

**THE EFFECT OF BEHAVIORAL FINANCE FACTORS ON
STOCK INVESTMENT DECISIONS IN KENYA**

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DECLARATION

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

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ABSTRACT

NSE investors in stocks are believed to base their decisions on the standard finance models of CAPM by Sharpe, portfolio theory by Markowitz, arbitrage asset pricing by Modigliani and Miller and the option pricing of Black, Scholes and Merton. However empirical research has shown that, when selecting a portfolio, investors not only consider statistical measures such as risk and return, but do also consider psychological factors closely related to the field of finance. This study therefore applied behavioral finance factors to explain investment decision making by investors of the NSE market in Kenya. The study investigated the behavioral finance factors influencing investment decisions in the Kenyan NSE with a particular interest in Machakos County. This was aimed at better reflecting the way NSE investors think and behave by use of behavioral finance. It intended to verify the extent to which these behavioral factors contribute to the success or failure of the investments made by these investors. Finally the study focused on establishing the frequency at which these factors are utilized in informing investment decisions making by NSE investors. The study employed cross-sectional survey research design with a survey questionnaire to collect data from NSE investors within Machakos County as provided by registered stock brokerage firms operating within Machakos County. This entailed employing qualitative research methods which are deemed to be the best in understanding and interpreting behavioral finance trends and ideologies. The researcher utilized field surveys for data collection and development as this has been deemed to be the most appropriate tool in gathering data that needs to reveal attitudes and opinions. The study targeted a population of 1.67 million active NSE investors under 3 stock brokerage firms within Machakos County. From the target population, a sample of 60 respondents was randomly obtained from the 3 stock brokerage firms to represent the interests of the rest. The sample was to be wholly covered based on the fact that it was not too large and had the possibility of being centralized within Machakos County. To collect data the researcher utilized a closed ended structured questionnaire that was personally administered to the respondents while at the same time administering short interviews to those respondents that could spare some time for the same. This data collection was carried out within a period of 24 days by the researcher in person due to the sensitivity and confidentiality of the subject matter. The data collected was analyzed using SPSS Version 20 to generate frequencies, mean scores, standard deviations, percentages, and multiple regression analysis. This study established that a unit increase in Certain-return bias is associated with - 0.468 decreases in stock investment, loss aversion 0.445, fear of regret 0.278 and random walk framing 0.340 increase while the coefficient of determination was found to be 26.5% meaning the above factors accounted for this percent while other factors accounted for 73.5% of the NSE investors financial and investment decisions. These findings have been presented by use of tables and charts. In conclusion this study is not an end in itself as it suggests further studies and research in this field with a view of identifying the most influential factors on stock market investors' behavior on how they base their future investment strategies and how they are likely to affect their investment decisions.

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LIST OF ABBREVIATIONS

APT	Arbitrage Pricing Theory
BAPM	Behavioral Asset Pricing Model
BF	Behavioral Finance
BM	Book- to – Market
BV	Book Value
CAPM	Capital Asset Pricing Model
CBD	Central Business District
CDS	Central Depository Settlement
CMA	Capital Markets Authority
COOP	The Cooperative Bank of Kenya Limited
EMH	Efficient Market Hypothesis
MPT	Modern Portfolio Theory
MV	Market Value
NSE	Nairobi Securities Exchange
P/E	Price/ Earnings Ratio
SPSS	Statistical Package for Social Sciences

DEFINITION OF TERMS

Behavioral finance factors– these are psychological factors that influence financial decision making process.

Stock investment decisions– investment decisions on which stocks to buy, hold or sell on the Nairobi securities exchange by investors.

CHAPTER ONE

1.0 Introduction

Over the years it has been viewed that the standard finance models of CAPM, APT, portfolio theory and option pricing informed rational finance investors decisions by predicting and explaining market dynamics. Behavioral Finance (BF) is the application of psychology to financial behavior; i.e. it is the behavior of practitioners. According to BF, investors are rational, but not in the linear and mathematical sense based on the mean and variance of returns. Instead, investors respond to natural psychological factors such as fear, hope, optimism and pessimism. As a result, asset values may deviate from their fundamental value and as such the theory of market efficiency suffers(Mayo 2009).Hence behavior finance helps to understand why investors buy, hold or sell their stocks without carrying out fundamental analysis and basing their decisions on the results of these analyses.

Various definitions on behavioral finance have been advanced by several scholars.Shefrin(2001) states that behavioral finance is the study of how psychology affects financial decision making and financial markets.According to Statman (2010) “behavioral finance is a solid structure that incorporates parts of standard finance while replacing others in bridging the gap between theory, evidence and practice” From the above definitions it can be seen that individual investors are affected by psychological factors like cognitive biases in their decision making, rather than being rational with wealth maximization ideologies. Since the thrust of this study was on the effects of behavioral finance factors on stock investment decisions, it thus adopted the definition by Shefrin (2001) which emphasizes the psychological effects of behavioral finance on financial decision making and financial markets where NSE is a member.

1.1 Background of the study

Investors are usually deemed to make investment decisions by employing financial tools such as fundamental analysis, technical analysis and judgment. It has over the years been assumed that information structure and factors in the market systematically influence individuals' investment decisions as well as market outcomes. However investor market behavior not only depends on the rational thinking but also derives from psychological principles of decision making to explain why people buy or sell stocks. As such many people are influenced by feelings, fantasy, mood and sentiments in making investment decisions (Statman, Fisher and Anginer, 2008)

Psychology Professor Paul Slovic(1969) published a detailed study of the investment process from a behavioral point of view. However, it was not until the late 1980s that Behavioral Finance began to get acceptance among professional economists. At that time, Professors Richard Thaler(1999)of the University of Chicago, Robert Shiller(1995) of Yale University, Werner de Bondt of the University of Illinois, and Meir Statman(1994) and HershShefrin (1994) at Santa Clara University, among others, began to publish research relevant to Behavioral Finance (Olsen, 1998).

These scholars began to discover a host of empirical results that were not consistent with the view that market returns were determined in accordance with the CAPM and the efficient market hypothesis. Proponents of Traditional Finance regarded these findings as anomalous, and thus called them anomalies. Behavioral Finance's main contribution was to allow a better understanding of the anomalies present in investors' behavior by integrating psychology with finance and economics. However, it was not until Professor Daniel Kahneman of Princeton University was awarded the 2002

Nobel Prize in economic sciences that Behavioral Finance gained momentum. Consequently, it was not until researchers began to discover empirical results that were not consistent with the efficient market theory that Behavioral Finance became popular. In short, the growing interest in Behavioral Finance has been the result of an accumulation of empirical anomalies.

Indeed investor psychology has been found to have an impact on the outcomes of the choice of the portfolio formed by a stock market investor and as such it helps in understanding what underlies the decision creation criteria of an individual investor's investment goals in stocks. Further the application of these behavioral finance psychological principles on investigating the happenings on the stock markets has been pivotal in highlighting the limitations and complications of an improved financial decision making process which tends to be complex to an individual stock market investor (Statman,1999)

Neo- behavioral economics contends that the level of complexity in the real world makes it impossible for investors to fully comprehend the markets in which they trade. This information asymmetry thus places some stock market investors at an advantage especially if they are in a position to have access to these market dynamics while disadvantaging those that could find it a challenge in accessing this information hence driving them to resort to their personal intuition in making investment decisions (Gwily, 2003). Thus behavioral finance considers how various psychological traits affect how individuals or groups act as investors, analysts, and portfolio managers (Brown & Reilly, 2004).

Actually financial psychology has demonstrated that human beings are quite irrational while making stock market investment decisions. This has been emphasized by the fact that indeed psychological factors such as endowment effect, disposition effect, fear of regret and framing effects do have an effect on the investors' rationality in stock market investment decisions (Decourtet *al* 2005). Additionally stock prices have been found to deviate from their fundamentally analyzed values which are occasioned by human beings who are stock market investors' tendency to overreact and/or under react to certain stock market circumstances hence deviating from the rational decision making and thus bringing into play psychological biases in informing their investment decisions (Andrikopoulos 2006)

Further individual investors do rely more on newspapers/media and noise in the market when making their investment decisions, while professional investors rely more on fundamental and technical analysis and less on portfolio analysis. Hence stock market participants are generally exposed to a constant flow of information, ranging from quantitative financial data to financial news in the media, and socially exchanged opinions and recommendations, however processing all this information is a difficult task particularly to those less savvy stock market investors and this results into them making investment decision based on less sophisticated information and data and thus giving weight to behavioral finance proponents that indeed these factors have an influence on stock market investment decisions (Dimitrios I. M, 2007)

It should be noted further that in as much as it is expected that investment decisions should be guided by predefined fundamental and technical analysis that incorporate an acceptable level of risk for the overall portfolio and are consistent with the goals and time horizon of the investor, it has been quite evident that investors have difficulties

making long term financial decisions for reasons such as shortsightedness, a lack of financial sophistication and inability to self regulate (Winchester *et al.* 2011). People when faced with uncertainty, tend to rely on heuristics or rules of thumb to subjectively assess risks of alternatives, which reduces the complex tasks of assessing probabilities and predicting values to simpler judgmental operations (Raines & Leathers, 2011)

As elucidated by the above facts, this study therefore intended to establish the various behavioral finance factors that play a key role when stock market investors on the NSE are faced with decision making moments as pertains to where to put their hard earned cash for future anticipated returns, and whether these instincts do really have a bearing on the success of the investment of choice.

1.2 Statement of the Problem

Investors on The Nairobi Securities Exchange have for years been deemed to rely on statistics and expert opinions which are professionally analyzed and presented on making their investment decisions with a hope of gaining in either the short or long term. It should be however noted that the NSE market environment in Kenya cannot be entirely explained by the Traditional Finance Theory and thus its models can't perfectly apply to this market situation. According to Shiller (2002) literature in empirical finance which has been done in relation to underlying behavioral principles which come primarily from psychology, sociology and anthropology, suggests a myriad of behavioral principles as influencing stock investors. In Kenya, cognitive psychological biases have taken prominence over rational behavior on many occasions as pertains to stock market investments.

