COGNITIVE BIASES AND INVESTMENT DECISIONS OF DEPOSIT-TAKING SAVINGS AND CREDIT COOPERATIVE SOCIETIES IN KENYA

BY

WILSON YESWA

A RESEARCH DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT FOR THE AWARD OF DEGREE OF MASTER OF SCIENCE IN COMMERCE (FINANCE AND INVESTMENT) IN THE SCHOOL OF BUSINESS AT KCA UNIVERSITY

NOVEMBER 2024

DECLARATION

I am certain and therefore declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree in any institution of higher learning. I also acknowledge that this contains no material written or published by other people except where due reference is made and author duly acknowledged by KCA University.

Wilson Yeswa **Admission Number 22/08980**

Signed: ……. Date: ……

I do hereby confirm that I have examined the master's dissertation of

WILSON YESWA

And have certified that all revisions that the dissertation panel and examiners recommended have been adequately addressed with my consent as the university supervisor

Signed: …… Date …….

DR. IBRAHIM TIRIMBA ONDABU
Dissertation supervisor
Senior Lecturer of Financial Management
KCA University

ABSTRACT

The primary focus of this research was to examine how cognitive biases influence the investment decisions of deposit-taking savings and credit cooperatives (SACCOs) in Kenya. The study was guided by four specific objectives: first, to determine the impact of herding behavior on the investment choices of deposit-taking SACCOs in Kenya; second, to evaluate whether mental accounting affects the investment decisions of these SACCOs; third, to investigate the role of overconfidence in shaping the investment choices of credit cooperatives involved in deposit-taking and savings; and finally, to assess how regret aversion influences the investment decisions made by investors in these SACCOs. Primary data was collected using a Likert scale-based, self-administered questionnaire, and the analysis was conducted using multiple regression and correlation analysis. The study also adopted a descriptive survey approach, utilizing a census technique to gather data from the 176 registered and licensed deposit-taking SACCOs in Kenya. The target population for the study consisted of SACCOs actively engaged in deposit-taking and savings activities. The research employed both open and closed-ended questions in the questionnaire as the main data collection tool. Other statistical methods used included measures of central tendency, dispersion, and correlation analysis, all facilitated by SPSS software. To ensure the validity of the research instrument, tests for multicollinearity, linearity, autocorrelation, and heteroskedasticity were conducted. From the analysis various findings were drawn also several recommendations were uplifted which included first the investor to re-evaluate the decision in regards to investment the deposit taking saccos, secondly deposit taking to continuously integrate technology and thirdly government policy making and regulating body ensure that prospective investors resources are safeguarded. Finally, areas for further research was included as the last part in the research

DEDICATION

I wish to make special thanks and more importantly to the Almighty God for enabling me to grow a strong spirit and pull through the ups and downs of my beloved daughters and a son Emmy, Angeline, and Bryant my siblings Ken, Pam, Charles Eliphas, and Caroline who have remained the strongest pillar in all aspects of my life and ensuring that all the goals remain achieved.

ACKNOWLEDGEMENT

I wish to acknowledge and express my sincere and special honour to my abled supervisor Dr. Ibrahim Tirimba Ondabu for his impeccable skill and moral support, special friends who hold strong academic values, and most importantly to almighty God for his gracious grace and for opening avenues for finances, strength, and courage to actualize this academic journey.

TABLE OF CONTENT

ABBREVIATIONS AND ACRONYMS

GOK : Government of Kenya

SACCO : Saving and credit cooperative organization

OECD : Organization for Economic Co-operation and Development

SACCOS : Saving and credit cooperate societies

SASRA : Saving Society Regulatory Authority

WOCCU : Worker community cooperative credit union

DTS : Deposit-taking SACCOs

OPERATION AND DEFINITION OF TERMS

Herding bias Herding refers to an alignment of thoughts or behaviours of individuals in a group. This effect is evident when people do what others a doing instead of using their information or making independent decisions. It is particularly relevant in the domain of finance, where it has been discussed in relation to the collective irrationality of investors (Banerjee, 1992)

Mental Accounting: Mental accounting is a concept in the field of behavioral economics. it contends that individuals classify funds differently and therefore are prone to irrational decision-making in their spending and investment behavior. It is a framework that helps you understand how people label and track them money (Thaler, 1985,1999). It describes people's tendency to categorize and evaluate economic outcomes by grouping their assets into any number of non-fungibles, non-interchangeable mental accounts (Gou et al., 2013).

Overconfidence: Overconfidence is the belief that we have more knowledge or skill than we possess in a particular domain or task. It is one of the most pervasive and seductive illusions it has been explained as a particular form of miscalibration, for which the assigned probability that the answers given are correct exceeds the true accuracy of the answers (Moore & Healy, 2008)

Regret Aversion: Regret aversion is a concept within the prospect theory describing a negative

emotional bias that urges investors to avoid regret, thus sometimes making the wrong decision. also investigated that regret aversion is a significant negative emotion. (Tsiros & Mittal, 2000)

Investment Decisions: Investment decision is defined as today's sacrifice of resources (time, money, and energy) to get better or more resources in the future. Thus, making an investment decision means choosing the best way to achieve the goal of obtaining future returns with limited financial resources (Laopodis, 2021

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The key aspect of the cognitive control is that it is considered to be the main function of the executive control. It is enlisted as having the ability to meticulously respond to stimuli and goal by inhibiting or responding to relevant stimuli. Many a time this may take place when prospective individuals wish to find meaning in the information in the surrounding environment which ultimately alters the decision and rationality of the mind selective criteria they settle on, in as much as the human brain is a powerful engine is subjected to limitation, therefore in other words cognitive bias ultimately checks on the mind capability in determining what rational decision to undertake (Wante et al.,2017).

Kapoora and Prosad (2017) Noted that behavioural finance decisions sometimes conflict sharply with the ideologies of rationality because issues such as bias, greed, self-attrition, and overconfidence affect the decisions that many investors face when they want to make a rational decision towards investment. Therefore, behavioural cognitive bias shades light in finding meaning in investors' psychological application when it comes to market behaviours and when it comes to settling on the right decision in regards to projected future crises that are raised by economic measures as indicated by (Kapoor & Prosad, 2017 & Paule-Vianez et al., 2020).

1.1.1 Cognitive Biases

Usually, people who undergo mental disposition to cognitive bias become uneasy in absorbing new information that is as a result of the prior perspective this is about (Yuniningsih & Taufiq, 2019). It, therefore, implies the mishap with the processed information that should be clustered and mastered in regards to the notable building blocks of the cognitive bias which include cognitive dissonance bias related to overconfidence, and the illusion of control bias (Pradhana, 2018).

Therefore, cognitive bias many a time the prospect who undergo investment prejudice ultimately don't consider dispensed information in making the right decision they simply draw their conclusion, they employ their skill in drawing and arriving at a conclusion by believing that the rationality of their mind is the best (Lekovi, 2020). It is therefore important to note the induced bias to psychology which hinders people from settling on a wise financial plan which causes them to magnify the bigger picture of the foreseeable problem and the hazard that comes out as a result. Under this we find two cognitive bias that ultimately alters how individual settles on a rational decision these include emotionally inclined bias and cognitive bias they affect how the prospective investor arrive at an investment decision (Pradhana, 2018).

People who have undergone the cognitive bias experience, tend to withdraw and not be willing and easy to absorb new ideas, this is as a result of the prior prospective experience asserts (Yuniningsih &Taufiq, 2019). The result of the asymmetric information many a times results from the past experience and from the knowledge acquired that may tend to differ from the previously conceptualized information according to (Civek, 2019). In regards to the emphasis on the feeling spontaneity rather than the logical way it states that emotional bias is a deviation. Therefore, regret aversion bias, status quo and loss aversion are the key component of the building block of emotional bias in reference to (Pradhana, 2018).

