BEHAVIOURAL FACTORS, MARKET INFORMATION AND INDIVIDUAL INVESTOR DECISION MAKING AT THE NAIROBI SECURITIES EXCHANGE, KENYA.

SAMSON KIPROTICH BETT

A Thesis Submitted to the Board of Graduate Studies in Partial Fulfilment of the Requirements for Conferment of the Degree of Master of Business Administration (Finance Option) of the University of Kabianga

UNIVERSITY OF KABIANGA

OCTOBER,2024

DECLARATION AND APPROVAL

Declaration

I declare that this thesis is my original work and has not been presented before for the conferment of a degree or award of a diploma in this or any other institution.

Signature…………………………….   **Date………………………...**

Samson Kiprotich Bett

MBA/A/0007/2022

Approval

This thesis has been submitted with our approval as the University supervisors: -

Signature…………………………….   **Date………………………...**

Dr. Penina Langat

Department of Accounting, Finance and Economics

University of Kabianga

Signature…………………………….   **Date………………………...**

Dr. Gichuki Kingori

Department of Accounting, Finance and Economics

University of Kabianga

COPYRIGHT

DEDICATION

I dedicate this thesis to my beloved wife, Mary Bett for your unwavering love, support and believe, my sons Edwin, Brian, Nollan and my daughter Faith for their moral support.

ACKNOWLEDGEMENT

I am grateful for the amazing grace of God that has been bestowed upon me. I would like to express my sincere appreciation to the University of Kabianga for allowing me to pursue my master's degree course. Additionally, I would like to acknowledge all the lecturers at the institution and my supervisors, especially Dr. Penina and Dr. Kingori for taking time out of their busy schedules to read my thesis. Their inspirational guidance, support, and friendly encouragement motivated me throughout the writing of this thesis.

ABSTRACT

The securities market acts as a catalyst for economic development by providing investors an opportunity for wealth creation and financial security while providing companies with the necessary resources for expansion and innovation. Statistics from the Capital Markets Authority and the Nairobi Securities Exchange indicate a consistent decline in individual investor participation at the securities market. Previous studies have established that individual behavioral biases could be the reason for the decline. However, these studies have been inconsistent on the extent to which they relate with individual investor decisions as most of them have focused on a specific group of individual investors such as lawyers and teachers. Against this backdrop, the study assessed the relationship between behavioral factors and individual investor decision-making at the Nairobi Securities Exchange. Specifically, the study assessed the relationship between risk attitude, herding behavior, overconfidence, anchoring behavior, and individual investor decision-making at the Nairobi Securities Exchange. In addition, the study assessed the moderating effect of market information on the relationship between behavioral factors and individual investor decision-making at the Nairobi Securities Exchange. The study was anchored on behavioral factors theory, prospect theory, and expected utility theory. The study was guided by positivist research philosophy and correlational research design. The target population of the study was the 2.03 million individual investors who trade at the Nairobi Securities Exchange through 17 licensed brokerage firms in Kenya. Simple random sampling techniques were used to select a sample of 399 respondents. The study used a structured questionnaire to collect data. Construct validity of the data collection instrument was enhanced through a detailed literature review, and content validity was enhanced through consultation with the lecturers and other experts. Internal consistency of the instruments was measured using Cronbach's alpha coefficient, where a coefficient of 0.865 was obtained. The obtained data was analyzed descriptively using frequencies, means, and standard deviation and inferentially using correlation and multiple regression model. The findings were presented using tables. The findings of the study revealed that risk attitude ($\beta = 0.159$ $p<0.05$), herding behaviour ($\beta = 0.180$ $p<0.05$), overconfidence ($\beta = 0.306$, $p<0.05$) and anchoring behaviour ($\beta = 0.311$, $p<0.05$) had a positive and significant relationship with individual investor decision making. Overall, the study established that the behavioural factors under the study explained 59.6% change in the individual investor decision making. The study revealed that market information had a positive and significant moderating effect on the relationship between behavioral factors and individual investor decision-making at the Nairobi Securities Exchange (NSE), as evidenced by an increase in R^2 from 59.6% to 61.0%, a change of 1.4%. Risk attitude, herding behavior, overconfidence, and anchoring behavior were found to have significant relationships with investor decision-making. The study recommended that investors stay informed about market trends and economic indicators while seeking expert advice. The NSE should enhance transparency, offer regular market analysis, and introduce investment products catering to varying risk profiles. The findings are valuable for policymakers, financial experts, and scholars, contributing to theoretical developments in the field.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATIONS

AMOS	Analysis of Moment Structures
APT	Arbitrage Pricing Theory
ASE	Amman Stock Exchange
BATS	Better Alternative Trading System
CAPM	Capital Assets Pricing Model
CBK	Central Bank of Kenya
CDS	Central Depository System
CDSC	Central Depository Settlement Corporation
CEO	Chief Executive Officer
CMA	Capital Markets Authority
COVID-19	Corona Virus Disease 2019
EUT	Expected Utility Theory
GARCH	Generalized Auto Regressive Conditional Heteroscedasticity
GDP	Gross Domestic Product
IPO	Initial Public Offer
KENGEN	Kenya Electricity Generating Company
MMR	Moderated Multiple Regression
MPT	Modern Portfolio Theory

NACOSTI	National Commission of Science, Technology and Innovation
NASDAQ	National Association of Securities Dealers Automated Quotations
NSE	Nairobi Securities Exchange
PLC	Private Limited Company
PLS	Partial Least Square
PSX	Pakistan Stock Exchange
SEM	Structural Equation Modeling
SEM-PLS	Structured Equation Modeling- Partial Least Square
Smart-PLS	Smart Partial Least Square
SME	Small and Medium Enterprises
SPSS	Statistical Package for Social Sciences
STATA	South Texas Art Therapy Association
ZSE	Zimbabwe Stock Exchange

OPERATIONAL DEFINITION OF TERMS

Anchoring Behaviour   Refers to a psychological bias where individuals rely on initial information when making an investment decision even if that information is arbitrary or irrelevant (Madaan, & Singh 2019). In this study, the term was used to refer to individual investors who make investment decision on the basis of the initial prices of securities as opposed to the market value of those securities.

Behavioural factors   Refer to the psychological influences and biases that affect the financial decision-making process of individuals (Kartini, & Nahda, 2021). In the context of this study; risk attitude, overconfidence, herding behaviour and anchoring behaviour were examined to understand how individual investors make irrational decision deviating from the predictions of classical investment theories.

Herding behaviour   Is defined as the tendency of individuals to imitate the actions of others or follow a crowd when making a decision in situations that are ambiguous or uncertain (Ah Mand, Janor, Abdul, & Sarmidi,2023). In the context of this study, herding behavior takes place when the individual investor makes an investment decision on the basis of other investors actions as opposed their own independent analysis of value of the securities or the market conditions.

Individual investor at Nairobi Securities Exchange	Also known as retail investors are private citizens who participate at the stock market as individuals rather than presenting an organization or institution (Kartini & Nahda, 2021). In this study individual investors were individuals who participate at the NSE through stock brokers based on their personal financial goals, market analysis and risk tolerance.
Market Information	Refers to the general awareness and insights pertaining the market trend and financial instruments traded at the securities exchange (Sharma, & Sarma, 2022). In the context of this study the investors access to market information entailed access to real-time stock prices, historical performance data, market trends, trading volumes, and general macroeconomic factors.
Overconfidence	Refers to a cognitive bias where individuals overestimate their own knowledge, skills, abilities or predictions about future trends (Lamptey, Marsidi, Usman, & Ali, 2020). In the context of this study, overconfidence behaviour was exhibited by individual investors' who believed that they could predict the securities markets' movement and ability to choosing securities with great accuracy even when evidence through market trends suggested otherwise.

Risk attitude   Is the individual's willingness to take risks in making investment decisions influenced by their psychological factors such as emotions unlike through use of finance theories that lead to rational investment decision making (Jacob, 2017). In the context of this study, risk attitude is used to refer to risk appetite of individual investors which could be observed from attributes such as fear or urge to invest that influences individuals investment decision.

Stock brokers   This are intermediaries between investors and the NSE (Ndung'u, 2022). According to this study stock brokers are licensed firms or financial professionals that facilitate trading of securities such as bonds, stocks and other financial securities on behalf of individual and institutional investors at the NSE.

CHAPTER ONE

INTRODUCTION

1.1 Overview

This chapter outlines the study's background, defines the research problem, and presents the general and specific objectives. Additionally, it introduces the research hypothesis and discusses the study's justification and significance. The chapter further elaborates on the scope, limitations, and assumptions guiding the study.

1.2 Background of the Study

Behavioral factors are interdisciplinary aspects of behavioral finance that combine economic and psychological principles to explain how individuals and businesses make decisions. This field recognizes that people often deviate from rational behavior due to cognitive biases and emotional influences, which traditional economic models of rationality fail to account for (Shukla, Rushdi, & Katiyar, 2020). Sharma and Sarma (2022) further expand on this by noting that behavioral factors examine the psychological elements that influence financial decisions within households, markets, and organizations.

Many scholars have focused on understanding how financial decision-making influences the behavior of individuals and organizations. Al-Nasseri and Tucker (2021) noted that the rise in individual investors in the USA's major stock exchanges such as NASDAQ, the Chicago Stock Exchange, and BATS was linked to the growth of online trading platforms, behavioral biases, preference for technology stocks, and the impact of social media. Renault (2017) highlighted that behavioral biases, including anchoring, herding,

and overconfidence, contributed to stock market fluctuations, especially after the COVID-19 pandemic.

Australia, one of the world's leading financial markets, heavily relies on commodities like mining. However, investor behavioral factors such as herding, anchoring, market sentiments, and reactions to economic indicators and company reports creates volatility, leading to investment fluctuations (Rahman, Amin, & Al Mamun, 2021). Thaler (2015) identifies behavioral factors, including loss aversion, overconfidence, and self-serving behavior, with anchoring as another key bias. These biases cause instability in stock prices, as overconfidence, based on intuition and judgment, often leads to irrational decisions, particularly within the regulations of the Australian Stock Exchange.

Kartini and Nahda (2021) explored the relationship between behavioral factors, such as overconfidence, and their impact on portfolio performance and investment choices. Their study revealed that both individual and institutional investments in the stock market were heavily influenced by overconfidence bias, leading to poor company performance. For institutional investors, overconfident managers had a detrimental effect on firm performance. Additionally, biases like loss aversion, overconfidence, and optimism affected the frequency, time horizon, and variations in individual investors' decisions.

In Ghana, Kuranchie and Forson (2022) found that overconfidence highly influenced the investor's rationality hence leading to the increase in the volatility of the stock market, especially during and almost after the Covid-19 pandemic. Additionally, overconfidence bias was found to have an effect on working capital management, financial performance and investment decision-making by SMEs. Investment decisions made by individual investors, institutional investors, and managers of large corporations can often be

influenced by overconfidence behaviour. Managers who exhibit overconfidence behaviour are more likely to make irrational investment decisions, which can negatively affect the working capital of their businesses. This is possible if they have significant internal equity and anticipate higher returns or performance (Lamptey, Marsidi, Usman & Ali, 2020).

Nnoje, Okonkwo and Anachedo (2021) established that investor sentiments and market dynamics affected the market returns in the Nigerian Stock Market. Investor behavioural factors such as herding behaviour and overconfidence led to increased variability in the stock prices, negatively affects the contribution and participation of some investors in the stock market. The way in which investors view the general performance of the stock market affects how they make investment or financial decisions. However, it was discovered that all behavioral facts affect the financial decisions made by investors depending on the performance and the type of industry.

In Kenya, the performance of individual investors at the NSE is often influenced by behavioural factors; Ludenyo (2021), Langat and Rop (2019), and Odhowa and Mutswenje (2022) established that factors related to representativeness, risk aversion, herding, and anchoring behaviour, financial wealth, social interaction, financial literacy and cognitive dissonance largely affected how financial decisions are made by investors in the stock exchange market. However, these studies have used different categories of stock market participants and different control variables in the assessment of how strong the variables relate, and their direction as well.

Previous studies have shown that various behaviours can influence investment decisions, but the extent of their influence can differ across industries. Additionally, geographical

factors, market condition, and information availability can how decision making and financial behavior relate with one another. This research evaluated how risk attitude, herding behaviour, overconfidence, and anchoring behaviour affect individual investor decision-making. These factors were selected on the basis that previous study findings have been inconsistent and thus they have recommended that further studies be carried. In addition, access to market information was adopted as a moderating variable.

1.2.1 Behavioural factors

Behavioural factors is a field of finance which combine principles from economics, finance and psychology that explores how cognitive and psychological biases influence financial decision-making (Shukla & Shukla 2023). According to Sukmadilaga, Fitri, & Ghani (2022), behavioural factors examines ways in which cognitive errors, human emotions and social factors influence financial behaviour, leading to investment outcomes that may not be informed or in line with traditional financial theories.

Existing literature indicates that behavioural factors affect individual investor decisions differently depending on different impulses. Hunguru, Sibanda, and Tadu (2020) recognized more than ten factors that influence the way in which an individual makes decisions especially when it comes to investments. The factors that were investigated during the study include anchoring behavior, availability, herding, the gambler's fallacy, regret aversion, representativeness, overconfidence, metal accounting, loss aversion and demographic factors such as level of education and income. Theoretically, economic theory assumes that people dislike risk but can be motivated to take risks by the anticipated return (Mehmood et al., 2019). Thus, the degree of risk and investors'

expected rate of return are positively correlated. It is illogical for risk-averse investors to come to terms with a dangerous opportunity especially if they gain a higher level.

Individuals' attitudes towards risk are influenced by their willingness to take risks on investment. This attitude is affected by demographic and psychological factors that include age, gender, loss aversion, time horizon, financial knowledge, income, belief in one's abilities and optimism (Arshad & Ibrahim, 2019; Areiqat, Abu-Rumman, Al-Alani, & Alhorani, 2019). According to Jacob (2017), risk attitudes can vary significantly among investors, with some being risk-averse, preferring safer investments with lower potential returns to avoid losses, while others are risk-seeking as they are willing to gain more rewards.

According to Areiqat et al., (2019), risk aversion and risk perception are elements of risk attitude that can shape the decisions made by an individual. Risk-averse investors are more concerned about potential loss on investment than potential gains; thus, the investors are willing to accept investments with low returns if, by doing so, they are likely to avoid the possibility of a significant loss. Likewise, Saivasan and Lokhande (2022) used loss aversion, time horizon, and return expectation to measure the investor's attitude towards risk. Time horizon was assessed by the length of time an investor is willing to hold to an investment before the need to access finances. However, the study failed to indicate how the individual investor decision was measured.

Herding behaviour in behavioural factors is the tendency of people to crowd or copy the actions taken by other investors during decision making in times of uncertainty (Rahayu, 2021). This behaviour occurs when investors make investment decisions with the focus on the behaviors of other people rather than making independent decisions or using the

value of assets to make investment decisions (Ah Mand, Janor, Abdul, & Sarmidi,2023). This behaviour could lead to a bandwagon effect where individual investors make a rush collectively into buying or selling specific securities, thus causing exaggerated price movements in the stock market (Ahmad & Wu, 2022).

El-Hussein and Abdelgadir (2020) consider herd behaviour as a cognitive bias that stems from people seeking safety in numbers and following the majority's actions. Similar findings may be found in the financial industry, especially in the stock markets, where a large number of investors favor companies that have a strong following from the vast majority of investors. Stock overpricing occurs when the price of a stock rises more than its true level as a result of herd behavior driving up demand. This is the basic reason for the creation of bubbles in the stock markets if it takes place for a longer period.

Ahmad and Wu (2022) established that herd behaviour positively impacted the decision making process among all the individuals in Pakistani stock exchange. Herd behaviour was influenced by the information cascades exhibited by people who lack sufficient information regarding the performance of certain stocks and tend to follow or imitate others. Other factors influencing herd behaviour include fear of missing out, social pressure or social proof, and when individuals are uncertain or unable to predict the correct course of action.

Similarly, Quaicoe and Eleke-Aboagye (2021) established that herding behaviour can be caused by media influence and lack of confidence in the investor's judgements, making them assume that the people investing in the stock market collectively possess more knowledge or better judgment than themselves. Similarly, Langat and Rop (2019) established that investor participation at the NSE has a positive relationship with herd

6

behavior. This implies that stock market participation by teachers was attributed to herding behaviour, which was measured by social interactions characterized by peer pressure from workers, family members, welfare groups and friends.

Individual investment in stock markets in most developing countries is affected by overconfidence and anchoring behavioural factor. Overconfidence is categorized as a type of cognitive bias that makes individuals overestimate the general abilities, skills and future predictions (Lamptey, Marsidi, Usman, & Ali, 2020). Individuals are said to exhibit overconfidence behavior when they believe that they can predict the stock markets' movement and are able to choose stocks with great accuracy even when evidence through market trends suggests otherwise. Overconfident individuals might engage in excessive trading, assuming they have a superior ability to make the right decisions when it comes to investments or pick lucrative investments. This behaviour can result in increased transaction costs and reduced overall returns.

Overconfidence and anchoring behavioural factors have been found to have an influence on individual investment decision-making. Michael (2023) observed that overconfidence attributes such as illusion of control, experience of trading in the stock market and optimism bias influenced the process of decision making when it comes to investments for people in the Nigerian stock exchange. The emotional state of the investor, such as positive mood, high self-esteem and self-awareness, could lead to overconfidence bias (Wafula, Charles, & Ondiek, 2023). According to Njeru and Matanda (2023), skill perception and accuracy of prediction characterize overconfidence behaviour among individual investors at the NSE.

Anchoring behaviour is a psychological bias where individuals rely on initial information when making an investment decision, even if that information is arbitrary or irrelevant (Madaan & Singh 2019). According to Joshi and Agrawal (2021), investors may anchor their stock valuation or prices on the initial costs of the stocks as opposed to the market value of the stocks. This biasness often leads to suboptimal investment choices because investors are reluctant to adjust their estimates from the initial information, even when they have new and relevant information that should inform their alternative decision-making.

Awuor (2017) conducted a study that found two behavioural factors - anchoring behaviour and overconfidence - that influenced decision making in the Kenyan stock exchange. The study showed that anchoring behaviour tends to estimate the possibility of unlikely events occurring by starting with the initial position, primary values or making adjustments to make it alight with the decisions made. The research also found that investors often rely on pre-existing data or information rather than considering new information, which can lead to biased decision-making.

From the analysis of exiting literature, most of the studies on behavioural factors have been on developed nations with high GDPs and access to information. Others found mixed effects and findings to the extent to which behavioural biases influences individual investor decision making. Most of the scholars concentrated on specific populations such as teachers and institutional investors which their findings may not be generalized to the overall population.

1.2.2 Individual investor decision-making at the NSE

Nairobi Security Exchange was established in 1954 when Kenya was under colonial rule. It is considered one of Africa's most established security exchanges. In Africa, the NSE is the fourth-largest in terms of trading and relation to market capitalization through Gross Domestic Product (GDP), which is ranked fifth. There are 63 listed companies, including NSE, which was first listed in 2014 (Odhowa & Mutswenje, 2022; NSE, 2022).

Decision-making is usually an intricate process which involves an assessment of several factors which may follow a specific sequence (Madaan & Singh, 2019). The process of selecting the most preferred investment alternative is referred to as investment decision-making. The process of decision making involves an informed selection of the best investment alternative after effectively analyzing all the possible alternatives. Scientific literature indicates that decision-making is premised on two major factors: behavioural factors such as income, education, age, and investment portfolio; and technical factors such as market conditions. Similarly, individuals rely on these factors when they are willing to make investments in the stock market.

In recent years, the Nairobi Securities Exchange (NSE) has experienced extreme price volatility, which may be attributed to some underlying inefficiencies that negatively affect shareholder value. An examination of monthly returns on stocks in NSE reveals a trend of under-reaction and over-reaction of investors (Masema, 2019). According to Langat and Rop (2019), individual investors at the NSE often make irrational decisions based on biases or anomalies. These include overconfidence, herd behaviour, anchoring behaviour, loss aversion, regret aversion, and risk attitude (Ludenyo, 2021; Barno et al., 2021 & Ong'eta, 2021). Psychological biases during investment decision-making lead to

variation in the stock market prices, which may have a short or long-term effect on the stock market

For instance, investors with overconfident bias tend to sell their winning stocks quickly while holding onto their losing stocks since they believe the value will eventually increase. Mumias Sugar Company is an example of this nature at the NSE, where individuals bought stocks of the company when they were at their lowest and held onto them, hoping that they would appreciate and give better future returns. This behavioural bias could be attributed to loss aversion, overconfidence and herding. Similarly, Over-reaction and under-reaction of share prices have been witnessed in companies trading in NSE, including Safaricom, Uchumi, and Kenya Airways, among others.

Owiye, Ombok and Obura (2019) found out that overconfidence and anchoring both have a positive impact on individual decision-making in investing in Safaricom equities at the NSE. The Safaricom IPO that was offered in 2008 was tremendously oversubscribed. Immediately after the IPO, the company's shares traded at a lower price than the offer price, which was at Kshs 5; the shares traded for as low as two shillings each, a trend that continued for over five years. The scramble of the company's shares resulted from an overreaction behaviour among investors anchored on the previous good returns witnessed in the KenGen IPO in 2006, where the price of the shares tripled after the IPO.

According to Keswani, Dhingra and Wadhwa (2019), loss aversion, gamblers fallacy and investors' attitude towards risk behaviour was witnessed in individual investors who held onto the defunct Uchumi supermarkets shares even after becoming aware that the organization had started experiencing financial challenges as a result of mismanagement, poor internal controls, sub-optimal expansion strategy and inefficient corporate

governance, leading to a major loss in the value of the company's shares. This loss aversion and overconfidence behaviour have also been witnessed by individual investors in other state parastatals, such as East Africa Portland Cement and Kenya Airways (Ong'eta, 2021).

