EFFECT OF BEHAVIORAL BIASES ON EQUITY INVESTMENT DECISIONS AMONG RETAIL INVESTORS IN THE NAIROBI SECURITIES EXCHANGE

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DECLARATION

I affirm that this work has not been previously presented and authorized for the conferral of a degree by this or any other institution of higher education. As far as I know and believe, the Research Proposal does not include any content that has been previously published or authored by someone else, unless proper acknowledgment is given within the Research Proposal.

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This Research Proposal has been submitted for examination with my approval as the Supervisor.

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EMH Efficient Market Hypothesis

NSE Nairobi Securities Exchange

SU-ERB Strathmore University Ethical Review Board

ABSTRACT

The research proposal titled "Effect of Behavioral Biases on Equity Investment Decisions Among Retail Investors in the Naiorbi securities exchange . It highlights that while conventional financial theories, such as the Efficient Market Hypothesis (EMH), posit that markets are rational and operate under perfect information, actual investor behavior often deviates due to various behavioral biases. This research identifies key biases such as overconfidence, herding, loss aversion, and anchoring, which significantly influence the decision-making processes of retail investors. The study underscores the necessity of understanding these biases, especially in emerging markets like Kenya, where the interplay of socio-economic and cultural variables may lead to unique manifestations of irrational investing behavior. Through a comprehensive literature review, the research identifies gaps in existing studies, particularly the lack of empirical data on retail investors in developing countries compared to their counterparts in developed nations. The objectives of the study include investigating the specific effects of herding, risk aversion, and anchoring on equity investment decisions among NSE investors, as well as formulating hypotheses to explore these relationships. The methodology incorporates a quantitative approach, utilizing a sample of retail investors from NSE brokerage firms, applying regression analysis to establish causal relationships between identified behavioral biases and investment decisions. Retail investors exhibit various behavioral biases, including recency bias, familiarity bias, overconfidence, herding behavior, and anchoring bias, which significantly influence their equity investment decisions. Anchoring, driven by initial stock prices and historical reference points, alongside herding and risk aversion, plays a critical role, with these biases collectively explaining 90% of the variability in decisions. The reliance on digital platforms and social media amplifies impulsive, intuition-driven decisions, often leading to suboptimal outcomes such as limited diversification and poor long-term portfolio performance. These findings underscore the need for targeted investor education to mitigate biases like herding and risk aversion, promoting independent decision-making and better diversification strategies. Policymakers and regulators can address these challenges by improving access to accurate market data, fostering transparency, and encouraging evidence-based investing. Future research should explore the persistence of biases over time, demographic influences, the impact of

technologies like AI, and the effectiveness of financial literacy programs in reducing these biases, particularly in emerging markets like Kenya.

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

The Nairobi Securities Exchange has served as the focus of research and application into behavioral biases in individual investor stock selection. Even as financial theory evolves, psychological biases drive ordinary investors to make poor judgments. Biases influence investment decisions and market outcomes. Anchoring, herding, loss aversion, and overconfidence are among examples. These mistakes may result in disastrous investments that affect market stability and portfolios (Waweru et al., 2019; Mbaluka & Aduda, 2020). An important question is how behavioral biases affect market efficiency and investment decisions. Financial theories such as the Efficient Market Hypothesis (EMH) believe that markets are rational and that prices represent all information. However, behavioral finance demonstrates investor irrationality. Kilonzi (2021) discovered that NSE regular investors tend to follow others rather than making fundamental analysis-based judgments. According to Ndirangu and Muturi (2019), market bubbles and breakdowns may occur.

Retail investor behavioral bias in impoverished countries such as Kenya is seldom investigated. Because industrialized countries have been researched the most, understanding how these biases emerge in various economic and cultural circumstances is critical. More empirical study is required to better understand how these biases influence NSE market dynamics and investment results.

Overconfidence among NSE retail investors is unknown (Mwiti & Jagongo, 2020). It's widespread in Western markets. There is a need for research to minimize behavioral biases among retail investors. Despite ongoing debate, some evidence supports regulatory and educational initiatives to protect investors from irrational behavior and increase investor understanding. NSE is now doing research on financial literacy and behavioral nudges (Kamau & Waithaka, 2021). This demonstrates how much research is necessary to develop and implement appropriate guidelines to assist investors make better decisions.

Digitalization and internet trading platforms have increased the volatility of financial markets, making behavioral biases more difficult to explain. Because of their access to trading instruments and information, individual investors are more prejudiced than ever before. Technology may help

with decision-making, but it may also lead to information overload and biases including loss aversion and overtrading (Gatumu et al., 2020). Academics must investigate how digital channels influence NSE investors.

1.1.1 Behavioral Biases

Investor behavioral bias research has quickly expanded, particularly in emerging markets such as the Nairobi Securities Exchange. Cognitive and emotional biases lead to retail investor blunders. Herd mentality, overconfidence, and loss aversion all have an impact on markets. Overconfidence among investors leads to excessive trading and market instability (Baker et al., 2019. Market booms and busts may be caused by herding or a lack of study. These biases call into question the efficient market hypothesis, which claims that prices reflect all available information (Fama, 2020). Behavioral bias research has not eliminated all of the challenges, particularly in expanding markets like as the NSE. Most research has focused on established markets, leaving emerging nations with less data (Waweru et al., 2020). Geography restricts the application of ideas and concepts. Emerging countries' socioeconomic and cultural variables may have a different impact on behavioral biases than established markets. Thus, additional localized research is required to understand how these views influence NSE market outcomes (Mbaru & Gichuhi, 2021).

Another recurrent literature concern is the measurement and analysis of behavioral bias. Selfreported surveys and historical transaction data may underestimate investor complexity (Barberis et al. 2019). According to Camerer (2019), new behavioral finance research suggests merging experimental and neuroeconomic methodologies to better understand investor psychology. The division of cognitive processes involved in decision-making might help explain how biases influence trading (Lo, 2020). There has been minimal investigation on these innovative NSE approaches. These weaknesses must be addressed, both practically and intellectually. Poor investment decisions owing to behavioral biases might impair wealth and market efficiency (Odean, 2019). Financiers and politicians must address these prejudices while developing equitable investing solutions. Supporting education that clarifies common misconceptions and their consequences may improve investment decisions (Lusardi and Mitchell, 2019). Legislation aimed at protecting investors and increasing market transparency may reduce

these biases. This research looks at NSE retail investor behavioral biases and information scarcity solutions.

1.1.2 Equity Investment decisions

Financial research looks on individual stock investment decisions, notably those involving the Nairobi Securities Exchange. In contrast to institutional investors, individual stock investors trade for themselves. New study reveals that behavioral biases, financial ability, and risk tolerance may influence these decisions. Waweru, Mwangi, and Parkinson (2019) claim that ordinary NSE investors make poor investment decisions because to overconfidence and heuristics. More behavioral finance research in this cohort is required to understand how psychology influences investment choices. Although research on individual investors has advanced, many reasons why people buy stocks remain unknown. Education and financial comprehension influence investing outcomes, albeit this is contested. Some research relate financial literacy to better investing choices (Lusardi & Mitchell, 2020), while others (Xiao & Porto, 2020) show a more complex association based on financial guidance and socioeconomic background. Because of these moderating variables, further research is required to better understand financial literacy and NSE investor behavior. Disparities in outcomes highlight its relevance.

The impact of information asymmetry and market efficiency on investors is debatable. According to a Kariuki and Jagongo analysis from 2021, individual investors often have information gaps that might lead to affective selection and moral hazard. The efficient market hypothesis (EMH) posits that stock prices represent all relevant information, eliminating information asymmetry (Fama, 2020). Poor countries, like as Kenya, seldom fit the Efficient Market Hypothesis, yet market imperfections might have an impact on NSE activity among regular investors. Few research have studied how macroeconomic issues influence stock investment decisions. Several research have looked at the link between interest rates, inflation, stock market performance, and economic growth (Mankiw, 201). It's unknown how these characteristics influence investment. The 2022 Mwangi and Kipngetich study has begun to look at these linkages, but further research is needed to discover how macroeconomic conditions influence NSE retail investors' risk perceptions and investment strategies.

Automated trading platforms and technology have generated both opportunities and challenges for individual investors. Smartphone trading and online brokerage services might boost investor participation, financial inclusion, and market access. However, as trading becomes more accessible, technological developments provide new risks such as cybersecurity issues and the prospect of increased speculative behavior (Leung & Lee, 2021). The NSE must first understand how technological innovations impact retail investors' decision-making processes in order to develop effective regulatory frameworks and investor protection mechanisms.