It is observed that investors tend to imitate the market pattern with herding behaviour, when market is rising and when there is an adjustment in the market performance. At this point many prospective investors are more inclined in their own thinking, they are enthusiastic, more positively inclined and optimistic by neglecting the information they possess in regards to product and emulate the pattern of the behaviours dictated by others towards the buying decision. on a contrary note sometimes, the investment may fall where it is driven by fear and exposure, panic where the investor adopts a consensus and get involved in excessive selling of the shares (Pochea et al., 2017) As a result the global market crisis related to financial have changed how individual behaves during the condition when there is an upward and downward in the market structural performance (Ishqirat, 2019). In another study by Wu et al. (2020) revealed that herding bias is prevalence and more evident when it comes to market displays, poor trading volume and poor investment procedure that are as a result of the pandemic that happened 2019. In another research by Bagchi (2022) shades lightt on the contribution of cognitive bias that are exhibited towards investment decision among the most outstanding was noted to be herding behaviour that displayed a high level of the precipitation, also it is imperative to note from the study the positive contribution of herding behaviour on rational investment criteria selection.

In a research by Chen et al. (2020) many a time the noble character that is displayed and depicted by those who hear has been found to have no clue about the information about the product. There is a tendency to lack familiarity with the entire process that ought to be known due to this it results in many prospective investors dwelling and capitalizing on the opinion of others and what is juxtaposed to be the ideal situation and truth by the public. Most of the investors who herd tend to believe in having information about investment selection's criteria but in an actual sense, the

cognitive bias about herding has a higher possibility of rising to market in capabilities (Arisanti & Oktavendi, 2020).

Akhaler and Das (2020) affirm that overconfidence is an average effect that is a result of miscalibration, and the illusion of control which depicts the other three levels which include over placement, over-precision, and overestimation. From the analysis the determinant acts as the threshold in establishing the standard upon which investment performance can be benchmarked against its levels of propensity of the exposure of risk. It is imperative to note that overconfidence is associated to human behaviours which inherently has the main spring of individual adventure which is due to superiority and a times prospective investors don't necessarily become the main influencers when it comes to the decision-making process (Arik & Sri, 2021). The research carried out demystified overconfidence to have a positive impact and highly contribute towards decisions related to investment. Everyone can become overconfident in their age and education when deviation occurs systematically from the norm and thinking, and in cognitive biases.

Regret aversion is inclined more to the pain that is caused as a result of the loss and it draws more pain as compared to the realized gain according to (Jain et al., 2020). Also revealed, the precipitation of loss aversion does form a third major bias in terms of the influence in comparison to other bias that affects decisions related to the investment of the individual. Ideally, this is formed on the opinion about what exposure is, and, in this sense, it is the uncertainty that may a time differ from the ideal reality (Ainia & Lutfi, 2019).

From a global perspective on cognitive biases, research done in Eastern India by Khan (2020) concluded that many biases like herding bias, disposition effect, and mental accounting positively contribute to the well-being when it comes to individual prospective investors, while another conducted by Khan and Tan (2020) stated the influence of family on the behavioral biases

and concluded that learning from parents have strongest effect on financial outcomes and biases among the investors of Dhaka. Ogunlusi and Obademi (2019) stated the positive impact between behavioral finance and investment decisions. A study by Kumari (2018) in eastern India summed up the findings of the research which entailed the application of psychological bias on rational investment their final submission revealed that there subsists a significant association in the relationship related to the decision-making process.

Jetter and Walker (2017) In their research done in the United States of America (USA) acknowledged the link that connects behavioural finance bias and rationality on investment criteria. They also concluded that anchoring bias is more pronounced in female investors compared to male investors. However, children below the teenage are not prone to this bias. Shah et al. (2018) conducted research in Pakistan and specified that the bias known as heuristic biases holds a negative relationship with the process of investment decision-making of prospective investors enthusiastically doing transactions of stock brokerage in Pakistan

From a regional perspective, a study done in UAE on investment behaviours found that there has been an acknowledgment of the fact that religious inclination has a crucial role in determining the type of investment an individual will ultimately settle on. In this regard, there is notable evidence on the rationality of the decision that is depicted by individual from diverse aspect of faiths which include Christianity, Islam and Judaism (Alderman et al.,2017).

Another study done in Uganda checks into the two complementary theories which include prospect theory and utility theory that highlight how an individual is affected by behavioural bias towards the rationality relating to investment criteria decisions in the commercial market that is related to the intuitive exhibition by the investors and the attitude. From the findings, it was affirmed that the most prominent behaviours that contribute to the choices emanate from

psychology where many investment decisions in all aspects to inefficiency market in the commercial estate (Kahneman and Tversky, 1979; Shukla et al., 2020). Tanet et al. (2018) affirm that the price related to real estate is not solidly anchored on an investment foundation but it is due to bounding rationality which lends us to cling and hang our investment onto the past and other related factors, we herd, we react emotionally and we are overly averse to loss when assessing the quality of investment decisions. Tanet et al. (2018) examined the relationship between investor cognitive bias, intuitive investor attributes, and investment decision quality in commercial real estate in Uganda and found that both are significant predictors of investment decision quality in comparison with other East African cities, Kampala has higher total return than Nairobi, with average rental total return of 6.8%, 10.6% and 10.2% for apartment (rentals), office and retail, respectively, against Nairobi's 5.6%, 9, 3% and 10.0% for the same themes (Cytonn, 2019).

From a local perspective, a study done in Kenya by Shah et al. (2018) in their research work found a substantial negative relation between the bias called anchoring bias. Broihanne and Orkut (2018) stated that a bias known as mental accounting influence the "Personal Financial Planning" process of an investor which in return reinforces the pattern of inner thinking and evaluation processes that determine the several financial decisions.

1.1.2 Investment decision

Laopodis (2021) defines investment decision as today's sacrifice of resources (time, money, and energy) with the purpose of getting better or more resources in the future. Thus, making an investment decision means choosing the best way to achieve the goal of obtaining future returns with limited financial resources. There has been an assumption in traditional finance theory that investors always make rational decisions based on complete information, but behavioural finance argues that investors are influenced by their emotions, biases, and cognitive limitations

(Almansour & Arabyat, 2017). Numerous studies have examined the impact of these factors on investment decisions and have found that they can lead to suboptimal decision-making (Goswami et al., 2020).

A study done in India revealed that Investors have a strong inclination and prone to recency bias, which has a high impact on their behavior and financial decisions (Lathe et al., 2020). It was revealed to have a substantial impact on investors' financial investment decisions according to (Zahera & Bansal, 2018). There is a crucial role that is involved in the investment decision-making process since most the prospective investor makes the final submission based on published research of the article that relates to market structure and stock brokerage (Bihari et al., 2022). It was noted that among the Indonesia prospective investor, they display and exhibit the bias related to the recency once they receive stock related to capital market piece of the information in the mid of the trading process (Armansyah et al., 2022). On the other hand, Arabs significantly are affected by recency related bias while juggling on the type of allocation of asset that has an impact and high generation of income in the long run according to (Pradhan, 2018).

Also, in another research done in America noted peculiar behaviours that most prospective exhibit that relates to bias of familiarity when it comes to choosing of stock that they feel acquainted with by the company (Vries et al., 2017). It is quite prevalent and mostly displayed by the investors who also are affected by the decision that relates to financial rationality in the market (Bashir & Maqsood, 2018). Many a time they affect how most of the financial decisions are selected. when it comes to investment decisions this is evident in where familiar individuals are preferred by them that depends on geographical disposition and how gender may lead to the familiarity bias and its ultimate alteration on the investors behaviour and decision which is highly presented in the USA and other lower Asian hemisphere (Levy et al., 2020).

Further in another study done in Egypt, the research revealed how overconfidence bias positively impacts investor financial selection criteria in Egyptian financial markets and ultimate investment decisions, most of its decision is highly interconnected with the level of education, age, and gender also, the familiarity-based bias was found to have an enormous influence on the effect of decision making that relates to finance rationality of decision in Egypt market when it comes to choice making (Metawa et al., 2019).

In a study done in South Africa it was noted that most prospective investors will exhibit familiarity bias when they want to decide on the company to invest in (Varie et al., 2017. In regards to these cognitive biases more significant effect results into a negative outcome when it comes to portfolio diversification plans (Nurcahya & Dewib, 2022). It was also noted that sometimes the behavioural biases even though singularly significant also impact negatively on the betterment of behavioural bias when an ultimate decision is being made (Weixiang et al., 2022) In this regard it is imperative to note the ultimate rationality on the decision which may have a negligible but high impact that affects the cognitive bias (Sharma & Kumar, 2022). In other finding by Mallik et al. (2019) identified the positive relationship that subsists between the bias of overconfidence which plays a mediating role of the risk that is in line with the market financial investment decision.

