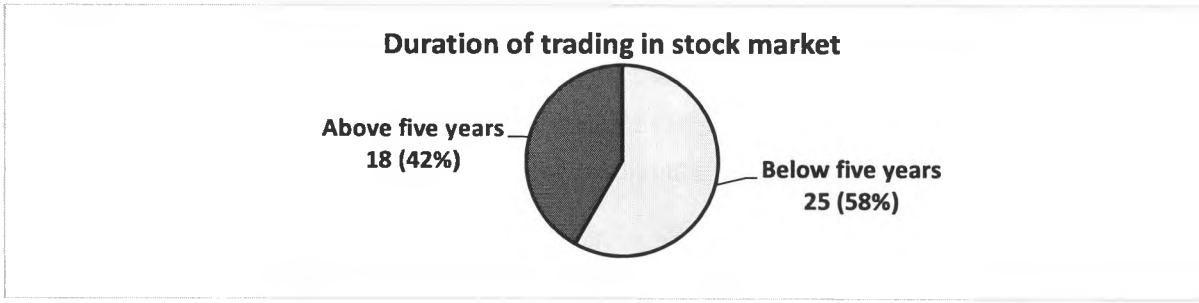


4.4 Stock Trading Behavior

4.4.1 Duration of trading in the stocks market

The researcher wanted to establish the duration the investors had been trading in stocks. As shown in Figure 4.4, the majority of investors had been in active trading in the market within the last 5 years (58 percent). Those who had been trading for longer periods longer than 5 years were at (42 percent).This shows that a large portion of the investors had been active in the stocks market long enough to enable one to deduce their investment behavior.

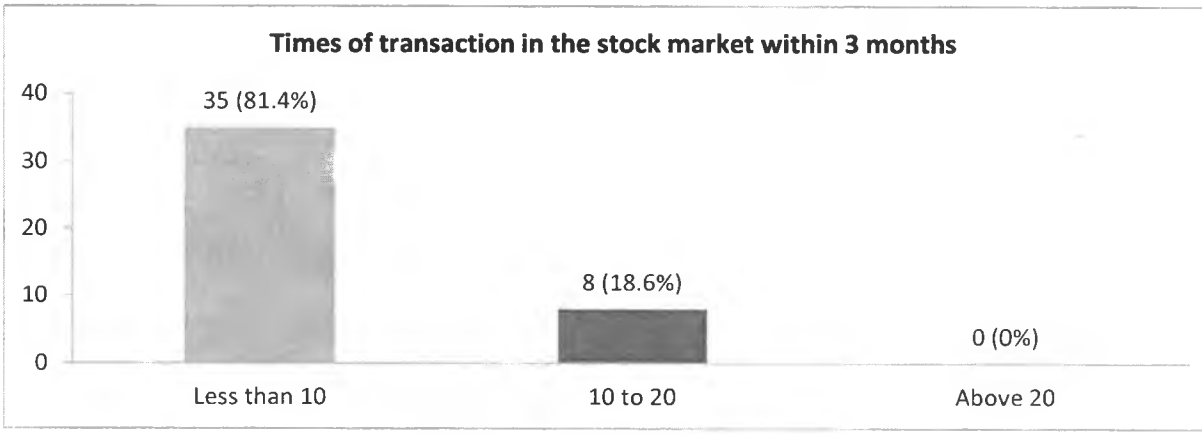
Figure 4.4: Duration of trading in the stocks market



4.4.2 Average time of trading in the stock market within 3 months

As presented in Figure 4.5, the study established that in the previous 3 months, most of the investors had traded in the stocks market for less than 10 times (81.4 percent). Those who had traded 10 to 20 times constituted the remaining 18.6 percent. This constituted sufficient evidence of overconfidence where individuals trade frequently and appear to be certain of their abilities as informed by the big percentage of investors whose sales turned out to be profitable.

Figure 4.5: Average time of trading in the stock market within 3 months



4.4.3: Transaction in stocks for periods more than 3 months

In the previous more than three months period, most of the investors (56 percent) had traded up to 41 times in periods of 10-14 months. These were followed by 28 percent of investors who had traded up to 11 times. The results are presented in Table 4.2 below.

Table 4.2: Transaction in stocks for periods more than 3 months

No. of Months	Investors	Total no. of times
10 - 14	14 (56%)	41
4 - 9	7 (28%)	11
15 - 19	2 (8%)	3
Above 20	2 (8%)	5
Total	**25**	**60**

4.4.5 Duration before selling stocks

As presented in Table 4.3, the researcher established that most of the investors sold the stocks they had previously bought within 36 months (83.7 percent). For these, the majority did it in 4 to 6 months (85.7 percent). On the other hand, the majority of those who sold their stocks in years (70.6 percent) did so in 1 to 2 years.

