

**THE EFFECT OF INDIVIDUAL BEHAVIOUR ON INVESTMENT
DECISIONS OF INVESTORS AT THE NAIROBI SECURITY
EXCHANGE**

BY

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DECLARATION

This Research Project is my original work and has not been submitted for award of any Degree in any other University or institution of higher learning.

SIGNED.....

DATE.....

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D61/6213/2017

SUPERVISOR'S APPROVAL

This Research Project has been submitted for examination with our approval as the University Supervisors.

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DEDICATION

The project is dedicated to my Loving wife Winnie, Children Miguel, Kimberly, Denver and Mother Alice. You inspired me greatly during the course and I will always hold you in high esteem. May God bless you.

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ABBREVIATIONS

ANOVA	-	Analysis of Variance
NSE	-	Nairobi Security Exchange
SPSS	-	Statistical package for social sciences

ABSTRACT

Individual behavior on investment decision is a branch of behavioral finance. Behavioral finance is important to investors as it captures the psychological and emotional biases that influences individual investors' behavior in regard to their investment choices. The objective of this study was to find out the effect of individual behavior of investors at the NSE. The study was conducted on 77 investors out of 96 that was the sample size. A descriptive survey was used and a structured questionnaire was administered to the respondents who were individual investors selected from the 24 approved stock brokers in Kenya as at 31st July 2019. The questionnaire had 30 items which were to be responded to. The data was analyzed using frequencies, mean scores, Standard deviation and percentages and processed using SPSS. Cronbach alpha was used to test reliability and validity of the data. Correlation analysis and Regression analysis was also used in summarizing research findings. The findings of the study came out with a conclusion that there is a significant correlation between investment decision and individual behavior with heuristic bias of overconfidence coming out prominently. The other behaviors characterized by framing errors were also found to influence investors' behavior. The findings from this study will be instrumental to security and investment firms for future predictions of security prices and provide understanding to investors on various decisions to be made on different circumstances.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Investments is important to individuals because it is through investment that they can participate in decision-making process and are able to see the result of their selection (Glover, 2006). Investment is often made by investors by making fundamental, technical analysis or judgement based on psychological principles. Conventional financial paradigm connotes that investors are rational which means they make choices that are traditionally acceptable (Barberis & Thaler, 2003). Tversky and Kahneman (1986) argued that normative approaches are seldom correct because people make choices that are not easy to justify under those circumstances and it's because of this that behavior of investors based psychological proposition has been given a lot of credence.

Kahneman and Tversky (1979) postulated that under uncertain circumstances human decisions departs from the conventional financial standards towards a new paradigm of behavioral finance. Behavioral finance recognizes that people use imperfect rules of thumb known as heuristics which has a ramification on investment decisions. It captures individual traits and economics to explain how people become irrational when they invest or borrow (Belsky & Gilovich, 1999).

Modern Portfolio Theory (MPT) and Efficient Market Hypothesis (EFM) asserts that prices in the market are based on rational foundations. At the NSE, investors' decisions are predominantly irrational and they are driven mainly by emotions and cognitive biases which conflicts with the traditional finance theories.

This study therefore looked at the behavioral biases and other factors at the NSE. It was also to find out which behavior is dominant and impacts heavily on individual stock investors' decisions. Individual investors make good investment decisions as they have a solid understanding on both theories (Lisa, 2013).

1.1.1 Individual Behavior

Individual behavior is the psychological and physical traits owned by a person and will explain how individual differences come about in different circumstances. In this context, individual behavior is taken to be the behavior of individual investors in the stock market. Nofsinger and Richard (2002) defined individual investment behavior as selecting about purchases of small securities from various alternatives. An investor will at times act irrationally no matter how well he or she is informed due to fear of losses in the future.

Irrationality at times is influenced by emotions and herd instinct thus vindicating Daniel Kahneman and Vernon Smith's principles of behavioral finance. According to Shefrin (2000), behavioral finance is defined as "a rapidly growing area that deals with the influence of psychology on the behavior of financial practitioners". In decision making, the effects of cognitive errors and emotional biases often puzzles and coupled with the unavailability of enough literature on the same, there is need to further interrogate the variables. The research will therefore try to explore the role of individual behavioral biases and how they impact on investment decisions at the Nairobi security exchange. Recent studies show that investors avoid stocks that have performed poorly in the past and are attracted to newly issued stocks clearly informing the overreaction of investors in the stock market (Aisha, 2015).

Behavior of investors is also exhibited when others perceive that they can outperform the market due to their belief that they are better than other investors. These mental shortcuts or heuristics by investors in making their decisions are complex in nature and have several components ranging from gamblers fallacy, representativeness, overconfidence and anchoring. Behavioral biases have resulted to investors making costly blunders in trading and investment decisions.

1.1.2 Investment Decision

The risk perception of an investor will persuade the decision to invest (Harcourt et. al, 1967). Understanding the dynamics of possible opportunities is very critical for a good investment decision. Fink (2008) defines investment decision making as the process where resource is apportioned to entities in anticipation that the same will yield future benefits. It is therefore critical that the whole mechanism is understood well by the verdict made and the ways by which this process can be made more effective (Agnew & Szykman, 2005).

According Baddeley (2003), investment decisions are complex in nature and are isolated from economic theories of maximizing utility due to inadequate information by decision makers. Decision makers lack the skill to forecast possible outcomes due to inadequate information and therefore they tend to use simple rules of thumb. Investors can make intuition and judgment on the basis of making an investment decision. Computations may be made to inform a decision but investors realize that the answers cannot fall out of the figures (McPherson & Guppy, 2009). The decision to carry out an investment decision may be relied upon by the investor's judgment accord to a feel for the movements of the market.

By drawing upon previous successful and unsuccessful practice an investor can judge the correct action to take although it may not be possible to explain fully the reasons. A good investment option in financial planning involves defining the goals and identifying the steps in making them a reality (Lusardi, 2008). Sometimes investors can suffice with satisfactory solutions for searching the ideal investment decision (Simon, 2007). Thus, minimum performance standards are set and once achieved the problem is considered solved. Thus, the investment decision process may be stopped after seeing a particular performance of investment and deciding the minimal parameters of the investment (Bernheim, 2007).

The cornerstone of financial theory assumes the efficiency of the financial market. Investors try to maximize their wealth by picking risky assets on the efficient frontiers along the capital market line. The capital asset pricing model which is an extension of portfolio theory is traditionally used to decide the rate of return of risky securities. However, in real life, investors have departed from conventional models towards more realistic model that focuses mainly on irrational behavior of investors where investment decisions are influenced by emotions and psychological biases. According to Akintoye (2006), decision making is a process where one reacts to alternative choices and come up with the most favorable option.

Shiller (1998) underlines that rational behavior of investors may not be entirely correct due to the market anomalies that often take place and it is prudent to explore the other side of human behavior. It is on this regard that the study aimed to establish the effect of individual behaviors of investors and other factors of investment decision using the case of investors at the Nairobi security exchange

1.1.3 Individual Behavior and Investment Decision

Decision making is the process of going for particular option from many available options. Investment decision is a critical area that investors are frequently confronted with. Demography, education, gender, level of income and literacy have often influenced decision making process while on the technical side, the traditional or conventional finance paradigms have been used to make investment decisions. Additionally, a new branch of financial economics has emerged known as behavioral finance that take cognizant of human psychology. Behavioral finance explains how investors depart from conventional model of rational thinking when making critical investment decisions to a more non-rational position which is guided mainly by cognitive and emotional biases.

According to Banejee (2011), behavioral finance is becoming a fundamental part of decision-making process because it influences investors' selection. It recognizes that traditional finance that is anchored on rational behavior is only acceptable within specific limits (Olsen, 1998). The proponents of behavioral finance consider conventional model to be inadequate because it fails to capture and consider individual behavior or human biases.

1.1.4 Investors at the Nairobi Security Exchange

A stock exchange was established in 1922. During this period, it acted as an informal bourse devoid of rules and regulations. According to NSE website, an estate agent by the name Francis Drummond established the first stock broking firm in the early 1950's. He together with then Finance minister formally approached the London Stock exchange in 1953 and an agreement was reached to form the Nairobi stock exchange as an overseas stock exchange.

The Nairobi security exchange is composed of individual and institutional investors. Individual investors are retail investors who purchase trade securities in smaller amount. They are not very sophisticated and they mostly purchase their securities through the brokerage firms while institutional investors are those who purchase trade securities in large amounts.

The securities at the NSE move in excess of fundamental market expectations. Emotions and social influences predominantly characterize the securities traded at the bourse as seen by cases of herd instincts which have been observed particularly when the decisions involve a high degree of uncertainty. Heuristic driven biases also exhibit themselves at the Nairobi security exchange. Chelagat (2011) carried out a study on behaviors of investors at the security market and concluded that male investors were overconfident in their investment choices since they believed in the accuracy of their decisions. Female investors were found to be prone to herding behavior as they invested where their friends were investing. In the study, age was also found to be a critical component in investment decisions as it was found that younger investors were likely to suffer from many biases compared to older category of investors. The investment patterns at the security market is therefore characterized by cognitive biases and emotions that lead to distortions in investment choices. There are currently over 60 listed companies who form the bulk of institutional investors and 20 licensed stock brokers with an equity market capitalization of 2,281.86 billion as at 19th July 2019 (NSE Website).