In Kenya, Juliet (2017) established the connection between demographical features of cognitive biases of prospective investors at the Nairobi Securities Exchange. The findings showed multilayered effects of behavioural biases across demographic characteristics. Most local studies in Kenya were based on investment of investors at the Nairobi Securities Exchange. Also, another research carried out locally about the field of behavioural science revealed that behavioural factors affecting the traders in an open-air market environment in Kisumu were noted that traders tend to exhibit overconfidence behaviours to the skill and knowledge performance in the air market.

Consequently, Nyakundi's (2017) study aimed to rank investment decisions that are mostly conducted by financial managers at the NSE index companies towards ultimate goal setting. In the submission is the regular and monthly earning of an individual can be in the stock market. This therefore informs and concludes that many a time the prospective individuals a stable and who have monthly returned that stem from their level of profession on the background investment of the prospect in the stock. Empirical evidence on research done by Weru (2019), and Karanja (2017) in their submission there seems to be a mixed sign in the relationship that subsists between herding bias to individual rationality with investment decision also Karanja (2017) by the employment of snowball in the sampling and the analysis of a multiple regression analysis which examines the cognitive biases factor on rational mind of the investor the herding instinct, was found to significantly impact positively towards the prospective investors' decision settlement and financial planning

1.1.3 Deposit-taking saving and credit cooperative societies in Kenya

SACCO Societies Regulation Authority (SASRA) is a statutory regulation agency established under the SACCO Societies Act 2008 to regulate DT-Saccos business in Kenya (cap 490B). The Sacco Act 2008 stipulates that at least the active and in operational deposit saccos must maintain 15% of its savings deposits and short-term liabilities in liquid assets. SASRA subscribe to Saccos societies act 2008 which uplifted the guideline that are customized by World Council of Credit Union (WOCCU) standards and they apply them to saccos which require them to have main stake of capital of at least ten (10) million in their accounts reserve. Where it is the requirement of the Sacco Society's regulation authority which is the government governing body is to enhance financial stability, performance, and control (SASRA, 2008).

There are 176 investment deposit SACCOS, complied and registered in Kenya as per the latest statistics which were published in January 2024 under the regulation of the Sacco society (deposit-taking business) regulation Societies act no. 8 of 2010 licensed by the SASRA to officially carry out the operation (SASRA, 2020).

From a global perspective study done by Park et al. (2019), acknowledged that the presence of overconfidence has been shown to have an enormous influence on both the firm prospective financial performance and management in a way that such results cannot casually be associated with the deposit-taking SACCOS since the rationality of the investors' decision is also characterized by other demographic factors which may include being furnished with the information related to their ultimate decision. In another analysis by Sharma and Kumar (2019), they could not mirror the finding with its relevance. Also, another insight by Aljuhani and Shaheen (2021), could not conclusively ascertain the firmness and methodological application. In regards to Areiqat et al. (2019) delved into stock brokerage which did not mirror well with the investment in deposit-taking SACCOS.

From a local perspective study done in Kenya has displayed a tremendous increase of 12.7% in the level of total assets between the years 2020 and 2021 which gave rise of Ksh 556.7 billion to Ksh 627.7 billion in the subsequent years that followed according to (Ahmed et al., 2021). From another perspective, Ntoiti and Jagongo (2021) noted that one key indicator that catapulted the growth of the SACCOS. Among the key notable pathways to the growth included the saving and credit facilities that is injected by the Sacco shareholders, and the increase in the number of prospective customers which are the drivers who propel the objectives of the Saccos.The Saccos Society Regulatory Authority (SASRA) (2016) provides that Saccos were the major contributors and influencers to Kenya’s GDP by taking a share of 30% on the trajectory

platform. This was attributed to the double-digit of increase of the members and the switching of its members from their banking services to commercial banks. In another study by Ndegwa (2020) the key letdowns and impediments in achieving the ultimate goal of the firm's financial decision are among the large outcome of behavioural biases.

Another recent research done in Kenya by Ondieki et al. (2017) alluded to the fact that the key determinant in terms of how monetary should perform in regards to investment in SACCOS, stems highly from the prospective members' attitude change the notable key indicators of the determining factor include their habit towards transaction that is a driving force towards liquidity, generation of the investment SACCOS and the ration of capital deposits which results to liabilities of the deposit taking saccos and thus the institutions capital that ought to be the one remaining in the SACCOS assets

1.2 Statement of the Problem

The Deposit-taking saving and credit co-operative societies have been facing low financial projection, could these be due to the wrong investment decisions that are taken as a result of cognitive biases, their inability to adopt high and efficient information technology systems, poor and counteractive ballooning loans that stem from futile strategies that are thriftless in planning and to the organization (Mumanyi, 2018). According to SASRA report of 2018, it was discovered that more than 100 deposit-taking savings and credit co-operatives did not meet the mandatory capital ratio which is a requirement in 2017 where each deposit taking must at least hold some reserve in its saving, raising questions over their fitness in the key credit market and their financial projection toward better financial soundness

Most deposit taking Saccos in Kenya have portrayed a fluctuating financial investment projection between 2017 and 2021 on its measure of a company's net income divided by its shareholders' equity , as indicated in their return on equity (ROE) .The trend revealed that the investment financial projection on return on equity (ROE) of the Kenyan DT SACCOs in the year 2017 stood at 8.34% after which it then increased to 9.40% in the year 2018. In the year 2019, the financial projection on return on equity (ROE) experienced a decline to 9.11%, and then another decline to 8.26% in the year 2020 .Among the non performing and closed down Saccos like Moi University, Transcom, Ufundi, Maono Daima, Greenhills and Nest Sacco Society Limited Mwalimu, Ekeza and Stima Investment Co-operative, are estimated to have lost their members upwards of Sh3.6 billion through mismanagement or outright fraud by officials and boards since they went bankrupt which is something to worry. In the year 2021, the projection of investment performance on ROE then increased to 9.44% (SASRA, 2021). As a result of the unsteady financial projection of such entities as indicated by their respective ROE, most of the deposit taking Saccos are now becoming irrelevant in the market and risk closure at some point. According to SASRA report (2016) the major reason of bankruptcy was increased level of bad debts. The Sacco Societies Regulatory Authority (SASRA) Also revoked the licenses of Nandi Hekima SACCO, based in Kapsabet, Sukari SACCO in Mumias and Miliki SACCO in Nairobi.

Gwey (2018) conducted a study on influence and vulnerability of deposit taking Saccos cooperative societies the risk incumbencies towards the financial projection and performance in Kenyan market environment, the study found that there have been poor results projected in reference to investment SACCOS characterized by forfeited bad debts. Locally there has been strong empirical evidence that financial investment decisions affect financial projection and performance, however there is inadequate research in regards to especially in deposit taking saving

SACCOs. Wepukhulu (2018) analyzed financing decision in the same way and concluded that capital structure has no effect on Return on asset (ROA) but has a significantly positive Return of earnings). From the forgoing, there was a clear indication of the presence methodological and conceptual unguarded gaps, none of them has examined the four cognitive biases and their effect on investment decisions of deposit taking saccos that are exhibited in the process. There is also inconclusive empirical studies in regards to cognitive biases since most of the researchers have not extensively researched in the area therefore there is inadequate research in regards to cognitive biases towards deposit taking Saccos in regards rational investment criterial selection among the investment deposit SACCOS in Kenya Therefore researcher sought to find and fill the gap to the missing answers by establishing the cognitive biases and its effect on investment decisions that significantly affect an investment decisions of deposit taking Saccos in Kenyan market environment.

1.3. The study objective

1.3.1. General Objective

To Establish the effect of cognitive biases on investment decisions of deposit-taking savings and credit co-operatives societies in Kenya.

1.3.2. Specific objectives

1. To determine the effect of herding behaviour on investment decisions of deposit-taking saccos in Kenya.
2. To evaluate on effect of mental accounting on investment decision of deposit-taking co-operatives societies in Kenya.