A report from CMA (2022) revealing statistics on individual participation at the NSE indicates a significant decline in individual investment between 2011 and 2022. Notably, between 2019 and 2022, only 61,000 shareholders participated in share trading at the NSE, representing a mere 3% of all shares traded, implying that 97% of equity accounts remained inactive during this period. A summary of the statistics from CMA is presented in Table 1.1.

Table 1.1

Trends in Individual Investment at the NSE

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Individual investors (%)	12.23	12.01	12.89	14.58	12.84	12.49	11.47	11.54	11.60	11.35	11.13	11.1

Source: CMA Quarterly Bulletin (2023)

Table 1.1 highlights a decline in the number of individual investors in the NSE. The number of investors consistently declined from 12.23% in 2011 to 11.1% in 2022. However, there was a slight increase in 2014, which could be attributed to investor confidence arising from the political stability witnessed in the country after the 2013 general election.

It is generally assumed that all investors, regardless of their emotional, cultural, and social backgrounds, are lucid and all the decisions made are based on the associated returns. However, studies have shown inconsistent findings regarding the relationship between the four variables when different attributes of market information are taken into account. As a result, this research study explored the ways in which behavioral factors relates with investment decision making. These factors have been identified because different scholars and studies have yielded different and inconsistent outcomes and the degree of influence on the investment decisions making.

1.2.3 Access to market information

Market information is comprehensive data and insights regarding the financial instruments traded at the securities exchange (Osamor et al., 2019). Access to market information serves as the foundation for investors' decision-making processes, influencing their perceptions, risk assessments, and investment choices. According to (Ah-Mand et al., 2023), market information encompasses both quantitative metrics and qualitative factors that contribute to investors' understanding of the securities market dynamics. This information may include but is not limited to real-time stock prices, historical performance data, market trends, trading volumes, and relevant economic indicators.

According to Kartini and Nahda (2021), market information can be accessed from any data, news, or analysis from financial markets, securities, and economic indicators. These include information on trading volumes, stock prices, company financial reports, and other microeconomic factors that can potentially influence how securities are traded on the stock exchange. Lawal, Somoye, Babajide, and Nwanji (2018) argue that access to

market information, such as information on inflation rates, can influence the investor's propensity to invest. Efficient access to information on global economic trends can also spur individual investment decisions in the stock market.

Previous studies have established that access to market information could influence the level of investment activities taking place in the economy, including the stock markets (Khan et al.,2021). Information on market volatility through economic indicators such as inflation levels, taxation, and consumption trends through disposable income can potentially influence the relationship between behavioral factors and investment decisions in the stock market (Ah-Mand et al., 2023). According to Keswani et al. (2019), market information influences investor sentiments and shapes investment patterns. For instance, some investors tend to take more risk and invest in potentially high-return assets in a bullish market. On the contrary, they become more cautious and prefer risk-low-return assets in a bearish market.

Nnoje et al. (2021) found that positive economic indicators or news can increase investors' confidence, leading to increased buying activities and stock prices, while negative economic indicators can trigger sell-offs due to panic selling. Lawal et al., (2018) singled out information on fiscal and monetary policies, such as inflation and exchange rates, as key factors influencing stock market performance. Banerjee and Kayal (2022) discovered that there is a positive relationship between market information, behavior and decision making in any stock market. It was also established that there is a lack of sufficient market information, behavioral biases such as herding, anchoring behaviour, and risk averseness tend to increase as investors imitate or are largely

influenced by the sentiments or actions of other investors, causing bubble run-ups and sell-offs in the stock market.

Previous studies have found that the availability of information affects how people behave and participate in the stock market (Ludenyo, 2021). However, the metrics used to measure financial literacy, such as access to financial knowledge and awareness of investment opportunities, are relative, and their impact is difficult to accurately quantify. Access to market information can potentially impact the decisions made by the investor. However, the moderating factor does not provide a clear insight on the relationship between decision making and behavioral factors for investors in the NSE. A gap that this study intended to address.

1.3 Statement of the Problem

A robust and dynamic securities market serves as a vital engine for economic growth by facilitating capital formation, enabling efficient allocation of resources, and fostering innovation and entrepreneurship. Despite the pivotal role a well-functioning security exchange market plays in the overall growth of a nation, investment in the Kenyan securities market has been decreasing over the years. According to reports from CMA and NSE, the Central Depository Settlement Corporation has a total of 2.03 million share accounts. However, only 61,000 shareholders participated in share trading between 2019 and 2022, which represents a mere 3% of 4,174,100 shares traded. As a result, 97% of equity accounts remained inactive during this period. This decrease maybe attributed to behavioural biases by individual investors. Trading at the NSE has primarily been dominated by institutional investors seeking long-term returns and foreign investors who are highly sensitive to political and economic changes in the country. NSE investors

14

suffer from market inefficiencies and cannot ensure wealth maximization. It is, therefore, critical to examine how decision making and behavior relate. Previous studies have yielded inconsistent findings on the specific behavioral factors and the manner in which decision making is affected by behavioral factors. Majority of research studies were conducted among individual investors in only developed countries with a high GDP. In addition, the main focus of several studies has been on institutional investors and money market institutions, leaving scanty information on individual investor decision-making. To fill this knowledge gap, this research therefore sought to determine the relationship between behavioural factors, market information and individual investor decision making at NSE, Kenya. The study is of relevance to investors when making investment decisions by taking into consideration the effects of behavioural factors and general market information.

1.4 General Objective of the Study

The study assessed the relationship between behavioral factors, market information and individual investor decision making at the Nairobi Securities Exchange

1.5 Specific objectives

The study was guided by the following specific objectives

i. To assess the relationship between risk attitude and individual investor decision-making at the Nairobi Securities Exchange.

ii. To examine the relationship between herding behaviour and individual investor decision-making at the Nairobi Securities Exchange.

iii.   To determine the relationship between the overconfidence and individual investor decision-making at the Nairobi Securities Exchange.

iv.   To establish the relationship between anchoring behaviour and individual investor decision-making at the Nairobi Securities Exchange.

v.   To assess the moderating effect of market information on the relationship between behavioural factors and individual investor decision-making at the Nairobi Securities Exchange.

1.6 Research hypotheses

The study tested the following hypotheses

H_{01}:   Risk attitude has no statistically significant relationship with individual investor decision-making at the Nairobi Securities Exchange.

H_{02}:   Herding behavior has no statistically significant relationship with individual investor decision-making at the Nairobi Securities Exchange.

H_{03}:   Overconfidence has no statistically significant relationship with individual investor decision-making at the Nairobi Securities Exchange.

H_{04}:   Anchoring behaviour has no statistically significant relationship with individual investor decision-making at the Nairobi Securities Exchange.

H_{05}:   Market information has no statistically significant moderating effect on the relationship between behavioral factors and individual investor decision-making at the Nairobi Securities Exchange.

1.7 Justification of the Study

Conducting a study on the relationship between behavioral factors and individual decision-making at the Nairobi Securities Exchange (NSE) is crucial for several reasons. In a dynamic economic environment shaped by global events, understanding behavioral influences like risk attitude, herding, overconfidence, and anchoring is key to comprehending market movements. These factors significantly affect asset prices and investor decisions. Furthermore, the current decline in investments due to political instability, coupled with diminishing institutional and foreign involvement, highlights the importance of examining behavioral aspects in the NSE to provide relevant insights for investors and policymakers.

1.8 Significance of the Study

The study aimed to provide empirical evidence on the moderating role of market information on the relationship between behavioral factors and individual investor decision-making. It contributed to understanding various financial decision-making models like the Fama-French, Modern Portfolio Theory (MPT), Arbitrage Pricing Theory (APT), and Capital Asset Pricing Model (CAPM). The results enriched both empirical and theoretical literature and could serve as a valuable reference for academicians interested in exploring the connection between individual investor behavior and decision-making in securities markets such as the Nairobi Securities Exchange (NSE).

Different parties such as management of the stock brokerage firms, financial money market institutions and unit funds as well as individual investors could use this study's findings to get insights on determinants of decision making among individual investors. The results gave an insight on the contribution of specific behaviors towards the decisions

made by individuals at NSE. Additionally, the study also provided useful insights on the effect of market factors such as access to information on how decision making is affected by individual behavior especially during investment.

The findings could help policy makers specifically at the NSE and CMA to re-evaluate, amend the existing policies or develop policies aimed at motivating individual investors to participate in the stock markets. Policymakers would also be able to assess and address the disparity between individual, institutional and foreign investors at NSE.

Finally, as behavioral factors gain prominence in global financial research, investigating its implications in the specific context of the Nairobi Securities Exchange could contribute to the development of targeted interventions, investor education programs, and regulatory strategies to enhance market efficiency, investor protection, and overall economic resilience.

1.9 Scope of the Study

This study examined the relationship between behavioral factors and individual investment decision-making at the Nairobi Securities Exchange (NSE) in Kenya, focusing on individual traders who use NSE brokers. Investment commercial banks were excluded from the study due to limitations from the Data Protection Act. The study assessed key behavioral factors such as risk attitude, herding, overconfidence, and anchoring behavior, along with the moderating effect of market information. It was conducted between January 2024 and October 2024, with the 17 brokers registered by the NSE as the focal participants.

1.10 Assumptions of the Study

The study was carried out on the assumption that target population was well-informed and were aware of how security market trading operates. As a result, the respondents were able to share information about how behavioral aspects affect stock trading at the NSE. Further, the study assumed that the population was diverse in terms of literacy levels informed by their level of education, income level, gender, cultural background, and financial literacy.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section centers on four major topics. The chapter begins by providing a critical analysis of relevant research and earlier studies that show how individual investor decision-making at the securities market is influenced by behavioral factors. These factors include risk attitude, herding behaviour, overconfidence, anchoring behaviour and market information. Secondly, it also provides an overview of theories and models anchoring the study. This chapter also explains the conceptual framework, which is a graphic representation of the potential relationship between the research variables. Lastly, a summary of the research gaps is also covered.

2.2 Review of Related Literature

The study reviewed several past studies on the relationship between behavioral factors, market information and individual investment decision-making at the securities exchange market.

2.2.1 Risk attitude and individual investor decision-making

Attitude towards risk is a key determinant in the choice of an investment portfolio either of a single asset or multiple assets that an individual investors chose to make within a given period of time. According to Maritim, et al., (2022), an individual attitude towards risk can be influenced by age, education level and social background. (Arshad, & Ibrahim 2019).

Arshad and Ibrahim (2019) carried out a study on uncertainty, risk avoidance, and perceived risk from the cultural perspective of individual investors in the Pakistan Stock Exchange. In carrying out this study, 548 active individual investors were used, and data analysis was done using SEM-PLS. The results of the study showed that the impact of various risk factors on investor decision-making varies. Risk perception had no effect on investor decision making, despite the fact that it was discovered that risk avoidance and uncertainty avoidance greatly influenced individual investor decision making. The research utilized Hofstede's cultural dimension to evaluate the impact of culture on the decision-making process of individual investors; this study gauged individual investor decision-making based on trading frequency.

Areiqat et al., (2019) sought to assess the impact of behavioural finance on stock investment decisions at the Amman Stock Exchange (ASE). The main focus of the study was to assess the impact of loss aversion and risk perception on individual investor decision-making were examined. 165 individuals selected from those actively trading at the ASE halls were used as respondents for the study. With the assistance of SPSS, hierarchical and multiple regression analyses were performed on the primary data, which was gathered via a structured questionnaire. The results showed that risk perception, and loss aversion significantly influenced the decisions made by individual investors at the ASE. In addition to using multiple regression and hierarchical analysis, this study also used correlation analysis to evaluate the direction and strength of the association between the variables under investigation.

In Bangalore, India, Saivasan and Lokhande (2022) investigated the impact of behavioral biases, risk inclination, and demographic variables on the risk perception of individual

equity investors. To investigate the impact of demographic characteristics on an individual's inclination to take risks and investors' perception of risk, multiple regression analysis was utilized. Customer propensity was defined by loss aversion, time horizon, and return expectation. It was discovered that these variables varied with demographic variables like income and age. The study discovered that the inclination of equities investors' risk perception was favorably influenced by demographic characteristics. The study's reference is restricted to its qualitative approach of evaluating how behavioral biases, risk propensity, and demographics affect stock investors' perception of risk. With market information acting as a moderating variable, this study evaluated the association between risk attitude, herding behavior, overconfidence, and anchoring behavior with individual investor decision making.

Langat and Rop (2019) examined the participation decisions and risk aversion of teachers in Kenyan secondary school. The study targeted secondary school teachers from Nakuru County. Behavioural finance theory was used to anchor the study variables. 320 teachers made up the sample that was chosen using a stratified proportionate sampling method. Data was collected using structured questionnaires, and Pearson correlation coefficient and regression analysis were then utilized to examine the data. The results of the study showed a strong positive correlation between secondary school teachers' stock market participation and risk aversion. This study focused on all individual investors at the NSE, whereas the current study only examined a subset of stock market investors.

Maritim et al. (2022) investigated how a person's attitude toward risk affected the selection of their own portfolio at the Nairobi Securities Exchange in Kenya. With 2.4 million individual investors as the target group, the study used a correlation research

design. The main method of gathering data was through the administration of structured questionnaires to a sample size of 385 active individual NSE investors. Regression and correlation analysis were used to do an analytical analysis on the acquired data. The results showed that each person's choice of portfolio was significantly positively influenced by their risk mindset. The moderating variable used in this study was the investor's age. This study used market information as the moderating variable.

2.2.2 Herding behaviour and individual investor decision-making

Herding behavior refers to the tendency of individuals to mimic the actions of a larger group, often driven by the belief that the collective judgment is superior to their own. this behavior can lead individual investors to make decisions based on the trading patterns of others rather than their own analysis or information. In a stock market, investor decision-making involves the processes through which these investors analyze market conditions, evaluate risk, and decide to buy or sell securities, influenced significantly by social dynamics and group behavior (Ababio & Mwamba 2017).

Ahmad and Wu (2022) sought to find out if, as evidence from an emerging economy, herding behavior was significant in investment management and perceived market efficiency. Specifically, the study focused on the influence of herding behavior, influence of market efficiency, investing decision-making, and the performance of individual investors. The study employed a cross-sectional research approach and gathered data from 309 active investors who trade on the Pakistan Stock Exchange. Utilizing Analysis of Moment Structures (AMOS) graphical software and SPSS, data was examined using structural equation modeling (SEM). The results showed that herding behavior, measured by position concentration and fear of being left out significantly influenced the decisions

made by individual investors. On the other hand, it significantly impairs perceived market efficiency and investment performance. The use of SEM is the methodological flaw found in this investigation. This study, however, used multiple regression.

Rahayu, et.al., (2021) used Indonesia as a case study to investigate the herding behavior model in investment decisions in emerging economies. The study's independent variables were the availability of information on the book value per share of the Indonesian stock market and societal impact. One hundred individual stock exchange investors in Indonesia participated in the study. A 2x2 factorial design laboratory experimental method was adopted. A univariate two-way ANOVA statistical method was utilized to examine the association between the variables. The study discovered that the book value per share information had less of an impact on individual investors' herding behavior and decision-making than social effects, particularly those of seasonal stock market investors. This study was relevant, although it was based on a laboratory experiment with a 2x2 factorial design. Regression modeling was used in this research.

Ababio and Mwamba (2017) conducted a test at the Johannesburg Stock Exchange to evaluate the impact of herding behavior on investor decision making. The study found that the nation's banking and real estate sectors were significantly negatively impacted by herding behavior. The results revealed asymmetry between herding behavior and investment in the banking sectors when stock prices were falling (bear phase and real estate witnessed herding behavior when the market was rising (bull phase). All commercial banks and real estate firms registered on the Johannesburg Stock Exchange were the focus of the study. The NSE's individual investors are the focus of this investigation.

Masema (2019) examined how companies listed in the NSE are affected by herding behavior. Their performance was examined through analysis of market capitalization, volumes of shares traded, and data on prices from the NSE database for the period 2007 to 2017. The study was guided by prospect and behavioural finance theory. Data was analyzed using multiple regression analysis and measures of central tendencies. The findings showed that 49% of the variation in insurance companies' market performance was due to herding behavior, while 51% was due to other factors. However, the researchers focused on insurance companies listed (Institutional investors) at the NSE, while this study targeted individual investors.

Ludenyo (2021) investigated how cognitive biases affected teachers in Vihiga, Kenya when making individual stock market investments. A correlational research approach was employed in the study, using 1,126 instructors as the target group. The study variables were supported by the application of behavioral factors theory, expected utility theory, and traditional finance theory. Two hundred fifty-seven teachers were selected as participants using a stratified random sampling method. Regression analysis was utilized to examine the data that was gathered through questionnaires. The results showed that herding behaviour had a positive and significant impact on individual investment decisions. Investor decision making was positively correlated with both herding measures: financial literacy bias, instructor risk aversion, and cognitive dissonance bias. Teachers in Vihiga sub-county who had access to information on how the stock market operated formed the main focus of study. However, this study aimed to encompass all individual investors in the NSE.

2.2.3 Overconfidence and individual investor decision-making

Overconfidence is an emotional bias that changes with changes in market conditions. Often, bullish market conditions elicit feelings of happiness and joy due to increased trade activities, while bearish market conditions elicit sadness as the stock market is on a downward trend (Kansal & Singh, 2018). Rahim, Shah, Jan, & Aamir (2020) examined the influence of overconfidence bias on investor decision-making of Pakistani stock investors. The findings established that the overconfidence bias had a significant positive influence on investor decision making as the stock burse as indicated by the rise of investment in the stock exchange from 33,000 investors in March 2020 to 42,023 in September 2020. The study was carried out by adopting a stratified random sampling technique where the Pakistani stock exchange was divided into three: Lahore Stock Exchange, Karachi Stock Exchange, and Islamabad Stock Exchange. Data was obtained by administering questionnaires to individual investors. A logistic regression model and rank correlation were used to analyze data.

Sukmadilaga, et al., (2022) investigated if overconfidence and foreign investment flow affected Indonesia's stock market movement by comparing the country's pre- and post-COVID-19 conditions. The manufacturing firms listed on the Indonesian stock exchange were the focus of this investigation. The study used content analysis to examine information gleaned from the financial accounts of the business. The study discovered that the Indonesian stock exchange's stock price movement was unaffected by overconfidence or foreign investment influx. However, the study relied on secondary data established through content analysis. This research used first-hand information. Furthermore, the study examined the association between overconfidence and changes in

stock price, whereas this study evaluated the connection between overconfidence and the choices made by certain investors.

Kansal and Singh (2018) conducted research on the factors that contribute to overconfidence in the Indian stock market. Four characteristics of overconfidence in the stock market were measured in the study: Self-attribution, average effect, planning fallacy, and optimistic illusion. A structured questionnaire was used to collect the data, and the t-test and ANOVA were used for analysis. The results showed that investing decision-making was positively impacted by overconfidence. It was discovered that those with higher incomes had larger portfolios, made more frequent investments, and invested in large capital equities. The study's control factors, age, gender, and general education, had no effect on the degree of confidence. Demographic characteristics served as the study's control variables. However, this study used market information as the moderator variable.

Kuranchie-Pong and Forson (2022) evaluated the rationality of investors during the COVID-19 era by examining the connection between overconfidence bias and market volatility at the Ghana Stock Exchange. Overconfidence bias among individual investors was tested using the pairwise Granger Causality test and Generalized Autoregressive Conditional Heteroscedasticity (GARCH) model. The investigation also evaluated whether COVID-19 contributed to the stock market's volatility. The Granger Causality test was unidirectional, according to the results. Increased trading volumes following COVID-19 were also shown by conditional variance estimates, suggesting an overconfidence bias among investors. It's possible, nevertheless, that the models employed by the research to evaluate the existence of overconfidence bias at the Ghana

Stock Exchange won't work in other nations. Consequently, in order to evaluate the connection between overconfidence bias and individual decision-making, this study employed inferential statistics.

Michael (2023) looked into the Nigerian stock exchange's investment decision-making process and behavioral biases. The study targeted 340 active NSE traders, and standardized questionnaires were used to gather data. Data analysis techniques included Pearson correlation analysis and multiple regression analysis. The results showed that the Nigerian Stock Exchange's investment decisions were highly impacted by overconfidence bias. The researcher recommended that regulatory interventions, investor education, market monitoring, and boosting risk management measures and diversification could enhance investors' activities. However, the study failed to address how investor decision-making was measured, thus failing to address the critical aspects informing the research. The current study measured individual investor decision-making by evaluating the frequency of trading in the stock exchange.

A study assessing the moderating effect of fund size on the link between overconfidence and the financial performance of mutual fund portfolios in Kenya was conducted by Wafula, et al., (2023). In this study market capitalization was used to gauge portfolio performance, and the predictor variables were lowest volume traded in a year, greatest volume traded in a year, and lowest/highest volume traded after one month. This study addressed 16 registered mutual fund units in Kenya and used a causal research methodology, all of which were grounded on prospect theory. Panel regression analysis was used for data analysis. The results showed a significant positive association between overconfidence and mutual fund portfolio performance in Kenya. It was discovered that

the association between overconfidence and portfolio performance was negatively moderated by fund size. Notably, the reviewed study used fund size as the moderating variable; the current study adopted market information as the moderating variable.