1.2 Research Problem

Investors are rational and logical in decision making but emerging trend show that psychological biases coupled with emotional attachment also play a role in how they make their decisions. Previous studies concentrated mainly on decision making as postulated by de facto financial paradigms, EFM (Efficient Market Hypothesis) and Capital Asset Pricing model (CAPM). The fact that the conventional finance model gives a critical understanding of financial markets dynamics, it is not a perfect tool. According to Statman (1999), the standard finance model is weighed down by anomalies therefore reconstruction of financial theory along behavioral line which is based on psychological principles makes sense. The studies previously conducted on individual behaviors have continued giving contradictory outcomes hence the need to do further research on this area to find out any other factor that may impact on decision making process by individual investors.

The dynamics at the Nairobi Security exchange has created a speculative euphoria amongst investors at the bourse. This irrational behavior amongst investors are complex leading to various market anomalies. The study offers a better model of humanity that explains the relationship between these behavioral pattern and stock volatility at the NSE. Statman (1988) observed that people invest for both cognitive and emotional reasons. They invest thinking they have the information when in reality they have nothing other than noise and invest only because investment brings them pride and joy. Investments bring pride when decisions yield positive return and regrets when decisions are to the contrary. Harbaugh (2003) posits that simple economic models are poor predictors of human behavior.

The need for more detailed study on human behavior in regards to investment pattern is desirable in order to come up with a more convincing theory. The study therefore helps us to ascertain if there is any variance from the assumptions of rational thinkers. During the global financial crisis, Ombai (2010) studied the behavioral biases at the NSE and came up with a conclusion that herding behavior was consistent with investment pattern and this is what contributed to the dip in returns at the NSE 20 share index.

Werah (2006) also carried out a study on investors' behavior at the Nairobi security exchange and noted the presence of heuristic and framing biases like overconfidence, anchoring, representativeness and mental accounting respectively. Additionally, Nyaribo (2010) and Mbaluka (2008) centered their studies on representativeness, overconfidence, framing biases and psychological influences respectively.

These studies have given contradictory results and additionally, they have not conclusively addressed the impact of these biases in the Kenyan context. The present study aims to shed light on the contradictions and add on some knowledge about other key behavioral influences among different individual investors with emphasis on the NSE which previous studies are yet to give conclusive results. The study therefore provides an insight to the question; "Does individual investor behavior have an effect on investment decision at the Nairobi security exchange?"

1.3 Research Objective

The objective of the study was to determine the existence of behavioral effects in individual investment decisions- making process at the Nairobi security exchange.

1.4 Value of the Study

The study is useful for the empirical review for behavioral finance and will also be used by researchers and scholars as a source of reference and information gathering on other factors affecting investment decisions other than the conventional finance models. The findings from study will provide investors with the prediction of future investment trend as well as identify investment opportunities for wise investment decisions. To the regulatory organizations, it will serve as a barometer and provide guidelines on how to manipulate market dynamics and deal with newly traded securities.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This literature gives a synopsis of theories of investment behaviors. It captures both the classical and emerging issues on investment behaviors and their effect on decision making process. In spite of the importance of individual behaviors on investment decisions, many studies are yet to conclusively resolve the puzzle on how the two variables impact on one another. The literature therefore encompasses both theoretical and empirical review. The theoretical review captures both rational and irrational individual investor behaviors including emotional and social influences and how they impact on decision making. The empirical literature reviews theories related to the study and sentiments by the authors. The chapter concludes with a summary of the same.

2.2 Theoretical Review

The conventional finance model assumes that investors are rational but there are instances when the stock market negates this preposition leading cognitive dissonance a mental discomfort leading to somebody to hold on to more than one contradictory idea (Festinger, Rieken and Schachter,1956). Additionally, Markowitz (1952) posits that decisions of the investors is based solely on the risk nature of the portfolio or perceived return. The risk of a portfolio is therefore measured on the basis of the standard deviation of expected returns (Markowitz, 1952). The theoretical review highlights the theories that informed this study.

2.2.1 Efficient Market Hypothesis

The Efficient Market Hypothesis is one of the de facto finance models that posits that security prices are rational. It is the proposition that once information is released, it is accurately and fully reflected in the stock market (Fama, 1965). The theory captures one of the most fundamental issues in finance and directly relates to information efficiency which is the measure of how quickly and accurately the market reacts to new information.

In efficient market, technical analysis is negated as security prices cannot be determined based on past patterns. The presence of many buyers and sellers makes it impossible for any of them to dominate the market. The kind of market makes it equitable for investors since they will receive equal returns from the securities by virtue of having all the necessary information. Competition amongst investors, buoyed by information efficiency, will make intrinsic values to be reflected “instantaneously” to the new prices (Fama, 1965). In efficient market, gaining from forecasting price movement is not possible. The fact that stock prices occur randomly as new information is released has aligned the theory to the random walk hypothesis theory. The key reason to the existence of efficient market is the competition from investors to profit from new information.

Efficient Market Hypothesis embraces both rational and irrationality of security prices hence it is considered credible. The empirical evidence from the 1970's buttressed the theory as postulated by Shleifer (2000) who contended that any new information about a security should promptly be reflected in price while the companies whose prices are static are devoid of information. Depending on which forms of information is released in the market, we have three forms of information efficiency; weak form, Semi- strong form

and Strong form depending on the information set involved. The theory has however been challenged by emerging financial and portfolio gurus since it has failed to address the puzzles arising from the market anomalies due to its limited role in understanding issues on reasons why investors trade and how they choose their portfolios. Additionally, the assumption of by the theory that all investors are rational in decision making is not true and this is what has informed further studies on a more robust area of financial economics known as behavioral finance which critically interrogates investors' individual behaviors focusing more on irrationality.

2.2.2 Prospects Theory

Kahneman and Tversky (1979) described how people framed and valued decisions involving uncertainty. The theory says that people look at gains in terms of what they will receive or losses in relation to a specific reference point. People often express different degrees of emotions towards gains than towards losses. Investors will often take more risk to avoid losses than to realize gain and for that reason they end up keeping losing stock for long with a hope that price will bounce back. The theory buttresses the notion that individuals are stressed with potential losses than they are with equal gains. Money flows into portfolios that are performing well than comes out from portfolios that are not performing as per expectation (Kahneman and Tversky, 1979). Financial psychology has vindicated the notion that human cognition has many irrational components even as we try to make rational decisions. Cognitive illusion in intuitive judgement are most likely to affect investment decision (Kahneman & Riepe, 1998).

Thaler (1980), described endowment effect as a tendency to place a greater value to something if it belonged to them than if it belonged to someone else. Endowment effect can be tested under prospect theory. Kahneman, Knetsch and Thaler (1991) believed that endowment effect is caused as a result of fear of subsequent losses. Kartasova et al (2014) in their study of influence of “snake bite”, on investment in Lithuania, found that previous experience is of utmost importance in decision making. Investors will avoid stocks that resulted to losses previously as the painful experience come back to haunt. This is referred to shadow of the past under prospect theory.

Prospect theory is also seen in the disposition effect which according to Ritter (2003) is when an investor seeks to avoid paper loss but realize paper gains. According to Shefrin and Statman (1995) people tend to sell good performing stock too early and ride the underperforming stocks for too long. The rigidity comes as a result of hope of locking sure profits and willingness to take more risk if it offers the possibility of avoiding losses.

2.2.3 Theory of Overconfidence

Overconfidence is a heuristic- driven bias and is the tendency of investors to overrate their skills. The belief by investors that they can consistently outperform the market is stemmed from illusion of knowledge and control. However, there is overwhelming evidence that that belief is not correct. Overconfidence results in bubbling trades with increased costs which will eventually dent profitability (Tapia & Yermo, 2007).

In most instances people remember what they achieved and gained from but quickly forget their failures. They will always attribute their gains to their skill and expertise while on the other hand attribute failure to bad luck leading to self- attribution bias which

is a sign of overconfidence. Self-attribution bias impacts on an investor's own conception and hinders the evaluation of the past. Gervais and Odean (2001) in their study of traders' behavior, found that past success lead to overconfidence. Overconfidence manifests itself in excess trading in financial markets which explains the dominance of actively managed portfolio in spite of their not so good performance. Montier (2006) found that majority of fund managers believed that they were above average and only a small percentage perceive themselves to be below average.

Chuang and Lee (2006) found out that overconfidence makes investors overestimate their own classified information while ignoring the publicly available information which could prove reliable while Phung (2004) asserted that overconfident individuals overestimate or exaggerate their ability to perform a particular task. However, overconfidence might at times back fire causing poor investment choice.