Recent studies on behavioral finance in Kenya has established the presence of herd behavior, fear of regret, overconfidence and anchoring as elucidated by Werah (2006), while Mbaluka (2008) study focused on psychological aspect. Further Nyaribo(2010) centered on overconfidence, frame dependence, anchoring, mental accounting and representativeness. As such the above studies had not adequately addressed the certain-return bias, loss aversion, regret aversion and random walk framing as affecting NSE investors while making their investment decisions as to which stocks to invest in. This study intended to bridge the knowledge gap left by the above studies which have not adequately focused on investor behavior on the NSE in Kenya today by establishing the presence and impact of certain-return bias, loss aversion, regret aversion and random walk framing so as to contribute towards the already existing body of knowledge on the effect of psychology on stock investment decisions.

1.3 Objectives

1.3.1 General Objective

The objective of this study was to establish the effects of behavioral finance factors on stock markets investment decisions by NSE investors.

1.3.2 Specific objectives

- a) To determine the effect of certain-return bias by investors on stock investment decisions on the Nairobi Securities Exchange.
- b) To assess the extent to which loss aversion affects stock investment decisions by investors on the Nairobi Securities Exchange.
- c) To analyze the impact of regret aversion on stock investment decisions by investors on the Nairobi Securities Exchange.
- d) To establish the effect of random walk framing on stock investment decisions by investors on the Nairobi Securities Exchange.

1.4 Research Questions

- a) What is the effect of stocks' certain-return bias by investors on stock investment decisions to the NSE investors?
- b) To what extent does loss aversion affect stock investment decisions by the NSE investors?
- c) What is the impact of fear of regret on stock investment decisions to the NSE investors?
- d) What is the effect of random walk framing on stock investment decisions by investors on the NSE?

1.5 Justification of Study

For a long time in the Kenyan capital mobilization industry, there has lacked information and insight on how to make viable investment and financial decisions on the NSE. Very many propositions have been advanced by various analyzed data by professionals on which stock to buy or hold. This study intended to act as an eye opener first to the individual investor in explaining to him the pertinent issues and misperceptions of the NSE which are primarily influenced by our psychological thinking which end up in more pain than gain. Secondly the study attempted to address the information deficiency to the seekers of capital finance from the NSE on the psychological factors that influence the uptake of their respective securities on the NSE and as such act as a basis of strategy formulation on how to maximize NSE potential as capital seekers. Lastly an insight into the psychological factors informing decisions on the NSE and by coincidence the corporate mitigation measures to counter-balance the same was deemed to be of great help to the CMA in drafting an amicable compromise strategy on how to manage the expectations of both and hence ensure the growth and expansion of the Bourse.

1.6 Scope of the Study

The study focused on the NSE investors in the stocks counter as provided by the three randomly sampled registered stockbrokerage firms operating within Machakos County who appeared in their registers and data bases as at the time of study. It focused on their stock investment decisions that they had made in the last five years with regard to the application of behavioral finance.

1.7 Limitation of study

In the course of the study the researcher encountered various impediments that hampered adequate gathering of the relevant data necessary for the research. Key among the challenges was encounters with uncooperative respondents in terms of volunteering their personal investment information to the researcher whom they perceived as a stranger to them. Another notable challenge was the limited cooperation by the targeted stockbrokerage firms in providing information and details as concern their customers due to the confidential nature of banking and investment in Kenya today. On the other hand, this being a relatively new phenomenon in the finance discipline there were instances of some respondents not fully understanding the topic and the questionnaire appropriately hence giving incorrect responses to the questions put forth to them during the research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Literature on behavioral finance is indeed large and diverse as it has been evidenced to produce a wide insight on the subject's influence on the application of psychology to financial behavior. Even though the idea that psychology plays an important role in investors' behavior became popular only recently, several economists and psychologists have been trying to integrate these fields for quite some time. Keynes wrote of the influence of psychology in economics more than fifty years ago.

The most prominently recognized father of BF Tversky and Kahneman (1979) advanced the various dimensions of behavioral finance in their works in a paper that critiqued the expected utility theory in which they found out that investors do usually under weigh outcomes that are probable in contrast to more certain outcomes. At the same time they established that investors do generally discard fundamental information that is shared by the majority of the market participants, as such value is assigned to gain and losses rather than to the final asset value.

Additionally, psychology Professor Paul Slovic published a detailed study of the investment process from a behavioral point of view in 1969. However, it was not until the late 1980s that Behavioral Finance began to get acceptance among professional economists. At that time, Professors Richard Thaler at the University of Chicago, Robert Shiller at Yale University, Werner de Bondt at the University of Illinois, and Meir Statman and Hersh Shefrin at Santa Clara University, among others, began to publish research relevant to Behavioral Finance (Olsen, 1998). In short, the growing

interest in Behavioral Finance has been the result of an accumulation of empirical anomalies which have demonstrated that human cognitive intuitions have taken away investors rationality when it comes to stock investment decision making. As such this study explored the various cognitive illusions that affect an investor's decision making.

2.2 Theoretical Literature Review

The theoretical literature review focused on the behavioral finance theories of the prospect theory, disposition effect, regret aversion and random walk theory to explain the certain-return bias, loss aversion, regret aversion and random walk framing in the objectives statement of the study. It further addressed the behavioral finance model and empirical studies on behavioral finance before winding up with the research gap and conceptual framework.

2.2.1 Behavioral Finance Theory

Behavioral Finance is the study of the influence of psychology on the behavior of financial practitioners and the subsequent effect on markets. Behavioral Finance is of interest because it helps explain why and how markets might be inefficient (Sewell 2001). Shefrin (1998) also summarizes the main empirical anomalies that affect investors' behavior and their financial decisions, and that have also led to a reevaluation of the efficient markets hypothesis. Behavioral finance provides a paradigm shift from the standard finance theory of Markowitz and Sharp by focusing on the individual investors and their ways of gathering and utilizing financial information (Hede, 2012). It further seeks to understand and predict systematic financial market implications of psychological decision making processes. In order to explain the various irrational investor behaviors in financial markets, behavioral

economists draw on the knowledge of human cognitive behavioral theories from psychology, sociology and anthropology applied together with economic principles. The following are some of the basic findings and principal behavioral finance theories that this study intends to explore.

2.2.2.1 Prospect Theory (Certain-return bias)

Tversky and Kahneman (1979) by way of developing the Prospect Theory showed how people manage risk and uncertainty. In essence, the theory explains the apparent regularity in human behaviors when assessing risk under uncertainty. That is, human beings are not consistently risk-averse; rather they are risk-averse in gains but risk-takers in losses. According to Tversky and Kahneman, people place much more weight on the outcomes that are perceived more certain than that are considered mere probable, a feature known as the “certainty effect”. People’s choices are also affected by ‘framing effect’. Framing refers to the way a problem is posed to the decision maker and their ‘mental accounting’ of that problem.

The value maximization function of the Prospect Theory is different from that of the value maximization function of MPT. Wealth maximization is between gains and losses, rather than over the final wealth position as in MPT (Markowitz, 1952). As such, people may make different choices in situations with identical final wealth levels. Critical to the value maximization is the reference point from which gains and losses are measured. Usually, the status quo is taken as the reference point and changes are measured against it in relative terms, rather than in absolute terms.

According to Jordan and Miller (2008), Prospect theory is an alternative to classical, rational economic decision making. Prospect theory emphasizes that investors tend to

behave differently when they face prospective gains and losses; investors are much more distressed by prospective losses than they are happy about equivalent gains, and a typical investor considers the pain of losing one dollar to be twice the pleasure received from the gain of one dollar. Investors have been found to respond in different ways to identical situations, depending on whether they are presented in terms of gains or in terms of losses. Investors seem to be willing to take more risk to avoid loss than they are to make an equivalent profit. The tendency of investors to be risk-averse regarding gains but risk-seeking regarding losses is the essence of prospect theory. When an investor has the choice between a sure gain and a gamble that could increase or decrease the sure gain, the investor is likely to choose the sure gain. But when faced with a choice between a sure loss and a gamble which could increase or decrease the sure loss, investors are more likely to take the gamble (Jordan & Miller, 2008).

2.2.2.2 Disposition effect (Loss aversion)

According to the disposition effect, investors have great difficulty coming to terms with losses. Consequently, they are predisposed to holding losers too long and selling winners too early. This is because investors will always avoid losses and seek to realize gains at any given time (Ritter, 2003). This position according to Weber and Camerer, (1998) is the tendency to sell those stocks that have gained in value while holding onto those that have shed value. Indeed it has been established that investors tend to sell winners too earlier whereas holding onto losers for so long. This is as a result of the fear that the winners may drop in value while the losers may gain value in the short term though this have proved not to hold in practice (Shefrin and Statman, 1995). It has been further noted that people will always try to avoid the feeling of being failures much so if they acted on the advice of others and as such they will do everything to make sure that they are winners in their actions hence the feeling that by

achieving a particular feat in the market they feel proud of their actions thus furthering the disposition effect (Brabazon, 2000). According to Nofsinger,(2007) the investors show of regret aversion is a result of disposition effect where investors sell well performing stocks too soon and hold on poorly performing stocks for too long. Thus this phenomenon has an effect of distorting the pricing of stocks on the NSE as it interferes with the rational forces of demand and supply which play a key role on price setting on the NSE. This position was emphasized by Shapira, Venezia, 2001 and Chen, 2007 who posits that disposition effect is pervasive in nature in that the more recently stocks gain or loss value the stronger the propensity for investors to sell winners and hold on losers. As such investors have been found to hold losers longer in their portfolio than winners.