3. To evaluate the effect of overconfidence on investment decision of deposit-taking saving and credit cooperative societies saccos in Kenya
4. To be able determine the effect of regret aversion on investment decision of deposit-taking savings and credit saccos in Kenya

1.4. Research Hypothesis

1. **H_{O1}:** There was no significance effect of Herding bias on investment decisions of deposit-taking saving Saccos in Kenya
2. **H_{O2}:** There was no significant effect of mental accounting on investment decisions of deposit taking savings Saccos in Kenya
3. **H_{O3}**: There was significance effect of overconfidence bias on investment decisions of deposit taking savings Saccos in, Kenya
4. **H_{O4}:** There was no significant effect of regret aversion on investment decisions of deposit taking saving Saccos in Kenya

1.5. Significance of the study

1.5.1 The management

The result from the research finding was of greater value to individual who on every day juggle on the best approach and investment decisions to take when one wants to invest through the cognitive biases that are exhibited, organization and institution who take up the potential

beneficiaries from the Saccos in Kenya. Therefore, the research carried out was significant to management who wished to find out the rationale mind behind psychological orientation of the investor mind towards investment decision cognitive fulfillment that drives the prospective investor, inferences that are drawn by a prospect investor the mental application and when to select the best approach method and portfolio that may be of benefit after all the risk consideration. And if at all from the finding some new measures could be adopted and used in setting the standard operating procedure of the organization for betterment

1.5.2 The government

The carried-out research and its revelation was specifically of high value to the Kenyan Government which acts as the regulating body in the country, it helped in coming up with a workable framework on the best way possible on how to ensure that the deposit taking Saccos work towards achieving a common goal, the study was also to help significantly the policy makers who may be interested in checking other ethical consideration which are of interest on their table.

1.5.3 Scholars

Finally, the other aspect of the importance of research was to act as the tipping point for the scholars in understanding the effect of cognitive biases of Saccos that are directly involved in deposit taking and saving in Kenya This was a cornerstone where researchers found the study relevant and rich to feed their literature review in their study positively

1.6. Scope of the study

The study was carried within the range of the Saccos that are directly engaged in activities of deposit taking and saving in Kenya areas of greater interest of the scope of the study was the cooperate societies that are within the scope of Kenya. The study obtained the information in

regard to cognitive biases that form the greater basis in investment decision making which was derived from the independent variables that include herding behaviour, mental accounting, Overconfidence and regret aversion which is a potential area in behavioural finance. The target population was clustered based on the information they are vast with in regards to the day to day operation of the deposit taking saccos and their respective manager towards the cooperative performance

The study aimed to uplift some of the expectation in regards to the respondents with the bated breath that the respondent would prove adequate information towards a common course and the reliable information which the study sought to fulfill ,this formed the basis of the threshing flow in collecting the data that is require The study was conducted for the period of 3 months which include the months of April to June being stated as time frame for the research findings. Therefore, the study was limited to Saccos that are located in Kenya that conduct and engage in deposit taking and savings activities within the region

CHAPTER TWO

LITERATURE REVIEW

2.1. Introduction

This chapter explores the research main underpinning reference theories, specific research variables with the aim of establishing the grey areas which forms the gap. The chapter also delve in to the empirical of the study that was covered in the finding of the research

2.2 Theoretical review

2.2.1 The prospect theory

The theory was first developed by Kahneman and Tversky (1979) and further more input on the milestone on its deliverables was done in 1992. By describing how psychology affect the decision making in comparison to the level of utility. Therefore, the theory has been instrumental in giving a bigger picture in understanding the level of cumulative utility of the choices that encompass among the number of results which may include continuous distribution (Tversky & Kahneman, 1979). Also, in Tversky and Kahneman (1992) made an inclusion by engaging a cumulation that may be separate in relation to separate weights and also where their uncertainty of accommodation that lies on uncertainty when probabilities are un known that is addition to the risk

The theory shades light on how individual make criterial selection based on the rationality of the observable outcome that is as a result of risk exposure and the choice of the outcome that individual make in evaluating in order to ascertain the likely outcome of the expectation. It is evident that prospective investors settle on the investment decision that are not congruent and look consistency which leads to intertemporal preference of the literature that is as a result of the

previous self-inclined behaviour related to intertemporal selection (Thaler & Shefrin, 1981). Prospect theory assumes that losses and gains are valued differently, the perceived value is pegged on the gain is more as per compared to a loss incurred in regards to regret aversion individuals are inclined to the concept of gain more than the loss, therefore the greater feeling that is associated with a gain is more as per compared to the feeling of a loss, where the two choices are presented the prospective investor mostly choose the former choice which is highly preferred. One of the eye opener in the theory of the prospect is that an individual exhibition on the behaviour may not result to some pertinent result in the sense that choices are made on singularly based on the expected gain and losses. It is therefore reasonably to have 50/50 gain instead of the overbearing which is presented one of the key aspect of the prospect theory is that it provides an insight on the rationality of the decision making process that underpin the tight condition where there is an exposure and uncertainty , for instance you will find most of the market partaker are risk averse in terms of recurring the market gain they accept to do risk avoidance so as to minimize on the losses also known as (loss aversion) . Many a time most of the prospective would possess, the uncertain value that is pegged on the expected product they wish to acquire. The investor in many instances will tend to be risk averse people and how they perceive themselves, if they realize they will be gaining in relation to the point of reference while on propensity of the risk.

In regards to Gigerenzer (1996) and Haselton et al. (2005) affirms that the direction of the content of cognitive bias may not be arbitrary, through the several important techniques that are important in the process of automation, this relates to aiming at reducing the type of monetary benefits and shading light on the importance of the prospective investor and shareholder that is as result of the attribution. The theory of prospect may not ultimately settle on the utility and matters related to choice but instead may in cooperate the anticipated changes related to a point of

preference , this may be referenced in the sense that for instance just how one may feel at a 20 degrees stable when the weather is cold and when it is quite sunny outside , therefore this justifies that perception may a time be a reference dependence according to (Helson, 1964).

In many instances prospective investor are quite happy when they gain than when they lose but on the other hand the theory of prospect it assign more profoundly on the significance of loss and is pegged to the portfolio thus a gain that is associated with the product which ultimately result to a loss aversion (Kahneman &Tversky, 1984) The individual fear losses that are acutely than they thrive on the gain having the same magnitude according (Shefrin, 2006), which evidently and negatively on non-monetary domain (McGraw et al., 2010). There seem to be a missing link in that in any case the indifference curve do not intersect then the aspect of loss regret aversion is presented and this may result to a contradiction on rationality that is exhibited on the investment decision this is according to Knetsch (1989) .This may also be affirmed in the sense that a time it results to manager and consumer shunning in engaging in more risk (Rabin, 2000).

The reference point may be subjected to change over time which informs the other implication of the prospect theory on the dynamism of the context that entails the losses and the gain that may occur. Arkes et al. (2008) revealed the lack of proportionate magnitude that relates to the realization of the gain than after the losses that is of equivalent measure in size. The hedonic editing that is as a result of asymmetric adaptation that emanates from the segregation of the intertemporal gain and in cooperating it with intertemporal losses (Thaler, 1999). Baucells et al. (2011) based on the reference point it is not recursive where there is no interconnectedness of the previous and the new information but the combination of the first purchase and the current (last) that relates to the time series. According to Arkes et al. (2010) pinpointed the diversity in the cultural difference and how it influences the point of adaptation which are highly connected to the

diminishing in the sensitivity and loss aversion and the maintenance of the status quo bias (Tversky & Kahneman, 1991).

The prospect theory links with the study in the sense that it informs the variable of regret aversion it implies to the fact that outcome that are exhibited by the prospective investor in reference to investment capabilities. Many a time human impulse will depict the precipitation related to regret aversion and therefore the rationality behind the prospective investor's decision is that a wrong decision has more impact and ultimate repercussion. This therefore means the market forces act as the driving force in the ultimate decision which is settled on by the prospective clients. the fact that we have variability in the market environment which has shifted on how the prospective customer view and settle their market desires based on their thinking towards SACCOS. It is imperative that the shareholder who include management and customers to reevaluate their decision towards how they settle on financial transaction with a typical example for instance the clients who had loans with the Sacco ultimately forfeited on the payment this is as a result of the projection of fears that are injected on the pegged notion of the fear of losing their savings and with the future that remains uncertain. Ultimately those who had waited with bated breath, in the long run cling to their monies since they try to foresee the unpredictable future happenings, which therefore forces the manager who have to revisit and reevaluate their investment plans those that could ultimately maximize on the shareholders return , this theory therefore shades light in unveiling the paradigm shift and cognitive bias facets towards decision on investment of the SACCOS that have direct involvement with the deposits in Kenya

2.2.2 Information Signaling Theory

The signal theory was initiated by Michael Spence in 1973. The theory shades light by suggesting that there seem to be an imbalance between the monopoly of the information which results to

information asymmetry that subsists between the manager and the outsiders who are the shareholder that play a pertinent role. Some expensive return in term of dividend it can be a good pin pointer of the firm which can be used to resolve the more amicable solution that may help in eliminating adverse selection (Spence, 1973). The key aspect of the signal theories is to act as the tipping point in enabling the prospective investor in making an informed rational decision towards the company investment based on the portfolio selection criteria with maximum return.

