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The Behaviour and Financial Performance of Individual Investors in the Trading Shares of Companies Listed At the Nairobi Stock Exchange, Kenya

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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 paper uses both a questionnaire survey and secondary data from the NSE and CMA to identify the individual investor behaviors and determine their financial performance respectively. In conclusion, it was found out that there were varied behaviours and financial performance of individual investors in trading shares of companies listed at the Nairobi Stock Exchange, Kenya. Some investors exhibited rational behaviour in making their investment decisions. On the contrary, there were

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investors who were poised to realize negative results due to irrationality and herding behaviour. The paper will contribute to literature which will form the basis of future more advanced research work on the field of behavioral finance.

JEL classification numbers: G10, G15
Keywords: Investors Behaviour, Financial Performance, Nairobi Stock Exchange

1 Introduction

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 availabilityi.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-heuristicwhere 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.

1.1 Problem of Research

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. 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.

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.

Empirical tests on thebehaviour 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 exampleusing 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 continumHofstede (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.

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 do they use in selecting their stock and their performance.

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 questionnaire and analysis was done to establish the influence of herd behaviour, mental accounting, loss aversion, anchoring, over reaction and under reaction, overconfidence, confirmation bias, 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.

1.2 Research Focus

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).

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 thus 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 diversion from the expected rational efficient market that standard finance is built on to 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 set up.

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 general objective of this study was 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.

Specifically, the study 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 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.

2 Preliminary Notes and Methodology of Research

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).

2.1 Sample of Research

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).

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 study adopted a probability sampling technique whereby systematic sampling technique was used to randomly select 5 respondents from each of the 10 brokerage firms. A respondent was selected after every three customers had been served in a brokerage firm in a given day.

2.2 Instrument and Procedures

Data on individual investor behaviour entailed collection 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.

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.

2.3 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 behavior helped to explain how good or bad their decisions were.

3 Main Results

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.

3.1 Demographic Information

The research sought to establish the gender of the investors sampled. The majority of the investors interviewed were males (54 percent). This shows that males were the most active traders in the stocks market. This is an indication of overconfidence on the part of the males in the assessment of their abilities to outperform the stock market.

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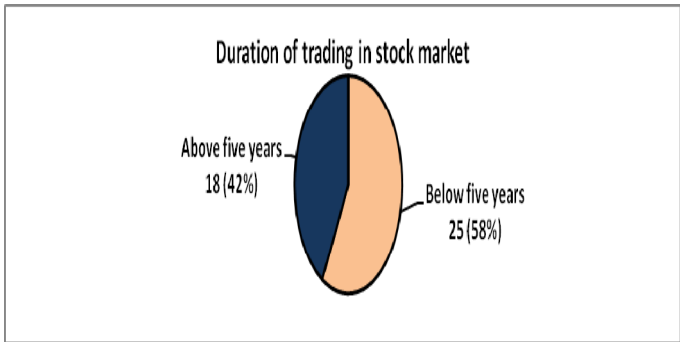
The study sought to establish the level of education of investors in the Stock Market. From the research data, the majority of investors had attained university education at 41.9 percent. This was followed by those who had attained college education at 32.6 percent and secondary education at 16.3 percent. 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.

3.2 Stock Trading Behavior

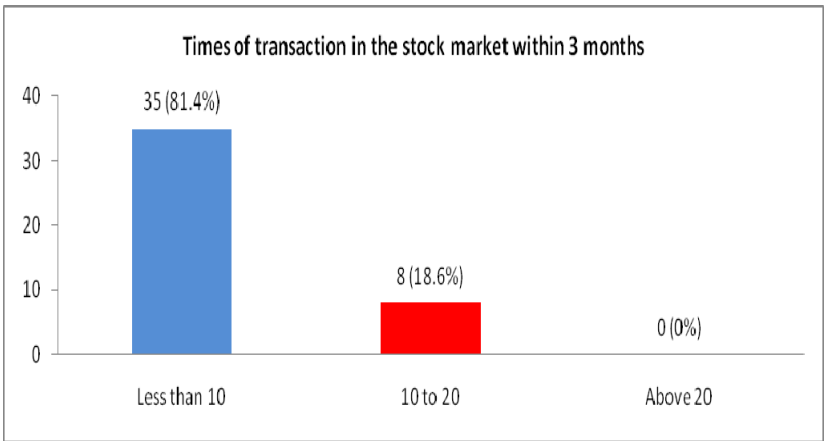
Duration of trading in the stocks market: The researcher wanted to establish the duration the investors had been trading in stocks. As shown in Figure 1, the majority of investors had been in active trading in the market within the last 5 years (58 percent). Those who had been trading for longer periods were many 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.



Source: Research Data (2011)

Figure 1: Duration of trading in the stocks market

Average time of trading in the stock market within 3 months: As presented in Figure 2, 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 constitutes sufficient evidence for 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.