2.2.2.3 Fear of Regret (Regret aversion)

Human beings have the tendency to feel the pain or the fear of regret at having made errors. As such, to avoid the pain of regret, people tend to alter their behavior, which may end up being irrational at times. Linked with fear of regret is ‘cognitive dissonance’, which is the mental suffering that people experience when they are presented with the evidence that their beliefs have been wrong (Shiller,1995). Regret aversion is a psychological error that arises out of excessive focus on feelings of regret at having made a decision, which turned out to be poor, mainly because the outcomes of the alternative are visibly better for the investor to see. This is made profound by the fact that investors have to admit their mistakes and embrace the consequences of their decisions which in itself is quite hard to phantom. This scenario forces most investors to avoid taking decisive actions for the very fear that their decisions may lead to an unfavorable outcome. This could lead to investors holding onto losing stocks for too long because of unwillingness to rectify mistakes in a timely manner

(Pompian, 2006). At the same time this could stop investors from making an entry into the market when there has been a downtrend, which is showing signs of ending, and signals that it is good time to buy. The fear of regret happens often when individual investors are indecisive in making investment decisions. Various psychology experimental studies suggest that regret influences decision-making under uncertainty. As such regret avoiding investors have a tendency of avoiding distress arising out of errors of commission which are as a result of misguided action, and errors of omission which occur as a result of missing an opportunity which existed (Pompian, 2006).

2.2.2.4 Random Walk Theory (Random walk framing)

Random Walk refers to the notion that changes in stock prices are random and unpredictable (Bodie, Kane & Marcus, 2007). It is thus of no use, to attempt to predict future stock prices. Past patterns of stock price movements should not be used as a basis to extrapolate future price trends. According to Bernstein (1984), investors consistently push stock prices to unsustainable levels, both upwards and downwards. Parikh (2009) in advocating for 'value investing' quotes Benjamin Graham who says, "Price is what you pay, value is what you get". He states that value investors buy stocks when the market is bearish, when expectations of investors are low; during bullish times, the value investors look for good neglected stocks which are out of favor with investors. He shows that growth stock investing on the other hand is based on dreams, illusions or popular opinion. A study by Anyumba (2010) concluded that NSE follows a random walk under the weak form of market efficiency.

Other components of behavioral finance theory relevant to this discussion include the following aspects:

2.2.2.5 Aversion to ambiguity

People prefer the familiar to the unfamiliar. The emotional aspect of aversion to ambiguity is fear of the unknown. Kahneman and Tversky (1979) studied how people respond to the prospect of loss. They find that a loss has about two and a half times the impact of a gain of the same magnitude and they call this phenomenon loss aversion. In this case therefore, people will always try to avoid situations that could pose a loss as compared to those that present a gain by holding onto losing positions in the hope that the prices will eventually recovery in the near future. According to Shefrin (2000) investors when left to view stocks individually, they are likely to be risk averse making them to sell quickly stocks whose prices are rising hence depressing the same prices. On the contrary they are likely to hold too long on the stocks with falling prices causing the stocks prices to be negative. This makes decision making in stocks investment sensitive to the investors actions hence further distorting the standard finance theory.

2.2.2.6 Emotional time line

It is important to discuss emotion while analyzing financial decisions because emotions determine tolerance for risk. According to psychologist Lopes (1987), hope and fear affect the way that investors evaluate alternatives. Lopes tells us that these two emotions reside within all of us, as opposite poles, and one of her contributions is to establish how the interaction of these conflicting emotions determines the tolerance towards risk. Lopes (1987) states that emotions determine tolerance for risk and this plays a key role in portfolio selection. It should be noted that investment usually takes time along a time line. Investors experience emotions as they ponder their alternatives, make decisions about how much risk to take, ride the financial roller coaster while watching over their investment decisions and assess whether to keep to the initial

strategy or alter it. Emotions timeline runs from left to right where investment decisions lie at the left while goals lie at the right. As such investors encounter various emotions along the timeline as they make investment decisions at the left, wait in the middle and learn their fate at the right. Thus the actions of investors along this time line will be guided by their risk tolerance level with total disregard to fundamental analysis. In this context therefore risk tolerance determines the position of the investor on the timeline. Fisher and Statman (1997) posits that investors who are more risk tolerant and have enough time to make investment decisions have an appetite for stocks.

2.2.2.7 Overconfidence

Alpert and Raiffa (1982) showed that people are poorly calibrated in estimating probabilities and usually overestimate their precision of the knowledge and ability to do well. People are also overconfidence about good things happening in future than bad. In addition, people overestimate their confidence to the past positive outcomes and usually recall only their successes than their failures. When people are overconfident, they set overly narrow confidence bands. They set their high guess too low and their low guess too high. There are two main implications of investor overconfidence. The first is that investors take bad bets because they fail to realize that they are at an informal disadvantage. The second is that they trade more frequently than is prudent, which leads to excessive trading volume. De Bondt (1993) posits that people tend to formulate their predictions by naively projecting trends that they perceive in the charts with the tendency to be overconfident in their ability to predict them accurately. However on many occasion this confidence intervals are usually skewed, meaning that their best guesses do not lie midway between their low and high guesses. It should be noted that overconfidence can be learned through past success in

that the more success the investor has experienced in the past the more the attribution of the same towards their ability even in instances where luck and mere fate played a role (Odean, 2001).

According to Jordan and Miller (2008), overconfidence manifests itself through lack of diversification. People tend to invest in local companies that they are familiar with, as opposed to distant companies which might even be performing better. Graham and Harvey (2009) found that investors who feel more confident trade more often. They also found that male investors and investors with larger portfolios or more education are more likely to perceive themselves as more competent than female investors and investors with smaller portfolios or less education.

2.2.2.8 Affect

Affect is manifested through sentiments, likes and dislikes of people about something including investments. Even the very name of a company can attract or repel prospective investors without regard to the fundamental value of the company's stock. It has been found that moods and emotions influence people in decision making, including investment decisions. This is irrational behavior from an economic point of view. Statman, Fisher, and Anginer (2008) argue that investors often admire a stock or disapprove of it when they hear its name even before they think about its P/E or the growth of its company's sales, and that affect is exhibited in stocks, houses, cars, watches, and many other products. They further define affect as the specific quality of "goodness" or "badness", and cite Slovic, Finucane, Peters, and MacGregor (2002) who described affect as a feeling that occurs rapidly and automatically, often without consciousness. Statman et al. (2008) quote Zajonc (1980) as having written that; "We do not just see house: We see a handsome house, an ugly house, or a pretentious house". The liking and attraction to something is what mostly drives investment

decisions. Thus it is not strange to find stock market investors liking or hating a particular stock based on any fundamental analysis but purely due to affect.

2.2.2.9 Representativeness and overreaction

This principle refers to judgments based on stereotypes. A financial example illustrating representativeness is the winner-loser effect documented by De Bondt and Thaler (1985, 1987). Investors who rely on the representativeness heuristic become overly pessimistic about past losers and overly optimistic about past winners. As a consequence, investors overreact to both bad and good news. Therefore, overreaction leads past losers to become underpriced and past winners to become overpriced.

2.2.3 Behavioral Asset Pricing Model (BAPM)

Shefrin and Statman (1994) developed a behavioral asset pricing theory as an analog to the standard CAPM. The behavioral asset pricing model (BAPM) features the market interaction of two groups of traders: information traders and noise traders. Information traders are the ones present in the standard CAPM and they are free of cognitive errors and have mean-variance preferences. Noise traders live outside the CAPM, commit cognitive errors, and do not have strict mean variance preferences.

The expected returns of securities in the BAPM are determined by their “behavioral betas”, which are relative to the tangent mean-variance efficient portfolio. But the mean-variance efficient portfolio is not the market portfolio because noise traders affect security prices.

In 1996, Fama and French developed the “three factor model” to try to explain behavioral factors. Previous work had shown that average returns on common stocks were related to firm characteristics like size, earnings/price, cash flow/price, book to market equity, past sales growth, long term past return, and short term past returns. Because these patterns in average returns were apparently not explained by the

CAPM, they were called anomalies. The authors found that, except for the continuation of short term returns, the anomalies largely disappeared in the three factor model. Although this model could not explain the continuation of short term returns documented by Jegadeesh and Titman (1993), they captured the reversal of long term returns documented by De Bondt and Thaler (1985, 1987).

Finally, another factor that has been largely documented by the behavioral finance literature and incorporated in their models is sentiment. According to Behavioral Finance, sentiment is the reflection of heuristic-driven bias. For example, in 1998, Barberis, Shleifer and Vishny presented a model of investor sentiment, which was consistent with the empirical findings. In other words, their work tried to model how investors formed beliefs. The model was based on psychological evidence and produced both under-reaction and overreaction for a wide range of parameter values. Moreover, several sentiment indexes were developed to measure sentiment in the market. Traditionally, market sentiment is seen as a contrarian indicator. Markets rise, the theory goes, as bears become bulls and put money into the market. The market peaks when there are no bears left and everyone is invested.

2.3 Empirical Studies on Behavioral Finance

As Merton (1987) emphasizes, ‘anomalous empirical evidence has indeed stimulated wide-ranging research efforts to make explicit the theoretical and empirical limitations of the basic finance model with its frictionless markets, complete information, and rational, optimizing economic behavior but although much has been done, this research line is far from closure’. Schacter, Oulette, Whittle and Gerin (1987) demonstrated investors’ tendencies to reinforce existing price trends and brief price reversals. Chopra, Lakonishok, and Ritter (1992) provided compelling evidence in support of the idea that investors make irrational forecasts of future cash-flows. If

excessive optimism or pessimism is driving these irrational forecasts, then earnings announcement dates should provide the impetus for correction.