Njeru and Matanda (2023) investigated how behavioral factors affected the real estate investment decisions made by retail investors in Nairobi County, Kenya. The study's specific goal was to evaluate the impact of herding measured by the source of information and peer influence and overconfidence which was measured by skill perception and forecast accuracy on the process of making investment decisions. The study used a descriptive research design with a target population of 26,723 individual investors who had mortgage accounts in 32 banks that provided mortgage facilities. Primary data were collected by structured questionnaires, and both inferential and descriptive statistics were used in the analysis. Herding behaviour and overconfidence were found to have a significant effect on investing decision-making. Notably, the reviewed focused on real estate investment decisions, however, this study focused on individual investor decision-making at the NSE. Furthermore, because the study's descriptive research approach merely describes the phenomenon, it is inappropriate for evaluating hypotheses (Kothari, 2017). This study adopted a correlational research design which made it possible to quantify and establish the direction of the relationship between the study variables.

2.2.4 Anchoring behaviour and individual investor decision-making

Anchoring behavior refers to the cognitive bias where individuals rely too heavily on the first piece of information encountered (the "anchor") when making decisions, which can skew their judgment and lead to irrational financial choices. In the context of a Securities Exchange market this might manifest as investors fixating on an initial stock price or

previous performance, affecting their subsequent investment decisions. Individual investor decision-making at the securities market encompasses the processes by which individual traders evaluate information, assess risks, and make choices regarding buying or selling securities based on a variety of factors, including market trends and personal biases (Hunguru et al., 2020).

Madaan and Singh (2019) conducted a study on the relationship between behavioral biases and investing decisions. The study's particular focus was on how investor decision-making is impacted by anchoring habit, temperament, and overconfidence. 243 investors completed questionnaires to provide information, which was then processed and examined using both descriptive and inferential statistics. The results showed that anchoring behaviour and disposition behavior had no significant relationship with individual investment decision on NSE stocks. The study looked at how anchoring behavior affected investors' decision-making when there was no moderating or control variable. The moderating impact of market information on the relationship between investor decision-making and anchoring behavior was evaluated by this study.

Mudu, et al., (2022) analyzed the investment choices made by Nigeria's Dangote Sugar Refinery PLC and behavioral bias variables. This study's particular goals were to determine how disposition behavior and anchoring affected people's decisions to invest in Dangote Sugar Refinery PLC. A sample of 383 investors' data was gathered, and Smart-PLS version 3 was used for analysis. It was discovered that disposition had little bearing on investor decision-making, while anchoring behavior had a positive and significant effect on the individual decision to invest. The data analysis for the study was

done using Smart-PLS version 3, while the data analysis for this study was done using multiple regression, mean, and standard deviation in descriptive statistics.

Hunguru et al., (2020) investigated the factors influencing individual investors' choices at the Zimbabwe Stock Exchange (ZSE). Using a Randomnizer.org (2019) tool, 291 respondents were randomly selected from the ZSE for this quantitative investigation. Multiple regression and correlation analysis were used to do an inferential analysis of the data, which was gathered via structured questionnaires. It was found that individual investor decision in the ZSE was influenced by behavioural factors, namely anchoring behaviour, gamblers fallacy, overconfidence, and loss aversion. The study used a Randomnizer.org (2019) tool to generate numbers for the respondents of the study. This study used Yamane formula to determine a sample size for large populations.

A study by Owusu and Laryea (2023) in Ghana established that individual investors were majorly influenced by anchoring behavior. The study found that the respondents' susceptibility to anchoring behaviour were significantly impacted by their level of knowledge and gender. It was shown that compared to male participants, female individuals used anchor information more frequently. Higher knowledge levels did not decrease anchoring behavior; rather, they increased it in both genders. A structured questionnaire with an embedded experiment was used to collect primary data for this study, which used an experimental research design. There is a drawback to this study's quasi-experiment approach when it comes to evaluating the research instruments' external validity. Since establishing the association between the study factors was the primary goal of the investigation, the causality of the research variables cannot be measured.

Barno, et al., (2021) examined the moderating effect of financial literacy on the relationship between anchoring behavior and investment decision-making among SMEs in Nairobi County. The survey included 383 respondents who were chosen using a stratified random sampling technique out of the 102,821 firm owners who were the target audience. A multiple hierarchal regression model was employed in the study to evaluate the moderating impact of financial literacy on the association between individual investment decision-making and anchoring behavior. It was discovered that investing decisions and anchoring behavior had a favorable and significant association. Furthermore, the connection between the dependent and independent variables was positively attenuated by financial literacy. This research concentrated on individual investors at NSE; the study was centered on the investment choices made by SMEs in Nairobi County.

2.2.5 Moderating effect of market information

Ahmad and Shah (2020) examined the impact of overconfidence heuristic-driven bias on individual decision making and performance at the Pakistan Stock Exchange. In addition, the study assessed the moderating effect of financial literacy and mediating effect of risk perception by applying the Kenny and Baron Technique The study employed a cross-sectional research approach and involved 183 individual investors from the Stock Exchange. The study established that overconfidence heuristic-driven bias had a significant impact on individual decision making and performance at the Pakistan Stock Exchange. In addition, the study found that overconfidence and decision-making were significantly moderated by financial literacy, while risk perception had an insignificant mediating effect on overconfidence and investment decision-making. Notably, the

reviewed study used risk perception as the mediating variable and financial literacy as the moderating variable while the current study used market information as the moderating variable

Joshi and Agrawal (2021) assessed the moderating effect of investor information on political events, occupation, income level, and economic factors on investment behavior and their influence how investment decision making is affected by behaviors in Udaipur, India. A sample of 468 investors from Udaipur was used. The study used both qualitative and quantitative data in a descriptive research approach. Individual investment behavior was found to be highly affected by cognitive dissonance and anchoring behavior. The study also demonstrated that the association between behavioral characteristics and investor decision-making was significantly moderated by market information. While this study employed a correlational research strategy, the previous study relied on a descriptive research design.

Gill et al., (2018) investigated the mediating role of information search on factors affecting individual investor decision making behaviour at the Pakistan Stock Exchange. Economic expectation and overconfidence behavioral factors were assessed, while trading frequency was used to measure investment decision-making. Quantitative data was obtained through a questionnaire targeting 270 individual investors. The study found that investors' decision-making was significantly affected by economic expectation; however, the effect became negligible and negative when information search was added as a mediating variable. Both before and after the mediation variable was included, it was discovered that overconfidence had a positive and significant association with the

decision-making of individual investors. Information search was used as the mediator in the study, whereas this study employed market information as the moderator.

The moderating influence of risk perception on Nigerians' financial literacy and investment decisions was investigated by Ademola, Musa, and Innocent (2019). A structured questionnaire was utilized to gather data from a sample of 378 respondents for the study. The study discovered a strong positive correlation between risk perception, financial literacy, and stock exchange investment decision-making using the Partial Least Square (PLS) approach. Furthermore, a positive but negligible correlation was found between investing decisions and financial literacy. It was discovered that the association between financial literacy, knowledge, and investment decision-making was significantly moderated by risk perception. However, the study used risk perception as the moderating variable; this research assessed the moderating effect of market information.

A study on heuristic biases and individual stock exchange investment decisions was conducted by Kasoga (2021). The moderating influence of financial literacy and the mediating role of risk tolerance on the link between the research variables were also investigated in this study. The study focused on 316 individual investors and used a descriptive research design. SEM was used to examine the primary data, which were gathered via a questionnaire. The results showed that the association between heuristic elements and investor decisions is not significantly mediated by financial literacy. On the other hand, risk tolerance significantly and favorably mediates the relationship between investor decision-making and the heuristic elements.

Okumu, et al., (2022) found that information asymmetry and perception of market volatility significantly moderated the relationship between firm-specific factors and

individual participation in the initial public offers. This was in relation to the moderating effect of automation of firm-specific factors and the performance of initial public offering stocks at the NSE. The research design used in the study was longitudinal and descriptive. Panel data from secondary sources covering 64 NSE-listed businesses between 2006 and 2019 was used in the study. With STATA's assistance, multiple regression analysis was used to examine the acquired data. The research made use of secondary data. However, primary data was used in this study.

2.2.6 Individual investor decision making

Behavioral factors in finance describes how stock market decision-making by individual investors is typified by the incorporation of psychological variables and biases into the investment process. Unlike traditional finance models that assume rational decision-making, behavioral factors recognize that investors often deviate from purely logical choices due to emotions, cognitive biases, and social influences (Shah, et al.,2018). According to Gill, et al., (2018), Individual investors may be swayed by fear, greed, and cognitive shortcuts, leading to suboptimal decisions. The extent and relevance of the relationship between behavioral characteristics and decision-making have been the subject of contradictory research.

Shah, Ahmad, et al. (2018) explored the heuristic biases in investment decision-making and perceived market efficiency in the Pakistan Stock Exchange (PSX) and discovered that overconfidence, representativeness, availability, anchoring behavior, and availability all had a negative effect on individual decision-making at the PSX. In this study investor decision making was measured by the trading volume at the PSX. The study was carried out by targeting 143 individual investors. Convenient purposive sampling was employed

in the study to get data from the participants. Data analysis techniques included correlation and regression analysis. The study's gap is that it was conducted in a nation with a higher GDP and a higher level of development. This study was carried out in Kenya which has a lower GDP.

Kartini and Nahda (2021) sought to assess the influence of behavioral biases on individual investment decisions in Indonesia. The psychological factors examined were classified into emotional and cognitive factors. The emotional factors examined were herding behavior, while the cognitive factors included optimism biases, loss aversion, anchoring behaviour, and overconfidence. The study used a quantitative approach based on snowball sampling and survey design. This led to the determination of a sample size of 165 investors from Yogkarta. The study adopted a one-sample t-test to analyze data and hypothesis testing. It established that both cognitive and emotional factors under the study did not have a negative impact on investment behaviors made by individuals. However, the study analyzed data using a T-test, while this research used multiple regression and correlation analysis.

Cao, et al., (2021) examined the effect of behavioral elements on the decision-making process of individual investors in the Vietnam Stock Exchange. The study looked at the following predictor variables: prospect (loss aversion, regret aversion, mental accounting), heuristic (availability bias, gamblers' fallacy, anchoring behavior, overconfidence, and representativeness), herding, and market information (news from politics and economic changes, reaction to price changes, market information, past trends of stocks, and price changes). The trade volume and transaction frequencies were used to measure the dependent variable (individual investor decision making). The primary data

analysis was conducted through confirmatory factor analysis, exploratory factor analysis, and structural equation modeling. 250 individual investors provided information by means of a structured questionnaire. The study established that all the behavioral characteristics examined significantly affected individual investors decision making process.

Wanjohi and Mwita (2019) investigated the impact of behavioral characteristics on the choices made by individual investors in NSE-affiliated investment banks and stock brokerage businesses. The study's scope was restricted to evaluating how investor decision-making is impacted by loss aversion, overconfidence, herding, and anchoring behavior. The frequency of purchases was used in investment banks to gauge individual decisions. 384 individual investors made up the sample for this descriptive study design. The analysis found a strong correlation between each independent variable and the choices made by individual investors. However, in carrying out this study, investment banks were included, which are governed by the confidentiality principle, and thus, it is not possible to get enough information. To fill this gap, investment banks were exempted in this study.

2.3 Theoretical Framework

The study was anchored on behavioral finance theory, prospect theory and expected utility theory.

2.3.1 Behavioral finance theory

Daniel Kahneman and Tversky introduced behavioral finance theory in 1970 (Takemura, 2021). According to the hypothesis, financial market arbitrage limits and instances of

irrational behavior can cause markets to misrepresent underlying economic principles. In an effort to explain why people make irrational financial decisions, the theory combines classical economics and finance with theories from behavioral and cognitive psychology. In this idea, investor competition seeking out anomalous returns causes prices to attain their true worth. Although it is assumed that markets produce unbiased forecasts of the future, not all investors are logical (Shukla et al.,2023).

According to Sahu, Padhy and Dhir (2020), under behavioral finance theory, it is assumed that financial markets are inefficient in terms of information flow and thus the participants have a huge impact on the self-control inclinations or normal influences rather than the totally rational ones. The investors' physical and mental health frequently affect their financial decisions with or without sufficient information on the market trends.

Finance theory exhibits several strengths that contribute to its prominence in understanding how decisions made during investments are affected by behavior. One of the basic strengths of the theory lies in its mathematical objectivity, which provides a precise framework for analyzing relationships and principles such as risk and return. According to Langat and Rop (2019) when the theory is used along with other theories such as portfolio theory, it offers valuable tools for investors to make informed decisions and construct optimized portfolios. Masema (2019), in a study investigating the impact of herding behavior on the market performance of insurance businesses listed at the Nairobi Securities Exchange, revealed that the theory has useful applications in risk management, corporate financial management, and investment decision-making.

Takemura, (2021) criticized the behavioral finance theory on the grounds that human behavior is highly contextual and can vary greatly based on individual, cultural, and situational factors, making it difficult to establish a comprehensive framework applicable to all scenarios including making investment decisions. Sahu et al., (2020) also criticized behavioural finance theory on the basis that it relies so much on hindsight analysis which may not give accurate predictions about future market behaviours. The theory also has a limitation of focusing on past behaviour in investment decision making rather than offering predictive abilities for future financial solutions.

However, these limitations have been addressed by advanced models such as prospect theory and therefore, in assessing the relationship between behavioural finance theory and individual investor decision making at the NSE, this theory was used to explain anchoring behaviour, overconfidence and herding objectives of the study.

2.3.2 Prospect theory

Prospect theory was espoused by Tversky and Kahneman in 1979. Prospect theory's fundamental premise is that choices are evaluated in light of a benchmark, such the current situation. According to the second hypothesis, people are more willing to take a chance on losses than they are on gains (as opposed to the reference point). As long as markets have existed, there will always be irrationality among investors.

Meng and Weng (2018) state that prospect theory makes the assumption that people evaluate possible investment outcomes in terms of gains and losses from a reference point rather than absolute wealth, indicating a psychological impact on wealth change rather than money itself. Additionally, the theory suggests that individual evaluation of probabilities is often distorted, with an individual under-weighing large probabilities and

over-weighing small possibilities, leading to a decision not aligned with objective rationality.

According to Farooq and Sajid (2015), stock market investors make decisions about their investments based on psychological shortcuts and heuristics that make difficult decisions easier to understand. This leads to predictable biases, such as becoming risk-averse in circumstances where gains could be possible and risk-seeking in situations where losses could occur. Thus, it is imperative that behavioral factors influencing an individual's decision to invest be understood and acknowledged in this regard. This helps the stock market and financial institutions create or design more effective investment products, offer customized advice, and put in place regulatory measures that take investor behavior into account (Sattar, Toseef, & Sattar 2020).

Market information is closely aligned with prospect theory, which posits that individuals evaluate potential gains and losses relative to a reference point rather than absolute outcomes. This theory suggests that investors exhibit loss aversion, meaning they experience losses more intensely than equivalent gains. Consequently, market information can influence investor behavior by shaping their perceptions of risk and potential returns, leading them to react more strongly to negative news than positive developments. As such, the way market information is presented and perceived can significantly impact individual decision-making in financial contexts (Sattar, et al., 2020). However, the theory has been criticized by other scholars such as Meng and Weng (2018) for its static nature, failing to account for how decisions evolve over time or with experience

Thus, the theory helps illustrate why investors often react differently to gains and losses and why they hold onto losing stocks, hoping for a recovery while quickly selling winning ones. Furthermore, prospect theory provides a basis for understanding individual investors' psychology and decision-making processes; this allows researchers to take note of the anomalies and patterns that can impact stock market dynamics by offering insights into designing strategies that align better with investor behavior. The individual investor decision-making and market information variables were anchored on the prospect theory.

2.3.3 Expected utility theory

In 1738, Daniel Bernoulli wrote a research article titled "Exposition of a new theory of measurement of risks," which laid the foundation for expected utility theory (EUT). John von Neumann and Oskar Morgenstern furthered this idea in 1944 (Moscati, 2023). According to the expectation of utility theory, people will select the course of action that maximizes their utility given the likelihood of various outcomes. Since a fair gamble has an expected value of zero, persons who are risk adverse may decline it. This is taken into consideration by the anticipated utility hypothesis. Individuals with concave utility functions and diminishing marginal wealth utility are considered to be risk averse.

According to Moscati (2023), the theory assumes that in making any investment decision, investors will make rational decisions by weighing the potential outcomes of their investment decisions. Investors are able to assess risks associated with different investment opportunities and expected benefits (utilities), thus helping them make decisions that maximize their overall satisfaction (Małecka, 2020). The theory becomes more prominent when behavioral finance intersects with psychological and emotional factors. In such instances, investors tend to deviate from rational thinking while making

investment decisions due to several biases and emotions that influence their perception of benefits and risk assessment (Khrennikov, 2023).

Expected Utility Theory has several strengths that contribute to its prominence in decision-making under uncertainty. EUT provides a systematic and coherent framework for evaluating choices by incorporating both preferences and probabilities (Małecka, 2020). Its mathematical rigor allows for quantitative analysis of decision problems, facilitating a clear understanding of risk and uncertainty. EUT also aligns with the principle of rational decision-making, as individuals are assumed to make choices that maximize their expected utility. The theory was applied by Ludenyo (2021) to evaluate the impact of cognitive biases on teachers in Vihiga, Kenya's decision-making process when making individual stock market investments.

The theory has faced criticism for its unsuitability in the field of behavioral finance. Critics contend that people frequently display behavioral biases and deviate from expected utility calculations, which implies that people do not always make decisions in a rational manner as suggested by the theory (McCarthy et al., 2020). According to Ruggeri et al., (2020), the weaknesses and limitations of Expected Utility Theory were remedied by Prospect Theory, which incorporates psychological factors like loss aversion and framing effects. This provides a more accurate model of human decision-making under uncertainty. The Expected Utility theory was relevant in this study as it supported the risk attitude variable.

2.4 Conceptual Framework

A diagrammatic representation of the proposed link between the variables used in a study is called a conceptual framework. Using market information as a moderator variable, this

study evaluated the relationship between individual investor decision making at the NSE, Kenya and behavioral factors. Behavioral factors were the independent variable while individual investor decision making was the dependent variable. Behavioral factors were conceptualized by risk attitude, overconfidence, herding behaviour, and anchoring behaviour variables. The NSE's individual investor decision-making process was conceptualized through trading frequency, with access to market information serving as a moderating variable.

Independent Variable

Behavioural factors

Risk Attitude
- Risk perception
- Risk aversion
- Risk Avoidance

Herding Behaviour
- Position Concentration
- Information source
- Peer influence

Dependent Variable

Individual Investor Decision Making
- Buying and selling
- Frequency of trade

Overconfidence
- Positive illusion
- Self-attribution
- Skill perception

Anchoring behaviour
- Historical prices
- Earnings estimates
- Comparison effect

Moderating Variable

Market Information
- Access to Market information
- Financial statements
- Social media platforms
- Economic factors.

Figure 2.1 Conceptual Framework

Source: Adopted and Modified from Prospect Theory (Tversky & Kahneman, 1979).

2.5 Identification of Knowledge Gap

The empirical literature indicates prior research efforts to assess the relationship between individual investor decision-making at the securities exchange market and various behavioral factors. However, many of these studies overlooked the potential influence of control variables, focusing primarily on the direct associations between behavioral factors and individual decision-making. This study evaluates the moderating effect of market information, specifically its role as an incentive, on the relationship between independent and dependent variables. Furthermore, the review reveals a trend toward univariate analyses, as many studies concentrated on the direct relationship between a single independent variable and the dependent variable. Consequently, this study investigated the collective relationship between four predictor variables; that is risk attitude, herding behavior, anchoring, and overconfidence on individual investor decision-making. The study was anchored on behavioural finance theory, prospect theory and expected utility theory.

Previous studies' research technique incorporated secondary data, which is insufficient to explain the behavioral characteristics of individual investors. It is evident that the bulk of research' primary goals-measuring investors' investment decision-making were not focused on behavioral elements when utilizing secondary data. This study made use of primary data from active individual investors to evaluate their behavioural influences on the trading patterns at the NSE. Finally, most studies on behavioral factors have been conducted in developed countries which differ largely on the market conditions, economic and political environment. These countries have advanced polices and legislations that regulate investment at stock exchange markets, including policies on

access to market information, incentives and management of macro-economic factors that affect individual investor decision making. As a result, the scientific literature on the relationships between the variables being studied in developing nations, particularly those in the Sub-Saharan region, is scarce. This study addressed this geographical gap as well as the conceptual, theoretical framework, and scope gaps. It evaluated the relationship between financial behavior and the decision-making of individual investors at the NSE, Kenya, moderated by market information.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research design and philosophy employed in the study. It details the target population, sampling methods, and data collection instruments, along with the validity and reliability of these instruments. Additionally, the chapter describes the processes for acquiring, analyzing, and presenting data. Finally, it addresses the ethical considerations taken into account throughout the study.

3.2 Research Design

The study adopted a positivist research philosophy due to its applicability in ensuring objectivity and impartiality, free from personal or external bias (Kothari, 2017). Positivism is well-suited for quantitative research, especially when analyzing relationships between variables like behavioral factors, market conditions, and individual investor decision-making. The approach relies on scientific methods, including hypothesis formulation and testing, which allows for a systematic evaluation using quantitative data, leading to the acceptance or rejection of hypotheses (Kirui & Naibei, 2023).

A research design is a blueprint or overall strategy selected by researchers to enable them to integrate different research components coherently, clearly, and logically, ensuring that the research problem is adequately addressed (Kothari, 2017). Research design for this study was correlational in nature. The researcher was able to compare multiple

elements at once with this design, including the strength and direction of the association between the study variables.

One type of systematic investigation over which the researcher has no direct control is correlational study design. Additionally, it allows the researcher to measure the correlation between the study variables and the testing of hypotheses. The research design is considered appropriate when carrying out studies that aim to explain why certain occurrences take place and establish the contribution of important elements to that occurrence without changing or manipulating the predictor variables.