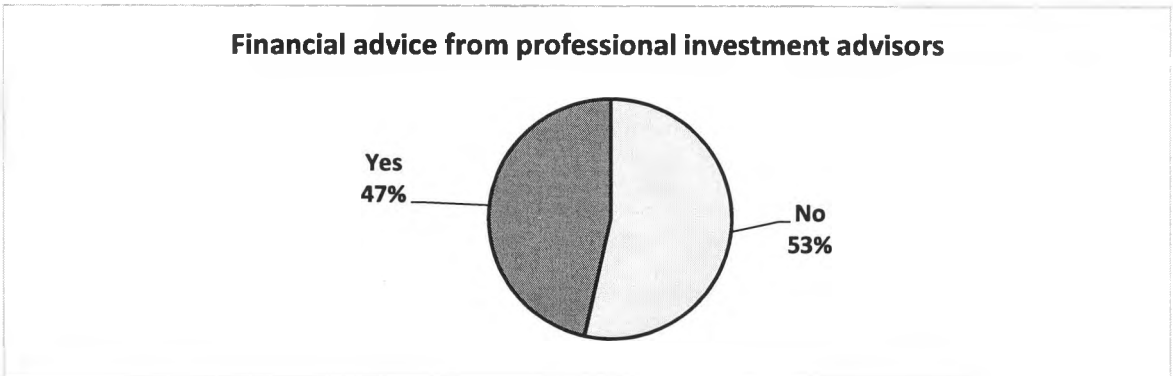
Table 4.3: Duration before selling stocks

Duration before selling a stock	Number	Percent
In months	36	83.7
In years	7	16.3
	43	100.0
Average months	**Responses**	**Percent**
0-3 months	1	14.3
4-6 months	6	85.7
Total		100.0
Average years		
1 to 2	12	70.6
3 to 5	5	29.4
Total		100.0

4.4.6 Financial advice from professional investment advisors

The majority of traders (53 percent) did not seek advice from professional investment advisors as shown in Figure 4.6.

Figure 4.6: Financial advice from professional investment advisors



4.4.7 Influence in buying and selling shares at the stock exchange market

(a) Responses from selected sources

Investors were asked to state whether they got professional investment advice as they made their buying and selling decisions. This was done on a likert scale of 1-strongly agree, 2-disagree, 3 – neutral, 4-agree and 5-strongly agree. Mean and standard deviation of the responses to these statements were obtained. For the mean, those between 0.00-1.50 meant that respondents disagreed strongly. In the same order, mean of 1.51-2.50 stood for disagreed; mean of 2.51 - 3.50 for neutral; mean of 3.51 - 4.50 for agreed and mean of 4.51 – 5.00 strongly agreed. Most of investors agreed that they got advice from friends and colleagues (3.65), from popular opinion about the market (3.58) and from recent trend in share price movements (3.53). All the investors sampled did not indicate any strong indication of seeking advice from professional investment advisors (neutral at 3.30) while (1.07) of the investors never sought advice from any other place. The results obtained are presented in Table 4.4.

Clearly there is an indication of herd behavior whereby investors are trading in the same direction over time as evidenced by the big mean figure of 3.65 whereby individuals investment decisions are informed not by reason but by what their friends and colleagues do. Irrationality is also manifested when popular opinions are used as a basis for investment. This can be prompted by heuristic biases that emanate from the opinion makers which can go a long way in influencing individual investors.

Table 4.4: Influence in buying and selling shares at the stock exchange market

Influence in buying and selling shares at the stock exchange market						
Statistics						
		Friends and colleagues	Professional and investment advisors	Popular opinion about the market	Recent trend in share price movements	Any othe reason
N	Valid	43	43	43	43	
	Missing	0	0	0	0	
Mean		3.65	3.30	3.58	3.53	1.(
Std. Deviation		1.33	1.49	1.50	1.82	1.8
Range		4.00	5.00	5.00	5.00	5.(
Minimum		1.00	.00	.00	.00	.(
Maximum		5.00	5.00	5.00	5.00	5.(

(b) Other factors influencing selling/buying of shares in the stock market

The other factors that were provided as influencing the purchase and disposal of shares in the stock market included; family background, religious background, improved exchange rates, day to day profits, inflation, past profitability of the company, management stability of the company, availability of shares in the market and capitalization in the market. This is shown in Table 4.5.

Table 4.5: Other factors influencing selling/buying of shares in the stock market

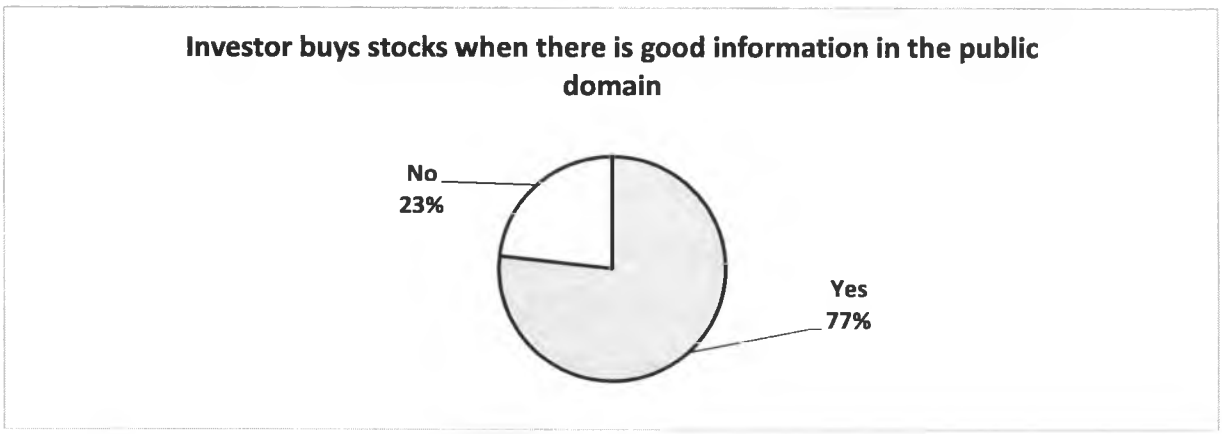
	Factors
1.	Family background
2.	Religious background
3.	Improved exchange
4.	Day to day profit
5.	Inflation
6.	Past profitability of the company
7.	Management stability of the company
8.	Company's available shares in the market
9.	Stock capitalization in the market

4.5 Buying and selling Stock

4.5.1 Effect of good information and buying stock

As shown in Figure 4.7, the majority of investors (77 percent) bought their stocks when there was good information in the public domain on the target company.