The behavioral models have been most successful in explaining stock price anomalies related to overreaction, under-reaction, momentum strategies, herding behavior, firm size effect and BV/MV ratio effects. Barberis, Schleifer, and Vishny (1996) formulated a model of security price over and under-reaction to information when investor judgment is biased by conservatism and the representativeness heuristic.

Daniel, Hirshleifer, and Subramanyam (1998) explained event-related security price anomalies according to the cognitive biases of investor overconfidence and self-attribution. Shiller (1998) suggested that descriptions of overreaction and under-reaction are not likely to be good psychological foundations upon which to organize a general theory of economic behavior. Cognitive biases inadequately identify the behavioral motivations causing price anomalies.

Barber and Odean (1999) highlighted two common mistakes investors make: excessive trading and the tendency to disproportionately hold on to losing investments while selling winners. They argue that these systematic biases have their origins in human psychology. The tendency for human beings to be overconfident causes the first bias in investors, and the human desire to avoid regret prompts the second.

Daniel and Titman (2000) explained the superior returns of a momentum investing strategy over the past 35 years as the result of investors' overconfidence bias. Further a study by Dremen and Lufkin (2000) presented evidence that investor under and overreaction exists and is part of the same psychological process. Chan (2001) found that a large stock price change, unsupported by news, on average was followed by a

statistically anomalous price trend reversal over the next month. He further illustrated that the price trend reversals often occur when a majority of market agents follow the same investing strategy (buying or selling), unsupported by new information. A study by Barberis and Thaler (2001) confirmed that data does indeed show anomalous corrective activity following earnings announcements from listed companies.

Decourt *et al* (2005) studied the influence of behavioral finance on Brazilian financial markets by use of an investment simulator and identified various psychological factors such as endowment effect, disposition effect, fear of regret and framing effects as affecting the investors' rationality in stock market investment decisions. Further studies by Andrikopoulos (2006) established that behavioral finance gives an alternative explanation on why stock prices deviate from their fundamentally analyzed values due to investors' tendency to overreact and/ or under react to certain stock market circumstances hence deviating from rational decision making.

Dimitrios I.M. (2007) conducted a study on investors behavior and found out that individual investors rely more on newspapers/media and noise in the market when making their investment decisions, while professional investors rely more on fundamental and technical analysis and less on portfolio analysis. This constant flow of information such as news in the media, socially exchanged opinions and recommendations proves a difficult task to the investors in terms of processing and interpretation resulting into them making investment decisions based on less sophisticated information.

A study on behavioral asset pricing model by Statman *et al* (2008) established that misleading emotions such as affect, has misled investors into admiring stocks with a positive affect while shunning those with perceived negative affect without concrete fundamental and technical analysis. Nyaribo (2010) centered on overconfidence, frame

dependency, loss aversion, anchoring, mental accounting and representativeness in his study on investor psychology. A study by Anyumba (2010) concluded that NSE follows a random walk under the weak form of market efficiency. According to a study by Edmans (2011), cognitive errors such as underestimation of tangible capital gains were reflected in investment asset pricing models, hence shaping the kind of portfolios that investors choose.

A study by Ton (2011) analyzed the tendency of investors to realize gains too early and the reluctance to liquidate losing positions. The analysis was based on the complete transaction data of the Estonian stock market. The study found the presence of the disposition effect (loss aversion) on the market as having a profound impact on the investment decision making by stock market investors thus reinforcing the position that behavioral finance plays a significant role on the stock market. Another study by Stephen (2011) tested the argument that stock market investors relied on heuristics or rule of the thumb in making their investment decisions by focusing on a simple heuristic whereby momentum traders are attracted to buying stocks that have recently doubled in price in anticipation of further gains. It was established that investors who avoid relying on this simple heuristic were likely to perform as expected, on average similar to the overall market.

Katherina, (2012) studied the role of mental framing in the decision-making process by stock market investors. The study was designed into two parts whereby study 1 focused on the impact of mental frames on the investor's portfolio and the interaction between mental frames and investor expectations. Study 2 examined individual and environmental factors that influence the type of mental investment frame individuals hold. It was established that mental framing about investors expectation of the market had an influence on the choices made about the stocks to invest or divest in. Khan

(2012) in his study about understanding investor psychology for responsible financial behavior established that behavioral finance was evident in the decision making process of stock market investors and is likely to disrupt the financial system and cause huge social and economic damages to investors.

A study by Sahiet *al* (2013) that was done to establish the beliefs and attitudes of the individual investors with regard to financial investment decision making, with particular reference to the investor biases, 30 exploratory semi-structured interviews were conducted to identify and describe the underlying thoughts and feelings that affect the individual investment decision-making behavior. The study established that stock market investors have numerous beliefs and preferences that bias their financial investment decisions. Additionally a study by Abdulaziz (2013) found out that securities' markets do usually overreact to earning signals there by affecting the stock market investors' decision making due to the unpredictability of the stock prices hence forcing them into applying their personal bias in decision making. This evidence from the study is consistent with the spirit of the behavioral models.

Vieto J. *et al* (2014) carried out a study to investigate investors buying, selling or maintaining stock decisions, 20 investors in two different markets were studied. One group traded first in a market with prices increasing steadily and after in a market with high volatility, and the other group traded first in the market with high volatility. This confirmed investors' brain mappings when making decisions on which stocks to buy, sell or hold. These results clearly show that investors use different reasoning strategies to make financial decisions depending on their trading experiences. A study by Aduda *et al* (2012) sought to identify behaviors finance factors from individual investors as they set out to make their investment decisions. The study concluded that there were varied behaviors financial factors that informed the performance of

individual investors in trading shares of companies listed at the Nairobi Stock Exchange, Kenya. Some investors exhibited rational behavior in making their investment decisions. On the contrary, there were other individual investors who posted negative results due to irrationality and herding behavior.

Another study by Wamae (2013) in establishing the behavioral factors influencing individual investors' decisions at the Nairobi Stock Exchange which was guided by the following specific objectives, that is, to find out the effect of risk aversion on investment decisions in Kenyan stock market, to investigate whether prospecting influences decision making in stock market investments, to establish the effect of anchoring on investment decision in Kenyan stock market and to determine the effect of herding on investment decisions in Kenyan stock market, found out that herding effect, risk aversion, prospecting and anchoring influences the investment decision making in stock market by NSE investors in Kenya. Zipporah (2014) in her study that sought to identify behavioral biases which affect individual investors at the Nairobi Securities Exchange found out that investors were affected by Availability bias, Representativeness bias, Confirmation bias and Disposition effect (loss aversion) while making their investment decisions on which shares to trade in on the NSE.

2.4 Literature Review Overview

From the literature, it was evident that most of the studies were done in the developed world with very little having been carried out in Africa and particularly in Kenya. Further, the studies that have been done locally have focused on the general behavioral finance factors without narrowing down to any particular factor as having a big influence on investor decisions. A study on behavioral finance in Kenya by Werah (2006) established the presence of herd behavior, fear of regret, overconfidence

and anchoring as factors influencing NSE investors, while Mbaluka (2008) study focused on psychological aspect. Further Nyaribo (2010) centered on overconfidence, frame dependence, anchoring, mental accounting and representativeness. As such the above studies had not adequately addressed the certain-return bias, loss aversion, regret aversion and random walk framing as affecting NSE investors while making their investment decisions as to which stocks to invest in. As such the findings from this study on the effects of the above mentioned factors on stock investment decision making process on the NSE and their subsequent impact on the investors' success will form a crucial body of knowledge in the field of behavioral finance in the Kenyan context.

2.5 Conceptual Framework

The conceptual framework for the study was developed from the literature review by highlighting the psychological biases and factors that affect investor behavior resulting in subjective investment decision making process on the stock exchange. This was depicted in figure 2.1 where the four elements that formed the basis of the study as affecting the process of stock investors' decisions making were summarized. Moving from left where we have stock market investors to the right where decisions are made, the study highlighted the four psychological factors that influence the investors' decisions in between. These independent variables interface with the human judgement and psychology thus influencing stock investment decisions which were dependent on these factors.

Independent Variables

Dependent Variable

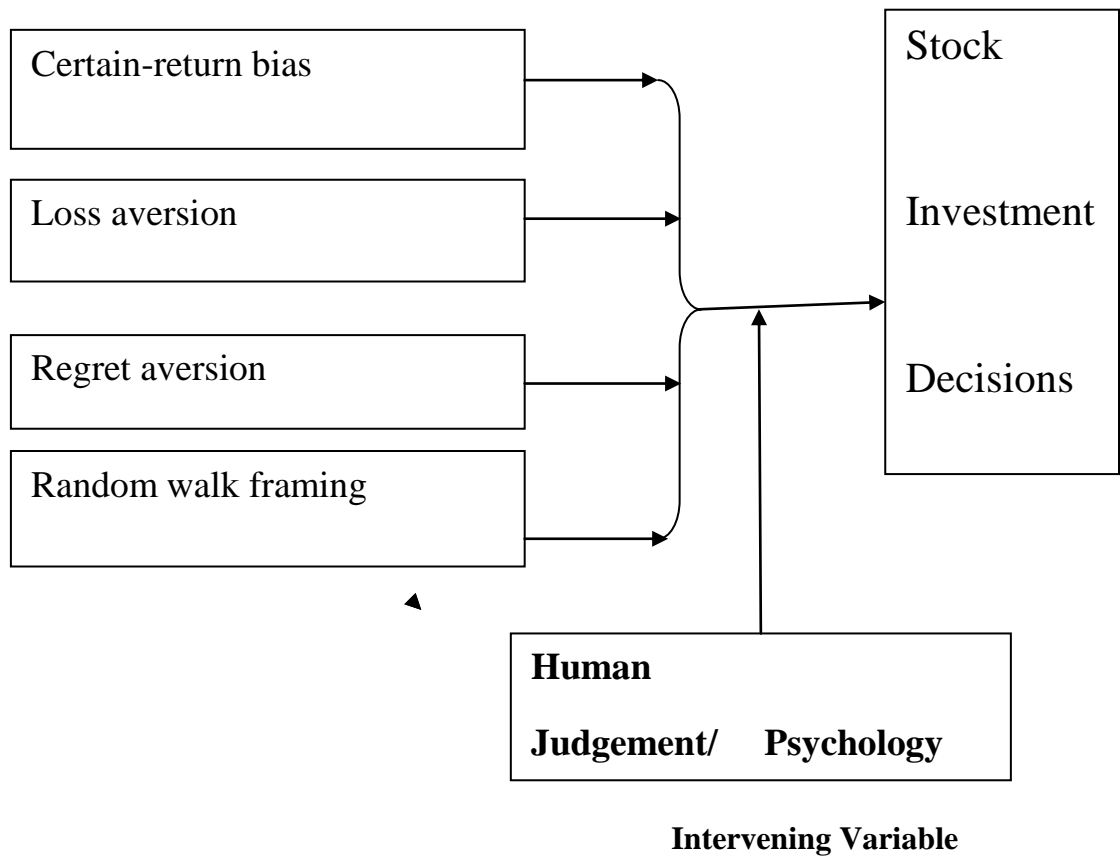


Figure 2.1: Conceptual Framework

Source: Author, 2015)