1.1.3 Investors at the NSE

Nairobi Securities Exchange is a leading Kenyan and African bank. Since 1954, the NSE has evolved into a comprehensive platform for firms to raise finance and investors to trade stocks. Kenya's economy depends on this commerce to support critical projects. The Capital Markets Authority supervises NSE efficiency, transparency, and investor safety. It offers stock, bonds, and derivatives to a variety of investors. NSE investors may be institutional or individual. Retail investors want wealth and income that provide higher returns than savings accounts. Pension funds, insurance firms, and mutual funds have a significant impact on market stability and liquidity due to enormous capital commitments. Mwangi (2018) argues that institutional investors emphasize long-term investing strategies to ensure market stability. Knowing the preferences of these investors is important when customizing investment goods and marketing strategies.

NSE investors pick investments according on their risk tolerance, market conditions, and economic realities. News, market fluctuations, and societal pressure may all lead to herd mentality and stock price volatility among average investors (Odhiambo, 2020). However, institutional investors emphasize capital preservation, stable income, and asset appreciation via research, financial analysis, and risk assessment (Wambua, 2017). Understanding these behavioral tendencies helps in developing effective policies and investing solutions for various investor groups (Kariuki & Ngugi, 2019). NSE investors confront regulatory changes, financial inexperience, and volatile markets. According to Odhiambo (2020), market volatility may influence both individual and institutional investors. Investors with little financial literacy are vulnerable to market manipulation and make poor judgments (Kimani, 2019). Even if they improve investor safety and market efficiency, legislative changes may create uncertainty that

jeopardizes investment plans. Financial institutions, investor education programs, and regulators must work together to address these concerns (Maina, 2018).

NSE investing has altered because to technological advancements. Since internet trading platforms have democratized real-time market data, investors may trade and manage their portfolios from anywhere (Njoroge, 2020). Robo-advisors and algorithmic trading assist naïve investors with limited market research abilities (Mutua, 2019). Technology has improved financial equality by making the market more transparent, efficient, and accessible (Njoroge, 2020). The NSE regulations assure fair trading and investor protection. NSE is overseen by the Capital Markets Authority (CMA), which ensures market integrity and transparency. Disclosure, insider trading, and market manipulation are all monitored here. The Investor Compensation Fund (NSE, 2020) protects investors against broker insolvency and market failure. Otieno (2021) contends that these constraints are critical to investor confidence and investment stability.

1.2 Problem Statement

Equity investors on the Nairobi Securities Exchange (NSE) should purchase only after studying market data. This rational decision-making method would forecast future returns by analyzing economic indicators, stock performance criteria, and financial data. Investors employed sophisticated financial models and tools to optimize portfolios and align assets with their risk tolerance and financial goals. Strong financial markets promote economic growth, market efficiency, volatility reduction, and investor confidence (Chen, 2020; Ozili, 2021).

However, behavioral biases influence typical investors' NSE stock investing judgments, diverging from rational decision-making. Investment blunders due to loss aversion, herd mentality, and overconfidence result in market inefficiencies and financial losses. Overconfidence in investors' abilities and foresight leads to aggressive timing and trading. Mob mentality, in which investors blindly follow the herd, drives investment booms and busts. Lossaverse investors sell successful stocks too fast and hang onto losing ones, resulting in lower earnings (Waweru et al., 2019; Murithi and Muturi, 2020). Finance illiteracy, dependence on untrustworthy sources, and market rumors exacerbate ordinary investors' departure from reason (Mutegi, 2021).

Create and execute strategies to eliminate investor behavioral biases, hence minimizing the gap between ideal and reality. Bias and careful investing training may help increase financial literacy.

Behavioral insight-based decision-support systems may help investors identify and overcome biases. Regulatory bodies may encourage transparency and provide investors with reliable information to reduce reliance on suspect sources (Gitari, 2022; Kamau & Mwangi, 2022). Encourage investors to learn and adapt for more rational investing. These changes will strengthen the NSE's investment climate, benefiting investors and market stability.

1.3 Research Objectives

1.3.1 General Objectives

To investigate the influence of Behavioral Biases on Equity Investment decisions among investors in the Nairobi securities exchange

1.3.2 Specific Objectives

i. To establish the effect of herding on Equity Investment decisions among investors in the Nairobi securities exchange ii. To determine the effect of risk aversion on Equity Investment decisions among investors in the Nairobi securities exchange

iii. To assess the effect of anchoring on investment decisions on Equity Investment decisions among investors in the Nairobi securities exchange

1.4 Research Hypothesis

i. Herding has no effect on investment decisions on the investors in the Nairobi securities exchange

ii. Risk Aversion has no on investment decisions on the investors in the Nairobi securities exchange

iii. Anchoring Bias has no effect on investment decisions on the investors in the Nairobi securities exchange

1.5 Justification of the Study

This research investigates how behavioral factors influence investment decisions, therefore enhancing financial knowledge. The study also promotes financial economics by looking at investing decisions as well as cultural, demographic, social, and behavioral factors.

Policymakers may alter policies to reduce the negative effects of our study's behavioral aspects during policy development. As a result, their policies will attract investment in Kenya, so promoting economic growth.

Stock brokers and fund managers may be able to detect heuristic-driven biases and generalizations that influence individual investors' investment decisions. Profits may increase if investors learn to overcome biases.

Individual investors are researched less than institutional investors, despite significant differences. They can benefit from this study. Behavioral finance professionals might use this data to identify research needs.

1.6 Scope of the study

This study investigates how behavioral biases influence NSE stock investors' decisions. The probe focuses on NSE investors. Research will be conducted in Kenya. The quantitative analysis will employ a sample of Kenyan investors listed on the NSE. The sample size will be statistically valid and representative of various investors. The data will be analyzed using complex analytical approaches such as factor and regression analysis, as well as descriptive statistics. The inquiry will be based on primary data.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter analyzes the relevant literature. This research presents a conceptual framework based on aspects discovered during a theoretical review. The chapter finishes with a practical assessment and critique of the study's flaws.

2.2 Theoretical Literature

Swanson (2013) defines a theoretical framework as "empirically proven and tested facts that help to support and direct a study." This research will investigate Heuristic Theory, Prospects Theory, and Herding Theory.

2.2.1 Heuristic Theory

Heuristic theory by Kahneman and Tversky (1984) changed human judgment and decisionmaking studies. The idea behind "heuristics and biases" was that in uncertain situations, judgment is frequently made using basic heuristics rather than complicated algorithmic processing. This paradigm quickly influenced political science, economics, law, medicine, and business research outside academic psychology. Gilovich and Griffin (2002) called the message innovative since it questioned ideal judgment models' descriptive validity and suggested a cognitive alternative that explained human mistake without encouraging irrational conduct.

The three general-purpose heuristics of availability, representativeness, anchoring, and adjustment underpin many spontaneous judgments in uncertain situations, according to Kahneman and Tversky (1979). Brain-evolved calculations underpinned these simple yet powerful heuristics. Heuristics simplify difficult tasks like anticipating values and assessing probability, according to Kahneman and Tversky (1979). Complex, perplexing decisions are improved.

Representativeness is how closely an event resembles its population or parent population, according to Kahneman and Tversky (1979). The real estate market utilizes representativeness when purchasers choose "hot" residences over underperforming ones. Anchoring happens when individuals use starting values to bias estimations toward the original values because starting points yield distinct estimates.

Scaling values using current data called anchoring. Investors typically use purchase price while evaluating or selling property. Availability bias occurs when individuals utilize readily accessible information. Despite the assumptions underpinning varied portfolio management for optimization, investors prefer local real estate companies they know or can readily research (Waweru et al., 2008).

Heuristic theory was expanded by Waweru et al. (2008) to incorporate gambler's fallacy and overconfidence. Investors and analysts may overestimate their expertise (Evans, 2006). Confidence may also boost others' opinions of one's talents, leading to speedier promotion and longer investment periods (Oberlechner & Osler, 2004). Overconfidence develops when someone overestimates their skills and expertise (Hvide 2002).

The Gamblers' fallacy arises from the "law of small numbers" that a tiny sample may reflect its parent population (Barberis & Thaler, 2003). DeBondt and Thaler (1995) say this inclination causes investor overreaction. Gamblers' fallacy occurs in the property market when someone mispredicts reversal points that terminate enormous (or catastrophic) market gains (Waweru et al. 2008).