In reference to spence's (1973) a study on seminal work in the labour market, gives insight on the distinctive exhibition of the behavioural disposition by the potential worker, who reduces information asymmetry that may be an impediment in choosing a potential employee, in this regard high quality employees have remarkable characteristic as per compared to low prospect employee. This is as a result of the costly signal that is exemplified by higher level of education, this has been an area of projection in coming up with the selection which imply the application of signal theory which is a branch of discipline emanating from Anthropology to zoology (Bird &smith, 2005).

The theory is very instrumental to manager who are highly informed and have acknowledged the influence and application of the theory in expounding on the Asymmetrical information in a wide range of research in reference to a research done on corporate governance being able to signal the concealed qualities of their firm prospective investor in displaying of their financial statement asserts (Zang and Wise Man, 2009).

It is in respect to this that the firm's management do hold the information monopoly where they have a better view on the key indications on the ideal state of the firm's financial structure where the outsiders may not be acquainted with the information they ought to and are supposed to be furnished with. Many a time the managers may take the advantage of the information monopoly towards their own gaining in terms of when it comes to dividend payout such that the loop hole of

the information presented is at their disposal and the financial position of the company and if its leveraging towards debt or equity ratio. The information signal theory also indicates that the firm's management have a better view on the financial performance of the company future gains, the capital structure composition and the positive signal that may be projected on the firm's performance There has been contradiction in reference to signal theory in terms of its impact which has made many to have divergent opinion on its definition that is not clearly stated this is in a accordance with (Ehrhart & Ziegert , 2005). Although there has been tremendous engagement and the number of studies that have incorporated the concept related to signal in relation to management who are scholars and who have utilized the theory in shading light on the observable organization's phenomenon (High House et al.,2007)

In reference to deposit savings and credit cooperative societies the theory informs the herding behaviour where many investors who herd on their investment barely hold factual information, they invest based on public opinion depict by others most of them make an investment without clearly being furnished with information which many may end up becoming victims incase an eventuality happens like bankruptcy since lots of the information is a preserve of the management who knows the financial soundness of the deposit taking saccos.

According to Stiglitz (2002; 469) in reference to information asymmetry it is imperative to note that "different people know different things." This theory helped in creating link of knowledge on the decisional criteria in relation to investment exhibited by prospective investors and the ultimate growth of the investment SACCOS that are engaged in transactions of deposits

2.2.3. The modern portfolio theory (MPT)

The sophisticated theory was developed by Markowitz in 1952, where Markowitz described the importance of combining the portfolio based on the diversified high spectrum plan. Markowitz 1952 highlighted the investors shortcoming in terms of risk mitigation and the correlation of the securities that yield high returns, on further emphasis is that for high return then it is imperative for the prospective investor to minimize risk so as to yield more return on the portfolio selection. On another insight Markowitz 1952 pointed out the key area that whenever the asset portfolio is intertwined for better result, they may tend to co-move together which sometimes does not necessarily mitigate or lower your risk on the portfolio.

The Markowitz high spectrum in reference to the relationship that subsist between two likely investment portfolio one of the key picking point of the theory is the spreading of exposure when it comes to portfolio selection, therefore Markowitz seek to narrow the investment that are less and are perfectly correlated. This is in regard to risk mitigation procedures and minimizing on the exposure without taking to consideration on the account of sacrificed return. In this regard it is imperative to acknowledge that the lowering of risk exposure is as result of the analysis on the covariance that subsist between the asset return

In Markowitz affirmation submits that the prospective investor would prefer a high return portfolio with lower risk which offers similar return. Markowitz further demonstrates that for investor to have higher return then it is imperative for the investor to be a partaker of higher risk for maximum and greater profit. The investors return diverse part of getting involved in the exposure. therefore, Markowitz came up with an approach of optimization in relation to portfolio management that entails rigorously taking a clear look in to the potential portfolio and quantifying the equivalent return, in an assertion Markowitz believed that a portfolio level of return discussed

in the modern portfolio combined weights of projected rates of all the stocks, giving an explainable picture that is associated with critical in assessing return which is an indicator of the portfolio exposure in the ultimate result in the return of the standard deviation (Markowitz, 1952).

According to Markowitz on diversification, risks are reduced it therefore imply that the combined assets which act on the opposite of each other, it is imperative to acknowledge that volatility reduction that is managed through spreading of the portfolio in different levels of its return when making the selection criteria. This is true in the sense that portfolio whose volatility has been spread is less average than the volatility that is resulted from the component parts (Markowitz, 1952). In regards to Cohen and Natoli (2003) modern portfolio theory tend to go against the normal procedure of the traditional way of asset pricing. It is quite psychological in nature. Where it uplifts and appreciates the facts that there exists the uniqueness in terms of how investment opportunity presents itself. Therefore, on a greater emphasis may be present to be one of the most pertinent aspect of financial theory

In reference to the theory many a times asset allocation and portfolio selection may be quite challenging which also is the greatest component of modern portfolio theory. It describes the expectation in terms of short-term result in respect to short term volatility and the risk involved. One of the key aspects is to measure the threshold upon which risks tolerance can be absorbed this will help in informing the type of portfolio to make a selection from the portfolio that yield maximum expected return for certain level of risk tolerance this is according to (Elton & Gruber ,1997)

This theory is relevant to the study in regards to deposit taking saccos in that it informs the mental accounting behaviours, many prospective exhibits the mental accounting behaviour when it comes to rationality of investment decision. Mental accounting often leads investors to make

irrational decisions in terms of selecting the deposit saccos that offers the best portfolio with lesser risk or sometimes a portfolio with low risk offering same return.in this regard most of the prospective investor may tend to divide in ensuring that it has safe portfolio and thus speculate in the condition that they may be used in preventing negative outcome in terms of return out of the speculated impact on the portfolio. Most of perspective investors would wish to maximize their investment where they can reap maximum return therefore the deposit taking saccos may be subject to evaluating the decisions they take based on the cognitive biases in terms of portfolio selection which has high return. It therefore calls for an introspection on the Saccos to invest in when one is making a rational decision.

2.2.4. Cognitive Dissonance Theory

Festinger et al (1956) throws insight in to the new milestone where there emerged a new psychological concept which was cognizant with the dissonance cognitive theory extracts which shades light on the prospective rationality of the investor in a state where his thoughts are not congruent, the set of belief in relation to attitude that many a time dictates the behavioural change. In reference to Festinger's (1957) On the framing of the theory of cognitive dissonance gives an insight on the inner drive that hold our attitude in one harmony which ultimately avoid disharmony (dissonance) which is a key principle of the cognitive consistency He reiterates that at that particular moment when the cognitive mind is not congruent there appear to be the aspect of cognitive dissonance this may a time disorients the mind formation through the experimental that creates disconnect which may at times be subjective to the person who may will strive to ensure that they remain and adhere the flow of line

According to Festinger (1954) alludes to the fact that there exists the uncertainty of the precision of the individual capabilities and announced opinion which was clearly stated in the

theory of social comparison process where most take a sling shot on what could be the counted opinion of others. In the submission the key aspect noted is that human beings do have conversion of the attitude not because of the of the argument that is legitimized but as a result of satisfying the inherent motive and drive. It therefore informs that people are motivated to impact other lives or to mitigate the ways of others in respect of the counted view so as to uplift the certainty of the counted view of the new opinion .In the final affirmation it can be noted that when one is faced with selection criteria on the choices of the product many a time prospect investor will peg a higher value on the potential product or item they have settled on and devalue the product they feel their opinion did not count on or settled with , just because of the distinctive selection , this may be in contrary that rejected might have been concluded before the selection . Also, in reference to Brehm (1956), it is needless to say people would prefer to fail than propel the succession based on the previous experience, this is due to lack of consistency which is a recipe for expectation that acknowledged by failures asserted

Tversky and kahneman (1973) made milestone in unveiling new judgmental heuristic biases that a prospective person may discern in terms of coming up with asset class identification which acts as a cornerstone when it comes to mind selection, they shade light on the aspect of relying on readily available heuristic that ultimately outlines the systematic biases

According to (Festinger, 1957) gives insight on the two sets of beliefs that forms the central thesis related to the theory of dissonance. The two set of the beliefs include the individual that is negatively emanating from the cognitive conflict and the level of inconsistency. in this case it states that dissonance mirrors aversion. Therefore, the individual tends to reduce /minimize by changing or eliminating bone of the belief, for instance in a situation when a rational decision has to be made by an individual there seem to be conflict in the mind because all the attitude is not

congruent with each other, therefore the individual show attitude change that justifies the ultimate decision. therefore, the justification may be achieved through the alteration of the attitude in order to have the fusion of the both when the new belief and change of attitude they go in unison in justifying the ultimate decision that has been settled on since the remaining portion of the attitude could ultimately be long lasting (Sharot et al., 2012).