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This chapter presents the methodology that was applied in this study. The research design was presented by the application of qualitative method description and the field of the survey discussion. It further outlined the population of interest, the sample frame, sample and sampling design before highlighting the data collection instruments, data collection procedure and finally concludes with the data presentation and analysis techniques employed throughout the study.

3.1 Research design

This study employed a cross-sectional survey research design that involved qualitative research method with a primary aim of reproducing an extensive and exact picture of the NSE behavioral financing/ investment decisions. It should be noted that the behavioral and decision making nature of NSE investors is paramount in understating how they operate and thus the choice of this kind of research design which is important in understanding and interpreting behavioral finance trends and ideologies. According to Myers (1997) he argued that the nature of any research problem should guide the methodology to be adopted by the researcher in trying to unfold the underlying truths and myths. This argument is supported by Crotty (1998) by stating that the choice of a methodology should relate to the research statement and problem formulated. This being a social and psychological phenomenon, Casell and Symon (1994) further supported the choice of qualitative research design by posing that being an area that involves an array of interpretive techniques that seek to describe the social and psychological world, this is the best approach as it takes into consideration the understanding and interpretation of behavioral trends and traits that are key to financial and investment decisions.

This cross-sectional survey research design utilized field survey as data collection and development technique as held in high respect by Diaz and Hansz (1997) who agreed

that data development technique, field survey and process trailing protocol as well as controlled experiment are the best in testing social, psychological and behavioral functions of human nature. Neumann (2006) posits that field survey is the most widely used data gathering tool as it is able to reveal attitudes and opinions yielding relations that serve as a guiding hypothesis for further follow up research that is relevant in revealing the key factors behind this phenomenon. This study was keen on employing the field survey under qualitative research technique in attempting to unearth the key behavioral finance factors that guide stock market investors' investment and financial decisions.

3.2 Population of Study

This study targeted a population of the entire active stock market investors as provided by the register of members on the NSE which was a total of 1.67 million investors.(Source: Business Daily publication of June 12 2014).

3.3 Sampling Frame

The sampling frame constituted all CDS account holders of the 3 stock brokerage firms with operations within Machakos County. From this frame a random sample of 60 respondents consisting of 20 from each stock brokerage firm were randomly sampled to represent the interests of the rest.

3.4 Sample and Sampling Technique

The targeted 3 stockbrokerage firms were randomly sampled from those with their presence in Machakos County while the respondents were also randomly sampled to obtain a sample of 60 respondents comprising of 20 respondents per stockbrokerage firm. The sampled population was intended to be covered wholly due to the likelihood of the respondents being concentrated within the environs of Machakos County. Based on this fact and as supported by Kothari (1990) who describes this as a complete

enumeration of all elements intended to be covered in a population, my study found this as the most appropriate technique for this purpose.

3.5 Data Collection Instruments

The study utilized closed ended structured questionnaires in the collection of primary data from the sampled respondents. At the same time a brief interview guide was administered to the three stock brokerage firms to generate a diverse opinion on the research questions. Secondary data for the purpose of the study was gathered from textbooks, NSE and CMA website, online journals and publications and other written literature on the topic of study.

3.6 Validity and Reliability of the Instruments

3.6.1 Validity

Validity is the extent to which inferences made on the basis of numerical scores are appropriate, meaningful and useful. Validity of the study is assessed depending on the purpose, population and environmental characteristic in which measurement takes place (Britt, 2006). Kothari (2004), states that validity is the most critical criterion and indicates the degree to which an instrument measures what it is supposed to measure. Cohen et al. (2007) states that to demonstrate content validity the research instrument must show that it fairly and comprehensively covers the domain or items that it purports to cover.

To test the validity of the research instrument a pilot study was carried out to identify the research instrument that is ambiguous. This involved distributing a few samples of the research instrument to the respondents, hence the response and understanding of the questions analyzed. Ambiguity and irrelevant information noted in the

questionnaire were modified for validity purpose. The respondents were also requested to respond on the clarity of the questions presented to them.

Internal consistency reliability was done after all items had been constructed. A pilot study was carried out among 10 investors from few randomly selected firms in the neighboring location to identify some of the short comings likely to be experienced during the actual study and hence enhance reliability (Kombo& Tromp, 2006). Split half method was used where the questionnaire items were divided in two: odd and even items and a reliability coefficient calculated. This method is preferred because it required only one testing session and it helps the researcher to eliminate chance error which can be occasioned by other methods like the test re-test method. Cronbach Alpha formula in the SPSS computer programme was used to calculate the correlation coefficient. In this study if the alpha coefficient of correlation obtained is 0.6 above then the questionnaire is accepted as reliable to be used in the study. The alpha coefficient of correlation obtained was 0.5 and hence the questionnaire was accepted as reliable and used in this study (Boudens and Abbott, 2005).

3.6.2 Reliability Analysis

To measure reliability, the 5 investors sat NSE were requested to tick if the item in the questionnaire addressed the impact of investment among firms in Nairobi Kenya. The responses were ascertained by using the Cronbachs' alpha reliability coefficient (α) of the data gathered from the pilot study. Field (2014) contended that Cronbach's alpha value that is at least 0.70 is for a reliable research instrument. In this study a threshold of 0.70 was used to establish the reliability of the data collection instrument. This was computed with the assistance of Statistical Package for Social Sciences (SPSS). A coefficient of above 0.70 was obtained and this indicated questionnaires were reliable

instruments in gathering data on the impact of behavioral finance factors on stock investment in Kenya.

3.7 Data Collection Procedure

The questionnaires were administered on a drop and pick basis with limited possibility of face to face interviews within a period of 24 days by the researcher in person due to the sensitivity of the subject matter. The questionnaire was structured in a manner that it had 5 parts drawn from the objectives and research questions of the study. Part one dealt with the general characteristics of the respondents. Part two addressed the effects of certain-return bias; part three dwelt on loss aversion while part four focused on regret aversion. Lastly, part five focused on the random walk framing effects.

3.8 Data Processing and Analysis

The researcher collected the completed questionnaires from the respondents that were edited for completeness, accuracy and elimination of possible information bias/asymmetry. Thereafter the questionnaires were coded and checked for coding and omission errors. The coded data was processed by the help of SPSS version 20 software package and analyzed using various quantitative techniques such as frequencies, mean scores, standard deviations and percentages. In order to understand the relationship between the independent and dependent variables as shown in the conceptual framework and articulated in the research objectives; in this study to establish their prevalence in influencing financial and investment decisions the researcher conducted a multiple regression analysis so as to assess the relationship between the independent and dependent variable.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

Data analysis entails separation of data into constituent elements and examining separately in relation to the whole more than just examining of what has been collected in order to make deduction and inference i.e. scrutinizing the acquired information and making inferences Kombo& Tromp, (2006). Kavulya (2007) defines data analysis as the process of ordering and restructuring data from the field in order to grasp the overall meaning in relation to the hypothesis, the purpose of which is to illustrate the issues.

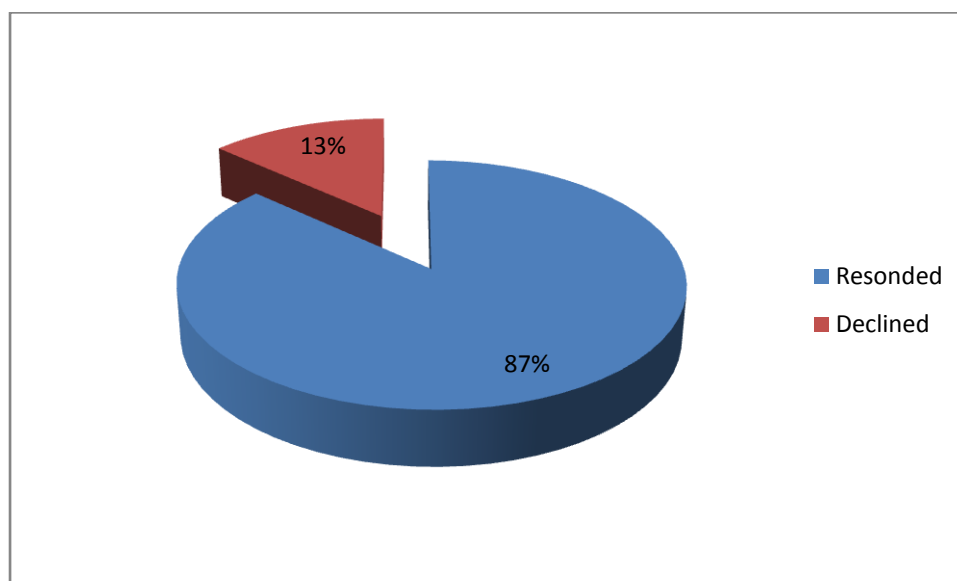
The responses in the questionnaires were interpreted for analysis based on the fundamental assumptions underlined in each question. The returned questionnaires formed the basis for the analysis presented in this chapter. The questionnaires were then verified, coded and tallied according to the themes. Thereafter they were quantitatively and qualitatively analyzed by use of SPSS (Scientific Package for Social Sciences) and presented in frequencies and percentages through the use of tables and charts. In each sub-section, responses of all categories of respondents are analyzed and reported, an interpretation of the analysis is made to attach significance and offer explanations to the findings and make inferences.