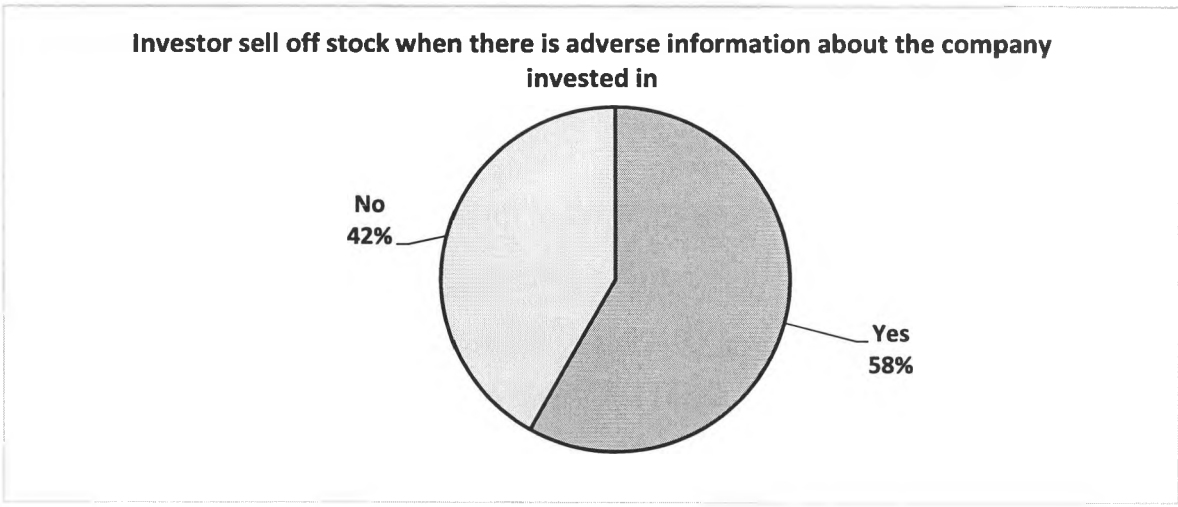
Figure 4.7: Good information and buying stock



4.5.2: Adverse information and selling off stocks

As shown in Figure 4.8, the majority of investors (58 percent) sold off their stock when there was adverse information about the companies they had invested in. The investors here are afflicted by the Theory of Regret whereby they are considering the regret of ending up with highly depreciated shares on the continued holding of the same while fully aware of the adverse information that will result in the loss of value of the shares.

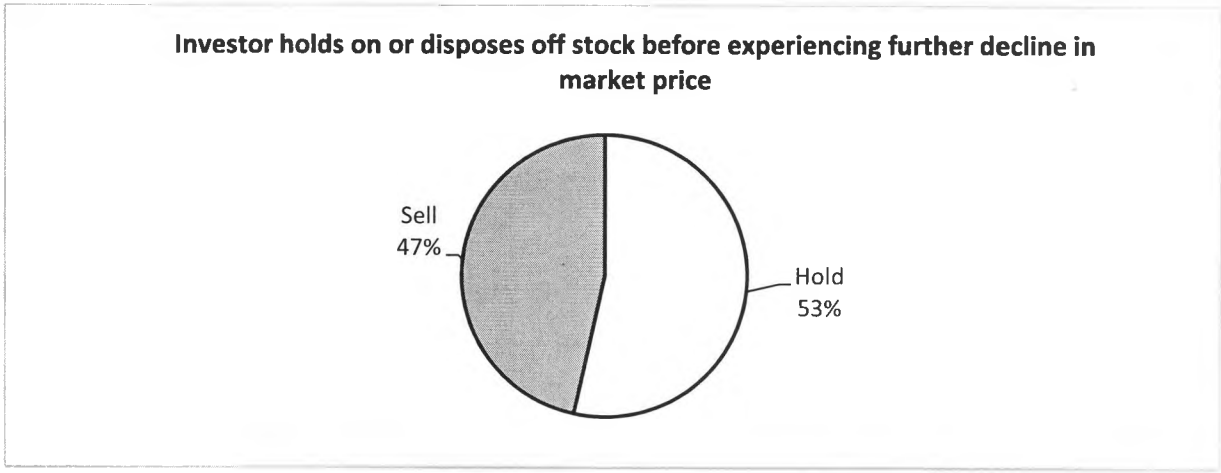
Figure 4.8: Adverse information and selling off stocks



4.5.3 Holding on or disposing off stocks before experiencing further decline in market price

The researcher established that the majority of investors (53 percent) held on to their stocks before experiencing further declines in the stocks market. This is shown in Figure 4.9. This is again an indication of the investors desire to experience an emotional reaction whereby they will not want to be seen to have done nothing as they watched their shares decline further while they did nothing to cut their loses.

Figure 4.9: Holding on or disposing off before experiencing further decline in market price



4.6 Company stocks bought or sold-off in the previous six months

4.6.1 Company stocks bought from

As shown in Table 4.6, it was found that the majority of investors bought stock from Equity Bank (11.9 percent) followed by Safaricom Ltd. at (9.5 percent) then Kenya Airways, Kengen Ltd., KCB, KPLC and Kenol Kobil Ltd. each at 7.1 percent among others.