3.3 Location of Study

The study was conducted in Kenya, focusing on individual investors actively trading at the Nairobi Securities Exchange (NSE). The research targeted investors using services from the licensed brokerage firms, which serve as intermediaries between investors and the NSE. These brokerage firms play a critical role in facilitating trading activities for investors by offering market insights, executing trades, and managing portfolios. The study's scope covered all individual investors at the NSE, regardless of the specific securities traded or their experience level, providing a broad understanding of investor behavior and decision-making

3.4 Target Population

The total number of objects that the researcher is interested in examining and drawing conclusions from is known as the target population (Kothari, 2017). As a result, everyone who purchases or sells securities from NSE-listed businesses was included in the study's target audience. According to the CDSC register (2023), there were 2.03 million retail

(individual) investors in Kenya. These investors buy and sell securities through 17 licensed brokerage firms (Appendix IV). Stock brokers licensed with NSE were selected for this study because they comply with NSE regulations and other regulations including those of Capital Markets Authority (CMA). These stock brokerage firms are spread across the country.

3.5 Sample and Sampling Procedure

The process, procedure, or technique of selecting a subgroup of the population to take part in a study is known as sampling (Etikan & Bala, 2017). Kothari (2017) defines sampling as the act of choosing a subset of items or people from a population so that the chosen group has characteristics that are typical of the larger group from which they were chosen. Probability sampling was used in the study to get a sample. Probability, according to Creswell and Creswell (2017), enables the researcher to deliberately choose volunteers based on availability, accessibility, and particular traits that are pertinent to the study. In this study, simple random sampling techniques was used. As suggested by Cooper and Schindler (2014), subjects with homogenous characteristics can be handled effectively through simple random sampling techniques. The technique allows the researcher to get a higher response rate save time and cost so as to meet the budget of the study.

The Yamane (1967) formula for sample determination from large populations was used to determine the study's sample size.

The formula is given as:

$$n = \frac{N}{1 + Ne^2}$$

In the formula;

N is the total population of the study

n is the required sample

e ^{2} is the tolerance at a desired level of confidence which in this case was 95%

Therefore, to substitute the formula

$$n = \frac{2,030,000}{1+2,030,000(0.0025)} \qquad = n = \frac{2030,000}{1+5076} \qquad n = 399.9211$$

As a result, the study's sample size was 399 respondents. The respondents were chosen at random from NSE-registered stock brokers using simple random sampling.

3.6 Data Collection Instrument

A Structured questionnaire was used as an appropriate data collection method. Kothari (2017) asserts that questionnaires are an effective way to get data from a sizable sample size. There were two sections to the questionnaire. Section A of the questionnaire was used to collect demographic data from the participants, encompassing details about their age, gender, highest educational achievement, and frequency of NSE trading. The study's main objective was the subject of data collection in the second section of the questionnaire. Measurable indicators of risk attitude, herding behavior, overconfidence, anchoring behavior, and market information were included. The opinions of individual investors about behavioral aspects, market information, and individual investor decision making at NSE were measured using a five-point Likert scale.

3.6.1 Validity of the instrument

The extent to which a research tool measures what it is intended to measure is known as its validity (Suen & Sholihah, 2019). Assessment of the instrument validity is a critical concept in research as it ensures that it collects accurate data that represents the construct being studied. According to Kothari (2017), researchers use a combination of construct, content, and face validity measures. In this study only construct, content, and face validity were measured. These were used to ensure that the research instruments were relevant, accurate, and meaningful, thus enhancing the trustworthiness and credibility of the research findings. The degree to which a particular measure encompasses every construct in a study is known as content validity (Creswell & Creswell, 2017). Expert judgments in the field of financial brokerage firms, and supervisors were used to ensure that research questions and items were relevant, comprehensive and representative. To achieve construct validity, a thorough literature review was conducted to evaluate the relationship between the study's variables and determine whether or not they relate as predicted by current theories or hypotheses (Edmonds & Kennedy 2016). Construct validity measures the extent to which a research instrument measures the underlying theoretical concepts (Kothari, 2017). Face validity is related to the appearance of the instrument. It involved assessing whether the questions in the questionnaire or interview schedule were relevant and if they made sense to the respondent.

3.6.2 Reliability of the instrument

A research instrument is considered reliable if it can yield consistent results after several trials or each time it is used (Taherdoost, 2016). Internal consistency reliability, which gauges how well the questionnaire's items inside the measure are consistent in their

responses, were the foundation of this study. The reliability of the instrument was assessed using Cronbach's alpha coefficient. A greater consistency of the instrument is indicated by Cronbach's alpha coefficient values which should be 0.7 and above (Mugenda & Mugenda, 2013). For the purpose of gathering information for the reliability assessment, the researcher performed a pilot study with 39 individual investors which was 10% of the sample size from a stock brokerage firm in Nairobi County that was not included in the final study. According to Creswell & Creswell (2017), 10% of the target population is sufficient for a pilot study. The obtained data was coded into SPSS for further analysis. The reliability test revealed an alpha coefficient of 0.865 which was deemed sufficient as indicated in Table 3.1.

Table 3.1

Reliability Test

Constructs	Cronbach's Alpha Coefficients	Items
Risk attitude	0.889	6
Herding behaviour	0.901	6
Overconfidence	0.799	6
Anchoring	0.858	6
Market information	0.852	6
Individual Investor decision making	0.896	6
Overall reliability	0.865	36

3.7 Data Collection Procedures

Data collection is an organized and structured process of gathering information from different sources using various instruments for analysis to test research hypotheses or answer specific research questions (Barrett & Twycross, 2018). After the researcher received approval to collect data from the board of graduate studies and the ethical committee of the University of Kabianga, the researcher proceeded to obtain other permits from the National Commission of Science, Technology, and Innovation, the Ministry of Education and the Office of the County Commissioner before the commencement of the data collection exercise. Data was collected with the aid of two research assistants who were trained in advance on the organization and data collection procedures. After obtaining the necessary permits, the researcher met with brokerage firm managers to seek assistance in reaching out to active investors. Data was collected over a two-week period, during which walk-in investors through the guidance of the management of the brokerage firms were given questionnaires using a drop-and-pick method. Additionally, the researcher contacted active investors who agreed to provide data under the condition of anonymity, which was guaranteed to them.

3.8 Data Analysis and Presentation

Data analysis involves the systematic process of cleaning, analyzing, manipulating, and interpreting data to uncover important patterns that can help draw conclusions about a phenomenon and make informed decisions (Creswell & Creswell, 2017). On the other hand, data presentation provides a clear and understandable explanation of the examined data. The study relied on quantitative data gathered through a structured questionnaire. After collecting all the questionnaires, they were coded into SPSS version 26 for analysis

following sorting, organizing, and verifying their completeness. Descriptive statistics using frequency, mean, and standard deviation as well as inferential statistics using regression models and correlation were used to examine the nature and direction of the relationship between the study variables.

The following regression model was adopted for inferential statistics:

$$Y = \beta_0 + \beta_i X_i + \varepsilon \text{ ---(3.1)}$$

Where

Y = Dependent Variable (Individual Investor Decision Making)

β_0 = constant

X_i = independent variable

β_i Represents beta coefficients for the independent variables

ε = Error term

The model was replicated for all the independent variables

The combined relationship model was given as

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon \quad \text{---(3.2)}$$

In the above model,

Y = Individual Investor Decision Making

β_0 = constant

X_1 = Risk attitude

X_2 = Herding Behaviour

X_3 = Overconfidence

X_4 = Anchoring behaviour

$\beta_1, \beta_2, \beta_3, \beta_4$ = Beta coefficient

ε = Error term

The direction of the association between the predictor variables- risk attitude, herding behavior, overconfidence, and anchoring behavior-and the NSE decision-making process for individual investors was shown by the correlation coefficient (R). While the significance was tested by the coefficient of determination (R^2) and the beta Coefficients ($\beta_1 - \beta_4$).

In order to evaluate the moderating impact of market information on the relationship between behavioural factors and individual investor decision making at the NSE, the study employed the methodology developed by Baron and Kenny (1986). According to Creswell and Creswell (2017), this approach provides a methodological way to look into whether the presence of a moderating variable affects how an independent variable relates to a dependent variable. Baron and Kenny proposed a three-step process to test for the moderating effect of a variable in a regression analysis:

The independent variable's regression on the dependent variable was looked at in the first stage. That is the relationship between the predictor variable (Risk attitude, Herding Behaviour, Overconfidence and Anchoring behaviour) and individual investor decision making at the NSE (Y) was examined without considering the moderating variable (Market information or M). This is indicated in model 3.3

$$Y = \beta_0 + \beta_i X_i + \varepsilon \text{ --(3.3)}$$

In the model,

Y= Individual Investor Decision Making

β_0= constant

β_i = Regression coefficient for Risk attitude, Herding Behaviour, Overconfidence and Anchoring behaviour (Independent variables)

X = Independent variables

ε =Error term

Since the study used simple regression, the model was therefore replicated for all the independent variables

Step two involved analyzing the relationship, exclusive of the independent variable (X), between the moderator variable (M) and the dependent variable (Y). This was to establish whether the moderator variable was an explanatory variable. This was illustrated by model 3.4

$$Y = \beta_0 + \beta_i X_i + \beta_i X_5 + \varepsilon \text{ --(3.4)}$$

In the model,

Y= Individual Investor Decision Making

β_0= constant

β_i = Regression coefficient for Risk attitude, Herding Behaviour, Overconfidence and Anchoring behaviour (Independent variables)

X_i = Independent variables

X_5 = Moderating variable

ε = Error term

Step three involved fitting a Moderated Multiple Regression (MMR) model, in which the moderator was added and the dependent variable was regressed on each of the predictor variables. This is illustrated by model 3.5

$$Y = \beta_0 + \beta_i X_i + \beta_i X_i M + \varepsilon \text{ --(3.5)}$$

In the model;

Y = Individual Investor Decision Making

β_0 = constant

β_i = Regression coefficient for Risk attitude, Herding Behaviour, Overconfidence and Anchoring behaviour (Independent variables)

X_i = Independent variables

$X_i M$ = The interaction term between each independent variable and the moderator variable obtained through cross multiplication.

ε = Error term

The Moderated Multiple Regression model was replicated for all the independent variables separately.

The relationship between the independent variable (X) and the dependent variable (Y) was implied to be moderated by the moderator variable (M) if the interaction term (X * M) was statistically significant in predicting the dependent variable (Y) from the model.

3.9 Ethical Consideration

All ethical considerations were observed when carrying out this study. Before commencing the data collection exercise, a clearance letter detailing the purpose of the study was issued by the Board of Graduate Studies, University of Kabianga (Appendix iv). In addition, permission from the National Commission for Science, Technology, and Innovation was sought (Appendix v). During data collection, care was taken to protect the rights of everyone participating in the study, particularly the respondents. The researcher was liable for ensuring that the respondents' rights were not violated during the study. To guarantee that the informed consent requirement was met, each participating brokerage firm got a letter of introduction and a request to participate. All respondents were informed of the confidentiality provision and that their privacy was guaranteed at all times.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.1 Introduction

This section presents the study findings in alignment with the research objectives. The results, derived through descriptive and inferential statistical analyses using SPSS Version 26, provide a foundation for the subsequent discussion, conclusions, and recommendations. The chapter covers several subsections, including the response rate, demographic details of the respondents, descriptive statistics on behavioral factors, and inferential statistics explaining the relationships between the study variables.

4.2 Response Rate

The study targeted a population of 2.03 million investors at the Nairobi Securities Exchange. Questionnaires were administered to a sample of 399 respondents that were determined through Yamane (1967) formula. Table 2.1 presents a summary of the response rate.

Table 4.1

Response rate

Response Rate	Sample size	Percentage
Returned Questionnaires	342	85.7
Not retuned/incomplete	57	14.3
Total	399	100

The researcher collected 342 fully completed questionnaires, achieving a response rate of 85.7%. Additionally, 57 questionnaires were excluded due to incomplete responses or inconsistencies. Mugenda and Mugenda (2013) suggest that a response rate of this magnitude is sufficient for drawing valid conclusions in such studies, making it appropriate for this research.

4.3 Demographic Information

The study collected personal details of the respondents which included gender, age, academic level and business activities that the respondents were engaged in. These information was critical in understanding the diversity of the sample and identifying patterns or trends in investment behavior across different demographic groups. A summary of this information is presented in sub-section 4.3.1 to 4.3.4.

4.3.1 Gender of the Respondents

Gender of the respondents was examined to identify potential differences in investment behaviors between male and female investors at the NSE. These findings are presented in Table 4.2.

Table 4.2

Gender of the Respondents

Gender of the Respondent	Frequency	Percent
Male	194	56.7
Female	148	43.3
Total	342	100.0

As indicated by Table 4.2, majority of the respondents were male 194(56.7%) while 148(43.3%) respondents were female. These findings imply that both gender were well represented in the study. Therefore, the findings are representative.

4.3.2 Age of the respondents

The study also sought to assess the age distribution of the sampled respondents. This was critical in assessing how and whether age influences investment behavior and decision-making processes. These findings are presented in Table 4.3.

Table 4.3

Age of the Respondents

Age of the Respondent		Frequency	Percent
Valid	18-27 years	39	11.4
	28-37 years	124	36.3
	38-47 years	116	33.9
	Over 48 years	63	18.4
	Total	342	100.0

The findings in Table 4.3 above shows that 39(11.4%) of the respondents were between the ages of 18-27 years, 124(36.3%) between 28-37years, 116(33.9%) between the ages of 38-47 years and 63(18.4%) were over 48 years. From the findings, majority of individual investors fall under the age set of 28-37 years. This is backed up by a study by Wanjohi and Mwita (2019) who established that most individual investors in NSE-

affiliated investment banks and stock brokerage businesses were between the age of 28 to 47 years.

4.3.3 Education Level of the Respondents

The study examined the level of education attained by the individual investors. This information showed the influence of educational background on investment behavior. Education level can significantly impact an individual's financial literacy, risk assessment abilities, and susceptibility to cognitive biases. These findings are presented in Table 4.4

Table 4.4

Education Level of the Respondents

Level of education		Frequency	Percent
Valid	PhD	52	15.2
	Masters	68	19.9
	Degree	93	27.2
	Diploma	91	26.6
	Certificate	31	9.1
	Others	7	2.0
	Total	342	100.0

The findings presented by Table 4.4 shows that 52(15.2%) of the respondents were PhD holders, 68(19.9%) masters holders and 93(27.2%) were degree holders. Also, 91(26.6%) respondents were diploma holders, 31(9.1%) certificate holders and 7(2%) of the

respondents had attained other educational levels. This shows that the responses from the study participants catered for all the education levels and categories.

4.3.4 Business Activities engaged by the Respondents

The study examined business activities engaged in by individual investors. This information was essential in establishing how different types of business activities influence investment behaviors. These findings are presented in Table 4.5.

Table 4.5

Business Activity engaged by the Respondents

Business Activity	Frequency	Percent
Formal employment (public sector)	83	24.3
Formal employment (private sector)	110	32.2
Casual jobs	40	11.7
Farmer	42	12.3
Small-scale business	61	17.8
Others	6	1.8
Total	342	100.0

The findings in Table 4.5 showed that 83(24.3%) of the respondents had formal employment in the public sector, and 110(32.2%) were engaged in formal employment in the private sector. The results also revealed that 40(11.7%) of the respondents had casual jobs, 42(12.3%) were farmers, 61(17.8%) were small-scale business persons and 6(1.8%) respondents were engaged in other business activities. The findings therefore

revealed that respondents from various sectors of the economy were considered in the study.

4.4 Descriptive Statistics

The main focus of the study was to assess the relationship between risk attitude, herding behaviour, overconfidence, anchoring behaviour and individual investor decision-making at the Nairobi Securities Exchange. In addition, the study examined the moderating effect of market information on the relationship between behavioural factors and individual investor decision-making at the Nairobi Securities Exchange. Descriptive statistics were carried out in form of frequencies, mean, and standard deviation.

4.4.1 Risk attitude and investor decision making

The study provided statements on risk attitude and individual investor decision making at the NSE. The respondents were required to indicate the extent to which they agreed to the given statements using the provided five-point Likert scale. The findings are summarized in Table 4.6.

Table 4.6

Frequencies, Mean and Standard Deviation for Risk Attitude

Statements of risk attitude	5 (SA)	4 (A)	3 (N)	2 (D)	1(SD)	Mean	SD
I always invest in the securities market without considering the risk associated with it	12(3.5%)	43(12.6%)	88(25.7%)	199(58.2%)	0	2.6140	0.8373
I usually invest in low-risk securities, regardless of the low returns.	15(4.4%)	171(50%)	125(36.5%)	28(8.2%)	3(0.9%)	3.4883	0.7454
I invest in securities that I am able to sell in a short period.	124(36.3%)	158(46.2%)	36(10.5%	11(3.2%)	13(3.8%)	4.0789	0.9670
I always seek financial advice from experts before investing at the NSE.	139(40.6%)	121(35.4%)	20(5.8%)	39(11.4%)	23(6.7%)	3.9181	1.2345
I always dispose of securities once they start losing value.	33(9.6%)	182(53.2%)	121(35.4%)	6(1.8%)	0	3.7076	0.6605
Risks associated with trading in the NSE discourage me from participating in the securities market.	101(29.5%)	138(40.4%)	87(25.4%)	16(4.7%)	0	3.9474	0.8580

The findings in Table 4.6 showed that 12(3.5%) respondents strongly agreed that they always invest in the securities market without considering the associated risk, 43(12.6%) agreed, 88(25.7%) were neutral and 199(58.2%) respondents disagreed. This revealed that most respondents disagreed that they always invest in securities market without considering the risk associated with a mean and standard deviation, (M=2.6140; SD=0.8373) respectively.

As to whether investors invested in low-risk securities regardless of the low returns, the findings revealed that 15(4.4%) respondents strongly agreed to the statement, 171(50%) agreed, 125(36.5%) remained neutral, 28(8.2%) disagreed and 3(0.9%) respondents strongly disagreed that they usually invest in low-risk stocks regardless of the low returns (M=3.4883; SD=0.7454).

Based on the study, 124 (36.3%) respondents strongly agreed, 158 (46.2%) agreed, 36 (10.5%) were neutral, 11 (3.2%) disagreed, and 13 (3.8%) respondents strongly disagreed that they invest in securities that they can sell in a short period. The mean (M=4.0789) and standard deviation (SD= 0.9670) revealed that most respondents agreed that they invest in stocks that they can sell in a short period.

In the study, it was also found that 139 (40.6%) respondents strongly agreed, 121 (35.4%) agreed, 20 (5.8%) remained neutral, 39 (11.4%) disagreed, and 23 (6.7%) strongly disagreed that they always seek financial advice from experts before investing at the NSE as indicated by a mean (M) of 3.9181 and a standard deviation (SD) of 1.2345.

In assessing whether the respondents always disposed of securities once they started losing value, the findings revealed that 33(9.6%) respondents strongly agreed with the statement, 182(53.2%) agreed, 121(35.4%) undecided, and 6(1.8%) respondents

disagreed that they always dispose of securities once they start losing value as indicated by a mean of 3.7076 and standard deviation of 0.6605.

Finally, in reacting to the statement as to whether risks associated with trading at the NSE discouraged investors from participating in the securities market, the study revealed that 101(29.5%) respondents strongly agreed with that statement, 138(40.4%) agreed, 87(25.4%) were undecided, and 16(4.7%) disagreed. This was indicated by a mean of 3.9474 and a standard deviation of 0.8580, implying that most of the respondents agreed with the statement that risks associated with trading at the NSE discouraged them from participating in the securities market.

The findings of this study are supported by those of Areiqatet al. (2019), who in his study, showed that risk perception and loss aversion significantly influenced the decisions made by individual investors at the ASE. Similarly, Maritim et al. (2022) and Langat and Rop (2019) established that risk aversion significantly influenced investor decision-making to participate at the stock market.

4.4.2 Herding behaviour and investor decision making

The study provided statements on herding behaviour and individual investor decision making at the NSE. The respondents were required to indicate the extent to which they agreed to the given statements using the provided five-point Likert scale. The findings are summarized in Table 4.7.

Table 4.7

Frequencies, Mean and Standard Deviation for Herding behaviour

Statements on herding behavior	5 (SA)	4 (A)	3 (N)	2 (D)	1(SD)	mean	SD
Positive feedback from other investors who have already invested at NSE encourages me to invest at NSE.	136(39.8%)	146(42.7%)	25(7.3%)	14(4.1%)	21(6.1%)	4.059	1.089
Positive feedback from my friends who have invested in NSE encourages me to invest at NSE.	148(43.3%)	144(42.1%)	24(7%)	9(2.6%)	17(5%)	4.161	1.016
I have invested in the securities market for fear of being left out.	27(7.9%)	19(5.6%)	45(13.2%)	130(38%)	121(35.4%)	2.126	1.186
I consider investment advisors in making my investment decisions	91(26.6%)	165(48.2%)	40(11.7%)	36(10.5%)	10(2.9%)	3.851	1.023
I have developed the interest to invest in the securities market because it is the current trend	49(14.3%)	120(35.1%)	66(19.3%)	85(24.9%)	22(6.4%)	3.2602	1.169
The positive information on the returns from trading at NSE by financial institutions encourages me to invest.	125(36.5%)	148(43.3%)	38(11.1%)	12(3.5%)	19(5.6%)	4.0175	1.058

The findings in Table 4.7 shows that 136(39.8%) respondents strongly agreed, 146(42.7%) agreed, 25(7.3%) neutral, 14(4.1%) disagreed, and 21(6.1%) respondents strongly disagreed that positive feedback from other investors who have already invested at NSE encourages them to invest in the same market. This revealed that most of the respondents agreed to this statement, as revealed by a mean of 4.0585 and a standard deviation of 1.0896.