4.1.1 Analysis of Response Rate

This part sought to establish the response rate of the respondents. From Table and figure 4.1 below, the total number of questionnaires that were administered were 60 but only 52 questionnaires representing 87% were dully filled and returned. From the response, it can be concluded that the response rate was good enough thus giving credence to the findings. The results were presented in the tables and figures below.

The response rate was as follows:

Source: Computed from Field Data



Source: Computed from Field Data

Figure 4.1: Response Rate

4.2 Sample Characteristics

The sample used for this study had various attributes that are represented in the tables below with their frequency, percentages and brief explanatory notes.

Table 4.1: Age of respondents

		Age			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	18-25	7	12.5	13.5	13.5
	25-30	9	16.1	17.3	30.8
	30-35	10	17.9	19.2	50.0
	35-40	11	19.6	21.2	71.2
	Above 40	15	26.8	28.8	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

From table 4.1 above respondents aged 30 years and above constituted the majority of the players on the NSE at 69.2% as compared to those aged below 30 years represented by 30.8%. This gives an impression that the investors on the NSE are dominated by the older generation as opposed to the younger generation due to limited exposure of the younger generation to the investment vehicles available in the market and the lack of adequate financial power to effectively participate on the NSE.

Table 4.2: Respondents' gender

		Gender			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	36	64.3	69.2	69.2
	Female	16	28.6	30.8	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

The majority of the respondents were of the male gender representing 69.2% as compared to the female with a representation of 30.8% implying that the dominant players on the NSE are male. This could be attributed to the aggressive nature and risk appetite of the male gender as imposed to the female who are deemed to be more conscious in their investment decisions taking into consideration that the stock market is a high risk undertaking.

Table 4.3: Level of education

		Education Level			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Graduate	43	76.8	82.7	82.7
	College Diploma	9	16.1	17.3	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

The study established that the highest participants on the NSE in accordance to the level of education are graduates at 82.7 % which implies that they are more informed on the products on the NSE as compared to their counter parts with lower education. This confirms the information asymmetry that is prevalent in the investment and financial world where only a limited size of the population is aware of the various investment vehicles in the market.

Table 4.4: Employment status

		Employment Status			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employed	30	53.6	57.7	57.7
	Self--employed	8	14.3	15.4	73.1
	Retired	8	14.3	15.4	88.5
	Unemployed	6	10.7	11.5	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

From the study majority of the investors on the NSE at 57.7% are those in formal employment as opposed to those who are self-employed, retired and unemployed. This could be attributed to the fact that the employed are more adventurous and feel safe because they have an alternative source of income in employment income which is not enjoyed by other classes of the population who might be relying on a single stream of income hence denying them the luxury of risk taking.

Table 4.5: Investment experience on the NSE

Investment Experience on the NSE					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Over 10 years	15	26.8	28.8	28.8
	5-10	30	53.6	57.7	86.5
	Below 5	7	12.5	13.5	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

Based on the number of years that the respondents have been investing/ trading stocks on the NSE, 57.7% have between 5- 10 years, whereas 28.8% has over 10 years of investment experience giving a combined investment experience of above 5 years at 86.5%. This is important in understanding their choices as they have adequate exposure to understand the dynamics of the market as compared to the less savvy investors hence aiding the study in understanding these behavioral finance factors.

Table 4.6: Price range of shares traded

Price Range of Shares Traded					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High cap	10	17.9	19.2	19.2
	Mid cap	31	55.4	59.6	78.8
	Low cap	11	19.6	21.2	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

The findings from this study established that the majority of the investors on the NSE at 59.6% are risk neutral as they invest in mid cap prices range of shares. This could be due to the fact that they don't undertake any fundamental or technical analysis of the companies they buy into and could be mainly investing based on heuristics or rule of the thumb and their personal intuition.

4.3 Empirical Findings

The presentation and analysis of the empirical findings of this study are to be presented below by addressing the four research objectives of the study. Under each objective various variables that were deemed appropriate in addressing the research questions were summarized by use of tables followed by brief discussions on the same. Lastly a multiple regression analysis was done to establish the relationship between the independent and dependent variables.

4.3.1 Effects of Certain-Return bias on stock investment decisions

Every investor on the NSE prefers a security that is certain to return positive results than a security whose returns are doubtful. However many times securities that appears secure end up disappointing while those that seem doubtful turn out to be winners. It's for this preposition that the research undertook to establish how this preference for seemingly safe securities affect investors decision making on which stocks to trade in.

Table 4.7: Preference for more certain-return securities

Preference for more certain-return securities					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	2	3.6	3.8	3.8
	Sometimes	42	75.0	80.8	84.6
	No	8	14.3	15.4	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

The respondents in the study polled at 80.8% confirmed that sometimes they prefer investing in certain-return securities as opposed to those that were not be quite sure of

their returns. However a small percentage of the respondents were not sure of whether there are securities in the market that can post certain returns. This confirms the judgmental bias that investors exhibit when faced with uncertainties as concerns which securities to buy on the NSE.

Table 4.8: Impact of decisions to invest in certain-return securities

Impact of decision to invest in certain-return securities					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Positive	31	55.4	59.6	59.6
	Negative	21	37.5	40.4	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

It was confirmed from the study that those investors who chose to invest in certain – return securities rather than take a gamble with their investment at 59.6% experienced a positive impact on their investment whereas 40.4% of the respondents reported having experienced a negative impact on their investments based on this notion. This reinforces the notion that investment decisions on the operations of the NSE are usually influenced by this factor because investors believe it has a favorable impact on their investment hence there is no need of relying on other statistics when making investment decisions.

Table 4.9: Repeat investment under certain-return bias influence

Repeat investment under certain-return bias influence					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Over 10	17	30.4	32.7	32.7
	5-10	27	48.2	51.9	84.6
	Below 5	8	14.3	15.4	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

To further establish the how certain-return bias affects investment decisions, respondents were asked to state the frequency at which they had made investment decisions based on this factor. Majority of the respondents polled at 51.9 % for between 5- 10 times and 32.7% at over 10 times confirmed the notion that indeed this factor affects investors while making their stock market investment decisions. On the other hand a small percentage of the respondents at 15.4% had based their investment decision supported by this factor for a frequency below 5 times.

4.3.2 Extent to which Loss aversion affects stock investment decisions

Loss aversion which is the measure of disposition effect that underscores the fact that stock market investors are averse to loss while they are too willing to take in gains was explained by various variables in this section. From the mean results of the section it was evident that indeed investors will do everything to avoid loss by holding onto losing stocks with the hope that they might recover while at the same time selling rising stocks too first with the fear that the stocks might shade value. The following discussion underscores this position.

Table4.10: Holding onto losers for too long

		Holding unto losers for long			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	42	75.0	80.8	80.8
	Sometimes	10	17.9	19.2	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

The respondents to the study when asked whether they at any given point and time during their investment experience and life on the NSE had held onto losing stocks with the hope that the securities will in the near future gain in value only for them to continue the spiral fall south, 80.8% of them answered to the affirmative while 19.2% said sometimes they had found themselves in such scenario. None of the respondents replied to the negative. This affirms the notion that indeed NSE investors have for years been informed by the fear to lose hence holding onto stocks which if they could dispose of earlier, they could end up salvaging something out of them rather than losing their investments.

Table4.11: Effect of Loss aversion- Selling winners

		Result of selling a winning stock			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High	11	19.6	21.2	21.2
	Moderate	22	39.3	42.3	63.5
	Fairly Moderate	19	33.9	36.5	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

From the study in order to assess the effect of loss aversion on investment decisions, the respondents were asked to rate how the results they obtained after selling off a

stock that was rising in value so quickly with the fear that maybe it might stumble only for it to continue rising. The results as seen in the table4.11 above confirm the presence and effect of loss aversion as the majority of the respondents at 63.5% were of the opinion that they could have held on the stock much longer. This is given by the combined result of those who returned high and moderate results from the survey that is 21.2% for high and 42.3 % moderate achievement.

Table 4.12 Effect of Holding onto losers on investment decisions

Effect of holding unto losers on investment decisions					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Moderate	32	57.1	61.5	61.5
	Adverse	20	35.7	38.5	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

From the study the effects of holding onto losers for too long with the hope of seeing them recovery only for them to remain grounded had a moderate effect on the decisions that were made by the investors on whether to trade or not on the NSE during the time of study at 61.5%. However 38.5% of the respondents felt that by holding onto losers for too long they were adversely affected and their confidence to make investment decisions on which stocks to trade in was severely eroded while none of the respondents had any warm/ positive attitude towards this scenario. This position further emphasizes that indeed stock market investors are rarely guided by fundamental finance facts while making their decisions but rather by emotions derived from past experience.

Table4.13: Future repeat decision making under the influence of Loss aversion

		Repeat decision under loss aversion			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	21	37.5	40.4	40.4
	No	31	55.4	59.6	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

The study respondents while responding to whether given a chance in future if they will continue making decisions based on this fact, most of them due to the adverse effect they reaped for this scenario were of the opinion that they will not at 59.6% while others may be due to lack of stock market sophistication said they will continue to consider this factor in making their investment decisions about which stocks to trade in. However it should be noted that most stock market players will always try to minimize losses as they strive to maximize on gains.