Table 4.6: Company stocks bought from in the previous six months

Companies shares bought from in the previous six months		
Company	**Frequency**	**Percent**
Equity Bank	5	11.9
Safaricom Ltd.	4	9.5
Kenya Airways	3	7.1
Kengen	3	7.1
K.C.B	3	7.1
KPLC	3	7.1
KenolKobil	3	7.1
Co-operative Bank	2	4.8
Total Kenya	2	4.8
Scan group	2	4.8
National Bank	2	4.8
Unga ltd	1	2.4
Nation media	1	2.4
STD Chartered	1	2.4
Athi River mining	1	2.4
Mumias sugar	1	2.4
Sasini	1	2.4
E.A Portland cement	1	2.4
B.A.T	1	2.4
Standard group	1	2.4
E.A.B.L	1	2.4
Total	**42**	**100.0**

4.6.2 Companies stocks sold-off in the previous six months

As shown in Table 4.7, it was found that the majority of investors sold-off stock from Safaricom Ltd (28.6 percent), Mumias Sugar (14.3 percent) and Equity Bank (10.7 percent) among others. The results are shown in table 4.7.

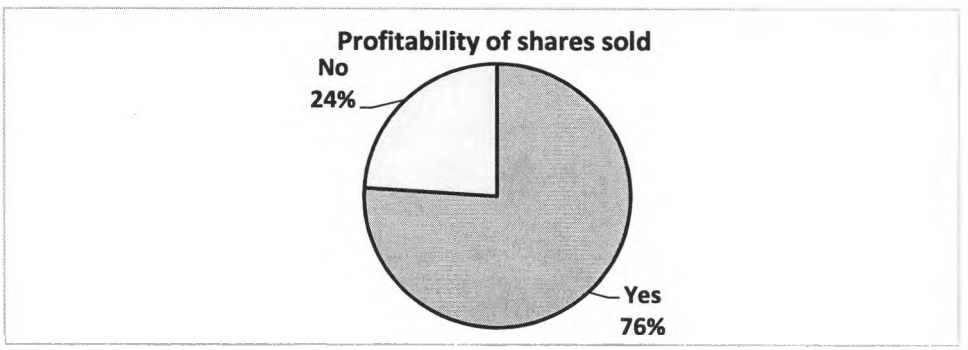
Table 4.7: Companies stocks sold-off in the previous six months

Company where shares had been sold-off	Frequency	Percent
Safaricom ltd.	8	28.6
Mumias sugar	4	14.3
Equity Bank	3	10.7
Kengen	2	7.1
KPLC	2	7.1
Eveready	2	7.1
KCB	2	7.1
Access Kenya	1	3.6
Total Kenya	1	3.6
Barclays Bank	1	3.6
Cooperative Bank	1	3.6
Unga Group	1	3.6
Scan Group	1	3.6
Total	**28**	**100.0**

4.6.3 Profitability of shares sold

The researcher sought to determine whether the shares sold-off were profitable. As shown in Figure 4.10, the majority of respondents held that their sales were profitable (76 percent).

Figure 4.10: Profitability of shares sold



4.7 Financial performance of the companies that investors sold stocks from

As shown in Table 4.8, all the companies from which investors sold their shares from had varied financial performances. The researcher calculated abnormal returns, volatility, market capitalization, book to market ratio and trading volumes from the top three companies in the list of companies that the respondents mentioned as having sold shares of. These were Safaricom limited, Equity Bank Limited and Mumias Sugar Company Limited.

4.7.1 Abnormal returns

Equity Bank Ltd recorded the highest monthly abnormal returns ranging from 8.00 to 32.33. Although Mumias Sugar Company Limited was not performing well during the months of October 2010 to June 2011, it started registering steady abnormal returns between July and September 2011. This shows that the investors who had sold their stocks from the company during the previous three months were acting irrationally. They had failed to notice the company was on an improvement trail. Just like Mumias Sugar Co. Ltd., Safaricom Co. Ltd was performing poorly. It had however registered steady improvement from June 2011 to September 2011. The findings show that investors were irrational in selling off their stocks during the previous three months.

4.7.2 Volatility

From the three companies, Equity Bank Stocks and Mumias Sugar Co. Ltd. were the most volatile (riskiest) stocks each with highs standard deviations of 1.98. However volatility was not high enough to suggest that the stocks from three companies were significantly risky to warrant their disposal considering other variables such as capitalization which were comparatively higher than other companies in the same sector as them.

4.7.3 Market capitalization

Safaricom Ltd. had the highest market capitalization of the three companies (average of 92,353,430,150) followed by Equity Bank Ltd. The three companies had high values of market capitalization. As such it was not worthwhile to dispose the companies' stocks.

4.7.4 Book Market Ratio

The higher the book market ratio, the better off a company will rank hence the reason why an investor should maintain his stock holding in the company. In this accord, investors should have first and fore most kept Mumias Sugar Co. Ltd. Stocks. Since all companies had positive book market ratios, one can deduce that it was not wise for investors to sell off all the shares that they had in those companies.

4.7.5 Trading volumes

Safaricom Company Ltd. had the highest trading volumes followed Equity bank and Mumias Co. Ltd. in that order. The trading volumes of all the three companies were large enough in relation to the entire stocks market.