As per the findings, 148(43.3%) respondents strongly agreed, 144(42.1%) agreed, 24(7%) were neutral, 9(2.6%) disagreed, and 17(5%)) strongly disagreed that positive feedback from their friends who had invested at NSE encouraged them to invest in the same securities market. Majority of the respondents agreed that positive feedback from their friends who had invested at NSE encouraged them to invest at NSE, (M=4.161; SD=1.016).

According to the results, 27(7.9%) respondents strongly agreed, 19(5.6%) agreed, 45(13.2%) remained neutral, 130(38%) disagreed, and 121(35.4%) strongly disagreed that they had invested at the securities market for fear of being left out. This shows that most respondents disagreed with this statement, as shown by a mean of 2.1257 with a standard deviation of 1.1859.

The study findings also revealed that, 91(26.6%) respondents strongly agreed that they consider investment advisors in making their investment decisions, 165(48.2%) agreed, 40(11.7%) undecided, 36(10.5%) disagreed, and 10(2.9%) respondents strongly disagreed to the statement. Most respondents agreed that they consider investment advisors when making their investment decisions with a mean of 3.8509 and a standard deviation of 1.0238.

Accordingly, the findings also revealed that 49(14.3%) respondents strongly agreed, 120(35.1%) agreed, 66(19.3%) remained neutral, 85(24.9%) disagreed, and 22(6.4%) strongly disagreed that they had developed interest to invest at the securities market because it was the current trend. This showed a mean of 3.2602 with a 1.1688 standard deviation.

The study also found that when the respondents were asked whether positive information on the returns from trading at NSE by financial institutions encouraged them to invest, 125(36.5%) respondents strongly agreed, 148(43.3%) agreed, 38(11.1%) were undecided, 12(3.5%) disagreed, and 19(5.6%) respondents strongly disagreed. Most respondents agreed with this, with a mean of 4.017 and a standard deviation of 1.058. These findings that herding behavior influences individual investor decision-making at the NSE were supported by those of Ludenyo (2021), who found a significant relationship between herding behavior and individual stock market investment decision-making.

4.4.3 Overconfidence and investor decision making

The study provided statements on overconfidence and individual investor decision making at the NSE. The respondents were required to indicate the extent to which they agreed to the given statements using a five-point Likert scale. The findings are summarized in Table 4.8.

Table 4.8

Frequencies, Mean and Standard Deviation for Overconfidence

Statements on overconfidence	5 (SA)	4 (A)	3 (N)	2 (D)	1(SD)	M	SD
I have enough knowledge of how trading at NSE operates.	27(7.9%)	69(20.2%)	97(28.4%)	126(36.8%)	23(6.7%)	2.8567	1.066
I have enough experience in trading at the NSE.	15(4.4%)	86(25.1%)	72(21.1%)	127(37.1%)	42(12.3%)	2.7222	1.102
I believe that the decisions I make when investing at NSE are right	37(10.8%0	162(47.4%)	67(19.6%)	48(14%)	28(8.2%)	3.3860	1.108
I follow trends in the performance of NSE before making an investment decision.	84(24.6%)	162(47.4%)	38(11.1%)	28(8.2%)	30(8.8%)	3.7076	1.179
My financial skills help me in making investment decisions.	85(24.9%)	173(50.6%)	49(14.3%)	21(6.1%)	14(4.1%)	3.8596	0.994
I rely on knowledge acquired from investment workshops when trading in the securities market	56(16.4%)	148(43.3%)	58(17%)	61(17.8%)	19(5.6%)	3.4708	1.127

Findings in Table 4.8 revealed that 27(7.9%) of the respondents strongly agreed that they had enough knowledge of how trading at NSE operates, 69(20.2%) agreed, 97(28.4%) were neutral, 126(36.8%) disagreed, and 23(6.7%) strongly disagreed to the statement (Mean=2.8567 and SD= 1.0667).

According to the results on whether the individual investors had enough experience on trading at NSE, 15(4.4%) respondents strongly agreed, 86(25.1%) agreed, 72(21.1%) respondents were undecided. In comparison, 127(37.1%) respondents disagreed, and 42(12.3%) respondents strongly disagreed with the statement. This revealed a mean of 2.7222 and a 1.1027 standard deviation, as most respondents disagreed that they had enough experience trading at the NSE.

On assessing whether investors believed the decision they made when investing at NSE were right, the study revealed that 37(10.8%) of the respondents strongly agreed, 162(47.4%) agreed, 67(19.6%) remained neutral, while 48(14%) disagreed and 28(8.2%) strongly disagreed to that statement with a mean of 3.3860 and a standard deviation of 1.1085 implying that most of the respondents agreed to this statement.

Further, the findings showed that 84(24.6%) respondents strongly agreed, 162(47.4%) agreed, 38(11.1%) remained neutral, 28(8.2%) disagreed, and 30(8.8%) respondents strongly disagreed that they follow trends in the performance of NSE before making an investment decision. Most respondents agreed with this statement, with a mean of 3.7076 and a standard deviation of 1.1799.

Accordingly, 85(24.9%) respondents strongly agreed, 173(50.6%) agreed, 49(14.3%) were undecided, 21(6.1%) disagreed, and 14(4.1%) respondents strongly disagreed that

their financial skills help them in making investment decisions. Majority of the respondents agreed as per the mean of 3.8596 and 0.9945 standard deviations.

The results also showed that 56(16.4%) of the respondents strongly agreed, 148(43.3%) agreed, 58(17%) undecided, 61(17.8%) disagreed, and 19(5.6%) strongly disagreed that they rely on knowledge acquired from investment workshops when trading at the securities market. This revealed a mean of 3.4708 and a standard deviation of 1.1271. The findings of this study are supported by Ahmad and Shah (2020), Kansal and Singh (2018), Kuranchie-Pong and Forson (2022), Michael (2023), and Wafula, Charles, and Ondiek (2023).

4.4.4 Anchoring and investor decision making

The study provided statements on anchoring and individual investor decision making at the NSE. The respondents were required to indicate the extent to which they agreed to the given statements using the provided five-point Likert scale. The findings are summarized in Table 4.9.

Table 4.9

Frequencies, Mean and Standard Deviation for Anchoring

Statement on Anchoring	5 (SA)	4 (A)	3 (N)	2 (D)	1(SD)	M	SD
I often base my investment decisions on historical stock performance, even if the market information has changed.	48(14%	125(36.5%)	52(15.2%)	85(24.9%)	32(9.4%)	3.211	1.228
When making investment decisions at the NSE, I am influenced by the first piece of information I come across, even if it may not be the most relevant.	26(7.6%)	113(33%)	53(15.5%)	103(30.1%)	47(13.7%)	2.906	1.216
Media reports on a particular security significantly influence my perception and subsequent decisions, often becoming an anchor point for my analysis.	67(19.6%)	146(42.7%)	48(14%)	66(19.3%)	15(4.4%)	3.538	1.137
I use initial security prices as reference points when assessing the fair value of securities at the NSE.	65(19%)	169(49.4%)	66(19.3%)	33(9.6%)	9(2.6%)	3.725	0.966
My initial perceptions or estimates can influence my investment decisions, and I actively try to mitigate this bias.	39(11.4%)	197(57.6%)	63(18.4%)	43(12.6%)	0(0%)	3.678	0.836
My investment at the securities exchange is often influenced by financial analysists	93(27.2%)	130(38%)	55(16.1%)	51(14.9%)	13(3.8%)	3.698	1.333

The above findings showed that 48(14%) respondents strongly agreed that they often base their investment decisions on historical stock performance, even if the market information has changed, 125(36.5%) agreed, 52(15.2%) were undecided, 85(24.9%) disagreed, and 32(9.4%) strongly disagreed. This revealed a mean of 3.2105 and a standard deviation of 1.2287, as most respondents agreed to the statement.

The results indicate that 26(7.6%) respondents strongly agreed, 113(33%) agreed, 53(15.5%) remained neutral, 103(30.1%) disagreed, and 47(13.7%) strongly disagreed that when making investment decisions at the NSE, they are influenced by the first piece of information they come across, even if it may not be the most relevant. Most respondents agreed with this, while a substantial number disagreed, as shown by the mean of 2.9064 and standard deviation of 1.2169.

Similarly, 67(19.6%) of the respondents strongly agreed that media reports on a particular security significantly influenced their perception and subsequent decisions, often becoming an anchor point for their analysis, 146(42.7%) agreed, 48(14%) undecided, 66(19.3%) disagreed, and 15(4.4%) respondents strongly disagreed to the statement. Majority of the respondents agreed with this, with a mean of 3.5380 and a standard deviation of 1.1372.

According to the findings, 65(19%) respondents strongly agreed, 169(49.4%) agreed, 66(19.3%) undecided, 33(9.6%) disagreed, and 9(2.6%) strongly disagreed that they use initial security prices as reference points when assessing the fair value of securities at the NSE. This revealed a mean of 3.7251 with a 0.9659 standard deviation, as most respondents agreed that they use initial security prices as reference points when assessing the fair value of securities at the NSE.

The results further showed that, when asked if their initial perceptions or estimates can influence their investment decisions and if they actively try to mitigate this bias, 39(11.4%) respondents strongly agreed, 197(57.6%) agreed, 63(18.4%) remained neutral, and 43(12.6%) respondents disagreed. Most of the respondents agreed that their initial perceptions or estimates can influence their investment decisions, and they actively try to mitigate this bias, as shown by the mean of 3.6784 and standard deviation of 0.8365.

The findings of the study revealed that 93(27.2%) respondents strongly agreed, 130(38%) agreed, 55(16.1%) were undecided, 51(14.9%) disagreed, and 13(3.8%) strongly disagreed that their investment at the securities exchange is often influenced by financial analysts, with a mean of 3.6988 and a standard deviation of 1.1333. Most of the respondents agreed to this statement. The findings that anchoring behavior has a significant influence on Individual investor decision-making are supported by those of Barno, Cheboi, and Muganda (2021), who found that anchoring behavior had a significant effect on investment decision-making among SMEs in Nairobi County.

4.4.5 Market Information

The study provided statements on Market Information and individual investor decision making at the NSE. The respondents were required to indicate the extent to which they agreed to the given statements using the provided five-point Liker scale. The findings are summarized in Table 4.10.

Table 4.10

Frequencies, Mean and Standard Deviation for Market Information

Statements on Market Information	5 (SA)	4 (A)	3 (N)	2 (D)	1(SD)	M	SD
I rely on financial statements and reports of NSE-listed companies for investment decisions.	86(25.1%)	185(54.1%)	40(11.7%)	21(6.1%)	10(2.9%)	3.924	0.935
I closely follow market trends and use them as a basis for making investment choices.	87(25.4%)	170(49.7%)	46(13.5%)	22(6.4)	17(5%)	3.842	1.035
I consider information from social media platforms and online forums to be valuable when making investment decisions.	38(11.1%)	146(42.7%)	59(17.3%)	76(22.2%)	23(6.7%)	3.29	1.132
When making investment decisions, I consider general economic factors, such as increased disposable income and inflation.	94(27.5%)	156(45.6%)	59(17.3%)	33(9.6%)	0(0%)	3.909	0.909
My ability to access relevant market information helps me when making investment decisions at the NSE.	92(26.9%)	186(54.4%)	47(13.7%)	10(2.9%)	7(2%)	4.012	0.842
Real-time market information, such as stock prices and trading volumes, has a substantial impact on my investment decision-making.	91(26.6%	157(45.9%)	56(16.4%)	31(9.1%)	7(2%)	3.8596	0.979

Table 4.10 indicated that 86(25.1%) respondents strongly agreed, 185(54.1%) agreed, 40(11.7%) were undecided, 21(6.1%) disagreed, and 10(2.9%) strongly disagreed that they rely on financial statements and reports of NSE-listed companies for investment decisions. The majority of the respondents agreed with this, with a mean of 3.9240 and a standard deviation of 0.9349.

The study findings show that 87(25.4%) respondents strongly agreed, 170(49.7%) agreed, 46(13.5%) undecided, 22(6.4%) disagreed, and 17(5%) strongly disagreed that they closely follow market trends and use them as a basis for making investment choices, with a mean of 3.8421, and a standard deviation of 1.03526. Most respondents agreed that they closely follow market trends and use them as a basis for making investment choices.

When asked whether they consider information from social media platforms and online forums to be valuable when making investment decisions, 38(11.1%) respondents strongly agreed, 146(42.7%) agreed, 59(17.3%) undecided, 76(22.2%) disagreed, and 23(6.7%) strongly disagreed. The majority of the respondents agreed with this statement, with a mean of 3.2924 and standard deviation of 1.1317.

As per the findings, 94(27.5%) respondents strongly agreed, 156(45.6%) agreed, 59(17.3%) undecided, and 33(9.6%) respondents disagreed that when making investment decisions, they consider general economic factors, such as increased disposable income and inflation. This revealed that most respondents agreed to the statement with a mean of 3.9094 and a standard deviation of 0.9097.

Similarly, 92(26.9%) respondents strongly agreed that their ability to access relevant market information helps them when making investment decisions at the NSE,

186(54.4%) agreed, 47(13.7%) were undecided, 10(2.9%) disagreed, and 7(2%) strongly disagreed. The majority of the respondents agreed that their ability to access relevant market information helps them when making investment decisions at the NSE, as indicated by a mean of 4.0117 with a standard deviation of 0.8423.

Finally, Table 4.10 shows that 91(26.6%) respondents strongly agreed, 157(45.9%) agreed, 56(16.4%) were undecided, 31(9.1%) respondents disagreed, and 7(2%) strongly disagreed that real-time market information, such as security prices and trading volumes, has a substantial impact on their investment decision-making. Most respondents agreed with this statement, as revealed by the mean of 3.8596 with a 0.9796 standard deviation.

4.4.6 Individual investor decision making at the NSE

The study provided statements on individual investor decision making at the NSE. The respondents were required to indicate the extent to which they agreed to the given statements using the provided five-point Liker scale. The findings are summarized in Table 4.11.

Table 4.11

Frequencies, Mean and Standard Deviation for Individual Investor Decision- Making

Statements on Investment decision-making	5 (SA)	4 (A)	3 (N)	2 (D)	1(SD)	M	SD
I am an active participant in the securities market.	136(39.8%)	188(55%)	13(3.5%)	6(1.8%)	0(0%)	4.3275	0.6299
I have invested in more than one security.	80(23.4%)	171(50%)	61(17.8%)	21(6.1%)	9(2.6%)	3.8538	0.9359
I invest in NSE for returns in the form of capital gains and dividends.	80(23.4%)	171(50%)	61(17.8%)	21(6.1%)	9(2.6%)	4.2368	0.6889
I actively buy and sell securities at the securities exchange	18(5.3%)	144(42.1%)	112(32.7%)	62(18.1%)	6(1.8%)	3.3099	0.8884
I invest at NSE market for speculative purposes.	48(14%)	93(27.2%)	68(19.9%)	95(27.8%)	38(11.1%)	3.0526	1.2479
I have access to information on stock prices in the NSE.	53(15.5%)	137(40.1%)	71(20.8%)	40(11.7%)	41(12%)	3.3538	1.2232

The findings in Table 4.11 indicates that 136(39.8%) respondents strongly agreed, 188(55%) agreed, 13(3.5%) were undecided, and 6(1.8%) respondents disagreed that they were active participants at the securities market. From the above, most of the respondents were active participants at the securities market, as shown by a mean of 4.3275 and a standard deviation of 0.6299.

The results showed that 80(23.4%) of the respondents strongly agreed, 171(50%) agreed, 61(17.8%) respondents remained neutral, 21(6.1%) disagreed, and 9(2.6%) strongly disagreed that they have invested in more than one security. The majority of the respondents agreed that they had invested in more than one security, with a mean of 3.8538 and a standard deviation of 0.9359.

From the study and the table above, 80(23.4%) respondents strongly agreed, 171(50%) agreed, 61(17.8%) were undecided, 21(6.1%) disagreed, and 9(2.6%) respondents strongly disagreed that they invest at NSE for returns in the form of capital gains and dividends. Most respondents agreed with this statement, as evidenced by the mean of 4.2368 and standard deviation of 0.6889.

As per the results, 18(5.3%) respondents strongly agreed, 144(42.1%) respondents agreed, 112(32.7%) remained undecided, 62(18.1%) disagreed, and 6(1.8%) respondents strongly disagreed that they actively buy and sell securities at the securities exchange. Most respondents agreed that they actively buy and sell stocks on the securities exchange. This revealed a mean of 3.3099 and a standard deviation of 0.8884.

The study also sought to find out whether the respondents invested at the NSE market for speculative purposes. The results revealed that 48(14%) of the investors strongly agreed with the given statement, 93(27.2%) agreed, 68(19.9%) were undecided, 95(27.8%)

disagreed and 38(11.1%) respondents strongly disagreed. The reaction to this statement generated a mean of a mean of 3.0526 and a standard deviation of 1.2479.

Finally, as to whether the individual investor had access to information on security prices at the NSE before investing, the findings revealed that 53(15.5%) of the investors strongly agreed to the statement, 137(40.1%) agreed, 71(20.8%) undecided, 40(11.7%) disagreed, and 41(12%) respondents strongly disagreed that they have access to information on security prices at the NSE (mean of 3.3538 and a standard deviation of 1.2232).

4.5 Inferential Statistics

Inferential statistics were carried out using Pearson Product Moment Correlation, Analysis of Variance (ANOVA) and linear regression to measure the strength and significance of the relationship between behavioural factors and individual investor decision making at the NSE. The study also used Moderated Regression Analysis to assess the moderating effect of market information on the relationship between behavioural factors and individual investor decision making at the NSE.

4.5.1 Correlation Analysis

The study conducted correlation analysis to examine the nature of the non-causal relationship between behavioral factors and individual investor decision-making at the NSE before testing the research hypotheses. The findings on the correlation between risk attitude, herding behavior, overconfidence, anchoring behavior, and individual investor decision-making at the Nairobi Securities Exchange are presented in Table 4.12.

Table 4.12

Correlation Analysis

		1	2	3	4	5
Risk Attitude	Pearson Correlation	1				
(1)	Sig. (2-tailed)					
	N	342				
Herding	Pearson Correlation	0.535**	1			
(2)	Sig. (2-tailed)	0.000				
	N	342	342			
Overconfidence	Pearson Correlation	0.411**	0.385**	1		
(3)	Sig. (2-tailed)	0.000	0.000			
	N	342	342	342		
Anchoring	Pearson Correlation	0.429**	0.526**	0.315**	1	
(4)	Sig. (2-tailed)	0.000	0.000	0.000		
	N	342	342	342	342	
Investor	Pearson Correlation	0.145**	0.235**	0.470**	0.429**	1
Decision	Sig. (2-tailed)	0.007	0.000	0.000	0.000	
making	N	342	342	342	342	342

**. Correlation is significant at the 0.01 level (2-tailed).

Table 4.12 presents the correlation analysis between risk attitude, herding behaviour, overconfidence, and anchoring behaviour with individual investor decision-making. The findings indicate a significant positive correlation between risk attitude and individual investor decision-making at the NSE ($r = 0.145$, $p < 0.05$). This discovery aligns with the results of Langat and Rop (2019), who also found a positive correlation between risk aversion and individual participation in the stock market participation.

The results also confirm the existence of a positive significant correlation between herding and individual investor decision-making ($r = 0.235$, $p < 0.05$). These findings are

supported by Ahmad and Wu (2022), which established a positive correlation between herding behavior investor decision-making.

Further, the study found a significant positive correlation ($r = 0.470$, $p < 0.05$) between overconfidence and individual investor decision-making, supporting previous research by Ahmad and Shah (2020), Kansal and Singh (2018), and Kuranchie-Pong and Forson (2022). These previous studies also identified a positive correlation between overconfidence behavior and investor decision-making.

Further, the results indicate that the there exists a positive significant relationship between anchoring behaviour and individual investor decision-making ($r = 0.429$, $p<0.05$). In a different study, Mudu, Dabo, and Idris (2022) and Hunguru et al., (2020) established similar findings which indicated that anchoring behaviour had a positive correlation with investor decision making.

The study shows that all predictor variables have a significant positive correlation with the dependent variable. This means that as one predictor variable increases, the dependent variable also tends to increase. These findings are consistent with Wanjohi and Mwita's (2019) research, which found out that behavioral characteristics such as loss aversion, overconfidence, herding, and anchoring have a positive correlation with individual investor decision-making. However, it's important to note that the study included investment banks that operate under the confidentiality principle, which limits access to required information.

Additionally, Cao, et al., (2021) established a positive significant relationship between behavioural factors such as prospect (loss aversion, regret aversion, mental accounting), heuristic (availability bias, gamblers' fallacy, anchoring behavior, overconfidence, and

representativeness), herding, and market variable (news from politics and economic changes, reaction to price changes, market information, past trends of stocks, and price changes) and individual investor decision making.

4.5.2 Testing of Research Hypothesis

The study used regression analysis to test the research hypotheses. First, individual predictor variables were subjected to linear regression analysis to assess their relationship with the dependent variable. Then, multiple regression analysis was conducted to determine the combined effect of the independent variables on the dependent variable.

4.5.2.1 Risk attitude and individual investor decision-making

The first hypothesis of the study stated that;

H0$_1$ Risk attitude has no statistically significant relationship with individual investor decision-making at the Nairobi Securities Exchange.

To test this hypothesis, the study carried out a linear regression analysis to assess the relationship between risk attitude and individual investor decision-making and the results are presented in Table 4.13.

Table 4.13

Model Summary for the relationship between Risk Attitude and individual investor decision-making

Mo del	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.145ᵃ	0.021	0.018	0.50369	0.021	7.281	1	340	0.007

a. Predictors: (Constant), Risk Attitude

The results presented in Table 4.13 show that the R-squared value is 0.021, suggesting that a 2.1% variation in individual investor decision-making can be attributed to risk attitude. This implies that 97.9% of the changes in individual investor decision-making may be influenced by other factors rather than risk attitude.