4.3.3 Impact of Regret aversion on stock investment decisions

Investors on the stock market have at least in their investment lifetime made some decisions that they have lived to regret either for their omission or commission of the same. This confirms the presence of regret among stock market investors.

Table 4.14: Presence of regret aversion

		Presence of regret aversion			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	42	75.0	80.8	80.8
	No	10	17.9	19.2	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

The study further tried to establish the presence of regret aversion among the NSE stock market investors so that it could be able to deduce its impact on investment decision by this targeted sample of the study. From those that responded to the survey, 80.8 % confirmed to have experienced this situation during their investment lives while 19.2% said they haven't experienced this kind of situation.

Table 4.15: Avoidance of decision making due to fear of unfavorable outcomes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	35	62.5	67.3	67.3
	Sometimes	17	30.4	32.7	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

The finding from this study confirmed that indeed stock market investors do avoid making investment decisions not because of any scientific and fundamental data but simply because of the fear that maybe the outcome of the investment decision might turn out to be unfavorable whether the deal is viable by virtue of other evaluation tools or not. As depicted in the table 4.16 above 67.3% of the respondents answered to the affirmative that indeed they have during their investment lives avoided taking positions on the market due this notion while 32.7% said sometimes but not always have they done so. However the combined percentage points to a heavy impact of regret aversion on decision making on the NSE.

Table 4.16: Impact of regret aversion on success of investments made

Impact of regret aversion on success of investment					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High	10	17.9	19.2	19.2
	Moderate	25	44.6	48.1	67.3
	Fairly Moderate	17	30.4	32.7	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

On trying to bring out the impact of this regret aversion on the decisions of stock market investors, the respondents were asked on a scale of 1-5 to rate how hard or soft have they been hit by this factor as concerns the results of the investment decisions they made by basing their intuition on this factor. Out of the responses, 48.1% and 32.7% had a moderate cum fairly moderate impact while 19.2% registered a high profound impact on their decision. However none of the respondent answered to the negative. This when combined give an indication that indeed fear of regret play a major role in the minds of the NSE investors as most of them had shied away from making decisions even when the conditions of the market suggested otherwise.

Table 4.17: Frequency of decision making aversion due to fear of regret

Frequency of avoidance to make investment decisions					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	High	23	41.1	44.2	44.2
	Moderate	21	37.5	40.4	84.6
	Fairly Moderate	8	14.3	15.4	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

With a view of further probing the impact of regret aversion on stock making decisions, the study sort to find out the frequency at which the respondents had employed this factor in informing their investment decisions or whether it was a one of situation. From the respondents 44.2% recorded a high frequency of 5 on a scale of 1-5 while another 40.4% registered a moderate frequency of 4 and lastly15.4% scored a frequency of 3. This amplified the fact that indeed regret aversion was not a one of act by NSE investors as far as the investment decisions were concerned but it was a fundamental phenomenon that informed investors decisions on several occasions hence deserved a mention as a factor with influence on the investor decisions.

Table 4.18: Future repeat decision making under the influence of regret aversion

Future investment decisions based on regret aversion					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	28	50.0	53.8	53.8
	Sometimes	14	25.0	26.9	80.8
	No	10	17.9	19.2	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

Asked whether the respondents in their future investment decisions making process will consider fear of regret to determine which stocks to trade in, 53.8. % said yes while another 26.9% were not sure as they gave a maybe response. However19.2% thought it might not be worthy while to continue making their investment decisions under the fear to regret the outcomes of their decisions. Thus taking the affirmative percentage alongside those with a sometimes response, it is evident that regret aversion will continue to inform stock market investors decision making on which stocks to trade in regardless of other market dynamics.

4.3.4 Effect of Random walk framing on stock investment decisions

It has always been deemed the norm for investors on the NSE to consider the past stock prices of the securities that they intend to invest in before making a decision on whether to go for them or not. However this notion hasn't held at all times as stock prices are known to fluctuate over time hence assuming a random walk pattern. It was further established that these market participants at one point or another in the course of making their investment decisions put in mind this notion that prices are random.

Table 4.19: Investor consideration of past price trends and perception that stock prices are random

Perception that stock prices are random					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Definitely	37	66.1	71.2	71.2
	Maybe	15	26.8	28.8	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

From the study, in an attempt to establish whether stock market investors consider the stock prices of the stocks that they intend to trade in as being random before making their decisions, 71.2% said they believed so while another 28.8% were of the opinion that may be the prices could be random in nature but were not quite sure.

Table 4.20: Rate of decision making under random walk framing

Frequency of investment decisions based on random walk framing					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Over 10 years	9	16.1	17.3	17.3
	5-10	30	53.6	57.7	75.0
	Below 5	13	23.2	25.0	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

In establishing the frequency at which the stock market investors had made their decisions under the influence of random walk framing, 57.7% of the respondents had utilized this factor between 5-10 times while 17.3% had used it over 10 times giving a combined frequency of the 75% for those respondents that had based their investment decisions on this factor as compared to a mere 25% of the respondents who had invested under this variable with a frequency of below 5times. This affirms the assertion that indeed random walk framing informs the majority of the decisions that stock market participants make while conducting their business.

Table 4.21: Effect of investment decision making based on random walk framing

Outcome of investment decision on random framing					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Positive	31	55.4	59.6	59.6
	Moderate	11	19.6	21.2	80.8
	Adverse	10	17.9	19.2	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

Investors registered varied levels of effects arising from their decisions made under the influence of random walk framing ranging from positive results which encouraged them to continue upholding this factor in their decision making process to adverse positions where they felt this factor misled them into making decisions that didn't return favorable results as far as their investments were concerned. Of the respondents, 59.6% returned a positive effect, 21.2% registered a moderate effect on their decisions while another 19.2% felt that basing their decisions on this factor returned an adverse position. However the combined effect of those with a positive and moderate result affirms to the fact that random walk framing can be positively applied by stock market investors in making viable investment decisions.

Table 4.22: Future repeat decision making based on random walk framing

Future decisions based on random walk framing					
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Definitely	38	67.9	73.1	73.1
	Maybe	14	25.0	26.9	100.0
	Total	52	92.9	100.0	
Missing	System	4	7.1		
Total		56	100.0		

For a factor to be of significance in decision making its frequency of future application is important and as such the study endeavored to find out from the respondents whether going forward they were likely to base their decisions on the random walk framing principle or because of the past results they are unlikely to employ it. Of the polled respondents 73.1% were of the affirmative while 26.9% thought they might base their decisions on other factors rather than random walk framing. As it is evident from the result the stock market players are more likely to continue basing their decisions on this notion in their future actions.

4.3.5 Regression Analysis

Multi regression analysis was carried out to show the nature of the relationship between the dependent variable and independent variables. The model goodness of fit was tested using the F statistics ($F=6.145$ and $P\text{-value} < 0.05$) this implies at least one of the beta coefficient is not equal to zero therefore there is a significant relationship between the stock investment and the four behavioral finance factors.

The regression equation set out to show the relationship between stock investment and behavioral finance factors had the values as scored below:

$$Y = \beta_0 + X_1 + X_2 + X_3 + X_4 + e$$

Where Y = Stock Investment

β_0 = constant

X_1 = Certain-return bias

X_2 = Loss aversion

X_3 = Regret aversion

X_4 = Random walk framing

$$Y = 7.201 + 1.076X_1 + 4.138X_2 + 0.2780X_3 + 0.340X_4 + e$$

Table 4.23: Regression Coefficients

	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	7.201	3.502		2.056	0.045
Certain-return bias	1.076	0.26	0.528	4.138	0.000
Loss aversion	4.138	0.106	0.09	3.254	0.000
Regret aversion	0.278	0.102	0.202	2.725	0.000
Random walk framing	0.340	0.168	0.248	2.02	.047
R	0.515				
	0.265				
R Squared					
Adj R Squared	0.222				

The study findings indicate that there is a negative significant relationship between Certain-return bias and stock investment ($\beta = 1.076$, $t = -4.138$, and P value < 0.05). This implies that a unit increase in Certain-return is associated with - 0.468 decreases in stock investment.

In addition, the study findings depicted that there is a positive significant relationship between loss aversion and stock investment ($\beta = 4.138$, $t = 3.254$ and P value < 0.05). This implies that a unit increase in loss aversion is associated with 0.445 increases in stock investment.

Further, results in Table 4.23 showed that there is a positive significant relationship between regret aversion and stock investment ($\beta=0.278$, $t=6.340$ and $P \text{ value}<0.05$). This implies that a unit increase in regret aversion is associated with 0.278 increases in stock investment.

Finally, results in Table 4.23 showed that there is a positive significant relationship between random walk framing and stock investment ($\beta=0.340$, $t=6.340$ and $P \text{ value}<0.05$). This implies that a unit increase in random walk framing is associated with 0.340 increases in stock investment

In conclusion the results of the study showed that the model explanatory power (coefficient of determination) was 26.5% which means that 26.5% of stock investment decisions can be explained by Certain-return bias, Loss aversion, Regret aversion and Random walk framing when combined. The remaining percentage (73.5%) can be explained by other factors not included in the model.

4.4 Discussions

This study had four specific objectives that formed the independent variables that were used to explain the dependent variable for the purpose of drawing meaningful conclusions from the study.

The first object was to determine the effect of certain-return bias on stock investment decisions by NSE investors. The study established that every investor on the NSE preferred a security that is certain to return positive results than a security whose returns are doubtful. However many times securities that appeared secure ended up disappointing while those that seemed doubtful turn out to be winners. It's for this preposition that the research undertook to establish how this preference for seemingly

safe securities affected investors' decision making on which stocks to trade in. These results resonate well with the study of Statman *et al* (2008) and Wamae (2013) which returned the same results by establishing the presence of certain-return bias among stock market investors. This could be attributed to the fact that the investor environment in Kenya under which Wamae (2013) did his study is still holding the same.