2.3 Determinants of Investment Decisions

2.3.1 Emotional and Social Influence

The interaction between cognitive and emotional factors is reflected on how investors behave in decision making process. According to Keynes (1936), sociological forces affect investors due speculative euphoria which spreads through chains of investors. The relationship between risk tolerance and emotions is complex since risk tolerance influences portfolio selection. Investors experience emotion timeline from inception when investment decision is made with hope or fear to the end when there is pride or regret depending on the outcome.

Cohen (2005) on the other side argued that social influences are a creation of evolution of the brain and this determines the behavior of individuals. Investment decisions are therefore influenced by social influence. Herding behavior is an ingredient of social influence as investors will move with the herd.

2.3.2 Literacy of Financial Knowledge

In spite of females controlling day-to-day finances, many are still rookie in investments. Males are financially knowledgeable and wealthy, creating confidence in investment decisions (Bruce, 2005). Glover (2006) in his study on fund management found out that male and female managers adopted different strategies to obtain their returns even though they had the same returns. The study also discovered that the industry is dominated by males who are trained on investment dynamics with females representing a paltry ten percent.

Past research has vindicated the notion that knowledge in finance and wealth increase is negatively correlated to a person's risk aversion. Arano, Parker, and Terry (2002) performed a research in 2003 on income, wealth and investment decisions based on gender. The survey found that men had generally larger incomes and better education than their female counterparts. Additionally, it was found that men took more risks than the female by virtue of their wealth and superior education. Wealth increase and financial knowledge therefore decreased risk aversion. Generally, literacy and financial knowledge is critical in investment decisions and that's why in contemporary world it will be seen that mutual investors are more likely to have some education.

2.3.3 Market Risk

Market risk or systematic risk refers to the tendency of prices of security to move in one direction and no matter how many securities are held, the risk cannot be eliminated or avoided. The risk is caused by market wide factors like inflation, economic instability, political instability, natural calamities e.g. earthquakes, fluctuation, in interest, rates and tax rates (Lee, 2003). Security prices are dynamic, and the investor must either accept the risk associated with those fluctuations or not participate in the market (Lee, 2003).

Some investors will invest in the same risk portfolio irrespective of how they raised their capital. However, they will be distinct in terms of their risk preferences. Additionally, other investors have internalized decisions hence will not necessarily invest in the same risk portfolio but will lie at different points at the capital market line because of their divergent risk preference.

2.3.4 Interest Rate Risk

When security prices and interest rates changes move to the opposite direction, we have interest rate risk. Interest rates will determine the price of a bond or preferred stock. According to Mayo (2008), rising interest rates depresses the price of securities due to the demand for competitive yield by the purchaser. Investors should take cognizant of the fact that interest rates do fluctuate and this will cause security prices to behave in a similar fashion. The source of this risk depends on the demand and supply of credit. Thus, diversification cannot affect interest rate risk because it applies to all securities. Instead the investor may alter the term (such as length of time to maturity) of the securities acquired to reduce the impact of interest rate fluctuations (Bernard and Ralph, 2005).

In conventional finance, three theories i.e. expectation theory, market segmentation theory and liquidity preference theory explain the interest rates. Expectation theory states that if future inflation rate is expected to decrease, long term interest rate will be lower than short term interest rate and if future inflation rate equals current rate, then future interest will equal current interest rate. Investors will therefore invest according to their expectation. Market segmentation theory states that borrowers and lenders are confined to a particular segment and will not change even if they forecast future likely interest changes due to different maturity preference of the lenders. A person saving for his retirement in twenty years will invest in long term securities while a trader borrowing to buy stocks for a fixed period of three months will opt for money market or short-term loan. Finally, liquidity preference theory lenders and borrowers act in an opposite way as lenders prefer short term bond due to their liquidity and would prefer lower interest rate for higher liquidity. Borrowers react differently as they prefer long term debt as opposed to short term ones which has the potential of exposing them to adverse fluctuation in interest rates.

2.3.5 Market Information

Market information is crucial in investment and the more one invests, the more frequent they will buy securities. More signals and alerts of high quality will be received by investors who dedicates their time on market information. Trading behavior will be determined by the quality of information signals. Information from reliable sources enhances trade than information from untrustworthy source (Epstein and Schneider, 2008).

Fisher and Gerhardt (2007) also argued that professionals with good financial advice will help investors to evaluate their skills and this will eventually result to more rational investment decisions. Ivkovic and Weisbenner (2007) claims that financial decisions have been gravely affected by complex factors like word-of-mouth effect. The following variables will vary according to investor behavior; age, occupation or the environment in which they live. Peress (2004) shows that wealthier investors will give information more weight unlike poor investors who trade little even with very precise information. Graham et al. (2005) found that investors who believe they are smart and intelligent trade more often.

2.4 Empirical Studies

Kahneman and Tversky (1979) developed the symbiotic relationship between psychology of investors and how it impacts on their investment selection. Kenneth and Nofsinger (2005) evaluated the behavior of individual investors in the Japanese stock market who because of poor selection strategies preferred holding non -risky stock with lower returns.

Mustapha Chafai (2014) in his study of how individual investor behavior affect the Tunisian stock Market, looked at the behavior of Tunisian stock market investors. The study involved 300 investors who were distributed with questionnaires with only 193 responding. The questionnaires were entered in SPHINX software for analysis and the findings concluded that the individual behavioral biases that affected the investment pattern all occurred but at different magnitudes.

Konstantinidis et al (2019) studied endowment effect, Disposition effect, and Attachment bias on investor advisors from 81 certified stock markets to test their effects on rational investment decisions. A questionnaire was formulated and from the results, that 65% of certified stock market executives found it easier to sell gains and holding on to losses. Additionally, 42% exhibited emotional attachment to their assets with another 46 % being rational. 10% of the respondents were indifferent between emotional bias and rational attitudes.

Al-Ahliyya et al (2019) in his study on how investor behavior influence stock investment decisions at the Amman stock exchange, used random sampling and 165 questionnaires were distributed to the respondents of which there was a response rate of 83.3 %. A Likert scale was used and a multi- collinearity test done for predictor variables. Normality test was done and after the use of SPSS, the study found a significant impact of overconfidence, loss aversion, and herding and risk perception on stock decision making at the Amman Stock Market.

Merikas et al., (2003) research on how investor behaviors behave at the Athens stock exchange, discovered that both rational thinking and psychological biases were predominant. The study showed a relationship between psychological traits and empirical evidence theories. Investors depicted a culture where they did not rely on any standard approach to make a decision. Another study carried out in Amman stock exchange in Jordan by Fares and Khamis (2011) investigating on how individual investors behaved, identified age, education, relationship with the brokers and availability of telecommunication were the key factors that could make individual investors to invest.

Mamta (2014), in a study to investigate which bias is predominant among the heuristic-driven and frame depended biases at the Indian Stock Market used a sample of 50 respondents during the period 2006-2013 discovered that overconfidence and disposition bias increase the market and individual security transaction. Although a sample size of 50 was used, it seemed very inadequate. Lindbom and Platan (2002) conducted a test on 160 private investors and 47 institutional investors at the Sweden and from the test he discovered that heuristic biases and framing errors considerably influenced decisions of investors.

Ngode (2013) carried out a study on the effect of behavioral biases on mutual fund used a random sample of 80 investors from the 16 licensed mutual firms. Primary data was collected using questionnaires and after testing for reliability of the research instrument, the data was then analyzed and effects of individual behavioral traits were found to be 63%. The respondents intimated that past investment patterns persuaded present investment decision. This study corroborated other studies carried earlier on about psychological and emotional effects on investment decision which established the relationship between the variables.

Kalunda and Mbaluka (2012) conducted a study on how prospect theory manifests in investors' behavior. They tested the endowment and disposition effect of the individual investors at the Nairobi security exchange. Their observation found that investors deviated from standard finance principles and they became attached to their investments. The endowment effect was identified as 23% of the respondents changed their mix while 77% did not in spite of the economic condition demanding so. Shikuku (2014) in her study on the effect of behavioral factors on individual investors choice at the NSE, found

out from the randomly selected 60 investors with a response rate of 93.65% using analysis of variance (ANOVA), that there was a relationship between the psychological and emotional influence on decision making process. The study identified several biases that influence investment decisions ranging from, herding, loss aversion, and overconfidence and anchoring. Additionally, market information and price changes were also identified as key elements impacting on investment decisions.

Jagongo and Mutswenje (2014), studied investment decisions and their influencers at the Nairobi security exchange. A sample of 50 respondents were used from an approximate 1.8 million investors who were given a questionnaire. The data was then analyzed using the SPSS package. From a response rate of 84%, accounting information and psychological influences were observed as decision catalysts. However, the Nairobi security exchange has close to 2 million investors and the sample size was not very representative.

Aduwa et.al (2012) performed a study on financial performance of individual investors at the Nairobi security exchange where he used a systematic sampling technique to formulate sample size. Questionnaires were given to the respondents for primary data collection and data from this was entered into SPSS for analysis. Secondary data was also collected from CMA and NSE to help calculate abnormal returns from NSE All Share Index.