Table 4.14

ANOVA Results for Risk Attitude and Individual Investor Decision-Making

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1.847	1	1.847	7.281	.007ᵇ
	Residual	86.259	340	.254		
	Total	88.106	341			

a. Dependent Variable: Individual Investor Decision-Making

b. Predictors: (Constant), Risk Attitude

The results in Table 4.14 show that the model was statistically significant. The model had F-statistics of the regression ($F_{(1, 340)} = 7.281$), which was statistically significant ($p < 0.05$). This means that the model used significantly predicted the change in the dependent

variable (individual investor decision-making) due to the predictor variable (risk attitude) included in the model, indicating a good fit of the model to the data.

Table 4.15

Coefficients for Risk Attitude and Individual Investor Decision-Making

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		β	Std. Error	Beta		
1	(Constant)	3.113	0.215		14.455	0.000
	Risk Attitude	0.159	0.059	0.145	2.698	0.007

a. Dependent Variable: Individual Investor Decision-Making

The results from Table 4.15 shows a statistically significant positive relationship between risk attitude and individual investor decision-making ($\beta = 0.159$, $p < 0.05$) and a t-test value of 2.698. This means that as risk attitude increases by one unit, individual investor decision-making increases by 0.159. Therefore, the null hypothesis, H01, stating that risk attitude has no statistically significant relationship with individual investor decision-making at the Nairobi Securities Exchange, was rejected, and the alternate hypothesis that risk attitude has a significant relationship with individual investor decision-making at the Nairobi Securities Exchange was accepted. This means that risk attitude affects individual investor decision-making at the NSE. The findings are supported by Areiqat et al. (2019), who found that risk perception had a significant influence on the decisions made by individual investors at the ASE.

The following regression equation was obtained.

$Y = 3.113 + 0.159 X_1$

Where;

Y – Individual investor decision-making

X_1 – Risk attitude

4.5.2.2 Herding behaviour and individual investor decision-making

The second objective was to examine the correlation between herding behavior and individual investor decision-making at the Nairobi Securities Exchange. The following hypothesis was used to test the relationship.

H_{02}: *Herding behavior has no statistically significant relationship with individual investor decision-making at the Nairobi Securities Exchange.*

The findings of the linear relationship are presented in Table 4.16

Table 4.16:

Model Summary for Herding Behaviour and Individual Investor Decision Making

Mod el	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
						Change Statistics			
1	0.235[a]	0.055	0.052	0.49483	0.055	19.830	1	340	0.000

a. Predictors: (Constant), Herding Behaviour

The study findings in Table 4.16 indicate that the R-squared value is 0.055. This means that 5.5% of the changes in investor decision-making can be attributed to herding behavior. The remaining 94.5% of the changes in investor decision-making can be attributed to other factors besides herding behavior.

Table 4.17

ANOVA Results for Herding Behaviour and Individual Investor Decision Making

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.856	1	4.856	19.830	0.000[b]
	Residual	83.250	340	0.245		
	Total	88.106	341			

a. Dependent Variable: Individual Investor Decision-Making

b. Predictors: (Constant), Herding Behaviour

The results on Table 4.17 reveal that the model was statistically significant. The model had F-statistics of the regression ($F_{(1, 340)} = 19.830$) which was statistically significant ($p<0.05$). This indicates that the model applied significantly predicted the change of the dependent variable which is individual investor decision-making as result of the predictor variable, herding behavior included in the model, suggesting that the model significantly fits the data.

Table 4.18

Coefficients for Herding Behaviour and Individual Investor Decision-Making

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		β	Std. Error	Beta		
1	(Constant)	3.046	0.147		20.724	0.000
	Herding Behaviour	0.180	0.040	0.235	4.453	0.000

a. Dependent Variable: Individual Investor Decision-Making

The findings in Table 4.18 indicate that there exists a statistically significant positive relationship between herding behavior and individual investor decision-making. (β

=0.180, p<0.05) and a t-test value of 4.453. This implies that when herding behavior increases by an additional unit, individual investor decision-making increases by 0.180. The null hypothesis, H_{02}: there is no statistically significant relationship between herding behavior and individual investor decision-making at the Nairobi Securities Exchange, was rejected and therefore, it was concluded that herding behavior has a significant relationship with individual investor decision-making at the Nairobi Securities Exchange. These findings are supported by those of Ludenyo (2021) which found a significant relationship between herding behaviour and individual stock market investments decision making.

The following regression equation was obtained.

$Y = 3.046 + 0.180 X_2$

Where;

Y – Individual investor decision-making

X_2 – Herding behavior

4.5.2.3 Overconfidence and individual investor decision-making

The third objective was to determine the relationship between overconfidence and individual investor decision-making at the Nairobi Securities Exchange. The following hypothesis was tested;

H_{03}: *Overconfidence has no statistically significant relationship with individual investor decision-making at the Nairobi Securities Exchange.*

The study carried out a linear regression analysis to test the hypothesis and the results summarized in Table 4.19.

Table 4.19

Model Summary for the Overconfidence and Individual Investor Decision Making

Mo del	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.470[a]	0.221	0.219	0.44930	0.221	96.455	1	340	0.000

a. Predictors: (Constant), Overconfidence

The study findings in Table 4.16 show that R square is 0.221 which implies that 22.1% change in investor decision-making can be explained by overconfidence, implying that, 77.9% change in investor decision making can be explained by other factors other than overconfidence.

Table 4.20

ANOVA Results for Overconfidence and Individual Investor Decision Making

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	19.471	1	19.471	96.455	0.000[b]
	Residual	68.635	340	.202		
	Total	88.106	341			

a. Dependent Variable: Individual Investor Decision-Making

b. Predictors: (Constant), Overconfidence

The results on Table 4.20 indicate that the model was statistically significant. The model had F-statistics of the regression (F $(1, 340)$ = 96.455) which was statistically significant $(p<0.05)$. This indicates that the model applied significantly predicted the change of the dependent variable (individual investor decision-making) as result of the predictor

variable (overconfidence) included in the model, suggesting that the model significantly fits the data.

Table 4.21

Coefficients for Overconfidence and Individual Investor Decision-Making

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		β	Std. Error	Beta		
1	(Constant)	2.669	0.107		25.021	0.000
	Overconfidence	0.306	0.031	0.470	9.821	0.000

a. Dependent Variable: Individual Investor Decision-Making

According to the findings in Table 4.21, there exists a statistically significant positive relationship between overconfidence and individual investor decision-making. ($\beta =0.306$, $p<0.05$) and a t-test value of 9.821. This implies that when overconfidence increases by an additional unit, individual investor decision-making increases by 0.306. The null hypothesis, H_{03}: There is no statistically significant relationship between overconfidence and individual investor decision-making at the Nairobi Securities Exchange, was rejected and therefore the alternate hypothesis that overconfidence has a statistical significant relationship with individual investor decision-making at the Nairobi Securities Exchange was accepted. This implies that overconfidence affects individual investor decision-making at the NSE. The findings of this study are supported by Wafula, et al., (2023) which found a significant relationship between overconfidence and individual decision making.

The following regression equation was obtained.

$$Y = 2.669 + 0.306\ X_3$$

Where;

Y – Individual investor decision-making

X_3 – Overconfidence

4.5.2.4 Anchoring behaviour and individual investor decision-making

The fourth objective was to determine the relationship between anchoring behaviour and individual investor decision-making at the Nairobi Securities Exchange. The hypothesis in this case was;

$H_{04:}$ Anchoring behaviour *has no statistically significant relationship with individual investor decision-making at the Nairobi Securities Exchange.*

To test the hypothesis, a linear regression analysis was carried out, and the results summarized in Table 4.22 below.

Table 4.22

Model Summary for the Anchoring Behaviour and Individual Investor Decision Making.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.429[a]	0.184	0.181	0.45988	0.184	76.599	1	340	0.000

a. Predictors: (Constant), Anchoring Behaviour

The study findings in Table 4.22 show that R square is 0.184. This implies that, 18.4% change in investor decision-making can be explained by anchoring behaviour. This

means that 81.6% change in investor decision-making can be explained by other factors other than anchoring behaviour.

Table 4.23

ANOVA Results for Anchoring Behaviour and Individual Investor Decision Making.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	16.200	1	16.200	76.599	.000[b]
	Residual	71.906	340	.211		
	Total	88.106	341			

a. Dependent Variable: Individual Investor Decision-Making

b. Predictors: (Constant), Anchoring Behaviour

The results on Table 4.23 indicate that the model was statistically significant. The model had F-statistics of the regression (F (1, 340) = 76.599) which was statistically significant (p<0.05). This indicates that the model significantly predicted the change in the dependent variable (individual investor decision-making) as result of the predictor variable (anchoring behavior), included in the model. This indicates the statistical significance of the regression model and the overall regression model statistically significantly predicts the outcome variable (a good fit for the data).

Table 4.24

Coefficients for Anchoring Behaviour and Individual Investor Decision-Making

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		β	Std. Error	Beta		
1	(Constant)	2.613	0.125		20.819	0.000
	Anchoring Behaviour	0.311	0.036	0.429	8.752	0.000

a. Dependent Variable: Individual Investor Decision-Making

The findings in Table 4.24 indicate that there exists a statistically significant positive relationship between anchoring behavior and individual investor decision-making. (β =0.311, p<0.05) and a t-test value of 8.752. When anchoring behavior increases by an additional unit, individual investor decision-making increases by 0.311. The null hypothesis, $H_{04:}$ There is no statistically significant relationship between anchoring behavior and individual investor decision-making at the Nairobi Securities Exchange, was rejected and therefore the alternate hypothesis that anchoring behavior has a statistically significant relationship with individual investor decision-making at the Nairobi Securities Exchange was accepted. This implies that anchoring behavior affects individual investor decision-making at the NSE. In a different study, Mudu, Dabo, and Idris (2022) found a significant relationship between anchoring behaviour and individual decision to invest. Hunguru et al., (2020) also established a significant relationship between anchoring behaviour and individual investor decision in the ZSE.

The following regression equation was obtained.

$Y = 2.613 + 0.311 X_4$

Where;

Y – Individual investor decision-making

X_4 – Anchoring behavior

4.5.2.5 Overall relationship between behavioural factors and individual investor decision making.

The study examined the combined relationship between behavioral factors (risk attitude, herding behaviour, overconfidence and anchoring behaviour) and individual investor decision making.

Table 4.25

Model summary for the overall relationship between behavioural factors and individual investor decision making.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig.
1	0.772[a]	0.596	0.583	0.63263	0.000[b]

a. Predictors: (Constant), Risk Attitude, Herding Behaviour, Overconfidence And Anchoring Behaviour

The research findings presented in Table 4.25 indicate that the R-square value is 0.596. This means that approximately 59.6% of the variation in individual investor decision-making can be attributed to factors related to behavioral factors, that is, risk attitude, herding behavior, overconfidence, and anchoring behavior. The remaining 40.4% of the variation was attributable to other factors that were not considered in the study.

Table 4.26

ANOVA Results for the overall relationship between behavioural factors and individual investor decision making.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.696	4	7.424	42.834	0.000[b]
	Residual	58.410	337	0.173		
	Total	88.106	341			

a. Dependent Variable: Individual Investor Decision Making.

b. Predictors: (Constant), Risk Attitude, Herding Behaviour, Overconfidence And Anchoring Behaviour

The findings in Table 4.26 show that $F(4, 337) = 42.834$, with $p < 0.05$. Additionally, the mean square of the residuals is 0.173. Therefore, the ANOVA results indicate that the model is significant, demonstrating a good fit with the data.

Table 4.27

Coefficients for the overall relationship between behavioural factors and individual investor decision making.

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		β	Std. Error	Beta		
1	(Constant)	2.591	0.184		14.081	0.000
	Risk Attitude	0.197	0.061	0.179	3.240	0.001
	Herding Behaviour	0.033	0.044	0.044	0.755	0.451
	Overconfidence	0.285	0.033	0.437	8.743	0.000
	Anchoring Behaviour	0.284	0.039	0.391	7.301	0.000

a. Dependent Variable: Individual Investor Decision Making.

The results in Table 4.27 indicate that the beta coefficient for risk attitude is 0.197 with a p-value of less than 0.05 (β =0.197, p<0.05), while the beta coefficient for herding behavior is 0.033 with a p-value greater than 0.05 (β =0.033, p>0.05). Additionally, the beta coefficient for overconfidence is 0.285 with a p-value of less than 0.05 (β =0.285, p<0.05), and the beta coefficient for anchoring behavior is 0.284 with a p-value of less than 0.05 (β =0.284, p<0.05). The results for the multiple regression analysis for the overall relationship indicate that all the predictor variables except herding behaviour had a positive significant relationship with individual investor decision making at NSE.

4.5.2.6 Moderating effect of market information on the relationship between behavioural factors and Individual investor decision making

The study established that all the predictor variables had a significant relationship with Individual investor decision making at the NSE. Subsequently, the study sought to assess the moderating effect of market information on the relationship between behavioural factors and Individual investor decision making. To determine this, the following hypotheses were tested;

H_{05a}: Market information has no statistically significant moderating effect on the relationship between risk attitude and individual investor decision-making at the Nairobi Securities Exchange.

H_{05b}: Market information has no statistically significant moderating effect on the relationship between herding behaviour and individual investor decision-making at the Nairobi Securities Exchange.

H$_{05c}$: Market information has no statistically significant moderating effect on the relationship between overconfidence and individual investor decision-making at the Nairobi Securities Exchange.

H$_{05d}$: Market information has no statistically significant moderating effect on the relationship between anchoring behaviour and individual investor decision-making at the Nairobi Securities Exchange.

Table 4.28

Model summary for the moderating effect of market information

	Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
						R Square Change	F Change	df1	df2	Sig. F Change
Risk attitude	1	0.145[a]	0.021	0.018	0.503	0.021	7.28	1	340	0.007
	2	0.426[b]	0.181	0.176	0.461	0.160	66.34	1	339	0.000
Herding behaviour	1	0.235[a]	0.055	0.052	0.494	0.055	19.83	1	340	0.000
	2	0.430[b]	0.185	0.180	0.460	0.130	53.86	1	339	0.000
Overconfidence	1	0.470[a]	0.221	0.219	0.449	0.221	96.45	1	340	0.000
	2	0.532[b]	0.283	0.279	0.431	0.062	29.23	1	339	0.000
Anchoring	1	0.429[a]	0.184	0.181	0.459	0.184	76.59	1	340	0.000
	2	0.473[b]	0.223	0.219	0.449	0.040	17.28	1	339	0.000

Table 4.28 present a summary of the results obtained after introducing the interaction of the moderator variable (market information) in the regression model. The findings obtained after the introduction of this interaction term to risk attitude produced an R^2 of 0.181 which implies that 18.1% of the variation in individual investor decision making can be accounted for by risk attitude*market information. The inclusion of the moderator variable in the regression model resulted to a change in the R^2 by 0.16, meaning the moderation effect of market information accounts for 16% of the variation in individual investor decision making above and in addition to the variation that was explained by risk attitude alone. Therefore, market information has a positive significant moderating effect on the relationship between risk attitude and individual investor decision making at the NSE. These findings coincide with those of Ademola, et al., (2019) which established that financial literacy had a significant moderating effect on the relationship between risk perception and stock exchange investment decision-making.

On the introduction of the interaction term, market information to the herding behavior, the study found a R^2 of 0.185 which implies that 18.5% of the variation in individual investor decision making can be accounted for by herding behaviour*market information. The inclusion of the moderator variable in the regression model resulted to a change in R^2 of 0.13which means that the moderation effect of market information accounts for 13% of the variation in individual investor decision making above and in addition to the variation that was explained by herding behaviour before the moderation. The results also show that this increase was statistically significant since the p value of 0.000 is less than the conventional probability value of 0.05 (p<0.05). Therefore, market information has a

positive significant moderating effect on the relationship between herding behaviour and individual investor decision making at the NSE.

Further, the study revealed that when the interaction term of market information was introduced to the overconfidence variable, the study found an R^2 of 0.283 which implies that 28.3% of the variation in individual investor decision making can be accounted for by overconfidence*market information. The inclusion of the moderator variable in the regression model resulted to a change in the R^2 by 0.062 which means that the moderation effect of market information accounts for 6.2% of the variation in individual investor decision making above and in addition to the variation that was explained by overconfidence behaviour. The increase was statistically significant since the p value of 0.000 is less than the conventional probability value of 0.05 (p<0.05). Therefore, market information has a positive significant moderating effect on the relationship between overconfidence and individual investor decision making at the NSE.

Lastly, on anchoring behavior, the R Square changed from 0.184 to 0.223 indicating a 0.039 increase in variation of anchoring behavior as a result of the interaction effect of the moderating variable (market information). The results also indicate that this increase was statistically significant since the p value of 0.000 is less than the conventional probability value of 0.05(p<0.05). The study findings concur with those of Joshi and Agrawal (2021) who found that market information had a significant effect on the investor decision making when assessing the moderating effect of investor information on individual investor decision making in India.

Table 4.29

ANOVA Results for the moderating effect of market information

	Model		Sum of Squares	df	Mean Square	F	Sig.
Risk Attitude	1	Regression	1.847	1	1.847	7.281	0.007[b]
		Residual	86.259	340	.254		
		Total	88.106	341			
	2	Regression	15.966	2	7.983	37.512	0.000[c]
		Residual	72.140	339	.213		
		Total	88.106	341			
Herding	1	Regression	4.856	1	4.856	19.830	0.000[b]
		Residual	83.250	340	.245		
		Total	88.106	341			
	2	Regression	16.270	2	8.135	38.391	0.000[c]
		Residual	71.835	339	.212		
		Total	88.106	341			
Overconfidence	1	Regression	19.471	1	19.471	96.455	0.000[b]
		Residual	68.635	340	.202		
		Total	88.106	341			
	2	Regression	24.920	2	12.460	66.851	0.000[c]
		Residual	63.186	339	.186		
		Total	88.106	341			
Anchoring behaviour	1	Regression	16.200	1	16.200	76.599	0.000[b]
		Residual	71.906	340	.211		
		Total	88.106	341			
	2	Regression	19.689	2	9.844	48.777	0.000[c]
		Residual	68.417	339	.202		
		Total	88.106	341			

The results on Table 4.29 indicate that the models were statistically significant since $p < 0.05$. This implies that the coefficients of the models were not equal to zero, suggesting that the models significantly fit the data.

Table 4.30

Coefficients for the moderating effect of market information

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		β	Std. Error	Beta		
1	(Constant)	3.113	0.215		14.455	0.000
	Risk Attitude	0.159	0.059	0.145	2.698	0.007
2	(Constant)	2.665	0.205		13.015	0.000
	Risk Attitude	-0.366	0.084	-0.334	-4.357	0.000
	Risk Attitude*market information	0.633	0.078	0.624	8.145	0.000
1	(Constant)	3.046	0.147		20.724	0.000
	Herding	0.180	0.040	0.235	4.453	0.000
2	(Constant)	2.624	0.148		17.701	0.000
	Herding	-0.425	0.091	-0.555	-4.692	0.000
	Herding *market information	0.700	0.095	0.867	7.340	0.000
1	(Constant)	2.669	0.107		25.021	0.000
	Overconfidence	0.306	0.031	.470	9.821	0.000
2	(Constant)	2.174	0.137		15.823	0.000
	Overconfidence	0.035	0.058	.053	0.596	0.552
	Overconfidence* market information	0.392	0.072	.485	5.407	0.000
1	(Constant)	2.613	0.125		20.819	0.000
	Anchoring	0.311	0.036	.429	8.752	0.000
2	(Constant)	2.320	0.141		16.411	0.000
	Anchoring	0.013	0.080	.018	0.160	0.873
	Anchoring* market information	0.365	0.088	.457	4.158	0.000

Table 4.30 shows that the direct effect of risk attitude on individual investor decision-making at NSE was positive and significant (β=0.159, p=0.007<0.05). This implies that when risk attitude increases by an additional unit, individual investor decision-making is predicted to increase by 0.159, given that market information is held constant. On

moderation, the beta coefficient to -0.366 and further the beta coefficient after the introduction of the moderating variable (market information) changed to 0.633 with a p-value=0.000<0.05, implying that market information has a significant moderating effect on the relationship between risk attitude and individual investor decision-making at the NSE. Thus, the null hypothesis that risk attitude has no significant relationship with individual investor decision making was rejected and the alternative hypothesis that market information has a statistically significant moderating effect on the relationship between risk attitude and individual investor decision-making at the NSE accepted.

The findings also reveal that, the direct effect of the relationship between herding behavior and individual investor decision-making at the NSE was positive and significant (β=0.180, p<0.05). This implies that when herding behavior increases by an additional unit, individual investor decision-making is predicted to increase by 0.180 given that market information is held constant. On moderation, the beta coefficient of herding behaviour changed to -0.425. After the introduction of the moderating variable (market information), the beta coefficient was found to be 0.7 with a p-value=0.000<0.05, implying that market information has a significant positive moderating effect on the relationship between herding behavior and individual investor decision-making at the NSE. Thus, the null hypothesis was rejected indicating that market information has a statistically significant moderating effect on the relationship between herding behavior and individual investor decision-making at the NSE.

Subsequently, the findings indicate that the direct relationship between overconfidence and individual investor decision-making at the NSE was positive and significant (β=0.306, p<0.05). meaning that when overconfidence was increased by an additional

unit, individual investor decision-making is predicted to increase by 0.306 given that market information is held constant. The beta coefficients changed to 0.035 during moderation and further to 0.392 after the introduction of the moderating variable (market information) with a p-value=0.000<0.05, implying that market information has a significant moderating effect on the relationship between overconfidence and individual investor decision-making at the NSE. Thus, the null hypothesis was rejected indicating that market information has a statistically significant moderating effect on the relationship between overconfidence and individual investor decision-making at the NSE.