The second objective of the study was to establish the extent to which loss aversion affected stock investment decisions by NSE investors and the findings of the study were that loss aversion which is the measure of disposition effect that underscores the fact that stock market investors are averse to loss while they are too willing to take in gains was present among stock market investors. From the results of the study it was evident that indeed investors would do everything to avoid losses by holding onto losing stocks with the hope that they might recover while at the same time selling rising stocks too first with the fear that the stocks might shade value.

A study by Barber and Odean (1999), Decourt *et al* (2005), and Nyaribo (2010) found out that stock market investors were usually prone to holding onto losing stock for too long with the hope that the prices would eventually rise only for them to continue falling and this position was evidenced with the results of this study where 80.8% of the respondents confirmed this position. On the other hand the position of selling winning stocks so fast was evidenced in the study by Ton (2011) as well as Zipporah (2014) where it was established that stock market investors were loss averse and would always jump into action once the price of the stocks they held showed an upwards price trend with the fear that the price surge might not be in the long run without considering other factors associated with the stock price movement.

The third objective of this study was to establish the impact of regret aversion on stock investment decisions by NSE investors and the findings from the study revealed that indeed investors on the stock market had at least in their investment lifetime made some decisions that they had lived to regret either for their omission or commission of the same. This confirmed the presence of regret among stock market investors.

From the statistics in the study it was evident that stock market investors had resentment when it came to making some decisions at some given point hence emphasizing the fact that indeed regret aversion was common on the NSE. Similar results as those from this study were registered in the study by Decourtet *al* (2005) and Katherina (2012) where it was found out that indeed stock market investors usually avoided making investment decisions with the fear that the outcome of their decisions might prove not to be favorable and thus they would rather retain the status quo than venture out into the unknown.

Lastly the fourth objective of the study centered on the effect of random walk framing on stock market investment decisions by NSE investors and the results of the study found out that the target stock investors had at one point or another in the course of making their investment decisions put in mind this notion that prices are random. The statistics from the study of those who rarely relied on the past and those that strongly believed that stock prices were random in nature justified that stock prices were indeed random in nature and investors based their decisions on this notion due to the unpredictability of stock price hence the invocation of their personal bias. This position was held in the study by Anyumba (2010) and Abdulaziz (2013) who established that stock market investors followed a random walk pattern in fixing the prices of the stock to invest in or divest from without considering the past or future price trends of the stocks in the market. This could be attributed to lack of financial

markets sophistication by most of the investors hence the reliance on personal intuition in decision making.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary, discussions and conclusions from the research findings as per the objective of the study. Based on the findings of this study, recommendations have been given on the factors influencing individual investment decisions in NSE.

5.2 Summary

The objective of this study was to identify the effects of behavioral factors influencing individual investment decisions in NSE. In summary this study has established the presence of investor psychology as playing a major role in influencing stock investment decisions by investors. The behavioral finance factors that the study focused on of certain-return bias, loss aversion, regret aversion and random walk framing have been found to have an effect on the decisions of the stock market investors though in varying degrees. As such the study established that these factors explains 26.5% of the outcomes of stock investors on the NSE and as such the remaining 73.5% of the decisions of these investors are explained by other factors hence the need for further studies that will help in identifying these alternative factors is recommended.

5.3 Conclusions

From the findings, the study concludes that stock market investment decisions are influenced by behavioral biases of individual stock market investors. The study established that certain-return bias, loss aversion, regret aversion and random walk framing had an effect on the decisions made by the investors on the NSE. The analysis

performed on the data collected appears to give a fairly accurate view of the average equity investor in the NSE. However it was further noted that these factors have varied degrees of effect on the decisions of stock market investors in the anticipation of continuous better returns. As evidenced from the analysis, it can be established that certain-return bias has a negative relationship with stock investment decisions whereas loss aversion, regret aversion and random walk framing have a positive correlation with stock investment decisions on the NSE.

5.3 Recommendations

Based on the findings of this research it is recommended that the individual investors need to analysis the investment factors carefully using the reasonable business knowledge before making an investment decision. The investors should also be able to interpret the market and economic indicators of various industries and firms in the market since they influence the performance of the share on the stock exchange.

Investors do also need to be open- minded while making their investment decisions and desist from holding onto the past notions with hindsight that they may reflect the future due to the fact that the stock exchange is a dynamic market with new developments coming in so quickly. They should evaluate all the variables in the environment instead of considering only one variable.

Further to minimize information asymmetry which is the biggest contributor to investor apathy that leads them to utilizing heuristics in making investment decisions, investment information should be disseminated by the NSE in a form comprehensible to common retail investors to aid them in making better informed investment decisions.

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Appendix 1

Structured Questionnaire

“Your honest feedback is of highest importance in the course of my academic research. This information will be used for the purpose of this research only and not for serving any other purpose”

PART ONE

1) What is your age bracket?

18- 25 years

25- 30 years

30- 35 years

35- 40 years

Above 40 years

2) Please state your gender

Male female

3) What is your highest level of education?

Graduate College diploma High school other

4) Please state your employment status

Employed Self-employed retired Unemployed

5) For how many years have you been investing/trading shares on the NSE?

Over 10 years

5- 10 years

Below 5 years

6) What price range of shares do you prefer to invest in?

High Cap Mid Cap Low Cap

PART TWO

7) Do you prefer investing in more certain securities or simply any security that shows a potential to return good results?

Yes Sometimes No

8) What impact has your decision to invest in certain-return securities had on the results of your investments?

Positive Negative Indifferent

9) Based on your appetite towards risk, how has it affected your investment decisions on the stock exchange?

Positively Moderately Adversely

10) How often have you invested in stocks that seem safer to invest in?

Over 10 times 5- 10 times Below 5 times

11) Going forward are you likely to be more adventurous or you will continue being conservative in your approach towards making investment decisions about stocks?

Open-minded Moderated Close-minded

PART THREE

12) In the years that you have been investing on the NSE, have you ever held shares that were losing value for quite a long time with the hope that they will eventually improve only for them to remain grounded?

Yes Sometimes Never

13) How can rate the results you obtained after selling a stock that was rising in value only for it to continue rising? (tick the appropriate row)

High	5	
Moderate	4	
Fairly moderate	3	
Low	2	
Rarely	1	

14) How has the loss you realized after holding onto a losing stock with the hope that it will rebound affected your future investment decisions?

Positively Moderately Adversely

15) Would you given another chance sell a winning security or hold on a losing one?

Yes No

PART FOUR

16) Have you ever made an investment decision to buy or sell a stock that you still regret having made?

Yes No Can't remember

17) Do you usually avoid making/ taking positions in the market for the fear that the outcome may be unfavorable?

Yes Sometimes No.

18) How do you rate the impact of a decision you avoided taking for fear of regretting on the success of your investments on the NSE? (Tick the appropriate box)

High	5	<input type="checkbox"/>
Moderate	4	<input type="checkbox"/>
Fairly moderate	3	<input type="checkbox"/>
Low	2	<input type="checkbox"/>
Rarely	1	<input type="checkbox"/>

19) On a scale of 1 to 5, how would you rate the frequency at which you have avoided making investment decisions for fear of a loss? (Tick the appropriate box)

High	5	<input type="checkbox"/>
Moderate	4	<input type="checkbox"/>
Fairly moderate	3	<input type="checkbox"/>
Low	2	<input type="checkbox"/>
Rarely	1	<input type="checkbox"/>

20) Is this fear of regretting your investment decisions likely to continue informing your future decisions or not?

Yes Sometimes No.

PART FIVE

21) Do you consider the past price trends of a stock before investing in it?

Always Sometimes Never

22) Do you think stock prices on the NSE are unpredictable hence qualify to be regarded random in nature?

Definitely Maybe No

23) Can you rate how many times you have made investment decisions without considering past prices trends on the target security.

Over 10 times 5- 10 times Below 5 times
24) What has been the outcome of your investment decisions that you made based on the fact that prices are random?

Positively Moderately Adversely

25) Going forward do you think it is worthwhile to continue making decisions on which stock to buy or sell based on this notion?

Definitely Maybe No

THANK YOU FOR SPARING YOUR PRECIOUS TIME.

Kisaka Edward (Student Researcher)

Appendix 11

Letter of recommendation



SOUTH EASTERN KENYA UNIVERSITY
OFFICE OF THE DIRECTOR
BOARD OF POST GRADUATE STUDIES

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Our Ref: /D61/MAC/20209/2012

Date: Wednesday, January 28, 2015

Edward Khisa Kisaka
Reg. No. D61/MAC/20209/2012
Master of Business Administration
C/O Dean, School of Business and Economics

Dear Edward,

RE: MASTER OF BUSINESS ADMINISTRATION RESEARCH PROJECT

This is to acknowledge receipt of your Master Proposal document.

Following a successful presentation of your Master Proposal, the School of Business and Economics in conjunction with the Directorate, Board of Post graduate Studies (BPS) have approved that you proceed on and carry out your research data collection in accordance with your approved proposal.

During your research work, you will be closely supervised by Prof. Charles Ombuki and Mr. Zablon Evusa. You should ensure that you liaise with your supervisors at all times.

The Board of Postgraduate Studies wishes you well and a successful research data collection as a critical stage in your Master of Business administration.

Prof. Cornelius Wanjala
Director, Board of Postgraduate Studies

Copy to: Deputy Vice Chancellor, Academic, Research and Students Affairs
Dean, School of Education
Chairman, Department of Business & Entrepreneurship
Prof. Charles Ombuki
Mr. Zablon Evusa
BPS Office - To file