Source: Research Data (2011)

Figure 2: Average time of trading in the stock market within 3 months

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 1 below.

Table 1: 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**

Source: Research Data (2011)

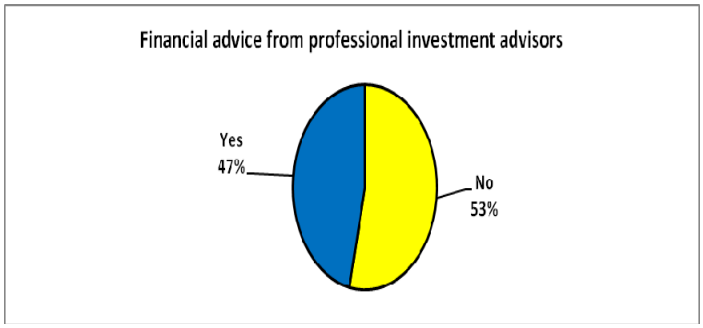
Duration before selling stocks: As presented in Table 2, the researcher established that most of the investors sold the stocks they had previously bought within months (83.7 percent). For these, the majority did it in 4 to 6 months (85.7 percent). On the other hand, the majority of those who sold their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

Table 2: Duration before selling stocks

Duration before selling a stock	**Number**	**Percent**
In months	36	83.7
In years	7	16.3
Total	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

Source: Research Data (2011)

Financial advice from professional investment advisors: The majority of traders (53 percent) sought advice from professional investment advisors as shown in Figure 3.



Source: Research Data (2011)

Figure 3: Financial advice from professional investment advisors

3.3 Factors Influence in Buying and Selling Shares at the Stock Exchange Market

Duration of 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 disagree 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 3.

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' behaviours.

Table 3: Influence in buying and selling shares at the stock exchange market

		Friends and colleagues	**Professional and investment advisors**	**Popular opinion about the market**	**Recent trend in share price movements**	**Any other reason**
N	**Valid**	43	43	43	43	43
	Missing	0	0	0	0	0
Mean		3.65	3.30	3.58	3.53	1.07
Std. Deviation		1.33	1.49	1.50	1.82	1.84
Range		4.00	5.00	5.00	5.00	5.00
Minimum		1.00	.00	.00	.00	.00
Maximum		5.00	5.00	5.00	5.00	5.00

Source: Research Data (2011)

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 rate, day to day profit, 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.

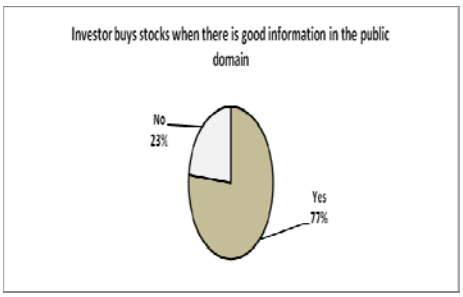
Table 4: Other factors influencing selling/buying of shares in the stock market

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

Source: Research Data (2011)

3.4 Buying and selling Stock

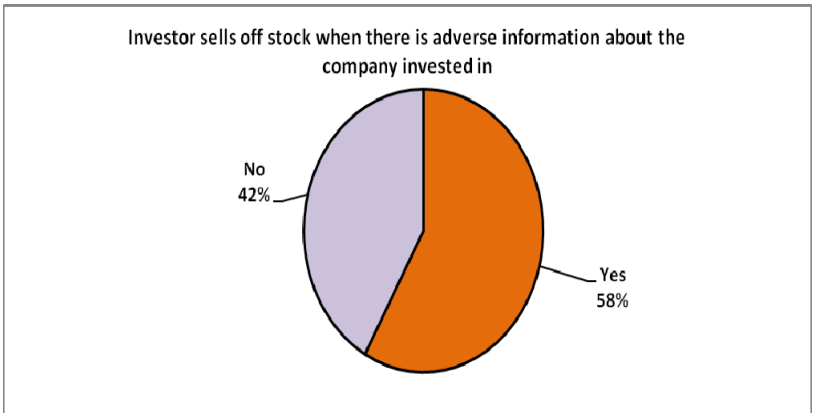
Effect of good information and buying stock: As shown in Figure 4, the majority of investors (77 percent) bought their stocks when there was good information in the public domain on the target company.



Source: Research Data (2011)

Figure 4: Good information and buying stock

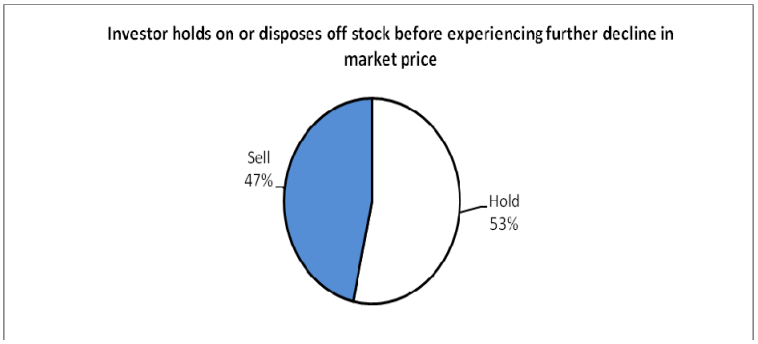
Adverse information and selling off stocks: As shown in Figure 5, the majority of investors (58 percent) sold off their stock when there was adverse information about the companies they had invested in. The investors here are afflicted by the Theory of Regret whereby they are considering the regret of 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.