Finally, the findings indicate that the direct relationship between anchoring behavior and individual investor decision-making at the NSE was positive and significant (β=0.311, p<0.05). This implies that when anchoring behavior increases by an additional unit, individual investor decision-making is predicted to increase by 0.311, market information held constant. On moderation, the beta coefficient of anchoring behaviour changed to 0.013. The beta coefficient after introduction of the moderating variable (market information) was 0.365 with a p-value<0.05, indicating that market information has a significant moderating effect on the effect of anchoring behavior and individual investor decision-making at the NSE. Thus, the null hypothesis was rejected, meaning that market information has a statistically significant moderating effect on the relationship between anchoring behavior and individual investor decision-making at the NSE.

4.5.2.7 Overall moderating effect of market information on the relationship between behavioural factors and individual investor decision making

The study conducted a moderated multiple regression analysis to examine how market information moderates the combined explanatory variables and individual investor decision-making at the NSE.

Table 4.31

Model summary for moderating effect of market information

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Sig.
1	0.772[a]	0.596	0.583	0.63263	0.000[b]
2	0.781[b]	0.610	0.595	0.62364	0.000[c]

a. Predictors: (Constant), Risk Attitude, Herding Behaviour, Overconfidence and Anchoring Behaviour

b. Predictors: (Constant), b. Predictors: (Constant), Risk Attitude, Herding Behaviour, Overconfidence, Anchoring Behaviour and Market Information

The results in Table 4.31 show that the R-Square in the moderated model increased from 0.596 to 0.610, indicating a 0.014 rise in variation due to the interaction effect of the moderating variable. Additionally, the increase was statistically significant and positive, with a probability value of $p = 0.000 < 0.05$.

Table 4.32

ANOVA Results for moderating effect of market information

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	29.696	4	7.424	42.834	0.000[b]
	Residual	58.410	337	0.173		
	Total	88.106	341			
2	Regression	31.820	5	6.364	37.990	0.000[c]
	Residual	56.286	336	0.168		
	Total	88.106	341			

Dependent Variable: Individual Investor Decision Making

Predictors: (Constant), b. Predictors: (Constant), Risk Attitude, Herding Behaviour, Overconfidence and Anchoring Behaviour

Predictors: (Constant), c. Predictors: (Constant), Risk Attitude, Herding Behaviour, Overconfidence, Anchoring Behaviour and Market Information

The results shown in Table 4.32 reveal that both models were statistically significant. Model 1 yielded F (4, 337) = 42.834, p < 0.05, while model 2 resulted in F (5, 336) = 37.990, p < 0.05. Additionally, the mean square of the residuals decreased from 0.173 in model 1 to 0.168 in model 2. Therefore, the ANOVA results for the moderated model indicate that the model was significant, indicating a good fit for the data.

Table 4.33

Coefficients for overall and moderating effect of market information

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		β	Std. Error	Beta		
1	(Constant)	2.591	0.184		14.081	0.000
	Risk Attitude	0.197	0.061	0.179	3.240	0.001
	Herding Behaviour	0.033	0.044	0.044	0.755	0.451
	Overconfidence	0.285	0.033	0.437	8.743	0.000
	Anchoring Behaviour	0.284	0.039	0.391	7.301	0.000
2	(Constant)	2.502	0.183		13.699	0.000
	Risk Attitude	0.0191	0.060	0.174	3.197	0.002
	Herding Behaviour	0.115	0.049	0.150	2.342	0.020
	Overconfidence	0.262	0.033	0.402	8.018	0.000
	Anchoring Behaviour	0.222	0.042	0.306	5.303	0.000
	Market Information	0.171	0.048	0.239	3.561	0.000

a Dependent Variable: Individual Investor Decision Making.

The results in Table 4.33 demonstrate that, following moderation, the beta coefficient for risk attitude changed to 0.0191 with a p-value of <0.05. The beta coefficient for herding behavior changed to 0.115, with a p-value of >0.05, which implies that the change was insignificant. Moreover, the beta coefficient for overconfidence changed to 0.262 with a p-value of <0.05, while the beta coefficient for anchoring behavior changed to 0.222 with a p-value of <0.05. The results also revealed that the beta coefficient of the moderating variable (market information) was 0.171 with a p-value of <0.05. This suggests that market information significantly moderates the effects of behavioral factors on individual investor decision-making at the Nairobi Securities Exchange.

Finally, the multiple regression equations were translated as follows:

MR model: Individual investor decision-making = 2.591 + 0.197 risk attitude + 0.033 herding behavior + 0.285 overconfidence + 0.284 anchoring behavior.

MMR model: Individual investor decision-making = 2.502 + 0.0191 risk attitude + 0.115 herding behavior + 0.262 overconfidence + 0.222 anchoring behavior + 0.171 market information.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter provides a summary of the study's findings, conclusions, recommendations, and suggestions for further research.

5.2 Summary

The summary of the research findings was done objective-wise. The study examined the relationship between risk attitude, herding behavior, overconfidence, anchoring behavior, and investor decision-making, with market information as a moderating variable.

5.2.1 Risk attitude and individual investor decision making

The findings of the first objective revealed that risk attitude has a positive significant relationship with individual investor decision-making at the Nairobi Securities Exchange ($r = 0.145$; $p<0.05$; $\beta = 0.159$, $p<0.05$). The study found out that, individuals always invest in the securities market without considering the risk associated with it, invest in low-risk securities regardless of low returns. It was further established that majority investors sought financial advice from experts and invested in securities that they were able to sell in a short period. The findings revealed that majority of the investors dispose of securities once they start depreciating. Majority of the investors also explained that risks associated with trading at the NSE discourage them from participating at the securities' market.

5.2.2 Herding behavior and individual investor decision-making

In assessing the relationship between herding behavior and individual investor decision-making at the Nairobi Securities Exchange, the findings from the correlation revealed

that herding behaviour had a positive significant correlation with individual investors at the NSE (r = 0.235; p<0.05), while the regression analysis results revealed that herding behaviour had a statistically significant relationship (β =0.180, p<0.05) with individual investor decision making at the NSE. From the study findings, most investors confirmed that positive feedback from friends and other investors who have already invested at NSE encourages them to invest at NSE. However, majority of them disagreed that they had invested in the securities market for fear of being left out. The results also showed that investors developed interests in investing at the securities market because it is the current trend, consider investment advisors in making investment decisions, and the positive information on the returns from trading at NSE by financial institutions encourages them to invest.

5.2.3 Overconfidence and individual investor decision-making

The third objective of the study was to determine the relationship between overconfidence and investor decision-making at the NSE. The results indicated that overconfidence had a positive significant correlation with individual investor decision-making at the NSE (r=0.470; p<0.05). Similarly, the study found that overconfidence had a statistically significant relationship (β=0.306, p<0.05) with individual investor decision-making at the NSE. The outcome of the study showed that most investors disagreed to having knowledge of how trading at the NSE operate, and that they had enough experience in trading at the NSE. The study findings found that most investors believed that they make right decisions at NSE when investing, and majority of them do follow trends in the performance of NSE before making investment decisions. It was also established that most investors agreed that their financial skills help them in making

112

investment decisions, and rely on knowledge acquired from investment workshops when trading at the securities market. These results showed that overconfidence has significantly contributed to individual investor decision-making at the NSE.

5.2.4 Anchoring behavior and individual investor decision-making

The fourth objective of this study was to establish the relationship between anchoring behavior and individual investor decision-making at the NSE. Results from the study revealed that anchoring behaviour had a positive significant correlation with individual investor decision-making at the NSE ($r = 0.429$; $p<0.05$). Regression analysis confirmed that anchoring behaviour had a statistically significant relationship with individual investor decision-making at the NSE ($\beta =0.311$, $p<0.05$). The study found that most investors often base their investment decisions on historical stock performance, even if the market information has changed. Majority of these investors agreed that they are influenced by the first piece of information they come across when making investment decisions at the NSE even if it may not be the most relevant. The findings established that majority of the investors agreed that media reports on a particular security significantly influenced their perception and subsequent decisions, often becoming an anchor point for their analysis. Most investors use initial security prices as reference points when assessing the fair value of securities at NSE. The study findings also revealed that most investors agreed that their initial perceptions or estimates can influence their investment decisions, and they actively try to mitigate this bias. The majority of the investors also agreed that financial analysts often influence their investment in the stock exchange.

5.2.5 Overall relationship between behavioural factors and individual investor decision making.

The study found that risk attitude ($\beta = 0.197$, $p < 0.05$), overconfidence ($\beta = 0.285$, $p < 0.05$), and anchoring behavior ($\beta = 0.284$, $p < 0.05$) were positively significantly related to individual investor decision-making at the Nairobi Securities Exchange. However, herding behavior was found to have an insignificant relationship ($\beta = 0.033$, $p > 0.05$) with individual investor decision-making at the Nairobi Securities Exchange.

5.2.6 Moderating effect of market information on the relationship between behavioural factors and Individual investor decision making

The study found out that risk attitude ($\beta = 0.0191$, $p < 0.05$), herding behavior ($\beta = 0.115$, $p < 0.05$), overconfidence ($\beta = 0.262$, $p < 0.05$) anchoring behavior ($\beta = 0.222$, $p < 0.05$), and market information ($\beta = 0.171$, $p < 0.05$) had a positive significant relationship with individual investor decision-making at the NSE. Furthermore, the study established that market information positively influences the relationship between behavioral factors and individual investor decision-making, as indicated by a 0.014 (1.4%) increase in the R-square value.

5.3 Conclusions

Following the study's research findings, the following conclusions were made based on the objectives of the study.

5.3.1 Risk attitude and individual investor decision-making

The study found that the risks involved in trading at the NSE deter individual investors from making investments at the securities market. Additionally, investors take into

account risks associated with securities before investing at the NSE. Therefore, the study concludes that there is a statistically significant positive relationship between risk attitude and individual investor decision-making at the NSE.

5.3.2 Herding behavior and individual investor decision-making

The study findings revealed that positive feedback from friends and other investors who had already invested in NSE significantly encouraged individuals to invest at the NSE. However, the aspect of investing at the NSE due to the pressure of being left out did not have any relationship with the individual investor's decision to invest in the securities market. Finally, current investment trends and input from investment advisors were found to have a significant relationship with the investor's intention to invest at the NSE. Thus, the study concluded that herding behaviour has a positive significant relationship with individual investor decision-making at the NSE.

5.3.3 Overconfidence and individual investor decision-making

It was also established that majority of the investors had insufficient knowledge of the workings of the NSE even though they had made investments at the securities exchange. They believed that investment decisions they make while investing at the security exchange were right and most of them followed the trend in the performance of the NSE. Therefore, the study concluded that overconfidence behaviour has a positive and significant correlation with individual investor decision-making at the NSE.

5.3.4 Anchoring behavior and individual investor decision-making

From the study findings, most investors base their investment decisions on historical security performance without making considerations on the changes in the market

information regarding the performance of securities. Similarly, most investors made their investment decisions on the basis of the information they came across without authenticating its validity or relevance, and relied on media reports on the performance of particular stocks when deciding to invest at the NSE. Therefore, the study concludes that there exists a positive significant relationship between anchoring behavior and individual investor decision-making.

5.3.5 Moderating effect of market information on the relationship between behavioural factors and Individual investor decision making

From the findings, the study concluded that market information has a positive, significant moderating effect on the relationship between behavioral factors and individual investor decision-making at the NSE. This implies that the contribution of behavioral factors to individual investor decision-making can be enhanced by market information.

5.4 Recommendations

Based on the conclusions of the study that established that risk attitude, herding behavior, overconfidence, and anchoring behavior influenced individual investor decision-making, the following recommendations were made.

5.4.1 Risk attitude and individual investor decision-making

The study recommends that investors should continuously assess their risk tolerance levels and, align their investment choices accordingly and diversify their portfolios by investing in a mix of low-risk and higher-risk stocks, as well as other categories of assets. The study also recommends that investors should understand market trends, financial statements, and economic indicators and continue to seek advice from financial experts.

The NSE should also provide regular market analysis, ensure transparency in market operations to build investor confidence, and introduce investment products that cater to investors in different risk profiles in order to encourage more people to invest at the NSE.

5.4.2 Herding behavior and individual investor decision-making

From the study, it's also recommended that investors should be aware of the psychological effects of herding behavior and strive to make decisions based on individual financial goals. Investors should also diversify information sources and understand the underlying factors driving market trends so as to help them differentiate between sustainable growth and short-term hype. The study also recommends that financial advisors and institutions offer educational resources and workshops to help clients understand the risks of herding behavior and the importance of independent decision-making. The NSE should also develop and promote educational programs focused on the risks of herding behavior and the benefits of independent, informed decision-making.

5.4.3 Overconfidence and individual investor decision-making

The study recommends that investors should regularly assess their knowledge and experience objectively so as to recognize the limits of their understanding and help mitigate the effects of overconfidence. Financial advisors and institutions should provide educational resources and training to clients on the dangers of cognitive biases, particularly overconfidence, and how they can impact investment decisions. The study recommends that the NSE should provide detailed and accessible market data and analysis and host events such as workshops, webinars, and seminars that bring together market experts and investors to discuss market trends, strategies, and risk management.

5.4.4 Anchoring behavior and individual investor decision-making

The study recommends that investors learn about cognitive biases, especially anchoring, and how they can impact investment decisions, diversify information sources, re-evaluate initial perceptions based on new data and developments, and seek professional advice. Financial advisors and institutions should provide balanced advice and educate clients about the risks of anchoring behavior and how to recognize and mitigate it in while making investment decisions. The NSE should also promote transparency in market reporting and ensure that media reports and analyst recommendations are based on comprehensive and current data.

5.4.5 Moderating effect of market information on the relationship between behavioural factors and Individual investor decision making

Financial analysts and institutions should also develop educational programs that highlight the importance of diverse and up-to-date market information in countering behavioral biases. The study also recommended that the NSE should maintain transparency and provide regular updates to help investors make informed decisions based on current market conditions since the study found a significant moderating effect of market information on the relationship between behavioural factors and individual investor decision making at NSE.

5.5 Suggestions for Further Research

The study recommends further research be carried out to analyze how various economic conditions (recession vs. growth periods) moderate the relationship between behavioral factors and investor decision-making. These studies will help scholars and investors gain

a deeper understanding of the complexities involved in individual investor decision-making and develop more effective strategies to enhance investment outcomes while also providing valuable insights for policymakers and financial institutions aiming to create a more informed and rational investment environment. Variation in individual investor decision-making was explained by 59.6% of the explanatory variables studied. Therefore, further studies should be carried out considering other behavioral biases.

REFERENCES

Ababio, K. A., & Mwamba, J. M. (2017). Test of herding behaviour in the Johannesburg stock exchange: application of quantile regression model. *Journal of Economic and Financial Sciences*, *10*(3), 457-474

Ademola, S. A., Musa, A. S., & Innocent, I. O. (2019). Moderating effect of risk perception on financial knowledge, literacy and investment decision. *American International Journal of Economics and Finance Research*, *1*(1), 34-44.

Afolabi, A. (2015). The effect of entrepreneurship on economy growth and development in Nigeria. *The Effect of Entrepreneurship on Economy Growth and Development in Nigeria*, *3*(2), 1-17.

Ah Mand, A., Janor, H., Abdul Rahim, R., & Sarmidi, T. (2023). Herding behavior and stock market conditions. *PSU Research Review*, *7*(2), 105-116.

Ahmad, M., & Shah, S. Z. A. (2020). Overconfidence heuristic-driven bias in investment decision-making and performance: mediating effects of risk perception and moderating effects of financial literacy. *Journal of Economic and Administrative Sciences*, *38*(1), 60-90.

Ahmad, M., & Wu, Q. (2022). Does herding behavior matter in investment management and perceived market efficiency? Evidence from an emerging market. *Management Decision*, *60*(8), 2148-2173.

Al-Nasseri, A., Menla Ali, F., & Tucker, A. (2021). Investor sentiment and the dispersion of stock returns: Evidence based on the social network of investors. *International Review of Financial Analysis*, *78*(C)

Areiqat, A. Y., Abu-Rumman, A., Al-Alani, Y. S., & Alhorani, A. (2019). Impact of behavioral finance on stock investment decisions applied study on a sample of investors at Amman stock exchange. *Academy of Accounting and Financial Studies Journal*, *23*(2), 1-17.

Arshad, I., & Ibrahim, Y. (2019). Uncertainty avoidance, risk avoidance and perceived risk: A cultural perspective of individual investors. *Hasanuddin economics and business review*, *3*(1), 21-33.

Awuor, L. J. (2017). *Behavioural factors that influence individual investment decisions at the Nairobi securities exchange* (Doctoral dissertation, University of Nairobi).

Banerjee, A., & Kayal, P. (2022). Bubble run-ups and sell-offs: a study of Indian stock market. *Review of Behavioral Finance*, *14*(5), 875-885.

Barno, L. J., Cheboi, J., & Muganda, C. (2021). Moderating Effect of Financial Literacy on Relationship between Anchoring and Investment Decision among SMEs in Nairobi County. *East African Journal of Business and Economics*, *3*(1), 65-81.

Barrett, D., & Twycross, A. (2018). Data collection in qualitative research. *Evidence-based nursing*, *21*(3), 63-64.

Blankespoor, E., deHaan, E., & Marinovic, I. (2020). Disclosure processing costs, investors' information choice, and equity market outcomes: A review. *Journal of Accounting and Economics*, *70*(2-3), 101344.

Cao, M. M., Nguyen, N. T., & Tran, T. T. (2021). Behavioral factors on individual investors' decision making and investment performance: A survey from the Vietnam Stock Market. *The Journal of Asian Finance, Economics and Business*, *8*(3), 845-853.

Cherono, I. (2020). Investor Behaviour and Stock Market Reaction in Kenya. *European Journal of Economic and Financial Research*, *4*(2).

Cooper, D. R., & Schindler, P. (2014). *Business research methods*. Mcgraw-hill.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches*. Sage publications.

Darman, D., Ubud, S., Siti, A., & Khusniyah, I. N. (2017). The interpretive paradigm in finance research: an overview of behavioral finance. *Russian Journal of Agricultural and Socio-Economic Sciences*, *65*(5), 162-167.

Edmonds, W. A., & Kennedy, T. D. (2016). *An Applied Guide to Research Designs: Quantitative, Qualitative, and Mixed Methods*. SAGE Publications.

Elhussein, N. H., & Abdelgadir, J. N. (2020). Behavioral bias in individual investment decisions: Is it a common phenomenon in stock markets. *International Journal of Financial Research*, *11*(6), 25.

Etikan, I., & Bala, K. (2017). Sampling and sampling methods. *Biometrics & Biostatistics International Journal*, *5*(6), 00149.

Farooq, A., & Sajid, M. (2015). Factors affecting investment decision making: Evidence from equity fund managers and individual investors in Pakistan. *Research Journal of Finance and Accounting*, *6*(9), 2222-1697.

Gill, S., Khurshid, M. K., Mahmood, S., & Ali, A. (2018). Factors effecting investment decision making behavior: The mediating role of information searches. *European Online Journal of Natural and Social Sciences*, *7*(4), 758-767

Hidayati, S. A., Wahyulina, S., & Suryani, E. (2018). The Influence of Behavioral Finance on Corporate Performance Through Debt Decision Making (Study on Small and Medium Enterprises in Lombok Island). *E-Proceeding Stie Mandala*.

Hunguru, P., Sibanda, V., & Tadu, R. (2020). Determinants of Investment Decisions: A Study of Individual Investors on the Zimbabwe Stock Exchange. *Applied Economics and Finance*, *7*(5), 38-53.

Jacob, S. A. W. (2017). *The impact of risk attitudes on micro-enterprise performance: Evidence from urban markets of Maputo, Mozambique* (Doctoral dissertation).

Joshi, M. A., & Agrawal, M. C. (2021). A study on the impact of Anchoring and Cognitive Dissonance on investment behavior with special reference to Income level, occupation and economic & political events. *Journal of Emerging Technologies and Innovative Research 8*(7), 570-586

Kansal, P., & Singh, S. (2018). Determinants of overconfidence bias in Indian stock market. *Qualitative Research in Financial Markets*, *10*(4), 381-394.

Kapoor, S., & Prosad, J. M. (2017). Behavioural finance: A review. *Procedia computer science*, *122*, 50-54.

Kartini, K., & Nahda, K. (2021). Behavioral biases on investment decision: A case study in Indonesia. *The Journal of Asian Finance, Economics and Business*, *8*(3), 1231-1240.

Kasoga, P. S. (2021). Heuristic biases and investment decisions: multiple mediation mechanisms of risk tolerance and financial literacy—a survey at the Tanzania stock market. *Journal of Money and Business*, *1*(2), 102-116.

Keswani, S., Dhingra, V., & Wadhwa, B. (2019). Impact of behavioral factors in making investment decisions and performance: study on investors of National Stock Exchange. *International Journal of Economics and Finance*, *11*(8), 80-90.

Khan, M. T. I., Tan, S. H., Chong, L. L., & Goh, G. G. (2021). Investment environment, stock market perception and stock investments after stock market crash. *International Journal of Emerging Markets*.

Khrennikov, A. Y. (2023). Classical Expected Utility Theory and Its Paradoxes. In *Open Quantum Systems in Biology, Cognitive and Social Sciences 2*(1) 319-325.

Kirui J. & Naibei I. (2023). *Research Methodology for Social Sciences*. Kenya Literature Bureau

Kothari, C. (2017). research methodology methods and techniques by CR Kothari. *Published by New Age International (P) Ltd., Publishers*, *91*.