Table 4.8: Financial performance of the businesses

SAFARICOM LIMITED					
Period	**Abormal Return**	**Volatility**	**Market Capitalization**	**Book Market Ratio**	**Trading Volume**
Oct 2010	(8.31)	0.34	178,000,000,000	0.33	399,090,496
Nov 2010	(4.66)	0.14	180,000,000,000	0.38	254,590,547
Dec 2010	(4.48)	0.14	188,000,000,000	0.38	185,773,505
Jan 2011	(5.75)	0.12	178,000,000,000	0.39	470,963,632
Feb 2011	(3.63)	0.05	160,000,000,000	0.41	151,839,126
Mar 2011	3.13	0.07	152,000,000,000	0.45	242,155,802
Apr 2011	(1.41)	0.03	158,000,000,000	0.43	280,781,917
May 2011	(0.59)	0.07	154,000,000,000	0.45	169,455,782
Jun 2011	1.28	0.06	158,000,000,000	0.45	154,849,066
Jul 2011	8.10	0.13	142,000,000,000	0.47	196,241,011
Aug 2011	16.30	0.12	122,000,000,000	0.47	337,983,527
Sep 2011	22.41	0.31	118,000,000,000	0.57	389,129,265
Average					258,520,401
Total	**22.42**				

EQUITY BANK LIMITED					
Period	**Abormal Return**	**Volatility**	**Market Capitalization**	**Book Market Ratio**	**Trading Volume**
Oct 2010	8.00	0.52	99,049,285,000	0.27	65,053,520
Nov 2010	11.38	0.24	94,420,814,010	0.28	36,749,812
Dec 2010	10.99	0.07	99,049,285,285	0.29	23,492,406
Jan 2011	13.30	1.08	107,380,533,580	0.25	40,521,198
Feb 2011	14.96	0.88	105,529,145,070	0.26	18,416,514
Mar 2011	19.18	0.03	92,569,425,500	0.29	31,498,640
Apr 2011	15.37	0.29	99,974,979,540	0.28	33,573,979
May 2011	15.26	0.03	92,569,425,500	0.29	58,290,306
Jun 2011	16.97	0.07	95,346,508,265	0.29	36,598,162
Jul 2011	22.57	0.48	85,163,871,460	0.31	36,280,600
Aug 2011	30.46	0.56	71,833,874,188	0.31	38,874,251
Sep 2011	32.33	1.98	65,354,014,403	0.40	34,513,878
Average			92,353,430,150		37,821,939
Total	**210.80**				

MUMIAS COMPANY LIMITED					
Period	**Abormal Return**	**Volatility**	**Market Capitalization**	**Book Market Ratio**	**Trading Volume**
Oct 2010	(9.21)	0.52	18,666,000,000	0.79	71,291,128
Nov 2010	(7.29)	0.24	14,611,500,000	0.97	29,435,565
Dec 2010	(7.67)	0.07	14,841,000,000	1.03	17,127,222
Jan 2011	(8.54)	1.08	13,617,000,000	1.00	17,681,830
Feb 2011	(7.75)	0.88	12,316,500,000	1.19	19,693,584
Mar 2011	(1.30)	0.03	10,939,500,000	1.30	11,455,284
Apr 2011	(5.82)	0.29	11,628,000,000	1.27	8,525,608
May 2011	(4.93)	0.03	11,398,500,000	1.28	13,057,154
Jun 2011	(3.34)	0.07	10,939,500,000	1.33	14,328,988
Jul 2011	3.36	0.48	10,863,000,000	1.39	11,959,371
Aug 2011	11.60	0.56	9,792,000,000	1.38	12,455,886
Sep 2011	17.55	1.98	9,868,500,000	1.56	16,391,632
Average			12,456,750,000		20,283,604
Total	(23.31)				

4.8 Summary and Interpretation of Findings

The study managed to establish the behaviour and financial performance of individual investors in Kenya. The findings are summarized below.

4.8.1 Factors that investors put into consideration in making investment decisions

The first objective of the study was to find out how individual investors made their investment decisions. (a) Influence from friends: most investors relied on advice from friends and colleagues (3.65 on a likert scale of 1-5) before deciding to go for stocks and; (b) Popular opinion about the market (3.58) and from recent trend in share price movements (3.53). There was a clear indication of herd behavior. Investors were trading in the same direction over time as evidenced by the big mean figure of 3.65 whereby individuals investment decisions were informed not by reason but by what their friends and colleagues did. Irrationality was also manifested when popular opinions were used as a basis for investment. This was prompted by heuristic biases that emanated from the opinion makers which had immense influence on individual investors.

Other factors influenced the purchase and disposal of shares in the stock market. These influences consisted of family and religious backgrounds, improved exchange rates, day to day profitability, inflation, past profitability of the companies their decisions were based on, management stability of the companies, availability of shares in the market and company capitalization in the market. Rather than being influenced by financial performance of companies, the decision of investors being influenced by family and religious affiliations corroborated the finding that herding behavior was highly prevalent among many investors. The reliance on past profitability of a company was a clear indication that many investors were not guided by rationalism; they were ready to invest in stocks irrespective of their riskiness. The management stability of a company was however a good factor to consider but stable companies meant that the performance of the said company was guaranteed.

Another factor that the majority of investors (77 percent) considered in deciding the stocks to buy was the availability of good information in the public domain on the target company. This was a clear indication that investors relied on publicity of stocks irrespective of their eventual performance. In so doing, the investors were often irrational therefore easily influenced. In the same light the majority of investors (58 percent) sold off their stock when there was adverse information about the companies that they had invested in. In this case, the investors showed that they were afflicted by the Theory of Regret whereby they were concerned with the regret of ending up with highly depreciated shares on the continued holding of the same while fully aware of the adverse information that would result in the loss of value of their shares.