Source: Research Data (2011)

Figure 5: Adverse information and selling off stocks

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 6. 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.



Source: Research Data (2011)

Figure 6: Holding on or disposing off before experiencing further decline in market price

On company stocks bought or sold-off in the previous six months, as shown in Table 5, 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 KenolKobil Ltd. each at 7.1 percent among others.

Table 5: 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

Source: Research Data (2011)

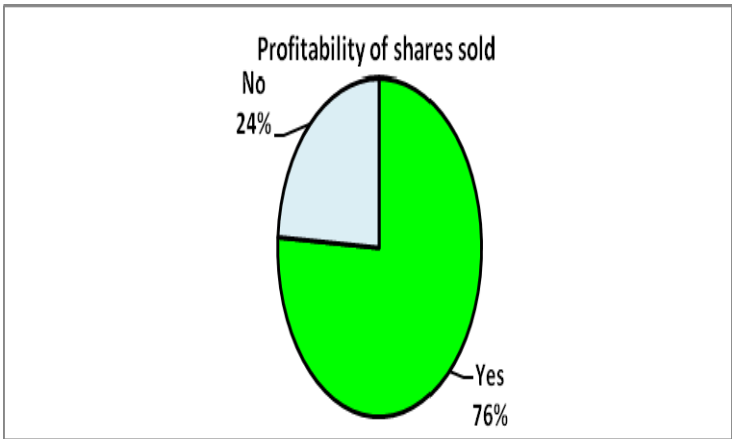
Also as shown in Table 6, it was found that the majority of investors sold-off stock from Safaricom Ltd (28.6 percent), Mumias Sugar (14.3 percent) and Equity Bank (10.7 percent) among others.

Table 6: 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

Source: Research Data (2011)

Profitability of shares sold: The researcher sought to determine whether the shares sold-off were profitable. As shown in Figure 7, the majority of shares sold were profitable (76 percent).



Source: Research Data (2011)

Figure 7: Profitability of shares sold

3.5 Financial Performance of the Businesses That Investors Sold Stocks Off From

As shown in Table 7, all the companies from which investors sold off their shares from had varied financial performances. The researcher calculated abnormal return, volatility, market capitalization, book market ratio and trading volumes from the three top most companies from which stocks had been sold off. These were Safaricom limited, Equity Bank Limited and Mumias Sugar Company Limited.

3.5.1 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.

3.5.2 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 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.

3.5.3 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 stocks from the companies.

3.5.4 Book Market Ratio

The higher the Book Market Value the better for an investor to maintain his stocks. 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 shares.

3.5.5 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 7: 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	99,090,496
Nov 2010	(4.66)	0.14	180,000,000,000	0.38	54,590,547
Dec 2010	(4.48)	0.14	188,000,000,000	0.38	85,773,505
Jan 2011	(5.75)	0.12	178,000,000,000	0.39	70,963,632
Feb 2011	(3.63)	0.05	160,000,000,000	0.41	51,839,126
Mar 2011	3.13	0.07	152,000,000,000	0.45	42,155,802
Apr 2011	(1.41)	0.03	158,000,000,000	0.43	80,781,917
May 2011	(0.59)	0.07	154,000,000,000	0.45	69,455,782
Jun 2011	1.28	0.06	158,000,000,000	0.45	54,849,066
Jul 2011	8.10	0.13	142,000,000,000	0.47	96,241,011
Aug 2011	16.30	0.12	122,000,000,000	0.47	37,983,527
Sep 2011	22.41	0.31	118,000,000,000	0.57	89,129,265
Average					58,520,401
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	07,380,533,580	0.25	40,521,198
Feb 2011	14.96	0.88	05,529,145,070	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)				

Source: Research Data (2011)

4 Discussions

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

4.1 Factors that Investors Put Into Consideration in Making Investment Decisions

The first objective of the study was to find out how individual investors make 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 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 could be prompted by heuristic biases that emanated from the opinion makers which could have 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 background, improved exchange rates, day to day profits, 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 were 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.

4.2 Familiarity of Investors with the Best Investment Practices That Are 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 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 irrationalin 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 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 offstocks 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 Value the better for an investor to maintain his stocks. 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.

4.3 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 had 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, 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 the best 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.

5 Conclusions

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 in key to making the best investment decisions.

5.1 Recommendations for Further Study

The basis for choosing 50 respondents was informed by the reasoning that volatility in individuals 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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