Kuranchie-Pong, R., & Forson, J. A. (2022). Overconfidence bias and stock market volatility in Ghana: Testing the rationality of investors in the COVID-19 era. *African Journal of Economic and Management Studies*, *13*(1), 147-161.

Lamptey, J., Marsidi, A. B., Usman, B., & Ali, A. B. (2020). The Overconfidence Behavioral Bias in Working Capital Management and Performance of Small and Medium Enterprise in Ghana: A Conceptual Paper. *Malaysian Journal of Social Sciences and Humanities*, *5*(7), 124-129.

Langat, P. C., & Rop, W. C. (2019). Relationship between risk aversion of individual investors and stock market participation decision among secondary school teachers from Nakuru County, Kenya. *International Journal of Scientific and Research Publications*, *9*(9), 477-485.

Lawal, A. I., Somoye, R. O., Babajide, A. A., & Nwanji, T. I. (2018). The effect of fiscal and monetary policies interaction on stock market performance: Evidence from Nigeria. *Future Business Journal*, *4*(1), 16-33.

Ludenyo, J. I. (2021). *Effect of cognitive biases on individual investment decision in stock market among teachers in Vihiga sub county, Kenya* (Doctoral dissertation, Maseno university).

Madaan, G., & Singh, S. (2019). An analysis of behavioral biases in investment decision-making. *International Journal of Financial Research*, *10*(4), 55-67.

Małecka, M. (2020). The normative decision theory in economics: A philosophy of science perspective. The case of the expected utility theory. *Journal of Economic Methodology*, *27*(1), 36-50.

Maritim, F., Muturi, W. M., Kosgei, D., & Ranyimbo, A. O. (2022). Effect of Attitude Towards Risk on Individual Portfolio Choice at Nairobi Securities Exchange, Kenya. *Research Journal of Finance and Accounting*, *13*(20).

Masema, E. W. (2019). *Effect of Herding Behaviour On Market Performance of Insurance Companies Listed on Nairobi Securities Exchange* (Doctoral dissertation, University of Nairobi, Kenya).

McCarthy, D., Mikkola, K., & Thomas, T. (2020). Utilitarianism with and without expected utility. *Journal of Mathematical Economics*, *87*, 77-113.

Mehmood, T., Alzoubi, H. M., Alshurideh, M., Al-Gasaymeh, A., & Ahmed, G. (2019). Schumpeterian entrepreneurship theory: Evolution and relevance. *Academy of Entrepreneurship Journal*, *25*(4), 1-10.

Meng, J., & Weng, X. (2018). Can prospect theory explain the disposition effect? A new perspective on reference points. *Management Science*, *64*(7), 3331-3351.

Michael, C. I. (2023). Behavioural Biases and Investment Decisions in Nigerian Stock Exchange. *African Development Finance Journal*, *5*(4), 133-153.

Mudu, M. F., Dabo, Z., & Idris, M. B. (2022). Behavioural Bias and Investment Decisions of Dangote Sugar Refinery Plc. *Jalingo Journal of Social and Management Sciences*, *4*(2), 328-343.

Ndung'u, D. T. (2022). Influence of investor awareness on performance of real estate investment trusts in Kenya. *Journal of Business Economics and Finance*, *11*(3), 122-129.

Njeru, D. K., & Matanda, J. W. (2023). Behavioral factors and investment decisions among retail investors in real estate in Nairobi City County: Kenya. *International Academic Journal of Economics and Finance, 3* (9), 121-153.

Nnoje, A. I., Okonkwo, J. J., & Anachedo, C. K. (2021). Investors 'sentiments, Market Dynamics and Stock Market Returns in Nigeria. *Journal of Contemporary Issues in Accounting*, *1*(1), 56-73.

Okumu, A. B., Olweny, T., & Muturi, W. (2022). The Moderating Effect of Automation on Firm Specific Factors and Performance of Initial Public Offering Stocks at The Nairobi Securities Exchange in Kenya. *Journal of Applied Finance and Banking*, *12*(3).

Ong'eta, J. O. (2021). The controlling effect of investment decisions on the behavioral factors influencing investment performance of individual investors in Nairobi security exchange. *International Journal of Innovative Research and Advanced Studies 8*(11),41-47

Osamor, I. P., Anene, E. C., & Saka, Q. A. (2019) Relationship Between Stock Market Conditions and Investors Reactions: Evidence from Nigerian Stock Market. *International Journal of Finance and Banking Research 5*(6), 140-144

Owiye, O. P., Ombok, B. M., & Obura, J. M. (2019). Investor Behaviour towards Initial Public Offers (IPOs) in Kenya: A Re-Modelling of the Harry Markowitz's Risk-Return theory? *African Research Review*, *13*(4), 67-73.

Owusu, S. P., & Laryea, E. (2023). The impact of anchoring behaviour on investment decision-making: evidence from Ghana. *Review of Behavioral Finance*, *15*(5), 729-749.

Quaicoe, A., & Eleke-Aboagye, P. Q. (2021). Behavioral factors affecting investment decision-making in bank stocks on the Ghana stock exchange. *Qualitative Research in Financial Markets*, *13*(4), 425-439.

Rahayu, S., Rohman, A., & Harto, P. (2021). Herding behavior model in investment decision on emerging markets: Experimental in Indonesia. *Journal of Asian Finance, Economics and Business*, *8*(1), 053-059.

Rahim, D. A., Shah, D. M. H., Jan, D. S. U., & Aamir, D. A. (2020). Post COVID-19 influence of overconfidence bias on investment decisions of Pakistani stock investors. *International Journal of Management*, *11*(9).

Rahman, M. L., Amin, A., & Al Mamun, M. A. (2021). The COVID-19 outbreak and stock market reactions: Evidence from Australia. *Finance Research Letters*, *38*, 101832.

Renault, T. (2017). Intraday online investor sentiment and return patterns in the US stock market. *Journal of Banking & Finance*, *84*, 25-40.

Ruggeri, K., Alí, S., Berge, M. L., Bertoldo, G., Bjørndal, L. D., Cortijos-Bernabeu, A., ... & Folke, T. (2020). Replicating patterns of prospect theory for decision under risk. *Nature human behaviour*, *4*(6), 622-633.

Sahu, A. K., Padhy, R. K., & Dhir, A. (2020). Envisioning the future of behavioral decision-making: A systematic literature review of behavioral reasoning theory. *Australasian Marketing Journal*, *28*(4), 145-159.

Saivasan, R., & Lokhande, M. (2022). Influence of risk propensity, behavioural biases and demographic factors on equity investors' risk perception. *Asian Journal of Economics and Banking*, *6*(3), 373-403.

Sattar, M. A., Toseef, M., & Sattar, M. F. (2020). Behavioral finance biases in investment decision making. *International Journal of Accounting, Finance and Risk Management*, *5*(2), 69.

Shah, S. Z. A., Ahmad, M., & Mahmood, F. (2018). Heuristic biases in investment decision-making and perceived market efficiency: A survey at the Pakistan stock exchange. *Qualitative Research in Financial Markets*, *10*(1), 85-110.

Sharma, D. J., & Sarma, N. N. (2022). Behavioural Finance–A study on its Bases and paradigms. *International Journal of Scientific Research and Management, 10*(03), 3157-3170.

Shukla, A., Rushdi, D. N. J., & Katiyar, D. R. C. (2020). Impact of behavioral biases on investment decisions 'a systematic review'. *International Journal of Management*, *11*(4).

Shukla, S., & Shukla, S. K. (2023). *Impact of Automation Bias and Status Quo Bias on Capital Market Investment Decisions of Indian Investors: An Explanatory Research*. (MBA thesis Siddharth University, India).

Suen, M. W., & Sholilah, A. M. (2019). High Validity and Reliability of School Readiness Questionnaire Measuring Instrument for Kindergarten Children in Indonesia Sample. *Journal of Psychological and Educational Research*, *27*(2), 126-153.

Sukmadilaga, C., Fitri, A. N., & Ghani, E. K. (2022). Do Foreign Investment Flow and Overconfidence Influence Stock Price Movement? A Comparative Analysis before and after the COVID-19 Lockdown. *Journal of Risk and Financial Management*, *16*(1), 5.

Taherdoost, H. (2019). What is the best response scale for survey and questionnaire design; review of different lengths of rating scale/attitude scale/Likert scale. *Hamed Taherdoost*, 1-10.

Takemura, K. (2021). *Behavioral decision theory*. Springer Singapore.

Thaler, R. H. (2015). *Misbehaving: The making of behavioral economics*. WW Norton & Company.

Wafula, D. S., Charles, Y. T., & Ondiek, A. B. (2023). The Moderating Role of Fund Size on the Relationship between Overconfidence and Portfolio Financial

Performance of Mutual Funds in Kenya. *African Journal of Empirical Research*, *4*(1), 286-297.

Wanjohi, S. W., & Mwita, M. (2019). Effect of behavioural factors on investor decisions in investment banks and stock brokerage firms at the Nairobi Securities Exchange. *International Academic Journal of Economics and Finance*, *3*(4), 64-79.

Yamane. Taro, (1967): Statistics: An Introductory Analysis, 2nd Ed., New York: *Harper and Row.*

APPENDICES

Appendix I: Introduction letter

Bett Samson

University of Kabianga

P.O BOX 2030-20200,

Kericho, Kenya

Dear Sir/Madam

RE: Permission to Collect Data from Your Clients

I am a postgraduate student undertaking a master of Business in Finance at the University of Kabianga. As a requirement for conferment of the award of the said degree, I am carrying out research on the relationship between behavioural factors, market information and individual investor decision making at the Nairobi Securities Exchange. Your brokerage firm has been selected for this study. Kindly allow me to collect data from individual investors in your firm between December 2023 and January 2024. This study is purely academic, and all the information obtained from your clients will be treated with utmost confidentiality. In addition, the study will not reveal the identity of the customers, and their participation will be voluntary.

Thank you in advance

Yours sincerely

Bett Samson

Introduction

This questionnaire intends to collect data on the relationship between behavioural factors, market information and individual investor decision-making at the Nairobi Securities Exchange. Your participation in filling out this questionnaire is voluntary and will be highly appreciated. Confidentiality of the provided information will be observed. In addition, you are requested not to write your name or any personal identification mark in any part of this questionnaire.

SECTION A: Personal Information

Put a tick (√) against your appropriate choice

1. Gender

      a)   Male   [ ]

      b)   Female   [ ]

2. Age

      a)   18 –27 years [ ]

      b)   28 -37years   [ ]

      c)   38 –47years   [ ]

      d)   Over 48years [ ]

3. Indicate the highest level of education

      a)   PhD   [ ]

      b)   Masters   [ ]

      c)   Degree   [ ]

      d)   Diploma   [ ]

      e)   Certificate [ ]

      f)   Others-specify_____

4. Business activity engaged in

      a) Formal employment (public sector) [   ]

      b) Formal employment (private sector) [ ]

c) Casual Jobs [   ]

d) Farmer

e) Small-Scale business [   ]

f) Others –specify_____

SECTION B: Risk Attitude

The following statement relates to risk attitude and individual investor decision-making. On a scale of 1-5, indicate the level of your agreement to the following statements by putting a tick (√) in the appropriate spaces shown in the table below: 5= Strongly Agree (SA), 4= Agree (A), 3= Undecided/ Neutral (N), 2 = Disagree (D) and 1= Strongly Disagree (SD).

No	Statements on Risk attitude	Rating				
		5 (SA)	4 (A)	3 (N)	2 (D)	1(SD)
1.	I always invest in the securities market without considering the risk associated with it					
2.	I usually invest in low-risk securities, regardless of the low returns.					
3.	I invest in securities that I am able to sell in a short period.					
4.	I always seek financial advice from experts before investing at the NSE.					
5.	I always dispose of securities once they start losing value.					
6.	Risks associated with trading at NSE discourage me from participating at the securities market.					

SECTION C: Herding Behaviour

The following statement relates to herding behaviour and individual investor decision-making. On a scale of 1-5, indicate the level of your agreement to the following statements by putting a tick (√) in the appropriate spaces shown in the table below: 5=

Strongly Agree (SA), 4= Agree (A), 3= Undecided (N), 2 = Disagree (D) and 1= Strongly Disagree (SD).

No.	Statements on Herding Behaviour	Rating				
		5 (SA)	4 (A)	3 (N)	2 (D)	1(SD)
1.	Positive feedback from other investors who have already invested at NSE encourages me to invest at NSE.					
2.	Positive feedback from my friends who have invested at NSE encourages me to invest at NSE.					
3.	I have invested in the securities market for fear of being left out.					
4.	I consider investment advisors in making my investment decisions					
5.	I have developed interest to invest at the securities market because it is the current trend					
6.	The positive information on the returns from trading at NSE by financial institutions encourages me to invest.					

SECTION D: Overconfidence

The following statement relates to overconfidence on individual investor decision-making. On a scale of 1-5, indicate the level of your agreement to the following statements by putting a tick (√) in the appropriate spaces shown in the table below: 5= Strongly Agree (SA), 4= Agree (A), 3= Undecided (N), 2 = Disagree (D) and 1= Strongly Disagree (SD).

No.	Statements on Overconfidence Behaviour	Rating				
		5 (SA)	4 (A)	3 (N)	2 (D)	1(SD)
1.	I have enough knowledge of how trading at NSE operates.					
2.	I have enough experience in trading at the NSE.					
3.	I believe that the decisions I make when investing at NSE are right					

No.		5 (SA)	4 (A)	3 (N)	2 (D)	1(SD)
4.	I follow trends in the performance of NSE before making an investment decision.					
5.	My financial skills help me in making investment decisions.					
6.	I rely on knowledge acquired from investment workshops when trading in the securities market					

SECTION E: Anchoring Behaviour

The following statement relates to anchoring behaviour and individual investor decision-making. On a scale of 1-5, indicate the level of your agreement to the following statements by putting a tick (√) in the appropriate spaces shown in the table below: 5= Strongly Agree (SA), 4= Agree (A), 3= Undecided (N), 2 = Disagree (D) and 1= Strongly Disagree (SD).

No.	Statements on Anchoring Behaviour	Rating				
		5 (SA)	4 (A)	3 (N)	2 (D)	1(SD)
1.	I often base my investment decisions on historical stock performance, even if the market information has changed.					
2.	When making investment decisions at the NSE, I am influenced by the first piece of information I come across, even if it may not be the most relevant.					
3.	Media reports on a particular security significantly influence my perception and subsequent decisions, often becoming an anchor point for my analysis.					
4.	I use initial security prices as reference points when assessing the fair value of securities at the NSE.					
5.	My initial perceptions or estimates can influence my investment decisions, and I actively try to mitigate this bias.					
6.	My investment at the securities exchange is often influenced by financial analysists					

SECTION F: Market Information

The following statement relates to Market Information. On a scale of 1-5, indicate the level of your agreement to the following statements by putting a tick (√) in the appropriate spaces shown in the table below: 5= Strongly Agree (SA), 4= Agree (A), 3= Undecided (N), 2 = Disagree (D) and 1= Strongly Disagree (SD).

No	Statements on Market Information	Rating				
		5 (SA)	4 (A)	3 (N)	2 (D)	1(SD)
1.	I rely on financial statements and reports of NSE-listed companies for investment decisions.					
2.	I closely follow market trends and use them as a basis for making investment choices.					
3.	I consider information from social media platforms and online forums to be valuable when making investment decisions.					
4.	When making investment decisions, I consider general economic factors, such as increased disposable income and inflation.					
5.	My ability to access relevant market information helps me when making investment decisions at the NSE.					
6.	Real-time market information, such as stock prices and trading volumes, has a substantial impact on my investment decision-making.					

SECTION G: Investor Decision-making

The following statement relates to Investment Decision making at the NSE. On a scale of 1-5, indicate the level of your agreement to the following statements by putting a tick (√) in the appropriate spaces shown in the table below: 5= Strongly Agree (SA), 4= Agree (A), 3= Undecided (N), 2 = Disagree (D) and 1= Strongly Disagree (SD).

No	Statements on Investment decision-making	Rating				
		5 (SA)	4 (A)	3 (N)	2 (D)	1(SD)
1.	I am an active participant at the securities market.					
2.	I have invested in more than one security.					
3.	I invest at NSE for returns in the form of capital gains and dividends.					
4.	I actively buy and sell securities at the securities exchange					

5.	I invest at the NSE market for speculative purposes.					
6.	I have access to information on security prices at the NSE.					

Appendix III: Stock Brokers in Kenya

1. Dyer & Blair Investment Bank Ltd

2. Francis Drummond & Company Limited

3. Ngenye Kariuki & Co. Ltd. (Under Statutory Management)

4. Old Mutual Securities Ltd

5. Suntra Investment Bank Ltd

6. AIB Capital Ltd

7. Kingdom Securities Ltd

8. SBG Securities Ltd

9. Sterling Capital Ltd

10. Apex Africa Capital Ltd

11. Faida Investment Bank Ltd

12. Kestrel Capital (EA) Limited

13. African Alliance Securities

14. Renaissance Capital (Kenya) Ltd

15. Genghis Capital Ltd

16. Securities Africa Kenya Limited

17. EFG Hermes Kenya Limited

Source: NSE, (2024)

Appendix IV: Research Authorization from the Board of Graduate Studies

UNIVERSITY OF KABIANGA
ISO 9001:2015 CERTIFIED
OFFICE OF THE DIRECTOR, BOARD OF GRADUATE STUDIES

REF: MBA/A/0007/2022　　　　　　　　　　　**DATE: 8TH JULY, 2024**

Samson Kiprotich Bett,
Accounting and Finance Department,
University of Kabianga,
P.O Box 2030- 20200,
KERICHO.

Dear Mr. Bett,

RE:　CLEARANCE TO COMMENCE FIELD WORK/DATA COLLECTION

I am pleased to inform you that the Board of Graduate Studies has considered and approved your MBA research proposal entitled **"Behavioural Finance, Market Information and Individual Investor Decision Making at the Nairobi Securities Exchange."**

Subsequently the Board has also approved the following supervisors for appointments.

　　　　　1. Dr. Penina Langat
　　　　　2. Dr. Gichuki Kingori

You may now proceed to commence field work/data collection on condition that you obtain a research permit from NACOSTI and /or an ethical review permit from a relevant ethics review board.

You are also required to publish one (1) article in a peer reviewed journal, with all your supervisors, before your oral defense of thesis.

You are required to submit through your supervisors, and HoD, progress reports every three months, to the Director, Board of Graduate Studies.

Please note that it is the policy of the University that you complete your studies within three years from the date of registration. Do not hesitate to consult this office in case of any difficulties encountered in the course of your studies.

I wish you all the best in your research and hope that your study will yield original contribution for the betterment of humanity.

Yours Sincerely,

Dr. Ronald K. Rop
DIRECTOR, BOARD OF GRADUATE STUDIES.
RKR/lc

cc   1. Dean, SBE
      2. HOD, Accounting and Finance
      3. Supervisors

Appendix V: Research Authorization from the National Commission for Science, Technology and Innovation

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION

Ref No: **818620**

Date of Issue: **26/July/2024**

RESEARCH LICENSE

This is to Certify that Mr.. SAMSON KIPROTICH BETT of University of Kabianga, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: BEHAVIOURAL FINANCE, MARKET INFORMATION AND INDIVIDUAL INVESTOR DECISION MAKING AT THE NAIROBI SECURITIES EXCHANGE for the period ending : 26/July/2025.

License No: **NACOSTI/P/24/38343**

818620

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY &
INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

Appendix VI: Research Authorization from the Ministry of Education

REPUBLIC OF KENYA

MINISTRY OF EDUCATION
State Department of Basic Education

Email:cdekerichocounty@gmail.com
When Replying Please Quote:

County Education Office
P.O BOX 149
KERICHO

Ref: No. KER/C/ED/RC/VOL.111/97

29th July, 2024

TO WHOM IT MAY CONCERN.

RE: RESEARCH AUTHORIZATION: MR. SAMSON KIPROTICH BETT NACOSTI/P/24/38343

I refer to the Director NACOSTI Letter Ref: No.818620 dated 26/07/2024 granting the student above authority to conduct research in Kericho County. His topic *"BEHAVIOUR FINANCE MARKET INFORMATION AND INDIVIDUAL INVESTOR DECISION MAKING AT THE NAIROBI SECURITY EXCHANGE, for* the period ending 26/07/ 2025.

This is to request your office to accord him the necessary support during the research period.

Thank you.

FOR COUNTY DIRECTOR OF EDUCATION
KERICHO COUNTY

2 9 JUL. 2024

P.O. BOX 149 – 20200,
KERICHO.

MOSES OKEA
FOR; COUNTY DIRECTOR OF EDUCATION
KERICHO COUNTY.

140

Appendix VII: Research Authorization from the Ministry of Interior and National Administration

OFFICE OF THE PRESIDENT
MINISTRY OF INTERIOR AND NATIONAL ADMINISTRATION

Telegrams: ....
Telephone: Kericho 20132
When replying please quote
kerichocc@yahoo.com

THE COUNTY COMMISSIONER
KERICHO COUNTY
P.O. BOX 19
KERICHO

REF: MISC 19 VOL.VIII (168)

29th July,2024

TO WHOM IT MAY CONCERN

RESEARCH AUTHORIZATION –MR. SAMSON KIPROTICH BETT.

I am pleased to inform you that you are authorized to undertake research as per the licence No. NACOSTI /P/24/38343 dated 26th July, 2024 on *"behavioural Finance, Market Information and Individual Investor Decision Making at the Nairobi Securities Exchange'* for a period ending: 26th July, 2025.

MUTHONI NKUBIRIA
FOR:COUNTY COMMISSIONER
KERICHO COUNTY.