4.8.2 Familiarity of investors with the best investment practices as ascribed to in the traditional standard finance

The second objective of the study was to find out whether the investors were familiar with the best investment practices that are ascribed to in the traditional standard finance. To this end, the performance of the three major companies from which investors sold off stock from was analyzed. This was in terms of abnormal returns, volatility, market capitalization, book to market ratio and trading volumes.

The fact that many investors sold off shares from Equity, which had the highest abnormal returns (ranging from 8.00 to 32.33) shows that many investors were never guided with the investment practices attributed to in standard finance. Although Mumias Sugar Company Limited had not been performing well during the months of October 2010 to June 2011, it started registering steady abnormal returns between July and September 2011. This shows that the investors who had sold their stocks from the company during the previous three months were acting irrationally. They had failed to notice the company was on an improvement trail. Just like Mumias Sugar Co. Ltd., Safaricom Co. Ltd was performing poorly on the firm specific variables. It had however registered steady improvement from June 2011 to September 2011. The findings show that investors were irrational in selling off their stocks during the previous three months.

As far as volatility was concerned, Equity Bank Stocks and Mumias Sugar Co. Ltd. were the most volatile (riskiest) each with highs of 1.98 in a likert scale of 1-5. However the level of volatility was not high to suggest that the stocks of the three companies were significantly risky to warrant their disposal at those particular points in time. Irrespective of this, investors still went ahead and sold their stocks of these companies. This was also a clear indication that the other factors elicited in the previous section, influenced investors in making investment their decisions. Investors were thus not guided by traditional formulated standard investment practices.

Safaricom Ltd. had the highest market capitalization of the three companies (average of 92,353,430,150) followed by Equity Bank Ltd. The three companies had high values of market capitalization. As such it was not worthwhile to dispose off the stocks of the companies. In the same accord, all companies had positive book-market ratios, as a result one can deduce that it was not wise for investors to sell off all the shares that they had in those companies. This is because the higher the book market ratio should have made the investors to maintain their holdings. As far as trading volumes were concerned, Safaricom Company Ltd. had the highest trading volumes followed Equity bank and Mumias Co. Ltd. in that order. The trading volumes of all the three companies were large enough in relation to the entire stocks market. The fact that investors went ahead and sold off their shares without considering the abnormal volumes, trading volumes and book market values was a clear indication that most of the investors were indeed not familiar with the best practices of traditional standard finance.

4.8.3 Results of individuals' investors decisions

The last objective of the study was to find out the results of the individuals' investment decisions. It was evident that the majority of the stocks sold were profitable (76 percent). The fact that investors realized immediate profits from the stocks that they had sold depicts short time gains. It was however evident that keeping the same stocks would have yielded better results. The financial performance of companies, which should have formed the major guiding principle for investors willing to sell or maintain were seemingly not known to most investors. On the other hand, the fact that most investors

bought stock from the Equity Bank (11.9 percent) followed by Safaricom Ltd. at (9.5 percent) shows that these investors were making timely decisions out of the performance of these companies. The decisions of these investors were good since these businesses could benefit from high abnormal returns, low volatilities, high market capitalization, positive book market ratios and high trading volumes of these companies. One can conclude that whereas some of the investors could realize negative results from their investment decisions some of them were poised to gain from the decisions they made.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

The essence of this last chapter is to give an overview of the paper, make significant conclusions based on the findings of the study and make recommendations in regards to the behaviour and financial performance of individual investors in Kenya

5.1 Summary

The idea to investigate the Behaviour and Financial Performance of individual investors in Kenya was informed by their increasing involvement in trading shares of companies listed at the NSE. This has been evidenced by the over subscriptions by individuals in shares whenever there is an IPO or a rights issue and the huge trading volumes in shares seen in the market on a daily basis. The fact that some of the investors have not gone to school but have been reported to out-perform the market begs the answers on what informs their decision to buy or sell certain shares.

The traditional finance economists' recorgnise that standard finance formulates the best practice investment models that need to be followed by investors in order to achieve good investment outcomes. These practices are backed up by theories that have been practiced successfully to some extent over time. The central assumption of this traditional finance model is that people are rational a notion that has been challenged by psychologists who argued that people often suffer from cognitive and emotional biases and act in a seemingly irrational manner.

Behavioural finance has experienced greater acceptance after identification of behavioural tendencies in investors such as heuristic driven biases, frame dependencies, emotional and social influences etc. In view of the studies that have been conducted both locally and abroad, the researcher set out to replicate the study locally to determine the individual behavior and their financial performance in trading shares.

Lack of financial knowledge by a large number of stockholders in the Kenyan market was a reason to want to know how the individuals went about making their investment decision. The research was particularly out to establish whether the investors investment decisions varied or not with the assumptions of rationality. Thus the main objective was to establish whether individual Kenyan investors in stocks were guided by their behavioral considerations as they invested in the NSE and if the behavioral considerations existed what the financial performance of the individual would be. The other objective was to determine whether the investors were familiar with the best investment practices as ascribed to by the standard finance model.

The results of the study were meant to help the investment managers set better investment outcome to their clients and nurture better advisory relationships with them. The study also aimed at contributing to academic literature in the field particularly in investor psychology. The study would also go a long way in providing a platform for further research in the area.

The study adopted an exploratory approach using descriptive survey design whereby a sample of 50 respondents were to provide information via questionnaires to discern information on their behavior. Secondary data to determine their financial performance was obtained from the CMA and NSE.

The data collected from the respondents was analysed using the latest version of SPSS and conclusions arrived at. The secondary data on the other hand was used to compute some firm specific measures such as abnormal returns, risk, book to market ratios and trading volumes. These measures were to help make conclusions on the individuals' financial performance.