From a response rate of 83%, majority of whom were men at 54%, the findings of the study clearly demonstrated that some investors exhibited rationality in their investment decision while there were others who were irrational in their decision making as they were affected by herding behavior which is a product of emotional and social influence. These studies were all conducted in established security markets but did not factor individual investors in unestablished markets. This is an indicator that not all psychological biases which affect investment decisions were incorporated in the studies informing the reason for further research.

2.5 Conceptual Framework

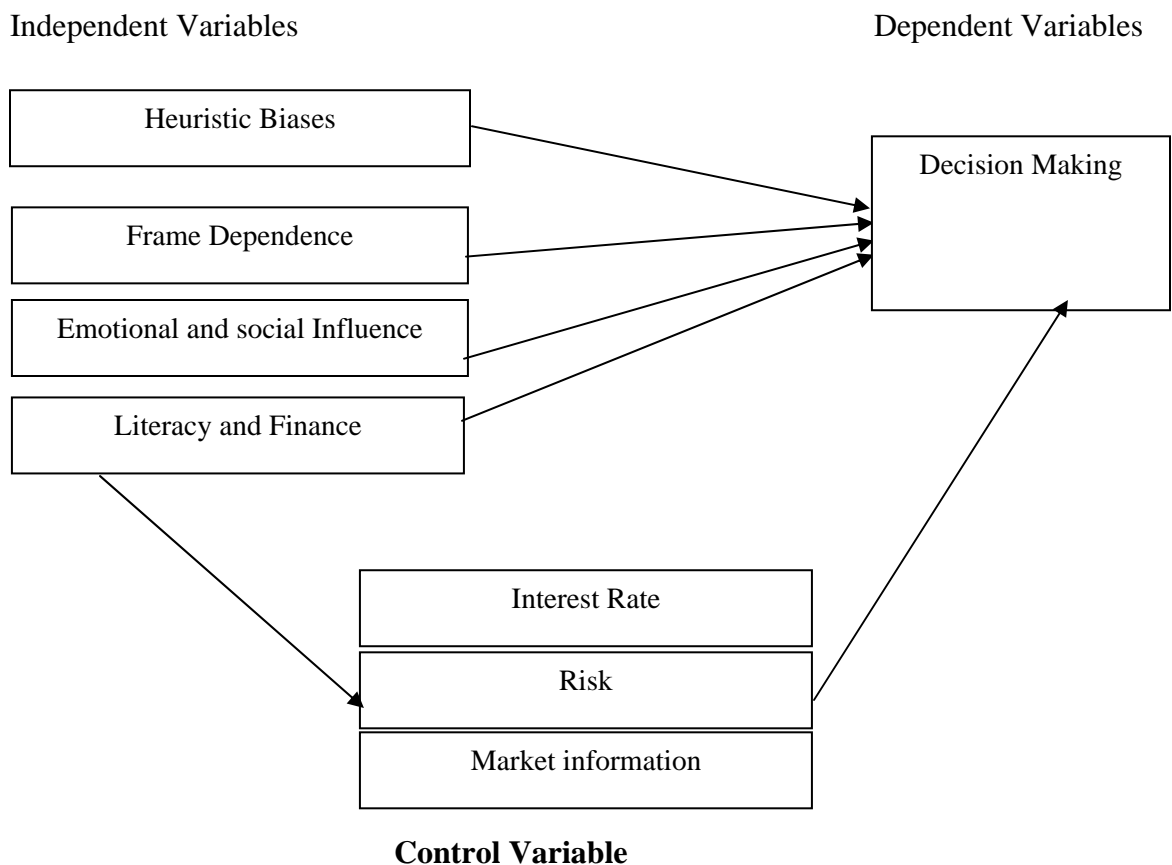


Figure 2.1: Conceptual Framework

Source: Researcher

2.6 Summary of the Literature Review

This chapter reviewed both the individual behaviors of investors and other factors that influence investors' decisions. The literature has addressed the heuristic driven biases in decision making. Additionally, it has mentioned the emotional and herd instincts that influence decisions. The chapter also highlighted empirical studies and theories that have guided the conceptualization of this area of study. There is still more to be covered locally with a larger sample. Additionally, many studies carried out concentrated mainly on advanced stock markets globally giving lukewarm attention to underdeveloped stock markets hence need to conduct more studies in this area.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Objectives highlighted in chapter one was addressed. Various methods and processes were adopted and classified according to design, population, sampling design, sampling frame and techniques, data collection methods, diagnostic test, data analysis and finally the test statistics used.

3.2 Research Design

A descriptive research design was preferred. Cooper and Schindler (2003) views it as a technique concerned with specific predictions. It is a blue print or plan highlighting how the research will be carried out. In addition, a good research design help minimize biasness and maximize the accuracy of the data collected and analyzed.

One of the best research design method is a survey research design because of its user-friendly nature and ability to capture broad range of data. The use of large samples will make the results statistically significant (Malhotra and Birks, 2007). The independent variables are the individual behavior biases and other factors. The dependent variable is the investment decision.

3.3 Population

The study focused on individual investors at the Nairobi security exchange. NSE has over 3 million individual investors with 64 listed firms and approximately 20 licensed stock brokers with a market capitalization of 2245.27 billion as at 9th July 2019 (CMA quarterly bulletin).

3.4 Sample Design

A sample is a representative number out of a whole population (Cooper and Schindler, 2006). Mugenda and Mugenda (1999) recognizes the importance of a correct sample size. A smaller sample is not very representative though it can be used in homogeneous population while a larger sample is very representative and is very useful in heterogeneous population. Bearing this in mind, a standard of accuracy and acceptable level of confidence will be required to come up with an acceptable sample. For this study, a confidence level of 95%, with a margin of error of 10% will be used. To obtain a sample size that has an adequate size relative to the goals of the study, Kothari formulae (2004) was adopted as follows:

$$n = \frac{Z^2 pqN}{e^2(N-1) + Z^2 pq}$$

N is the sample size, while p is the population reliability i.e. 0.5 q= (1-0.5), Z=value of selected alpha level 0.05 therefore Z is 1.96 and e is the margin of error. The sample size for this study will therefore be;

$$n = \frac{(1.96)^2 \times 0.5 \times 0.5 \times 3,000,000}{(0.1)^2(3,000,000 - 1) + (1.96)^2 \times 0.5 \times 0.5}$$

n=96

Based on goals of the study a sample size of 96 will be adopted.

Table 3.1: Sample Size Distribution

Category	Total Population	Sample Size
Individuals at NSE	3,000,000	96
Total	3,000,000	96

3.5 Data Collection

Primary method of data collection was used. A structured closed - open questionnaire was developed on the basis of research objectives used. Additionally, the questionnaire contained a 4- point Likert scale. The questionnaires were physically presented by the researcher through drop and pick. Maholtra (2007) explains that questionnaires are ideal for collection of data as information is gotten within a very short time. It was divided into three sections: General information, Investment Decisions and Individual behavior biases.

3.6 Data Analysis

3.6.1 Validity and Reliability

Validity is the accuracy with which we measure what we intended to measure. Validity interrogates the level of accuracy of the data in relation to variables of the study, (Mugenda, 2009). The confidence with which causal relationship was stated from the test (Internal Validity) and generalization of the study to test whether the same results was to be the same subsequently in other settings (External validity) was considered. However, care was taken to control threats of internal validity. The research supervisor assisted in establishing the validity of the content. Reliability was also used to measure the extent to which research instrument was to subsequently yield similar results.

3.6.2 Analytical Model

Statistical Package for Social Sciences (SPSS) program was used to manipulate the independent and dependent variables. Since the study used descriptive statistics it was necessary to incorporate multi linear regression model in data analysis in the form;

$$Y = a + b_1x_1 + b_2x_2 + \dots + b_nx_n + e; \text{ where}$$

Y- Investment Decision measured based on individual behavioral bias. Scores will be derived from Likert scale of each behavior.

X1-Independent Variable the heuristic biases

X2- Framing error

X3-Emotional and Social influence

X4- Literacy and finance/OF

a-Constant **b**-Slope **e**- Error margin

The results of the study were presented using tables, graphs and figures. Data analysis was conducted using the Statistical Package for Social Science (SPSS).

3.6.3 Test of Significance

t-test was deemed desirable with a 5% significance level. The test is going to give a 95 % confidence that the selected sample gave projected result. The relationship between variables were established.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSIONS

4.1 Introduction

This chapter covers data analysis and it also discusses the results. The objective was to find how investors' individual behavior impacts on investment decisions at the NSE and the collective reactions and views of the respondents from the questionnaires were summarized in tables, coded and analyzed using SPSS.

4.2 Response Rate

The study targeted 96 respondents from approved the approved 24 brokerage firms who we given questionnaires to fill and only 77 respondents filled and returned the questionnaires making a response rate of 80.2 % which was deemed adequate. Mugenda and Mugenda (2003) and Kothari (2004) asserted that a response rate of over 50% is adequate for reporting and considering that the response rate was above the threshold, it therefore suited data analysis and interpretation.