In reference to thaler (1985) key revelation that was noted is that many a time there seem to be moments when the prospective consumer depicts and may act in manner that may not be congruent with the goals of the economic theory. Tversky and Kahneman (1992) lay more insight on the prospect theory as this key point in reference to an alternative descriptive elaborate theory

The theory is relevant to this study in regards to deposit taking saccos in that it informs the overconfidence bias, in the sense that at that high moment when the investor exhibits the overconfidence bias towards the investment decision on deposit taking , and the type of Sacco he / wishes to invest in for maximum return at that particular moment there is dissonance in the moment of mental investing which also refer to the dissonance mostly anchored on several factors . among the key notable are how highly a particular set of belief with high values and the extent to which it brings about the inconsistency. One of the key pillars of dissonance is that it influenced by several pertinent factors which entail the importance that is pegged on each set of belief. therefore, cognitive assumes a more personal alignment about self and it tend to give rise to greater disharmony

It is important to note that dissonance have a crucial role and therefore it has a powerful influence that ultimately alters how the behaviours and action not only adjust how we have our inner drive but also acts as a motivation that helps in minimizing the dissonance. the cognitive dissonance may also act as a shield in making prospective individual more uncomfortable. This is

true in the sense that disparity may occur between the individual level of the behaviour which may include things that are central to their sense of self

2.3 Empirical Review

The empirical section of the study gives insights on the ultimate conclusions from the previous research on the effects of cognitive biases on the investment decisions of SACCOS in Kenya their behavioural exhibition among other financial institution'

2.3.1 Herding and Investment decisions

The research revealed that, the herd mentality exists in the market formation when the prices are going up and when it is going down. It is noted that the effect of herding has a significant increase in the volume and market related volatility when it comes to quick decision making , most of them would invest more of their time trying to analyze the information dispensed by the public In regards it is clear that due to herding behaviour investor tend to relinquish their expert opinion when making a judgement however projective it was and due to this, they whole heartedly love the imitate the pattern exhibited by others blindly without proper consideration even though the pattern that is emulated may not correct or corresponds to the ideal situation. One of the key important lesson is that group mistake is worth the call than an individual pain that is as a result of the wrong decision that is exhibited by the herd prospect (Ahmad & Mahmood, 2020).

A Research done by Das and Panja (2019) on the impact behavioural biases on the investment decisions, that entails the financial decision that applies to psychological application , The likely outcome of most of the cognitive bias which include the bias of gamblers fallacy , herding, overconfidence anchoring representativeness , they are held by the irrationality when it comes to decision making of the investor where it influences the financial environment that

surrounds economy . In reference to all the bias mentioned herding was the highly witnessed behaviour of investor, the existence of the situation that is not promising it alters the level of confidence level of the prospective investor and in the long run as a result the illusion instead of emulating their ultimate rational thinking they prefer to imitate the depicted patterns of the behaviours displayed by others

In regards to a study by Zheng et al. (2015) and Wong (2019) their analysis to find out the impact of price to earnings in reference to herding bias , in their submission relayed that stocks have the highest price earning which include the growth of stock , it therefore means that when there is an increase in price per earning (P/E) value it found out that there is more evident of herding since prospective investor they foresee growth in the future instead of synchronizing on the information at hand, they tend to invest in the market-based consensus. In other words, the study also revealed that in a larger market capitalization the is high evidence of the presence of the herding that is determined by market capitalization .A research done by Karanja (2017) on the effect of behavioural biases of finance in reference to investment decisional criteria of the prospective investor at the NSE index and stocks exchange with a sample of 385 with the use of the questionnaire as the reference tool the study affirmed that herding had a higher value and it depicted a moderate effect when it comes to rational investment decision in comparison to other biases that are exhibited by other investors at the stocks exchange platforms and that combination had 16.1 % or so effect on decision of individual investors

In another study by Wanjiru and Mwita (2019) shades light on projective impact of cognitive biases on the financial institution like banks that are credited at the Nairobi's stock exchange through employing of descriptive research with a sample size of 384 prospective investors from the finding the researcher alluded to the fact that herding bias played a pivotal role

in determining the investors decision on the purchasing power and on the decision on whether retaining the stocks or incurring more purchasing which has an effect on the stocks exchange

2.3.2 Mental accounting and Investment decisions

The aspect of mental accounting requires one to evaluate the scenarios that is as a result of multiple projective outcome that is exhibited particularly how to combine the possible outcome. One relevant explanation is that people engage in reciprocity. The ability of the prospective investors to work with mental accounting thus is highly reflected in the various domains that apply behavioural when it comes to financial industry among the key notable example include banks that offer multiple accounts which has saving goals and label which makes the bias related to mental accounting more exposed also third party services that provide the aggregate of the financial information that include different institution of finance according (Zhang & Sussman, 2018).

Santi et al. (2019) did a study on the impact of mental accounting on equity investment decisions, from the finding that showed the precipitation of the phenomenon of mental accounting among investors makes them use a larger part of their money to invest their monthly private funds. The displayed character by the prospective investor is that many tend to peg the preference on the two criteria in respect to this most of them (investors) would be comfortable on monthly fund than bonus fund this is due to the fears of risk exposure. It therefore informs and confirms fear that may result from monthly private funds that we have sustained from investing in bonuses. From the research it was clear on the prospective investor that most of them show bias towards mental accounting

According to Mascareñas and Yan (2017) did a research on the concept of mental accounting, which is a combination of finance and psychology. One of the key suggestion from

the study was that investment portfolio showed the main determinant in ensuring how mental accounting has on financial decision related to investment amongst the potential investor who are willing to take up the mantle of absorbing risk and profitability .It was noted that not all investors are risk takers many would prefer to shun risk which is contrary to traditional theory related to financial risk , the portfolio with different levels the return are connected with the investors ability on the mental risks which entails calculating on the profit in order to meet their investment expectation in submission it was also noted that investment decision once their psychological and mental application are met the study also revealed that in many occasion most of the investor do not make their risk related to profit , in this case the investment portfolio must ultimately be a determinant of the willingness of the investor to reckon the profitability preference of the prospective investor preference in regards to investment decision making

Nofsinger (2017) analyzed the Psychology of Investing theory of mental accounting and suggested that individuals are likely to assign different functions to each asset group this depends on how the individual perceive the risk in this case the selection of a portfolio becomes a priority in terms of its return to the investment, the result of which can be an irrational and detrimental set of behaviors. In this study, mental accounting is depicted as an independent variable that must be influenced through a different pattern that is congruent to the decision.