2.2.2 Prospects Theory

Daniel Kahneman and Tversky (1992)'s 1979 prospect theory makes decision-making more psychologically realistic. Instead of the result, they consider advantages and costs. People estimate benefits and expenses using heuristics instead of outcomes.

The decision-making prospect theory relates to danger. Risk drives decisions. World externalities are examined. Event consequences are harder to judge without transparency, making them more problematic. Value trade-offs dispute decision-making. Contradictory aims complicate decisionmaking. The notion emphasizes how these options are presented and assessed during decisionmaking.

Prospect theory outlines investors' framing and evaluation. Tversky and Kahneman's 1979 prospect theory addresses risk and uncertainty. The idea explains why people react unexpectedly to danger in uncertain situations. It means that people take risks in wins and avoid them in losses, sometimes.

The "certainty effect," which states that people take chances in losses but not in wins, pushes traders to take risks following losses. Plateau Some results may be preferred by state real estate

investors. They may react differently whether the real estate market is losing or generating money.

Filbeck, Hatfield, and Horvath (2005) describe prospect theory as subjective investor valuebased decision-making. Prospect theory explains how mental states like the disposition effect affect decision-making (Waweru et al., 2008). People feel bad about mistakes. Investments that sell appreciating but not decreasing properties may avert regret. Holding onto lost assets hurts investors more than selling successful ones too soon (Forgel & Berry, 2006).

Lehenkari and Perttunen (2004) found that both good and negative returns in the past may worsen the negative relationship between capital losses and selling inclination, indicating riskaverse investors. Investors' risk aversion may lead to bad decisions that hurt wealth (Odean, 2005).

2.2.3 Theory of Herding Theory

Raafat, Chater, and Frith (2009) introduced herd behavior theory to explain leaderless group cooperation. Their herding method focused on how people communicate and interact. Raafat, Chater, and Frith (2009) suggested combining herding behavior theories to stress their relevance in economics, business, and cognitive neuroscience.

Financial herding is investors' inclination to copy others. Herding is discussed because investors rely on community knowledge. Asset prices that deviate from their genuine value may threaten many great investment opportunities. Academics study herding because it affects property values, which affect risk and return models and asset pricing theories (Tan, Chiang, Mason, & Nelling, 2008).

Gossip, home bias, compliance, congruence, and cognitive conflict may result from herding Herding may appeal to investors if it provides accurate and timely information (Kallinterakis, Munir, & Markovic, 2010). Stock market tendencies guide herding investors' real estate investments. The market works well because responsible investors don't follow the crowd. Inefficiencies and speculative booms occur from trading in the wrong direction. Herding investors are like ancient individuals who congregated for safety and support without knowing their surroundings (Caparrelli et al., 2004).

Overconfidence, investment volume, and other factors may cause investor herding. Confident investors make financial judgments based on personal experience. Herding is less important to investors here. Investors think copying other investors lowers risk when they spend a lot.

Herding is valued differently by investors. Individual investors follow the herd more than institutional investors. Waweru et al. (2008) argue herding and momentum may drive stock trading. Herding may lose interest if it costs more to follow the herd for higher anomalous yields. Genesove and Mayer (2001) found that investors who sell their assets for less than the acquisition price anticipate the selling price to exceed other sellers' asking prices. Market corrections and seller expectations set pricing. Premium-buyers risk loss. Coval and Shumway (2000) found that investors who gain or lose money in the first half of the trading day take less or more risk in the second half.

After reviewing hundreds of homes, investors cannot find a suitable acquisition. People buy properties that interest them and may be profitable.

2.3 Conceptual Framework

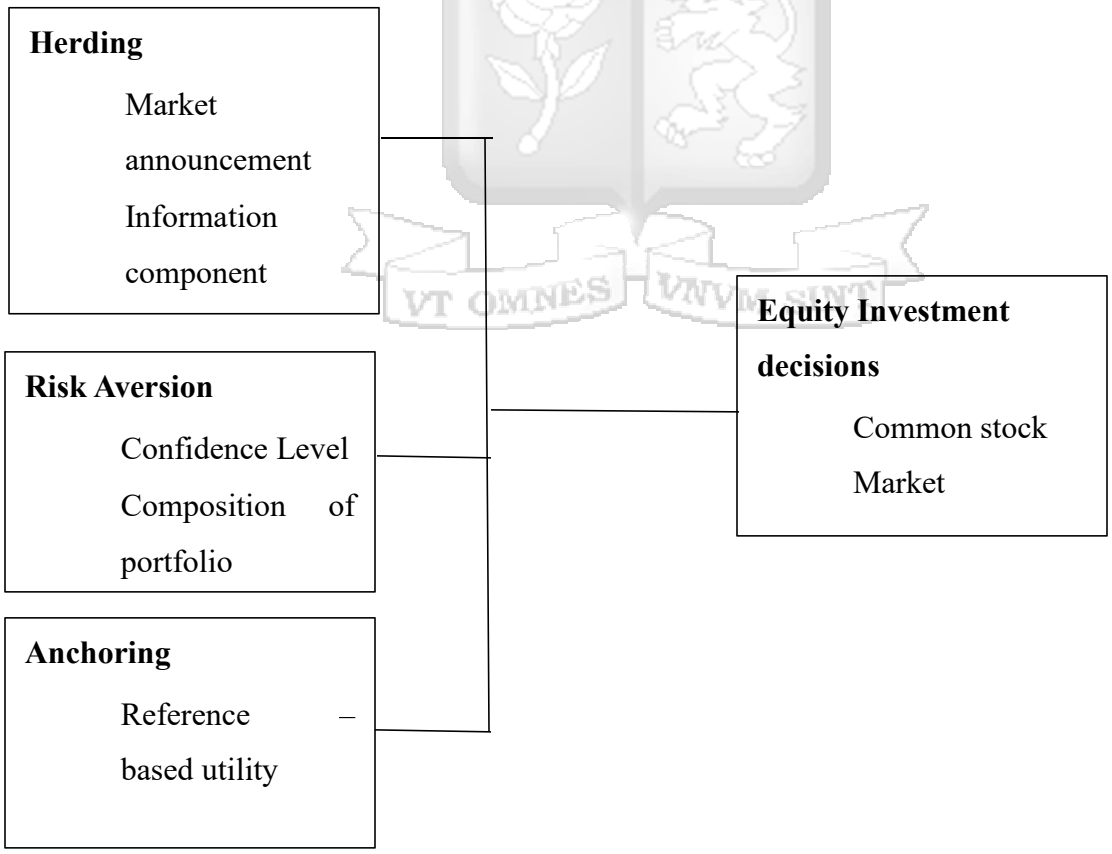

Figure 2.1 Conceptual Framework

2.4 Empirical Literature

Bashir and Naseem (2017) say behavioral biases affect investors' financial choices. Investigations include overconfidence, confirmation bias, the illusion of control, loss aversion, mental accounting, status quo, and overoptimism. Financial counselors, banks, investors, and politicians respect research. We collected ethnographic data using questionnaires. Correlation and linear regression show how biases affect investment. Status quo, loss aversion, and false accounting biases do not affect investor decision-making, but confirmation, illusion of control, extreme optimism, and overconfidence do, according to financial institution data.

Gyimah, Nkukpornu, and Sakyiwaa (2020) examined low-income countries' investment decisions and behavioral biases. Overconfidence, remorse, belief, and "snakebite" affect investment, according to this research. Behavioral biases and investing decisions are studied using multiple regression. Research demonstrated a strong positive correlation between the four biases and investing decisions. The "snakebite" effect, regret bias, and belief bias affect decisionmaking. Overconfidence hardly affects financial decisions. Our findings support prospect theory by showing how behavioral bias affects developing market investment.

Prospect Theory: An Analysis of Decision Under Risk, by Kahneman and Tversky in 1979, is studied worldwide. Strategies range from market-wide to fact-specific. Global studies start with human behavior, not finance.

Understanding brain processes might boost your company creativity. Mitchell and Utkus (2006) examined overconfidence, constrained control, loss aversion, overvaluing the present, and willpower among American retirement fund participants, whereas Guiso, Sapienza, and Zingales (2008) examined stock market skepticism. Breuer, Riesener, and Salzmann (2014) studied risk aversion and cultural variables, whereas Agarwal and Panwar (2014) examined whether behavioral finance theories can improve most investing techniques. Family dynamics were studied by Blasco and Ferreruela (2008) and Bogan (2009).