Table 4.1: Response Rate

	Questionnaires	Filled	Percentage
Respondents	96	77	80.2%

Source: Researcher 2019

4.3 Data Validity

Validity of the data was taken care of as the researcher ensured that what was intended to be measured was measured. The results obtained were analyzed to ensure that the same results could be achieved elsewhere and were consistent at other times.

The threats of internal validity were considered in the research with the assistance of the research supervisor by the use of Cronbach alpha. This gave a reliability of 0.798 and this was adequate as the best statistic should show a reliability of 0.7.

Table 4.2 Reliability test

Case Processing Summary			
		N	%
Cases	Valid	77	100.0
	Excluded ^a	0	0.0
	Total	77	100.0

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.798	30

4.4 Descriptive Statistics

This section highlights the demographic information on age, gender and level of education. The mean and standard deviation of individual behaviors of investors' visa Vis investment decision is also captured.

4.4.1 Demographic Information

Table 4.3: Age Group

Age Bracket	Frequency	%	Cumulative
20-30	28	36.4	36.4
31-40	24	31.2	67.6
41-50	13	16.9	84.4
50 and above	12	15.6	100
	77		

In conducting the research, the respondents were supposed to indicate their age bracket and from the study, the study thus found out that majority of investors were in the age bracket of between 20-30 years who accounted for 36.4 per cent. The analysis further found out that 31% of the respondents were aged between 31-40 years with 16.9% accounting for the age bracket between 41-50 years of age. Investors who were above 50 years only accounted for 15.6%. The study therefore showed that majority of investors were mature to make tangible investment decision based on their behavioral characteristics.

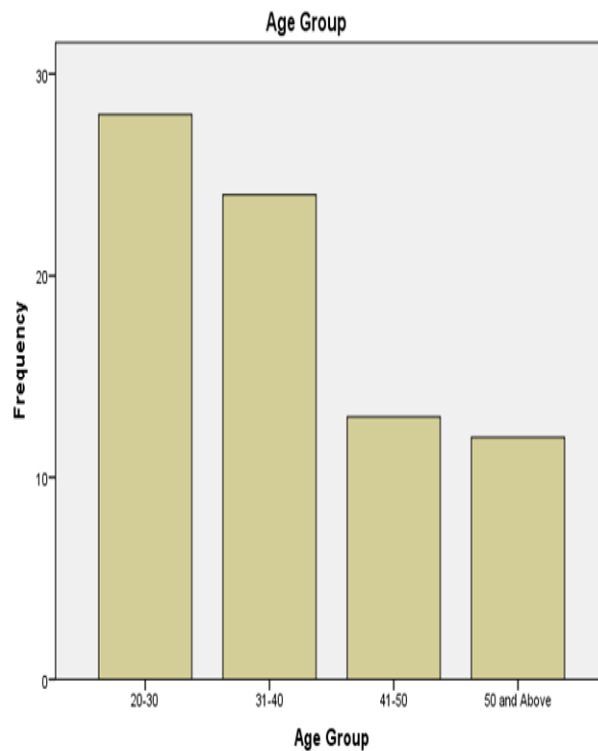


Figure 4.1: Investors Age distribution

Source: Researcher 2019

4.4.2 Demographic Information

Table 4.4: Gender

	Frequency		Percentage
Male	41	41	53.2%
Female	36	36	46.8%
Total	77	77	100%

Source: Researcher 2019

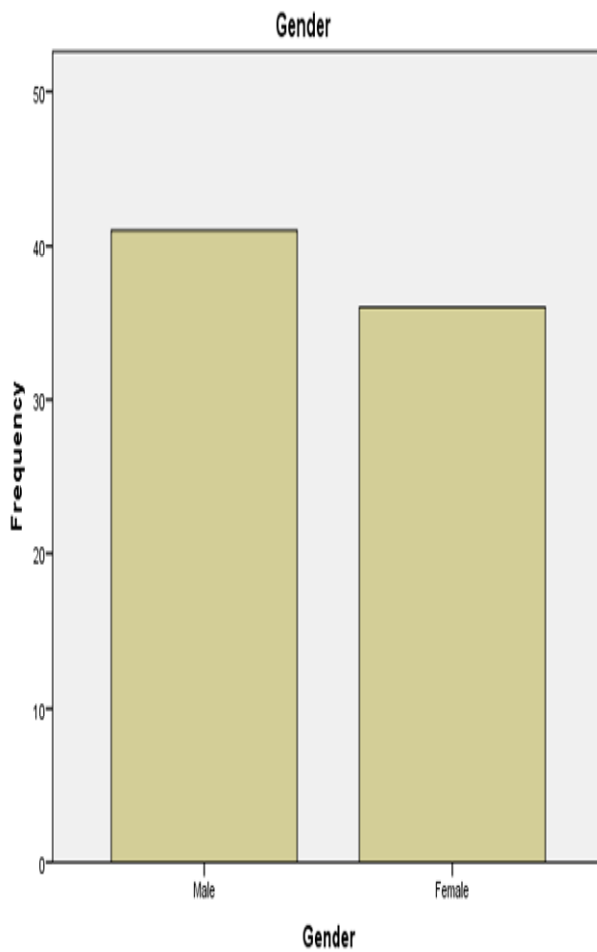


Figure 4.2: Demographic information on Gender

Source: Researcher 2019

Based on the research findings, majority of investors were found to be male at 53.2 % with the female investors accounting the remaining 46.8% as shown in figure 2 above.

4.4.3 Individual Investors Education Qualification

Table: 4.5 Level of Education

	Frequency	Percentage
Postgraduate	14	18%
Graduate	47	61%
Non- Graduate	16	21%
Total	77	100

The research sought to know the level of education of the individual investors and from the findings, majority of the investors had attained first degree as they accounted for 61%. The non-graduate category accounted for 21% with the remaining 18% being investors who had postgraduate qualification. The findings showed that majority of individual investors were literate and could apply conventional financial models in decision making but still individual behavioral biases influenced them

4.4.4 How individual Investors Ventured into Security trading

Table 4.6 How individual Ventured into Security Trading

	Frequency	Percentage
Relative	16	21%
Media	18	23%
Investment Expert	36	47%
Others	7	9%
Total	77	100

The study found out that 47% of the respondents ventured into investment by the influence of investment experts comprising the majority and another 23% and 21% venturing into security trading through the influence of media and relatives respectively. The other 9% could have been influenced by other behavioral factors like herding euphoria.

4.4.5 The Influence of Past History on Investment

Table 4.7 The Influence of Past History on Investment

	Frequency	Percentage
Yes	49	64
No	20	26
Not Sure	8	10
Total	77	100

The research found out that majority of the investors (63%) considered history which influenced their investment decision as opposed to 26 % and 10% who didn't consider history and were not sure respectively. This showed that past history is critical in individual investor decision making because it encompasses both fundamental finance models and some behavioral attributes. This is illustrated below.

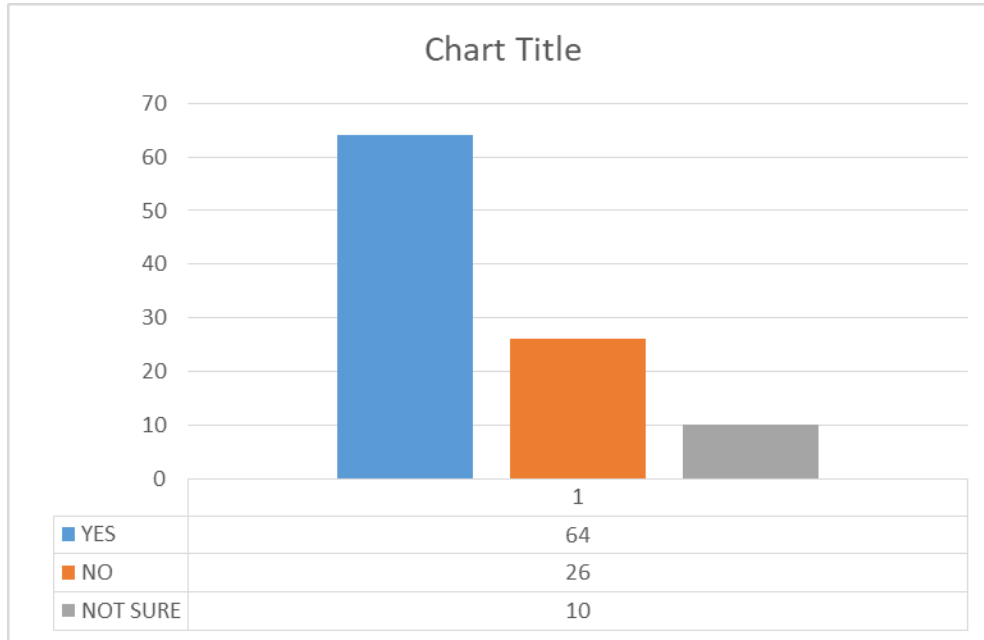


Figure 4.3 Past History on Investment

4.4.6 Investors Level of experience on Financial Maters

Table 4.8: Experience in Finance

	Frequency	Percentage
Yes	33	43%
No	44	57%
Total	77	100

From the research findings, it was clear that knowledge in conventional financial models is not a requirement for investment as majority of the respondents (57%) did not have financial knowledge but used their cognitive ability and other framing biases to make investment decision showing clearly that individual behavior is also a factor in investment decision making. This is graphically illustrated below.