Nderitu et al. (2018) determine on what could be the behavioural biases on the effect of individual decision in regard to estate pricing in the county of Nairobi. From the analysis it was concluded that behavioural biases undertakes a very pertinent function in accelerating the investment decision on the investors of the real estate. It was further affirmed that the presence of behavioural biases not only exist in other platforms like securities but also they are actively and visibly incorporated in activities related to real estate investment .Also from the finding ,mental

accounting and narrow framing had less effect in terms of its significance towards investment decision since at that particular moment there is dissonance in terms of selecting the right portfolio with less risk but with maximum return on other hand herding behaviour was found to be highly correlated to real estate prices and the behaviours exhibited by the real estate investors towards their ultimate decision and portfolio management

2.3.3 Over confidence and Investment Decisions

A study by Shrestha (2019) noted the precipitation of overconfidence that substantially determine the investment decision that is exhibited by Nepalese stock market participants, it was noted that women were less over confident when it comes to rationality in decision making which is the ultimate decision the prospect would prefer to have lower risk exposure towards the investment decision for maximum income in terms of return. In other aspect when the prospective investor encounters with an investment decision they may be more likely to transfer to irrational behaviour which ultimately creates an impact on the rationality of the decision related to investment, in this regard it is imperative to acknowledge how variable related to emotions have ultimately influenced on the investment decision asserts (Alwahaibi, 2019). The discovered distinctive character that is exhibited by Chinese prospects , one of the key revelation is that many investor in institution are more inclined to talent and display a confidence character than the ordinary prospect which ultimately brings a new measure in the market projection that is a mirror of the overconfidence behaviour Further there is an advocacy that biases cannot be avoided even after gathering experiences (Shah et al. 2019).

A study by Arifin and Soleha (2019) in reference to the three factors in regards a topic of factors influencing overconfidence, the three vested areas of interest is the investor knowledge on performance of the company, risk attitude of investor and thirdly the knowledge of macro-

economic condition by the investor. 28% percent of the prospect equated the investor financial literacy through the employment of 133 investors who have direct engagement in the credited stock market of Indonesia capital market. From the finding the affirmed fact were that there was a projection of a positive impact of over confidence the study also classified overconfidence as a situation where the ultimate individual rationality perception on the precision of the information possessed and the fact at hand depicted from the interpretation. There seem to be no clear-cut in the research on how the bias related overconfidence have an alteration in relation to effect caused on the performance of the financial restructuring in the study

Ranaweera and Kawshala (2021)'s study was based on the effect of behavioural biases on Colombo stock exchange in Sri Lanka where researcher found and concluded that there was a significant statistical evidence on presence of overconfidence and herd biases. Which was paramount when one wants to make a rational decision the presence of overconfidence significantly affected how the prospective investor makes a decision

Locally Ngacha (2019) examined what could be the impact of investment decisions in reference behavioural factor biases at the NSE index , by the use of primary data , The result shows that there was likelihood of high presence of the effect of overconfidence behaviour on investment decisions that is settled on by the rational prospective investor. The research analysis also found a high positive correlation between overconfident, herding, and anchoring behaviour and investment decision making that they are highly connected in determining the final decision that is depicted by an investor

Ngahu (2017) Research in examining the key influential factors on the rational decision in reference to share payment ratio the pattern displayed among investment trend was observed to invest in the stock market. One of the notable results from the study include the availability of

disposable income which is among the investment. These revolve around the market price per share that is prevailing that ultimately dictates the trend in the stock prices which greatly influence the rationality of the decision related to investment, it was also vividly clear that most of the investment settlement and selection criteria are highly influenced by the bias of overconfidence

Nyakundi (2017) did a study on the behavioural bias on the ranking of financial decision by the financial manager of the firms that takes part in Nairobi's stock exchange index. From the sampling of different levels of the management which included middle managers, senior financial managers. this was intended to check on the management in relation to overconfidence, the mental accounting regret aversion. The study finding concluded that most of the managers were inclined to overconfidence as a bias whereas anchoring and mental accounting were more associated with equity, one key aspect of the notable conclusion from the study is that it was imperative to have regular and consistent knowledge in relation to cognitive bias which was paramount in the sense that it leads to a financial decision that are enhanced in quality

Adebambo and Yan (2018) carried a study on Investor Overconfidence, on whether overconfidence bias results to overpricing of firm valuation in respect to corporate investment decision , out of the finding there was a clear indication on the role played by overconfidence that propel the firm exhibition and value pegging ,in this regard the investment decision of the firm have higher numbers of prospective investors overconfidence that are quite overvalued in regards to disposition ratios

2.3.4 Regret aversion and investment decisions

In reference to a study done by De Mori et al. (2017) The aspect of phenomenon related to psychology of regret aversion that influences the prospective investor of individual who are

inclined to remorse when it comes to specified investment section criteria and rationality in decision making, the key notable indicator is that the purported phenomenon becomes counteractive towards producing positive outcome. Most of the investor at this point may realize that the settled decision when making a decision was incorrect , there seem to be some sense of dissatisfaction that may be as a result of the external forces that are connected with disappointment of the outcome which may not be the same as the regret emotion that may have regret precipitation at later stage asserts (Moreira Costa et al., 2021).

Özen and Ersoy (2019) did a study on "Moral Thought System" in regards to the foundation of regret aversion which ultimately result in to regret aversion, in this regard they documented how individual fear the regret aversion and the pain that is as a result of the loss .In a scenario where an individual move from good to worse situation the prospective investor tends to be influenced by other determining factor which include bounded rationality, the level of income, the cognitive aspect acknowledged in finance, the limited information, the influence on reasoning the demographic foundation and the level of education of the investor

Deuskar and Pan, et al. (2020) did a study to investigate the impact of regret aversion on emotional bias on the trading frequency in china, the analysis revealed tremendously reality on the action that is affected than the action that is not taken. In other research the neuroscience supports the importance of having regret when it comes to the decision that individual take, the psychological application in relation to the regret that happens in all aspects of rationality in relation to investment selection criteria should extensively be analyzed through the empirical research studies done by others. this was realized that prospective investor with high neuroscience will lend to invest in a portfolio which sometimes ultimately is inclined towards negative emotion that is associated with traits. this is in reference to the action that are taken in order to respond to

the mitigation which entail the disturbing incitement which are self-defeating and sometimes in effective. Many a times prospective individuals have become victims of regret aversion which ultimately tend to avoid in investing in either due to the error that is caused by commission or as a result of the error of omission some of the behaviours that are exhibited by some prospective individual that is in the shape of dependency utility preference mostly do make a comparison with other similar investment in their state of mind

Shaheer (2017) examined on what could be the determinant of cognitive behaviours that result in rationality towards decision making of the investment outcome process of single asset portfolio investors of Indonesia. The study reveals the presence of self-attribution, illusion of control, regret aversion and loss aversion bias in case of portfolio investors whereas the single asset investors are affected by loss aversion and the status quo bias. The researcher pointed out that there is high presence of the existence of the regret aversion bias which is commonly found among the single asset and portfolio investors. This study also affirmed behavioural biases have played significant role in the losses suffered by the investors. Also, this is in reference to the Research carried by Susilawaty et.al (2018) conducted in Indonesia in 2018 which showed that regret aversion had a negative effect on an investor's investment decisions.

A study by Njenga and Kagiri (2018) on the effect of behavioural factor in regards to real estate pricing and performance in Kenya this was in reference to a study done in Kiambu county in Kenya , the research evaluated the finance theories and its causal relationship on estate pricing , from the analysis it was found and concluded that among the key aspect of the behavioural factor influencing investment decision cognitive biases regret aversion over confidence herding effect and gamblers fallacy proved that the four bias correlate and have high level of linkage and touch the real estate price in Kenya however regret aversion had a distinctive factor in terms of how it

informs the decision that is made by an investor. On reaffirmation these biases are incorporated in all levels varying from the age, marital status and on the level of education. the key finding was that the herding bias did not meet the threshold therefore it did not have an effect when it comes to asset pricing in Kenya market environment whereas on the other hand regret averse was found to affect the prices since the investor pegs the regret aspect to a portfolio which ultimately affects the decision making. The study recommended investors to have a keen look into other aspect of economic factor that plays a pivotal role in terms of setting the standard on the economic markets indicators since they also determine how real estate investment is influential

Odhiambo and Ondigo (2018) analyzed on what could be the behavioural precipitation of effect of biases on investment selection criteria on Estate investment in the city of Nairobi , the researcher employed a descriptive study by the use of 165 agents from the real estate , from the analysis , the empirical evidence showed that 53.7% of the respondents were the partakers of the institution when it comes to making a decisional rule on investment decision. Herding behaviour and regret aversion had a way in which it affects the investment decision in real estate in that the investors will exhibit herding behaviour because of market asymmetries but with high level of regret aversion in case an eventuality happened. From the finding it was imperative to appreciate and note that it is important for the prospective investor to incorporate the cognitive biases or behaviours which goes in line with financial element when the opportunity presents itself in terms of settling on investment decision in reference to real estate since they are highly interlinked especially when prospective investor is making a rational investment decision since they yearn to maximize investment returns.