Bogan (2009) questioned 12,686 men and women in 1994 using panel data from the National Longitudinal Question of Youth, conducted in the US since 1979. The research focuses on gender problems. Whether kid gender affects family savings and investments. Gender risk was initially

recognized in domestic portfolio literature, discouraging models that assume continuous risk from birth.

Cheng, Lee, and Lin (2013) examined Prospect Theory's effects on age and gender. Demographics affect female and more experienced investors more, supporting the concept that demographics affect financial market behavior.

Hackbarth (2009), Bhandari and Deaves (2006), Evans (2006), Cheng (2007), Gort (2009), Vieira Fernandes and Silva (2012), and Chung Hung and Yeh (2012) studied management optimism and overconfidence. Financial and investment choices and shareholder conflicts were studied. The most optimistic managers invest without concern for debt, according to a real options model and differential equation simulations. Smart investors behave differently. The findings suggested employing managers with less severe behavioral tendencies and adopting improved work scales to allocate power and decision-making.

Parallel studies on "optimism" in money management and investment examined emotional control and mood, two personality attributes that may contribute to excess or insecurity.

Excellent negotiators regulated their emotions differently than poor negotiators, according to a 2011 Fenton-O'Creavy study of London investment bank investors. This suggests that emotion regulation may help in negotiating and investment. First-generation agents use cognitive shift and attention self-regulation to monitor perceptions. They may also be able to manage negative emotions to stay focused and accomplish goals. Successful investors managed emotions and prejudices, according to Baker and Ricciardi (2014). They avoided novice investors' overconfidence.

Vries (2010) managed Radboud University Nijmegen study data using quantitative analysis, linear regression, and descriptive statistics. According to game theory, joyful individuals reject logic and dominance. Studies show that "state of mind" affects financial decisions, supporting behavioral biases.

From January 1983 to December 2001, information uncertainty affected US stock price continuity, anomalies, and transverse fluctuations. Zhang (2006) used panel data to expand Kahneman and Tversky's (1979) findings. Investors are more cautious when solid information is uncertain, yet favorable news boosts short-term gains while lowering long-term returns, according to study. Although inaccurate, cross-sectional studies ignore ambiguity.

Vlaev, Chater, and Stewart (2007) examined risk assessment, uncertainty, options, and scenarios. Statistics from Oxford's experimental economics research gave the best probability estimate. According to the writers, financial problems influence financial decisions. We found that exclusive and concurrent component arrangements affect risk-based savings and investment choices. These observations support relativity.

Brunnermeier, Gollier, and Parker discovered in 2007 that beliefs affect portfolio diversification. A damage-reduction model was sought. Using literature reviews, probability analysis, and variable correlations, the authors examined how optimism affects investment, portfolio prices, and returns.

Prather and Middleton (2006) tested mutual fund managers' selection and market timing. They used least squares and other statistics to choose the optimum method. Common sense says individuals and organizations should learn how to get the greatest results. According to Behavioral Theory, a group will correct an individual's mistakes on progressively difficult tasks.

They disproved behavioral finance theories using parametric secondary data testing from January 1992 to December 2001.

Feliner and Sutter (2009) examined risk aversion's causes, effects, and management. They found that longer investment horizons and greater return frequencies promote risk aversion. Return management, frequency, and flexibility affect investment quantities. Despite smaller gains, most 444 Jena University research participants preferred short-term investment, the scientists reported. This may be related to frequency and return.

Gwilym (2010) and Jeffrey (2006) imitated several duties. Gwilym (2010) developed a model that examines all behavioral traits, not only anomalies. FSTE All-Share Index regressions were fitted using the Generalized Autoregressive Conditional Heterokedasticity Model for 95% statistical significance. The author suggests this strategy for behavioral decision-making rules. Unlike Fama (1970 and 1991), these two components give behavioral and historical data.

All previous investigations employed Behavioral Finance Theory. This environment also emphasized mood, gender risk, optimism, and overconfidence. These features were objectively or comprehensively researched to develop multi-property models.

2.5 Critique of Existing Literature Relevant to the Study

This study focuses on behavioral biases, although environmental, market, demographic, behavioral, and cognitive biases all influence investor decision-making. The majority of research investigated cognitive and emotional biases in decision-making, while few looked at behavioral biases (Ramos, Latoeiro, & Veiga, 2020).

The majority of the research focused on decision-making in developed countries, particularly those in America and Asia. Few studies have looked at how the African environment influences investor decisions (Fares and Khamis (2011) in the Amman Stock Exchange, Jordan; Maheran, Muhammed, and Ismail (2008) in the Malaysian capital market; C. Liu, Wang, Wei, & Zhong, 2019) in China and Canada. Most African research focuses on institutional investors rather than individual investors (Waweru et al., 2008). The Nairobi securities exchange has 47 institutional investors (Yosra and Younes, 2013, Institutional Investor Behaviors in Tunisia's Stock Market).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter covers the methods for data collection and analysis. It comprises the study's design, target population, sampling techniques and sample size, data collection and analysis tools, quality problems, and ethical considerations.

3.2 Research design

The study design describes how the researcher will collect and evaluate data. The researcher collects data using the methodological framework, which sets the task sequence. In this study, descriptive research was used. Pre-existing data is utilized to collect information from discrete research units prior to creating descriptive conclusions about a large population.

3.3 Population

According to Mugenda & Mugenda (2003) and Kitchenham & Pfleeger (2002), a "population" is a collection of people, things, or events that have a common characteristic. According to Barnes, Grove, and Burns (2003), the population includes all study participants who meet the criteria. The target population is all members of a real or imaginary group of people, events, or objects from whom a researcher wishes to generalize study findings, while the accessible population is all sample candidates. Saunders, Lewis, and Thornhil (2007) define populations as sample units or components of relevance to researchers. Kothari (2004) defines a population in any field as the sum of its pieces, or "universe." Regular NSE brokerage business investors will be the focus of the study. The study will examine 16 Nairobi Securities Exchange brokerage firms. Brokerage firms will be inspected, and investors will be monitored.

3.4 Sampling Design and Sample Size

According to Orodho and Kombo (2002), a sample is a representative subset of the components or persons in the population being studied. Furthermore, a sample is a collection of units picked from the universe to represent it; Kothari (2004) states that it should not be too huge or too tiny. Although larger samples are seen to be more representative of variable scores than population scores, researchers often recommend a minimum sample size of 15 for experimental or exploratory research, 30 for correlational research, and 100 for survey research (Lenth, 2001).

Purposive random sampling will be used to choose five retail investors at random from each of the sixteen brokerage companies, ensuring a varied range of opinions and decreasing the possibility of personal bias in a sample of fewer than five respondents. Using deliberate random selection, the researchers will be able to pick the most relevant respondents—those who are knowledgeable about the topics at hand and will provide sufficient meaningful information. As a consequence, the research will follow Lenth's (2001) correlation study standards, with 80 participants.

3.5 Data Analysis

SPSS 25 will analyze and categorize questionnaire responses. To understand crucial components, we will conduct descriptive and inferential investigations. leanier regressions, correlation coefficients, mean, standard deviation, and percentages are all types of statistics. (Gupta, 2014). These approaches provide compelling mathematical explanations and comprehensive data summaries. Almost all quantitative data analysis use descriptive statistics and simple visual analysis (Kothari, 2019).

Tables will display results. All survey answers were graded on a Likert scale ranging from one to five. The frequency tables below include averages and percentages.

3.5.1 The regression Model

The research will seek to establish the effect of behavioral biases on equity investment decisions among retail investors in the Nairobi securities exchange. A causal association between variables will be determined via regression analysis. The table below shows the study used conventional least squares regression.

$$\mathbf{Y = \alpha + \beta 1X1 + \beta 2X2 + \beta 3X3 + \varepsilon}$$

Where: Y= Dependent Variable (Investment Decisions) Independent variables, which include

$\mathbf{X_1}$ is Herding

$\mathbf{X_2}$ is Anchoring $\mathbf{X_3}$

is Risk aversion $\boldsymbol{\alpha}$=

the constant

$\boldsymbol{\beta}_{1-3}$ = the regression coefficient or change included in Y by each

3.6 Research quality

Validity and reliability will guarantee the study measures what was intended and the study instrument is consistent and reliable.

3.6.1 Validity of the Instrument

Validity checks ensure that a test measures what it promised, according to Anastasi and Urbina (1997). There are three alternatives: construct, criterion, and content validity. Content validity specialists determine if the exam effectively reflects the concept of interest. The predictive and concurrent criterion-related validity of two measures influences their effectiveness in predicting an outcome. Construction validity is compared to other metrics to determine if a test appropriately investigates a theoretical concept (Cronbach and Meehl, 1955).