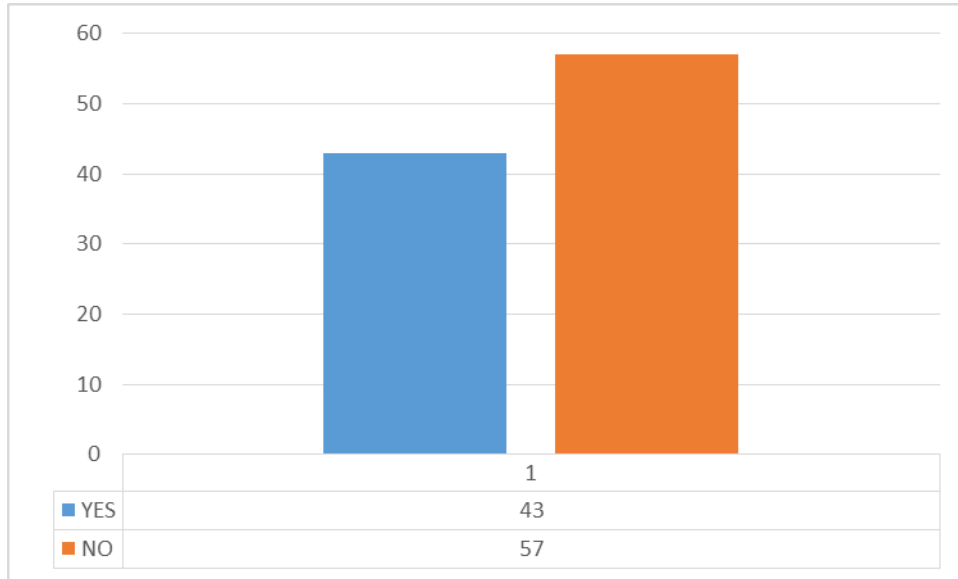


Figure 4.4 Experience in Finance

Source: Researcher 2019

4.4.7 Investment Period

The researcher was also interested in knowing how long the respondents (individual investors) trade in securities.

Table 4.9: Investment Period

	Frequency	Percentage
<1year	26	34
1-2 years	11	14
2-5 years	30	39
>5 years	10	13
Total	77	100

Source: Researcher

From the study majority comprising 39.5 % of the respondents preferred trading in securities for between 2-5 years followed closely by 34% whose investment period was 1 year. 14% and 13% preferred investment of between 1-2 years and more than 5 years respectively.

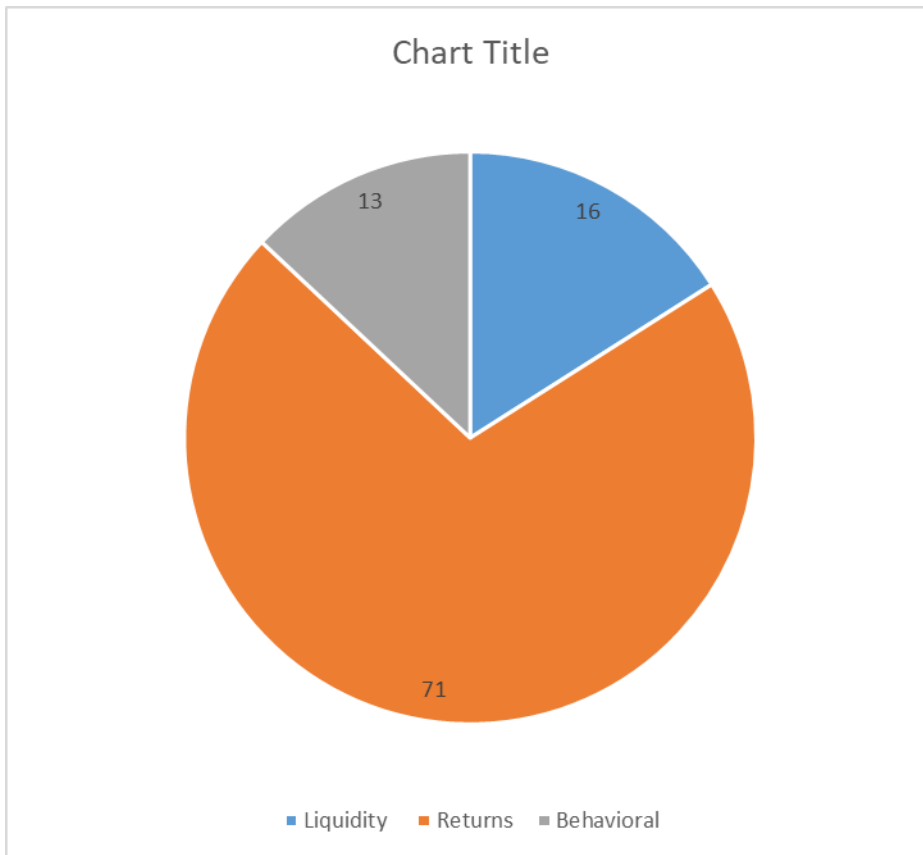


Figure 4.5 Factors influencing Investment Decisions

The researcher was interested in knowing the factors that motivates the majority of individual investors to invest and from the illustration above in the pie chart, 71% of the respondents chose returns as the main reason for their investment decision. 16% of the respondents and another 13% chose liquidity and behavioral influences respectively. The presence of behavioral attributes vindicated the notion that not all investors think rationally as some depart from this school of thinking and take irrational direction to make investment decision.

4.4.8 Investors View on Performance for the Last 3 years

Table 4.10: Performance for the last 3 years

	Frequency	Percentage
Excellent	0	0
Good	15	19
Fair	60	78
Poor	2	3
Total	77	100

Source: Research Findings

The investor wanted to know from the respondents what they perceived about their investments for the last 3 years and from the findings, majority (78%) said they considered it fair as the economy had slowed down. Another 19% considered investment performance to be good based on where they had invested. Only 3% considered their investment performance to be poor.

4.4.9 Market Sectors

The study also tried to find out which sector was predominant in terms of investment and that was the most preferred by individual investors. The study thus found out that the majority of the respondents had interests in telecommunication industry at 84 % followed closely by insurance at 71%. Commercial and allied had 64% with Agriculture having 58% share. The banking industry also had a substantial interest with those indicating they had shares in the industry accounting for 52%. Manufacturing & Allied and Energy and Petroleum had few respondents indicating their interest as only 49% and 36 % indicated that they held shares there. This is well illustrated below.

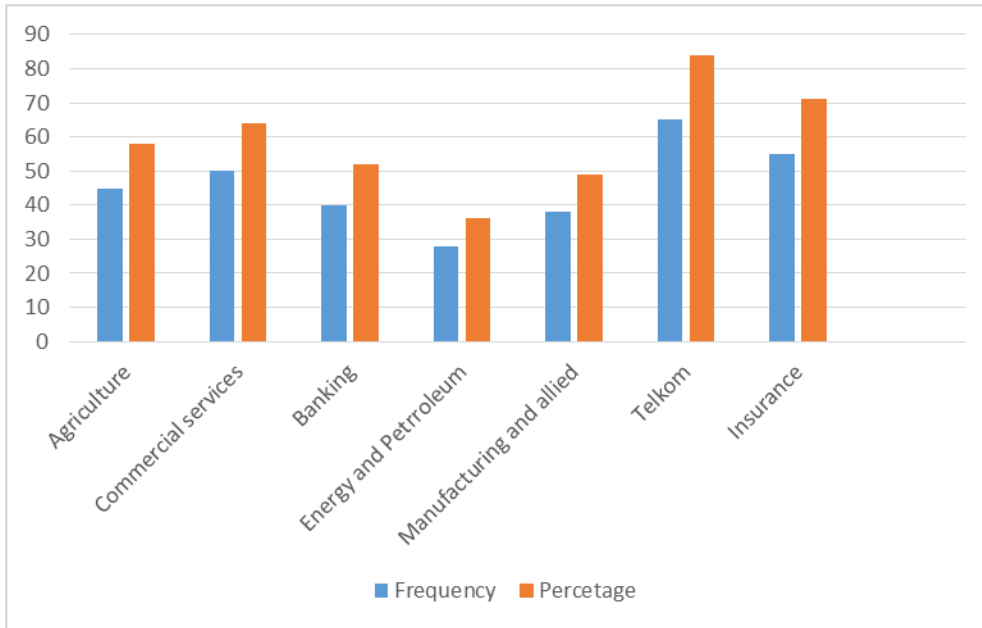


Figure 4.6 Market Share

Source: Research findings

4.4.10 Individual Behaviors and Investment Decision

The research was expected to identify the behavioral biases of individual investors and how they impacted on investment decisions.