5.2 Conclusions

The emergence of behavioural finance has helped to obtain a better understanding about how psychological factors affect individuals' behaviors and decisions contrary to traditional finance which ignores psychological and behavioural dimensions. Individuals' choices from the behavioral finance vary from the traditional finance expected utility theory which holds that individual's always try to maximize their utility by setting limits to their feelings and act only by using minds as emotionless beings. Far from it, according to behavioral finance, this kind of rationality is hypothetical, and in reality, individuals suffer some cognitive limitations when they have to make decisions in pursuit of their investment activities. This has been evident in the research whereby on the basis of their individual behaviours, investors were still able to make profitable decisions.

Human beings have a desire to be rational and believe that they actually behave rationally as has become clear from the investors who sought advice from professionals before trading. However it is clear that individuals do not always choose the alternative that will maximize their utilities and the presentation of the decision problem could lead to a deviation from the rational behavior. This is mainly due to the fact that individuals are not emotionless creatures; they have emotions which in themselves are barriers to rationality. Their choices under uncertainty can be affected by their emotions. Even if individuals can control their emotions for a while, they again behave irrationally because they cannot fix their minds. Individuals have limited computational skills and they have to use some heuristics in order to reduce the mental efforts for simplifying the complex tasks and make the decision process easier. These short cuts many times lead people to some irrational behaviours.

In conclusion, it was found out that there were varied behaviours and financial performance of individual investors in Kenya. Some investors exhibited rational behaviour in making their investment decisions. This can be seen in investors who decided to go for stocks from companies with good financial performance and dominant niche the stocks market. On the contrary, there were investors who were poised to realize negative results due to irrationality and herding behaviour. Despite the fact that most of

the investors sampled had sufficient experiences in trading in stocks, the vast majority had not acquired the required knowledge to make the best investment decisions.

5.3 Policy Recommendations

On the basis of the findings some recommendations can be made which include investors seeking the advice of professionals investment advisors who themselves should have knowledge on the behavioral investment considerations of their clients to be able to provide guidance that will immensely benefit the clients. This could avert making regrettable decisions.

Companies that have listed their stocks with the NSE need to establish mechanisms of educating the investors on the parameters to take into consideration when making investment decisions which will blend both their behavioral preferences as well as take advantage of best practice investment strategies.

Investment managers needed to be more rigorous in learning the volatile behaviors of individual investors so as to set better investment outcome and achieve better advisory relationship with their various clients. Since herding behaviour was quite prevalent among the investors sampled in this study, it was imperative to establish ways of checking this behaviour.

The social lives of investors play a major role in influencing their investment decision making behavior as far as investing in the stocks market is concerned. It will be thus be beneficial to design programs that will target the social groupings so that individuals within such groups which are varied in nature and include social settings such as clubs, family and religious gatherings are taken through best practice investment practices that will benefit them in the long run.

5.4 Limitations of the Study

The time available for the study was too short to adequately cover the behavioral theories that have been advanced in this area. There are many theories of behavioral finance and with the limited time the researcher was only able to cover a few of them.

The scope of data collection in terms of questionnaire administration was narrowed down to the brokerage firms situated in Nairobi. This was because of the geographical disparities, cost considerations and also the fact that most of the brokerage firms are situated in the city.

The cost for obtaining secondary historical data from the NSE was prohibitive. Unlike a few years back when the exchange never used to charge for data, the situation has now changed. Due to scarcity of funds the researcher had to cut down on one measure of risk to go for two instead of the initially planned for three. Receipt of data to help compute the third measure of risk would have cost a lot more.

5.5 Suggestions for Further Study

The basis for choosing 50 respondents was informed by the reasoning that variability in individual investors was low. This resulted in the use of respondents sourced from Nairobi based brokerage firms. There is need to undertake similar studies focusing on investors from brokerage firms in other parts of country using the same tools for correlation purposes to see whether the results will be the same or not.

There is need to formulate studies that can tap into the experience of investment professionals to capture their perceptions on the behaviour of individual investors and their respective performances.

In additions there is need to make follow ups on the investors to measure their investment trends over the years. This emanates from the fact that investors behaviour is subject to the influence of unseen factors.

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APPENDICES

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APPENDIX I

QUESTIONNAIRE

This questionnaire is designed to collect information from the individual investor and is meant for academic purposes only. Please complete each part as instructed. Do not write your name on the questionnaire. All the information in this questionnaire will be treated in confidence.

Section A

1. Please indicate your Gender. Male ☐ Female ☐

2. Where do you come from? Kenya ☐ Others ☐

3. What is your highest academic qualification? (Tick where applicable)

   a). Primary education ☐

   b). Secondary education ☐

   c). College education ☐

   d). University education ☐

   e). Any other. Please specify ☐

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.....