Raykov (2011) defines convergent validity coefficients as feature evaluation correlations that use several measurement methodologies. Zaiţ and Bertea (2011) argue that objects have more conceptual links than other conceptualizations. Surveys will have construct validity tested to ensure that they meet research standards. The content validity of the research instrument will be evaluated by subject matter experts or by a comprehensive literature study. To evaluate content validity, assess instrument items for representativeness, comprehensiveness, and relevance to the topic. Construct validity will be evaluated by exploratory factor analysis.

3.6.2 Reliability of the Instruments

A trustworthy measurement is consistent and repeatable. Test-retest, internal consistency, and inter-rater reliability. To measure test-retest reliability, administer the same exam to the same participants many times and compare the results. Intraclass correlation coefficients or Cohen's kappa measure inter-rater reliability. Cronbach's alpha (Nunnally & Bernstein, 1994) measures test item consistency. A measurement with high dependability has no major random errors, which improves reliability.

According to Sullivan (2011), a research instrument is trustworthy if it produces consistent results in the same settings and demographic groups. Cronbach's coefficient, which calculates average item discrepancy and co-inconsistency, is the most widely used internal consistency measure. Easton (2010) proposes alpha values greater than 0.70. Because the questionnaire will include Likert-type items, Cronbach's alpha will be used to evaluate the intrinsic and internal consistency of research tools. Cronbach's Alpha reliability assesses a measurement component's

0-to-1 positive correlation. Cooper and Schindler conducted research in 2011 on structures weighing 0.7 or more tons. A pilot study including 10% of the research population will validate the survey instruments.

3.7 Ethical issues in research

Ethics guide the investigator's conduct throughout stakeholder engagement in the research process (Akaranga & Makau, 2016). The will ensure that it adheres to the ethical code of conduct in doing research. To undertake the study, the researcher will request an ethical approval from the Strathmore University Ethical Review Board (SU-ERB). To gain participants' trust and confidence and to ensure smooth data collection, a letter of introduction will be issued by the researcher, which expressly indicated the purpose of the research. Respondents will participate voluntarily by giving their individual consent and the researcher respected their rights. Anonymity and confidentiality will be maintained by not disclosing the respondents' names or details or revealing sensitive information about the respondents.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The purpose of this chapter was to offer a comprehensive analysis of the research using the data acquired via questionnaires. First, demographic information about the respondents is supplied, including their age and level of education. Second, descriptive statistics such as means and standard deviations are used, followed by a thorough evaluation of the study questions. The chapter concludes with a discussion of the research goal. The study sought to investigate the effect of behavioral biases on equity investment decisions among retail investors in the Nairobi securities exchange.

4.2 Response rate

Response rate	Frequency	Percent
1. Response	73	91.25
2. No Response	7	8.75
Total	80	100

Researcher (2024)

The data presented in Table 4.1 highlights the response rate in a study examining the effect of behavioral biases on equity investment decisions among retail investors at the Nairobi Securities Exchange (NSE). Out of the 80 participants targeted, 73 responded, representing a high response rate of 91.25%, while only 7 participants, or 8.75%, did not respond. This robust response rate suggests that the findings of the study are likely to be representative of the population under investigation, lending credibility to the research conclusions. High response rates are crucial in behavioral studies, as they minimize the risk of nonresponse bias and enhance the reliability of data.

4.3 Background Information

Age

		Frequency	Percent
Valid	30-39	19	26.0
	40-49	12	16.4
	50-59	9	12.3
	60 and above	6	8.2
	Under 30	27	37.0
	Total	73	100.0

Educational Background

		Frequency	Percent
Valid	Bachelor's degree	45	61.6
	Doctorate or professional degree	8	11.0
	High School or equivalent	10	13.7
	Master's degree	10	13.7
	Total	73	100.0

Researcher (2024)

The age profile indicates that the majority of investors, 37.0%, are under 30 years old, suggesting a younger demographic actively participating in equity investments. This group likely reflects early-stage investors driven by technological advancements, such as online trading platforms, which have facilitated easier access to the stock market. Conversely, the age group 30-39 constitutes 26.0%, forming a significant portion of relatively mature investors. Participation diminishes progressively in older age brackets, with 16.4% aged 40-49, 12.3% aged 50-59, and only 8.2% aged 60 and above. These findings suggest that older investors may be more

riskaverse or inclined toward less volatile investment options, as noted in behavioral finance studies.

The educational attainment of NSE investors indicates a skew toward higher education levels. A majority (61.6%) hold a bachelor's degree, followed by 13.7% with either a master's degree or high school education. Investors with doctorate or professional degrees account for 11.0%. The dominance of degree holders underscores the importance of formal education in fostering stock market participation. However, it also highlights that individuals with higher education may exhibit biases such as overconfidence due to perceived superior knowledge.

4.4 Descriptive Stastistics

Table 4.4.1 Descriptive Statistics of Investment Decisions

	N	Mean	Std. Deviation
I often revise my investment decisions based on recent news or rumors about the stock market.	73	4.45	.782
I prefer to invest in familiar companies or brands, even when they may not offer the best returns.	73	4.36	.823
I frequently rely on past performance of stocks as a key factor in making investment decisions.	73	4.22	.854
I make investment decisions based on gut feelings or intuition rather than detailed analysis.	73	4.19	.758
I usually hold on to losing stocks longer than I should, hoping they will rebound in value.	73	4.11	.875
I believe that my investment decisions are influenced by recent price trends in the Nairobi securities exchange.	73	4.05	.848
Valid N (listwise)	73		

Researcher (2024)

The highest mean (4.45, SD = 0.782) reflects that retail investors frequently revise their investment decisions based on recent news or rumors about the stock market, demonstrating susceptibility to recency bias. This aligns with findings by Otieno et al. (2021), who observed

that Kenyan retail investors heavily depend on short-term market signals, leading to impulsive decision-making. Similarly, global studies, such as those by Kumar et al. (2020), show that recency bias influences retail investors worldwide, contributing to suboptimal decision-making.

Another prominent bias is familiarity bias, where respondents showed a preference for investing in familiar companies or brands (mean = 4.36, SD = 0.823). This behavior may stem from a sense of security and reduced perceived risk associated with familiar entities. Ndegwa and Wanjiru (2020) reported similar findings in East African markets, attributing this tendency to limited financial literacy and a conservative investment culture.

The reliance on past performance as a key factor in making investment decisions (mean = 4.22, SD = 0.854) suggests the presence of representativeness heuristic, where investors assume that past trends predict future outcomes. Globally, research by Barberis et al. (2021) identifies this heuristic as a common pitfall among individual investors, often resulting in misplaced confidence in historical performance.

Intuition-based decision-making, indicated by a mean score of 4.19 (SD = 0.758), reveals the influence of overconfidence bias, where investors trust their gut feelings over detailed analysis. This finding corroborates studies by Muchiri and Mwangi (2019), who found that Kenyan investors prioritize instinctive judgments over systematic research, particularly in volatile market conditions.

The tendency to hold on to losing stocks (mean = 4.11, SD = 0.875) reflects the disposition effect, where investors resist realizing losses due to emotional attachment or loss aversion. A study by Kahumba and Chacha (2022) found that such behavior is prevalent among NSE participants, contributing to portfolio underperformance.

Finally, the belief that recent price trends influence investment decisions (mean = 4.05, SD = 0.848) suggests a reliance on herding behavior, as investors follow perceived market trends. This mirrors findings by Sinha et al. (2021), who noted that retail investors globally are prone to herd mentality, often leading to market inefficiencies.

Table 4.4.2 Descriptive Statistics for Herding

	N	Mean	Std. Deviation
I rely on market announcements to guide my buy or sell decisions in the Nairobi securities exchange.	73	4.47	.747
I often rely on online forums and social media for information on investment opportunities in the Nairobi securities exchange.	73	4.22	.786
I believe that having access to insider information gives a significant advantage in making profitable investment decisions.	73	4.16	.913
I frequently adjust my investment portfolio based on announcements made by listed companies on the Nairobi securities exchange.	73	4.01	.858
I believe that reacting quickly to market announcements increases my chances of making profitable investments.	73	4.00	.882
I conduct thorough research on the available information before making any investment decisions in the Nairobi securities exchange.	73	3.93	.918
Valid N (listwise)	73		

Researcher (2024)

The statement, "I rely on market announcements to guide my buy or sell decisions in the Nairobi Securities Exchange," exhibits the highest mean score (4.47) with a standard deviation of 0.747. This highlights the prevalent dependency of retail investors on publicly available market information, suggesting a significant influence of herd behavior in response to market signals. Similarly, the reliance on online forums and social media for investment guidance, with a mean of 4.22 and a standard deviation of 0.786, reflects the growing impact of digital platforms as sources of investment intelligence.