Table 4.11 : Investors Individual Behavior on Investment Decisions

	Mean	Std. deviation
How did you venture into Security trading	2.44	.925
Does past history influence your Investment	1.47	.680
Whose judgement do you trust Most when making Investments	2.51	.719
Do you Consider Past Investments in Stock before investing in it		
Do you have experience in Finance? Do you have work experience in Finance	1.57	.498
How do you time your Investments	2.53	.502
What's your Investment Period	2.31	1.079
What's your short-term goal of investment	1.06	.248
What other factors influence your investment Decisions	1.97	.537
How do you consider your Investment Performance for the last 3 Years	2.83	.441
INDIVIDUAL BIASES		
I make all important share investment myself	2.47	.552
I am knowledgeable compared to an ordinary Investor	2.45	.501
I believe my knowledge of stock market can outperform the Market	2.96	.471
I believe my experience is enough to forecast winning investment	2.94	.439
Healthy growth in the past is a sign of well performing stock	2.95	.394
I don't believe in investing in stock I don't understand and little information about	1.99	.303
EMOTION AND SOCIAL INFLUENCE	2.48	.553
ACCOUNTING INFORMATION	1.97	.486
I consider market information critical for personal investment	2.32	.637
Information in my accounting books is important in my decision making	1.86	.506
I sell my security when market show loss	1.83	.677
FRAMING ERRORS	2.31	.520
After experiencing a gain, I am willing to take more risk and inclined to take a risk after incurring a loss	1.86	.601
Most stocks are Overvalued Compared to their actual prices	2.51	.737
Very soon the stock prices will come down and that will be the right time to invest.	2.64	.647

Source: Research findings.

4.5 Correlation Analysis

This helps in measuring the degree of the relationship between variables and also determines the nature or direction of the relationship. It indicates the strength of the linear relationship between two variables. The product moment coefficient denoted with r , take range of values from +1 to -1 which indicates perfect positive and perfect inverse relationship. 0 denotes positive association while any value less than 0 denotes an inverse association. The table 4.12 below depicts the correlation coefficient matrix of the predictor variables

Table 4.12: Correlation coefficient

Correlations						
		Investment decisions	Overconfidence_ heuristic_biases	Emotion_and_social_influence	Accounting_information	Framing_errors
Pearson Correlation	Investment_decisions	1.000	.130	.279	-.085	-.015
	Overconfidence_heuristic_biases	.130	1.000	.166	.386	.269
	Emotion_and_social_influence	.279	.166	1.000	.243	-.299
	Accounting_information	-.085	.386	.243	1.000	.241
	Framing_errors	-.015	.269	-.299	.241	1.000
Sig. (1-tailed)	Investment_decisions		.130	.007	.231	.448
	Overconfidence_heuristic_biases	.130		.074	.000	.009
	Emotion_and_social_influence	.007	.074		.017	.004
	Accounting_information	.231	.000	.017		.017
	Framing_errors	.448	.009	.004	.017	
N	Investment_decisions	77	77	77	77	77

Source: Researcher

From the findings above, there was positive correlations on some predictor variables.

4.6 Regression Analysis

The analysis in table 4.13 below shows the coefficient of determination denoted r^2 because it's the square of correlation coefficient r . It calculates what proportion of the variation in the actual values that may be predicted by changes in the value of independent variables. In this case it is .136 which means that only 13.6% of the stated independent variable affects investment decision while the other 86.4 % represents the other variables not captured in the model. The P-value .031 which is less than .005 implies that the regression model is significant at 95% significance level.

Table 4.13 Regression Analysis

Table 4.13: Model Summary

Model	R	R^2	Adjusted R square	Std, Error of the estimate	Change Statistics					
					R^2	F Change	Df1	Df2	Sig. F Change	Durbin-Watson
1	.368	.136	.088	.949	.136	2.827	4	72	.031	2.111

Source: Research Findings

Predictors: (Constant) Overconfident and heuristic biases, Emotion and Social Influence, Accounting information and Framing errors. The dependent variable was investment Decisions.

4.6.1 Analysis of Variance

Means were compared using ANOVA as shown below

Table 4.14: Analysis of Variance

	Sum of Squares	Df	Mean Square	F	Sign.
Regression	10.179	4	2.545	2.827	0.031
Residual	64.808	72	.900		
Total	74.987	76			

Dependent variable: Investment decisions.

b. Predictors: (Constant), Framing errors, Accounting Information, Overconfidence & heuristic biases, Emotion social Influence.

The findings in ANOVA in the above table 4.12 shows a P value of 0.031 explains that there is a correlation between the predictors variables in this case Overconfidence and other heuristic biases, Emotional and Social Influence, Accounting information and framing errors.

Table 4.15: Regression Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95.0% Confidence Interval for B		Collinearity Statistics	
		B	Std. Error	Beta			Lower Bound	Upper Bound	Tolerance	VIF
1	(Constant)	-.097	1.266		-.077	.939	-2.621	2.427		
	Overconfidence_heuristic_biases	.508	.453	.138	1.122	.266	-.394	1.410	.794	1.259
	Emotion_and_social_influence	.631	.223	.351	2.835	.006	.187	1.076	.781	1.280
	Accounting_information	-.513	.255	-.251	-2.007	.048	-1.022	-.003	.768	1.301
	Framing_errors	.216	.241	.113	.899	.372	-.264	.696	.757	1.322

a. Dependent Variable: Investment_decisions

From the regression results in the table above, the multiple linear regression model is:

$$ID = -0.097 + 0.508 (OCHB) + 0.631 (ES) - 0.513 (AI) + 0.216 (FC)$$

The multiple linear regression indicates that Overconfidence and other heuristic biases, emotional and Social influence and Framing errors have positive relationship with the dependent variable (Investment decision). However, the accounting information variable has a negative relationship but it is significant at 0.48. The VIF of all the predictors is less than 3 which is a clear indicator that there is no multi-collinearity in the independent variables. The model can be interpreted as by saying that a 1% increase in overconfidence and other heuristic biases will lead to a 50.8 % increase in investors decision. A 1 % increase in emotional and social influence will result to a 63 % increase in investors decision while an increase in accounting information will result to a decrease of 51.3% in investors decision. Finally, a 1% increase in framing error will lead to a 21% increase in investment decision to

4.7 Discussions of Research Findings

From the study, it was paramount that individual behavior of investors was existed as some respondents had overconfident bias in the decision making as they believed that they were superior to compared to ordinary investor and believed their knowledge of the stock was enough to forecast winning investment (average mean of 2.96).

On emotional and social influence bias, the respondents agreed that at times friends and relatives influence their behavioral trend in investment decision with a mean of 2.48. Framing errors was also noticed from the study as many respondents believed that stocks were overvalued compared to their actual prices which had an average mean of 2.31. Some respondent also concurred that after experiencing gains and losses they were willing to take more risks and some became risk averse after experiencing loses thus vindicating the prospect theory by Kahneman and Tversky.

The study also found out male investors dominate insecurity trading compared to their female counterparts accounting for 53.2 % and 46.8% respectively. The age bracket of the majority of the respondents were of the young investors of between 20-40 years. This could be because young investors are curious to venture into security market.

The education level for most of the respondents was adequate as most of them were graduates accounting for 61% and post graduate (18%). However, a good number of non-graduates (21%) also participated in the survey. Good education level is critical in assisting an investor to make sound decision based on traditional finance model. However, in spite of their level of education they were still influenced by individual behavioral biases.

On how they ventured into security trading, majority of the investors seem to have been influenced by investment experts and the media who accounted for 47% and 23 % respectively. Majority of the respondents also confirmed that past history was a key factor that informed their current investment position showing some behavioral traits of investors irrespective of their education level. The percentage on this showed a 64% affirmation.

Respondents were also asked about their preferred investment duration and from the response, it was clear that the preferred duration for most was between 1-5 years. It was also found out from the research that the majority of the investors were not very enthusiastic with the current economic environment as it impacted on their investment performance with most of them giving a not favorable verdict. 78% said that the performance was just fair for the last 3 years with a paltry 19 % returning a favorable

verdict. 3% of the respondents flatly gave a negative rating. It was also clear from the research findings that majority of the respondents who filled the questionnaire had an interest in telecommunication sector as opposed to other sectors. This was an indicator that the telecommunication sector was vibrant and since many valued returns, it was evident that the telecom sector was reliable to many investors.

Finally, the findings from the study showed that the coefficient of determination denoted by r square of .136 represents a positive correlation however not strong. This could mean that there could be a non- linear relationship and 13.6% of the stated independent variable affected investment decision while the remaining 86.4% represented other variables not studied.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

This Chapter is a presentation of a summary of the research findings in chapter 4 as well as recommendations for further research based on objectives of the study.

5.2 Summary of findings

The study sought to find out the individual behavior on investment decisions of investors at the Nairobi stock exchange and from the findings. The individual behavior of investors was based on irrational model that investors apply to their investment choice. The field of behavioral finance as come to give solutions to market anomalies which traditional finance model could not answer.