4. How long have you been trading in the stock market (please tick where applicable)

No. of years	Below 5 years	Above 5 years

5. How many times on average do you transact in stock within 3 months?

No. of times	Less than 10 times	Between 11-20	Above 20

6. For any longer periods, indicate the number of times you transact in stocks. ☐

No. of months ☐ Number of times

7. How long do you take to sell a stock you have previously bought?

In months ☐ Years ☐

8. Do you seek financial advice from professional investment advisors when making buying or selling decisions? (Please tick where applicable)

Yes ☐ No ☐

9. Using a scale of I to 5 where

1 = disagree strongly

2 = disagree somewhat

3 = Neutral

4 = Agree somewhat

5 = Agree strongly

Does the following influence your decision when buying/selling shares at the stock exchange market (Please tick the applicable options)

	1	2	3	4	5
Friends and colleagues	☐	☐	☐	☐	☐
Professional and investment advisors	☐	☐	☐	☐	☐
Popular opinion about the market	☐	☐	☐	☐	☐
Recent trend in share price movements	☐	☐	☐	☐	☐
Any other reason	☐	☐	☐	☐	☐

Please indicate the additional reason here and provide more information if any that you deem crucial to you buying/selling decision

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Section B

10. Do you buy stocks when there is good information in the public domain on your target company? (Please tick applicable option)

Yes ☐ No ☐

11. Do you sell off your stocks when there is adverse information about the companies that you have invested in? (Please tick applicable option)

Yes ☐ No ☐

11. Do you hold on to losing stocks or dispose them off before experiencing further declines in in their market price? (Please tick applicable option)

Hold ☐ Sell ☐

12. Kindly provide below in the names of the companies you have bought shares of in the last six months

a) .....

b) .....

c) .....

13. Please also provide the names of the companies whose shares you have sold-off in the last six months

a) .....

b) .....

c) .....

Were your above sales of shares profitable?

.....

.....

Thank you

APPENDIX II

MARKET CAPITALIZATION DATA

MONTH	COMPANY		
	SAFARICOM LTD	EQUITY BANK	MUMIAS SUGAR
OCT 2010	178,000,000,000	99,049,285,000	18,666,000,000
NOV 2010	180,000,000.000	94,420,814,010	14,611,500,000
DEC 2010	188,000,000,000	99,049,285,285	14,841,000,000
JAN 2011	178,000,000,000	107,380,533,580	13,617,000,000
FEB 2011	160,000,000,000	105,529,145,070	12,316,500,000
MAR 2011	152,000,000,000	92,569,425,500	10,939,500,000
APR 2011	158,000,000,000	99,974,979,540	11,628,000,000
MAY 2011	154,000,000,000	92,569,425,500	11,398,500,000
JUN 2011	158,000,000,000	95,346,508,265	10,939,500,000
JUL 2011	142,000,000,000	85,163,871,460	10,863,000,000
AUG 2011	122,000,000,000	71,833,874,188	9,792,000,000
SEP 2011	118,000,000,000	65,354,014,403	9,868,500,000

TRADING VOLUME DATA

MONTH	SAFARICOM LTD	EQUITY BANK	MUMIAS SUGAR
OCT 2010	399,090,496	65,053,520	71,291,128
NOV 2010	254,590,547	36,749,812	29,435,565
DEC 2010	185,773,505	23,492,406	17,127,222
JAN 2011	470,963,632	40,521,198	17,681,830
FEB 2011	151,839,126	18,416,514	19,693,584
MAR 2011	242,155,802	31,498,460	11,455,284
APR 2011	280,781,917	33,573,979	8,525,608
MAY 2011	169,455,782	58,290,306	13,057,154
JUN 2011	154,849,066	36,598,162	14,328,988
JUL 2011	196,241,011	36,280,600	11,959,371
AUG 2011	337,983,527	38,874,251	12,455,886
SEP 2011	389,129,265	34,513,878	16,391,632

MARKET TURNOVER DATA

MONTH	SAFARICOM LTD	EQUITY BANK	MUMIAS SUGAR
OCT 2010	929,280,566	837,813,467	435,791,781
NOV 2010	1,009,249,896	965,573,508	301,520,643
DEC 2010	863,528,549	607,375,665	164,678,646
JAN 2011	2,183,587,573	1,180,470,747	175,134,301
FEB 2011	652,742,282	525,330,857	162,258,002
MAR 2011	956,242,817	795,424,901	87,263,419
APR 2011	1,148,555,131	896,861,083	66,328,058
MAY 2011	666,818,097	1,469,106,011	100,683,287
JUN 2011	613,095,147	923,051,782	106,498,976
JUL 2011	731,238,528	870,251,230	84,695,177
AUG 2011	1,155,566,195	827,350,831	79,684,905
SEP 2011	1,185,416,363	647,412,857	104,314,225

SHARES ISSUED DATA

MONTH	SAFARICOM LTD	EQUITY BANK	MUMIAS SUGAR
OCT 2010	40,000,000,000	3,702,777,020	1,530,000,000
NOV 2010	40,000,000,000	3,702,777,020	1,530,000,000
DEC 2010	40,000,000,000	3,702,777,020	1,530,000,000
JAN 2011	40,000,000,000	3,702,777,020	1,530,000,000
FEB 2011	40,000,000,000	3,702,777,020	1,530,000,000
MAR 2011	40,000,000,000	3,702,777,020	1,530,000,000
APR 2011	40,000,000,000	3,702,777,020	1,530,000,000
MAY 2011	40,000,000,000	3,702,777,020	1,530,000,000
JUN 2011	40,000,000,000	3,702,777,020	1,530,000,000
JUL 2011	40,000,000,000	3,702,777,020	1,530,000,000
AUG 2011	40,000,000,000	3,702,777,020	1,530,000,000
SEP 2011	40,000,000,000	3,702,777,020	1,530,000,000

NAIROBI ALL SHARE INDEX

MONTH	INDEX
OCT 2010	102.36
NOV 2010	98.01
DEC 2010	97.82
JAN 2011	99.02
FEB 2011	96.66
MAR 2011	89.50
APR 2011	94.18
MAY 2011	93.21
JUN 2011	91.36
JUL 2011	84.32
AUG 2011	76.15
SEP 2011	69.38