Belief in the advantage provided by insider information (mean = 4.16; SD = 0.913) further underscores how access to privileged knowledge is perceived as a crucial determinant for success in equity investments. Notably, the frequency of adjusting portfolios based on company announcements (mean = 4.01; SD = 0.858) and the perception that reacting swiftly to such announcements enhances profitability (mean = 4.00; SD = 0.882) also demonstrate a clear pattern of reactive decision-making among investors. However, the relatively lower mean for

conducting thorough research (mean = 3.93; SD = 0.918) suggests that a significant segment of retail investors may prioritize reactive strategies over in-depth analysis, amplifying the herding effect.

The findings align with local and global evidence on behavioral biases affecting investment behavior. For instance, Waweru et al. (2020) found that herding behavior among NSE retail investors is heavily influenced by peer behavior and market rumors, often leading to suboptimal decisions. Similarly, in a regional context, Mugendi and Ndichu (2021) identified that retail investors in East Africa prioritize short-term gains driven by speculative reactions to market updates, exacerbating market volatility. Globally, research by Bikhchandani et al. (2021) on behavioral biases in emerging markets demonstrated that reliance on public and semi-public cues often undermines long-term portfolio performance due to overreaction and amplified risk exposure.

Further studies, such as those by Nduati and Maina (2019), emphasize the role of digital platforms and social networks in shaping investor perceptions and driving collective actions that may not necessarily align with fundamental market dynamics. Similarly, a study by Lee and Park (2020) in South Korea found that while online forums enhance information accessibility, they often contribute to herd mentality, limiting rational decision-making. Additionally, Grohmann and Menkhoff (2021) argue that behavioral biases, including herding, are significantly more pronounced in less financially literate populations, underscoring the need for investor education programs in markets like the NSE.

Table 4.4.3 Descriptive Statistics for Risk Aversion

	N	Mean	Std. Deviation
My investment decisions are based on thorough research and analysis.	73	4.40	.795
I allocate a significant portion of my portfolio to industries or sectors I am familiar with.	73	4.25	.813
My portfolio is balanced with a mix of high-risk and low-risk investments.	73	4.22	.837

I am confident in my ability to select profitable stocks in the Nairobi securities exchange.	73	4.21	.781
I regularly review and adjust my portfolio based on market conditions.	73	4.15	.861
I believe my knowledge of the stock market helps me make better investment choices than others.	73	3.97	.928
Valid N (listwise)	73		

Researcher (2024)

Investors also demonstrated a preference for familiar industries or sectors, reflected by a mean score of 4.25 (SD = 0.813). This behavior supports the concept of home bias, where investors exhibit a tendency to allocate resources to areas where they feel knowledgeable or connected. Such a bias has been consistently highlighted in global studies, such as those by Barberis et al. (2021), which emphasize the comfort-driven decision-making of individual investors. Regionally, Mukabi (2020) found that Kenyan investors were more inclined to invest in sectors such as agriculture and real estate due to familiarity and cultural proximity.

The third-highest mean score (M = 4.22, SD = 0.837) pertains to maintaining a balanced portfolio with a mix of high- and low-risk investments. This diversification strategy reflects a measured approach to risk mitigation. Studies from neighboring economies, such as those by Ndegwa and Kimeu (2021), suggest that retail investors in East Africa employ similar strategies, balancing growth-oriented stocks with safer assets like government securities. Globally, Brown and Cliff (2020) documented similar findings, highlighting diversification as a common approach to managing investment risks across various economies.

Confidence in the ability to select profitable stocks within the NSE recorded a mean of 4.21 (SD = 0.781), underscoring a relatively high level of self-assurance among investors. This aligns with behavioral finance theories that associate overconfidence with trading behavior. For instance, studies like Shiller (2021) argue that overconfidence often drives increased market participation but can lead to suboptimal decision-making when not moderated by external checks.

The mean score for regular portfolio reviews and adjustments was 4.15 (SD = 0.861). This proactive behavior suggests that investors are attentive to market dynamics, a trait that aligns with findings from Gakuru et al. (2019), who noted that Kenyan retail investors frequently

reassess their investment strategies in response to market fluctuations. Globally, Dimson et al. (2020) highlighted the critical role of periodic reviews in enhancing portfolio performance, particularly during economic downturns.

Finally, the belief that personal knowledge of the stock market leads to superior investment choices had the lowest mean score (M = 3.97, SD = 0.928). This suggests that while investors exhibit confidence, they are not entirely dismissive of market unpredictability or external influences. Similar findings were reported by Maina and Omondi (2022), who observed a tempered confidence in Kenyan retail investors due to limited access to high-quality market data.

Local studies have consistently highlighted the interplay of behavioral biases, such as overconfidence and familiarity bias, on investment decisions. For instance, Kamau et al. (2021) found that familiarity bias significantly influenced equity allocation among Kenyan retail investors, while Chacha and Otieno (2020) documented a strong reliance on personal networks for investment advice.

Regionally, studies like Mufutau and Ayodeji (2020) in Nigeria observed that risk aversion and home bias were prevalent among retail investors, driven by limited financial literacy and access to information. Globally, research by Kahneman and Tversky (2019) continues to underscore the universality of these behavioral biases, revealing that even in more developed markets, biases like overconfidence and familiarity shape investment decisions.

Table 4.4.4 Descriptive Statistics for Anchoring

	N	Mean	Std. Deviation
I often rely on the initial price of a stock as a reference point when making investment decisions, even when new information becomes available.	73	4.44	.781
My satisfaction with an investment decision is often based on how it compares to a reference investment or target return.	73	4.33	.800
I am more likely to hold on to a losing investment if I have previously seen it perform well compared to other stocks.	73	4.30	.877
I evaluate potential investments by comparing them to the returns I have received from similar stocks in the past.	73	4.21	.799

I measure the success of my investments by comparing them to 73 specific reference points, such as market indices or the performance of other investors.	4.10	.900
I prefer to invest in stocks that have previously provided me with 73 positive returns, using these past performances as a benchmark.	4.04	.857
Valid N (listwise)	73	

Researcher (2024)

Among the statements assessed, the highest mean score (4.44) was associated with the tendency to rely on the initial price of a stock as a reference point, even when new information becomes available. This indicates that most respondents strongly exhibit this behavior, underscoring the deep-rooted reliance on anchor points during investment decisions. Similarly, a high mean score (4.33) was observed for satisfaction derived from comparing investment outcomes to reference investments or target returns. This suggests that retail investors frequently evaluate their decisions in relative terms, rather than independently, which can lead to suboptimal decisionmaking.

Other notable findings include the tendency to hold on to losing investments that have previously performed well (mean = 4.30, SD = 0.877) and evaluating potential investments by comparing them to past returns from similar stocks (mean = 4.21, SD = 0.799). These behaviors suggest a psychological inertia that may prevent investors from adjusting strategies in response to changing market conditions. Moreover, the preference to benchmark success against specific reference points, such as market indices or peer performance (mean = 4.10, SD = 0.900), further supports the prevalence of anchoring in retail investment behavior.

Interestingly, the lowest mean (4.04) corresponds to the preference for reinvesting in stocks with positive past returns, suggesting that while past performance influences decisions, other factors such as diversification or market conditions may also play a role in stock selection.

The findings align with both local and global research on behavioral biases in investment decisions. Njuguna and Otieno (2021) found that retail investors in Kenya demonstrate a high propensity for anchoring bias, often influenced by the historical performance of stocks. Their study concluded that such biases lead to over-reliance on outdated information, resulting in suboptimal portfolio diversification.

Regionally, Mushore et al. (2020) observed similar anchoring tendencies among investors in Zimbabwe's equity market, where past performance and peer comparisons heavily influenced investment choices. This bias was more pronounced in less experienced investors, emphasizing the role of financial literacy in mitigating anchoring effects.

Globally, Baker et al. (2019) analyzed behavioral biases among retail investors in the United States and found a strong correlation between anchoring and investment persistence in underperforming stocks. They noted that anchoring often leads to herding behavior, as investors stick to familiar reference points rather than independently evaluating new opportunities.

Similarly, Waweru and Kisaka (2020) identified anchoring as a significant determinant of investment decisions in emerging markets, exacerbated by limited access to real-time market data.