Using a descriptive survey research, sample of 96 respondents were chosen from the approved 21 stock broking firms and a structured questionnaire was administered to each one of them. Only 77 responded and handed back the questionnaires. The analysis was done processed using excel and SPSS software and the findings presented in figures and tables.

The study came out with a conclusion that individual behavior do influence investors' decision making. This was captured as some investors were influenced by heuristic biases like overconfidence based on their responses. Emotion and social influences was also exhibited in the study as investors confessed that friends and colleagues have a role to play in their investment choices.

Investors also get influenced by framing errors as the the study found out that some individuals could hold on to stocks that were not performing well and instead sell profit making stocks hoping to gain in future when the price goes up. Some could also take risk after suffering losses to invest again while others became risk averse. The study also found out that financial knowledge was not a key to decision making as some investors did not have advanced education yet they ventured into security trading.

5.3 Conclusion

The study came out with a conclusion that behavioral finance is an important wing of finance that should be given more attention. The effect of cognitive limitation impacts on individuals when they make investment decisions even if their education level is high. Rationality is hypothetical and to be realistic individuals suffer from behavioral biases which plays a key role in their investment decisions. From the study, the effect of heuristic biases came out clearly as some individuals were very confident about themselves believing that they could always predict the market. The other heuristic bias that came out was aversion to ambiguity where some individuals were not ready to invest in stocks they didn't understand and had little information about.

The study thus found out that despite many individual investors preferring to be rational and logical in their investment choices they still found themselves entangled with cognitive dissonance that in a way led them to thin irrationally. However, accounting information had the least influence with an average mean of 1.99

5.4 Recommendations

Based on the study findings, an awareness training by the NSE should be introduced to educate newcomers in the security market on parameters of investment to help them make favorable investment decisions. This will protect investors from making cognitive errors that may lead to wrong investments. Behavioral finance should be enhanced and given special attention even in investment retreats and college curriculums since the effects of psychology and emotions have become prominent in our everyday decision-making process.

5.5 Limitations of the Study

In the course of the research, various obstacles were encountered that inhibited the smooth running of the study. Time constraint was one of the factors considering that the research was being conducted within a limited period of time resulting to some respondents not returning the questionnaires. Additionally, the study could have been threatened by maturation as some respondents considered some questions in the questionnaire to be very private and irritating. This could have been due to their level of motivation or fatigue at that time hence were reluctant to give answers. The fact that primary data was the only data used, the research was somehow limited as secondary data could have enhanced the findings.

5.6 Suggestions for Further Research

The study focused mostly on individual investors at the NSE particularly Nairobi. Future studies should also focus on investors in other parts of the country to also determine their behaviors. The sample size of 96 was chosen on the basis of time constraint and it will be good if the sample could be expanded in future studies.

Finally, future study should consider each behavioral variable separately and explore its importance in relation to investment decision making.

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APPENDICES

APPENDIX I: QUESTIONNAIRE

Dear Sir/ Madam

I am a Student at the University of Nairobi, doing my final year MBA as part of the curriculum; I am conducting a survey on “STUDY ON INDIVIDIVUAL BEHAVIOUR ON INVESTMENT DECISION”. I request you to kindly give me your valuable time to fill this questionnaire. I assure you that the data provided by you will be kept confidential

PART A: GENERAL INFORMATION

Age group

- a) 20-30 () b) 31- 40 () c) 41-50 () d) 50 and above ()

Gender

- a) Male () b) Female ()

Education qualification

- a) Postgraduate () b) Graduate () c) Non graduate () d) Others ()

1. How did you venture into security trading?

- a) Relative () b) Media () c) Investment Expert ()
d) Others specify_____

2. Does past history influence your current investment decision?

- a) Yes () b) No () c) Not sure ()

3. Whose judgement do you trust most when making Investments?

- a) Self Judgement b) Media/experts c) Brokers/friends

4. Do you consider past investment in stock before investing in it?

- a. Yes () b. No () c. Sometimes ()

5. Do you have work experience in Finance?

- Yes () No ()

If yes how many years? _____

6. How do you time your investments?

- a) Monthly () b) Quarterly () c) Yearly ()
 d) Others specify _____

7. What is your investment Period?

- a) <1-year () b) 1-2 years () c) 2-5 years () d) >5 years ()

8. What is your short-term goal of investment?

- a) Return () b) Liquidity () c) Risk ()

9. What factors influences your investment decision?

- a) Liquidity () b) Returns () c) Emotions and Social influence ()
 d) Any other Specify _____

10. How do you consider your Investment performance for the last 3years?

- a) Excellent () b) Good () c) Fair () d) Poor () e) Very Poor ()

SECTION B: INVESTMENT DECISION

Please tick investment sectors which you hold stocks and indicate volume of shares held, expected return and duration

Sector	Tick	Volume of shares	Expected return	Duration
Agriculture sector				
Commercial services				
Banking				
Energy and petroleum				
Manufacturing and allied				
Telcom				
Insurance				

SECTION C: INDIVIDUAL BEHAVIOURS (Biases)

Kindly evaluate the degree of your understanding on the following using a scale of 1-4 where 1= Strongly Agree 2= Agree 3. = Disagree 4. Strongly Disagree

Individual behavior (biases)	1	2	3	4
1) Overconfidence (heuristic biases)				
I make all the important share investment myself				
I am knowledgeable compared to an ordinary investor				
I believe my knowledge of the stock market can outperform the market				
I believe my experience is enough to forecast winning investment				
Healthy growth in the past is a sign of well performing stock				
I don't believe in investing in stock I don't understand and little information about				
2) Emotion and social influence				
Information from friends and colleagues are valuable when making investment decision				
I always rush to the most 'priced' investment				
I invest in stocks where everyone is investing as it is less risky				
A get recommendations from analysis and stock brokers				
3) Accounting information				
I consider market information critical for personal investment				
Information in my accounting books is important in my decision making				
I sell my security when the market show loss				
4) Framing errors				
After experiencing a gain, I am willing to take more risk and inclined to take a risk after incurring a loss				
Most stocks are overvalued compared to their actual Prices				
Very soon the stock prices will come down and that will be the right time to invest.				

APPENDIX II: LIST OF REGISTERED STOCK BROKERS

1. Dyer & Blair Investment Bank Ltd
2. Suntra Investment Bank Ltd
3. Kingdom Securities Ltd Co-Opp. Bank building
- 4 Francis Drummond & Company Limited
5. AIB CAPITAL LTD
6. ABC Capital Ltd
7. Standard Investment Bank
8. KCB Capital
- 9 Sterling Capital
10. Apex Africa Capital Ltd
- 11 Old Mutual Securities Ltd
12. Ngenye Kariuki & Co. Ltd. (Under Statutory Management)
13. Equity Investment Bank Limited
14. African Alliance Securities
15. NIC Securities Limited
16. EFG Hermes Kenya Limited
17. Securities Africa Kenya Limited
18. Barclays Financial Services Limited
19. Renaissance Capital (Kenya) Ltd
20. Kestrel Capital (EA) Limited
21. Genghis Capital Ltd
22. Faida Investment Bank Ltd
23. AIB CAPITAL L

23. SBG Securities Ltd

24. CBA Capital Limited

APPENDIX III: LISTED COMPANIES

1. Eaagards Limited
2. Kakuzi Plc
3. Kapchorua Tea Kenya Plc
4. The Limuru Tea Company Plc
5. Sasini Plc
6. Williamson Tea Kenya Plc
7. Car & General (K) Ltd
8. Atlas African Industries Ltd
9. Deacons (East Africa) Plc
10. Eveready East Africa Ltd
11. Express Kenya Ltd
12. Kenya Airways Ltd
13. Longhorn Publishers Plc
14. Nairobi Business Ventures Ltd
15. Nation Media Group Plc
16. Sameer Africa Plc
17. Standard Group Plc
18. TPS Eastern Africa Ltd
19. Uchumi Supermarket Plc
20. WPP Scangroup Plc
21. ARM Cement Plc
22. Bamburi Cement Ltd
23. Crown Paints Kenya Plc

24. E.A. Cables Ltd
25. E.A. Portland Cement Company Limited
26. KenGen Company Plc
27. KenolKobil Ltd
28. Kenya Power & Lighting Company Ltd
29. Total Kenya Ltd
30. Umeme Ltd
31. Centum Investment Company Plc
32. Home Africa Limited
33. Kurwitu Ventures Limited
34. Olympia Capital Holdings Limited
35. Trans Century Plc
36. Nairobi Securities Exchange Plc
37. B.O.C Kenya Plc
38. British American Tobacco Kenya Plc
39. Carbacid Investments Plc
40. East African Breweries Ltd
41. Flame Tree Group Holdings Ltd
42. Kenya Orchards Ltd
43. Mumias Sugar Company Ltd
44. Unga Group Ltd
45. Safaricom Plc
46. Stanlib Fahari- REIT

47. Barclays New Gold ETF

48. Barclays Bank Ltd

49. Co-operative bank ltd

50. Equity Holdings

51. BK Group Plc

52. Stanbic Bank Plc