4.5 Correlations Table

		Investment Decisions
Investment Decisions	Pearson Correlation	1
	Sig. (2-tailed)	
	N	73
Herding	Pearson Correlation	.915**
	Sig. (2-tailed)	.000
	N	73
Risk Aversion	Pearson Correlation	.941**
	Sig. (2-tailed)	.000
	N	73
Anchoring	Pearson Correlation	.885**
	Sig. (2-tailed)	.000

	N	73

Researcher (2024)

Pearson correlation coefficients indicate significant positive relationships between investment decisions and the examined behavioral biases: herding ($r=0.915, p<0.001$), risk aversion ($r=0.941, p<0.001$), and anchoring ($r=0.885, p<0.001$). These results demonstrate that herding behavior, where investors mimic the actions of others, and risk aversion, characterized by a preference for safer investment options, strongly correlate with how retail investors make equity decisions. Similarly, anchoring, where investors rely heavily on initial information or reference points, is also a significant factor influencing decisions. The uniform significance of these biases, as shown by p-values below 0.001, underscores their pervasive impact on investor behavior in this context.

The findings align with various studies conducted locally, regionally, and globally. In Kenya, Ngugi and Mwangi (2020) explored behavioral biases among retail investors at the NSE, finding that herding and risk aversion significantly impact decision-making, consistent with this study. Similarly, Mutua (2019) reported that retail investors often anchor their expectations on past stock performance, highlighting the influence of anchoring bias on equity investments.

Regionally, studies in sub-Saharan Africa, such as Kisaka and Ireri (2021), found that behavioral biases, particularly herding and risk aversion, played a critical role in investment decisions in emerging markets, where market inefficiencies are prevalent. Their research highlighted that collective decision-making and cultural factors amplify herding behavior in African securities markets.

Globally, research echoes similar patterns. For instance, Baker and Ricciardi (2020) studied retail investor behavior in developed and developing economies, revealing that biases such as anchoring and risk aversion affect investment decisions irrespective of market sophistication. In particular, their work emphasized that retail investors in emerging markets are more susceptible to herding due to limited access to comprehensive financial data and reliance on social cues. Additionally, Waweru et al. (2022) observed that anchoring significantly influenced portfolio choices among retail investors in India, further confirming the universal applicability of these biases.

4.6 Regression Analysis

Table 4.6.1 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.949[a]	.900	.896	.168778662273163

a. Predictors: (Constant), Anchoring, Herding, Risk Aversion

Researcher (2024)

The R-value of 0.949 signifies a very high correlation between the predictors and the dependent variable, implying that these behavioral biases collectively have a significant influence on investment decisions. The R Square value of 0.900 indicates that 90% of the variability in retail investors' equity investment decisions can be explained by these behavioral biases, while the Adjusted R Square value of 0.896 accounts for the degrees of freedom, confirming the robustness of the model. The standard error of the estimate, 0.1688, indicates a relatively small dispersion of observed values around the regression line, further demonstrating the model's precision in predicting outcomes.

Several studies support these findings. For instance, Wambui and Kilonzo (2020) investigated behavioral biases in Kenyan retail investors and concluded that anchoring bias significantly influenced equity pricing decisions, particularly during periods of market volatility. Similarly, Nduta and Mugo (2021) highlighted the role of herding behavior in amplifying market anomalies in East African financial markets, showing that retail investors often imitate peer strategies rather than relying on independent analysis.

In South Africa, Mokoka and Phiri (2022) reported that risk aversion among retail investors played a critical role in equity investment patterns, with heightened risk aversion being prevalent during economic downturns, thus aligning with the findings from the Nairobi Securities Exchange.

Globally, studies underscore the pervasive influence of behavioral biases on retail investor behavior. Liang and Jiang (2019) in a study conducted on Chinese retail investors found that herding was a dominant behavioral bias, leading to market inefficiencies. They observed that cultural norms and collective decision-making tendencies intensified this bias. In the United States, Brown and Baker (2021) identified anchoring bias as a critical factor that shaped retail

investors' portfolio diversification strategies, often leading to suboptimal investment outcomes due to over-reliance on historical stock prices. Khan and Kaur (2023) explored risk aversion among Indian retail investors and found that fear of loss often curtailed their participation in equity markets, particularly during market corrections.

Table 4.7 ANOVAa

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.736	3	5.912	207.540	.000[b]
	Residual	1.966	69	.028		
	Total	19.702	72			

a. Dependent Variable: Investment Decisions

b. Predictors: (Constant), Anchoring, Herding, Risk Aversion

Researcher (2024)

The model demonstrates a significant relationship, as evidenced by the F-statistic of 207.540 and a p-value of 0.000, indicating that the predictors collectively have a substantial impact on investment decisions. The regression sum of squares (17.736) explains a large proportion of the variance in investment decisions compared to the residual sum of squares (1.966). The total sum of squares (19.702) further confirms that the model accounts for nearly all variability in the dependent variable. The small mean square error (0.028) highlights the model's precision in capturing the variations.

The significant p-value (<0.05) implies that the behavioral biases of anchoring, herding, and risk aversion are influential predictors of retail investors' decisions. These findings align with the growing body of behavioral finance literature emphasizing the non-rational influences on investment behavior.

In Kenya, Muchiri and Wambugu (2021) observed that herding bias was prevalent among retail investors, leading to suboptimal decisions driven by peer influence. Similarly, Wainaina (2020) found that risk aversion, particularly during market downturns, led to overly conservative investment strategies that limited portfolio diversification. These findings corroborate the significant role of risk aversion noted in the present analysis.

Regionally, research by Onyango et al. (2022) in Uganda revealed that anchoring bias heavily influenced stock price estimations among investors, particularly when recent market trends were used as benchmarks. In South Africa, Mabasa and Lekhetho (2019) documented the influence of herding in speculative bubbles, echoing the significant role herding plays in collective investment decision-making.

Globally, studies such as Chaudhary et al. (2021) demonstrated that risk aversion and anchoring biases remain critical determinants of investment choices in emerging markets like India, where retail investors heavily rely on heuristics during volatile periods. Similarly, Smith and Greenfield (2020) identified herding behavior as a key driver of investment trends in developed markets, showing that retail investors often follow institutional movements without independent analysis.

Table 4.8 Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.218	.163		1.339	.185
	Herding	.270	.100	.279	2.704	.009
	Risk Aversion	.569	.126	.562	4.532	.000
	Anchoring	.121	.086	.131	1.408	.164

a. Dependent Variable: Investment Decisions

Researcher (2024)

The results show that Herding has a statistically significant positive impact on investment decisions (B=0.270,p=0.009B = 0.270, p = 0.009B=0.270,p=0.009). This suggests that investors are influenced by the collective behavior of others, aligning their decisions with market trends. Herding behavior is often attributed to information cascades, where individuals mimic the actions of others without conducting independent evaluations.

Risk Aversion demonstrates the highest influence on investment decisions (B=0.569,p<0.001B = 0.569, p < 0.001B=0.569,p<0.001). The standardized coefficient (β=0.562\beta = 0.562β=0.562) highlights its prominence as a determinant of investment decisions. This finding implies that

retail investors tend to avoid high-risk investments, favoring stability and security, even if it means forgoing potentially higher returns. Risk aversion is a consistent characteristic of behavioral finance and reflects investors' preferences for certainty over uncertainty.

On the other hand, Anchoring (B=0.121,p=0.164B = 0.121, p = 0.164B=0.121,p=0.164) does not have a statistically significant impact on investment decisions in this study. This indicates that while investors may initially base their decisions on a reference point (e.g., previous prices), this bias does not strongly dictate their final choices. Anchoring may still influence specific contexts but appears less significant when other biases are factored into the analysis.

These findings align with global and regional studies that have examined the role of behavioral biases in equity markets. For instance, Tversky and Kahneman's Prospect Theory laid the foundation for understanding risk aversion, showing how loss aversion drives cautious decisionmaking among investors. More recently, studies such as Bakar and Yi (2019) found that herding and risk aversion significantly influenced Malaysian investors' decisions, reinforcing the importance of these biases across different markets.

Locally, Mutua (2021) examined behavioral biases in Kenya and found similar results, highlighting that risk aversion is a dominant factor influencing investment decisions among retail investors. Furthermore, Ndegwa and Githinji (2020) reported that herding was particularly evident during market volatility, as investors in the Nairobi Securities Exchange sought security in numbers, often amplifying market trends.

Globally, Kumar and Goyal (2021) noted that herding is more pronounced in emerging markets due to limited access to reliable information and the influence of social networks. In contrast, anchoring was found to have a stronger influence in developed markets where historical benchmarks and technical analysis play a significant role in decision-making.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter includes a summary of the key findings as well as conclusions, suggestions, and potential topics for further study.

5.2 Summary of Major Findings

The findings reveal that retail investors exhibit several behavioral biases, including recency bias, familiarity bias, representativeness heuristic, overconfidence, disposition effect, and herding behavior. These biases drive decisions such as frequent reliance on market rumors, preference for familiar investments, overreliance on past performance, and intuition-based choices. Anchoring bias is particularly notable, with investors heavily influenced by initial stock prices and historical reference points. The use of digital platforms and social media for investment guidance, coupled with a preference for short-term market signals, highlights the growing impact of technology on investor behavior. These tendencies often lead to impulsive, suboptimal decision-making, limiting diversification and long-term portfolio performance.

The findings reveal significant positive relationships between behavioral biases—herding ($r = 0.915$, $p < 0.001$), risk aversion ($r = 0.941$, $p < 0.001$), and anchoring ($r = 0.885$, $p < 0.001$)—and retail investors' equity decisions. Herding, characterized by mimicking others' actions, and risk aversion, marked by a preference for safer investments, show the strongest correlations. Anchoring also influences decisions, though its impact is less significant when considered alongside other biases. The high R-value (0.949) and R Square (0.900) indicate that these biases collectively explain 90% of the variability in investment decisions, emphasizing their critical role in shaping investor behavior. Findings align with global and regional studies, highlighting the universal influence of behavioral biases in equity markets.

5.3 Conclusions

The study concludes that behavioral biases significantly influence retail investors' equity investment decisions, often leading to suboptimal outcomes. Key biases, including herding, risk aversion, and anchoring, were found to have strong positive correlations with investment choices, with risk aversion showing the highest impact. These biases collectively account for 90% of the variability in retail investors' decisions, as evidenced by the high R-value and R Square. Herding

behavior, driven by a tendency to mimic others, and risk aversion, characterized by a preference for safer investments, dominate decision-making processes. Anchoring, where investors rely heavily on initial stock prices or historical reference points, also plays a role but is less significant compared to the other biases when analyzed collectively. These findings underscore the pervasive nature of behavioral biases in shaping investor behavior, irrespective of market sophistication.

Additionally, the study highlights the role of digital platforms and social media in amplifying these biases, particularly through the dissemination of market rumors and short-term signals. The reliance on such sources, coupled with tendencies like overconfidence, familiarity bias, and the disposition effect, often results in impulsive and intuition-driven decisions. These behaviors limit diversification and hinder long-term portfolio performance, emphasizing the need for targeted investor education and regulatory interventions. Addressing these biases through financial literacy programs, improved access to reliable market data, and transparent reporting can help mitigate their impact, fostering more rational and informed decision-making among retail investors.

5.4 Recommendations

The implications underscore the need for targeted interventions to address the impact of behavioral biases on investment decisions. Educating retail investors on the risks of herding and excessive risk aversion can promote independent decision-making and optimal portfolio diversification. Policymakers and market regulators should focus on improving access to accurate financial data and fostering transparency to mitigate reliance on social cues and historical anchors. By addressing these biases, markets like the Nairobi Securities Exchange can reduce inefficiencies and enhance investor outcomes, supporting long-term financial growth and stability.

The implications emphasize the need for targeted investor education to mitigate behavioral biases and enhance financial literacy, particularly in emerging markets like Kenya. Programs should focus on promoting evidence-based decision-making, reducing overreliance on market rumors, and encouraging thorough research and diversification strategies. Policymakers and financial institutions can play a crucial role by improving access to reliable market data and fostering a

culture of informed investing. Addressing these biases is critical to improving retail investors' outcomes and reducing market inefficiencies caused by herd behavior and speculative reactions.

5.5 Areas for further studies Areas for Further Studies

Building on the findings of this study, several areas warrant further exploration to deepen the understanding of behavioral biases and their effects on equity investment decisions among retail investors in the Nairobi Securities Exchange (NSE). Future research could examine the longitudinal impact of behavioral biases on investment performance, tracking investor behavior over extended periods to assess the persistence and evolution of biases like herding, anchoring, and risk aversion. Additionally, investigating the influence of demographic factors, such as age, gender, education level, and income, on susceptibility to these biases could provide nuanced insights into targeted interventions. The role of emerging technologies, including algorithmic trading and artificial intelligence-driven platforms, in amplifying or mitigating behavioral biases, particularly in the context of retail investors, also merits investigation. Furthermore, comparative studies between the NSE and other regional or global markets could reveal cultural and structural differences in how biases manifest and influence decision-making. Lastly, exploring the effectiveness of financial literacy programs and regulatory policies in reducing these biases and improving investment outcomes could provide actionable insights for policymakers and financial institutions aiming to enhance market efficiency and investor welfare.

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APPENDICES

Appendix I: Questionnaire

Section A: Demographic information

1. **Age Group:**
    - Under 30 [ ]
    - 30-39 [ ]
    - 40-49 [ ]
    - 50-59 [ ]
    - 60 and above [ ]
2. **Educational Background:**
    - High School or equivalent [ ]
    - Bachelor's degree [ ]
    - Master's degree [ ]
    - Doctorate or professional degree [ ]

SECTION B: Herding (Tick where appropriate)

Below are several statements on the effect of herding on equity investment decisions among retail investors in the Nairobi securities exchange. Use a scale of 1-5 where 1= no extent, 2= little extent, 3= moderate extent, 4 = great extent and 5 = very great extent.

Statement	**5**	**4**	**3**	**2**	**1**
I frequently adjust my investment portfolio based on announcements made by listed companies on the Nairobi securities exchange.					
I rely on market announcements to guide my buy or sell decisions in the Nairobi securities exchange.					
I conduct thorough research on the available information before making any investment decisions in the Nairobi securities exchange.					

I often rely on online forums and social media for information on investment opportunities in the Nairobi securities exchange.					
I believe that having access to insider information gives a significant advantage in making profitable investment decisions.					
I believe that reacting quickly to market announcements increases my chances of making profitable investments.					

SECTION C: Risk Aversion

Below are several statements on the effect of risk aversion on equity investment decisions among retail investors in the Nairobi securities exchange. Use a scale of 1-5 where 1= no extent, 2= little extent, 3= moderate extent, 4 = great extent and 5 = very great extent.

Statement	**5**	**4**	**3**	**2**	**1**
I am confident in my ability to select profitable stocks in the Nairobi securities exchange.					
My investment decisions are based on thorough research and analysis.					
I believe my knowledge of the stock market helps me make better investment choices than others.					
My portfolio is balanced with a mix of high-risk and low-risk investments.					
I regularly review and my portfolio based on market adjust conditions.					
I allocate a significant portion of my portfolio to industries or sectors I am familiar with.					

SECTION D: Anchoring

Below are several statements on the effect of anchoring on equity investment decisions among retail investors in the Nairobi securities exchange. Use a scale of 1-5 where 1= no extent, 2= little extent, 3= moderate extent, 4 = great extent and 5 = very great extent.

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Statement	5	4	3	2	1
I measure the success of my investments by comparing them to specific reference points, such as market indices or the performance of other investors.					
I am more likely to hold on to a losing investment if I have previously seen it perform well compared to other stocks.					
I prefer to invest in stocks that have previously provided me with positive returns, using these past performances as a benchmark.					
My satisfaction with an investment decision is often based on how it compares to a reference investment or target return.					
I evaluate potential investments by comparing them to the returns I have received from similar stocks in the past.					
I often rely on the initial price of a stock as a reference point when making investment decisions, even when new information becomes available.					

SECTION E: Investment Decisions

Below are several statements on the effect of behavioral biases on equity investment decisions among retail investors in the Nairobi securities exchange. Use a scale of 1-5 where 1= no extent, 2= little extent, 3= moderate extent, 4 = great extent and 5 = very great extent.

Statement	5	4	3	2	1
I believe that my investment decisions are influenced by recent price trends in the Nairobi securities exchange.					
I prefer to invest in familiar companies or brands, even when they may not offer the best returns.					

I usually hold on to losing stocks longer than I should, hoping they will rebound in value.					
I frequently rely on past performance of stocks as a key factor in making investment decisions.					
I make investment decisions based on gut feelings or intuition rather than detailed analysis.					
I often revise my investment decisions based on recent news or rumors about the stock market.					