2.4. The Conceptual Framework

The diagram below enlists the relationship that subsists between the cognitive bias on the investment decision of the investment SACCOS that are in Kenya in regards to the saccos that have direct engagement in deposit taking and saving services.

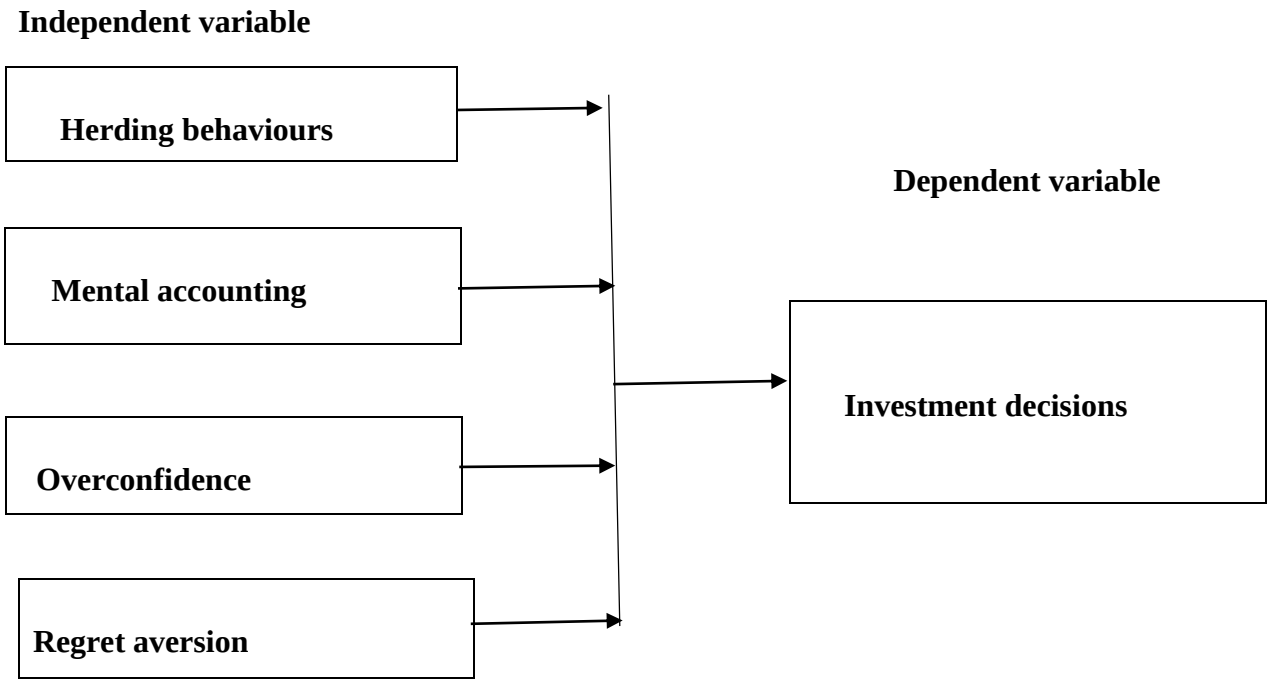


FIGURE 1:

Conceptual Framework

2.5. Operationalization of the conceptual framework

Table 1: Operationalization Table

Variable	Type of Variable	Indicator	Measurement
Investment decisions	Depended variable	-Investors' preferences - Information flow - Entry and exit strategy - Investors' income -Current price	5-point Likert scale
Mental accounting	Independent variable	- Segregating Investments -Rebalancing resistance - Underestimating transaction costs -Overweighting certain holdings -Ignoring overall portfolio performance	5-point Likert scale
Herding bias	Independent variable	-Peer pressure -Delayed reaction to news - Concentration in popular stocks - Attention focused on hot stocks - Groupthink	5-point Likert scale
Regret aversion	independent variable	- Holding onto losing positions - Overconcentration on short-term investment performance - Hesitation to take profits on winning investments - Excessive emphasis on benchmarking investment performance against market indices - Resistance in revising investment plans or strategies	5-point Likert scale
Over confidence	(independent variable	- Excessive trading - Overly optimistic forecasts - Disregard for Diversification - Underestimation of Risk - Overreaction to Information	5-point Likert scale

CHAPTER THREE

RESEARCH METHODOLOGY

3.1. Introduction

This chapter evaluates the methods of research that were employed by the researcher, population that was targeted, research design that was used, pilot testing for both validity and reliability of the data, the process of the data collection techniques for analyzing the data, the presentation of the analyzed data, pilot testing for variables. This chapter also acted as a cornerstone in establishing the relationship that exist between the variables in terms of sample size to be utilized in the research.

3.2. Research Design

The key aspect of the study was to employ descriptive survey procedure in collecting data from the sample population. According to Cooper and Schindler (2003) having a research design acts as a roadmap that catapult the process of measurement and data analysis. Orodho (2012), explained research design as the plan, scheme, or outline for formulating answers to issues under study. Correlational research design was adopted as it suits in calculating the strength of a relationship between variables. The study method best suits this research as it aids in the determination of the association between determinants of financial performance in deposit taking Sacco in Kenya.

According to Saunders et al. (2009), descriptive study is concerned with descriptions of phenomenon or characteristics associated with a subject population. Descriptive research design was preferred in the sense that it mirrored well and determines the correlation that is exhibited between cognitive biases on the investment decisions of the investment SACCOS that take part in

deposits in Kenya in this regard, key study focused on describing the phenomena or characteristics associated with the subject matter and by getting views from the respondents using questionnaires.

3.3 Sampling Frame

A sampling frame as defined by Welman et al. (2008) is a list of the source material or device from which a sample is drawn. It implies to a list of all those within a population who can be sampled, and may include individuals, households or institutions that forms an area of interest. The sampling frame comprised of all listed of 176 Deposit taking Saccos that are list under the SASRA report of 2024 in Kenya.

3.4 Target Population

According to Cooper and Schindler (2003) Described the entire set of objects or event placed under investigation as the population. The target population in this study was the deposit taking saccos that are regulated and licensed by saving society regulatory Authority (SASRA) to take deposits from the prospective clients in kenya . In reference to SASRA report of 2024 it acknowledges the 176 complied and registered investment deposit saccos in the country which subscribes to the statutes of deposit taking transactions as per the projection of the report of the period ended December 2023 in reference to the latest statistics which was published in January 2024 and which constitutes the study's population. The target population was the 176-deposit taking Saccos that are licensed by the SASRA in the country to officially carry out the deposit taking operation in Kenya (SASRA, 2024). Given that all deposit taking Saccos were considered, a census study was undertaken. The target population and unit of analysis for the researcher was one respondent from each deposit taking Sacco which include the finance and accounts department

credit risk officers, the marketing department and the management that have general overview on the general performance of the saccos.

3.5. Data and Data Collection

Permission was sought from the management of the respective saccos so as to create a pathway on how data was collected from the respective individual and department since it was primary data being sought for the first time. The questionnaires used were self-administered. The questions were open and close ended. The respondents were required to give short answers to the open-ended questions ensure they ticked specific spaces provided in the closed ended questionnaire. Among the key areas to take note of was the type of questionnaire that were required to be filled, different section of the questions was to guide the respondents on the information to be provided, In this regard the gaps in terms of the respondent privacy or any breach of their security was well guarded in respect to the codes of the organization under study. Therefore, this was to help in guarding against any victimization that may arise as a result of the information provided in regards to cognitive biases exhibited by the prospective investors towards the deposit SACCOS in Kenya

3.6 Pilot testing

3.6.1 Validity of the instruments

This implies to the extent of the ascertainment of the degree of consistency of the phenomenon of interest that is focused on for a study. According to Mugenda and Mugenda (2012) Alludes to the fact that it is important for the data that is gathered to uplift some degree of reliability and accuracy and affirms that validity in cooperates the quality of ensuring that procedures of

measurement are congruent with the system , in this regard it is imperative to do a pretest that can be used to justify the degree equivalence among the target population that is being targeted . In reference to this the outcomes were subjected and cross examined to verify and ascertain the level of the accuracy of the instruments and ensure it reflects and captures what was factored in the analysis.

3.7.2 Reliability of the instrument

According to Chadrian (2004) defined reliability as the extend of the degree upon which internal levels of the measurement procedure is consistent to the procedure of research. In another insight by Mugenda and Mugenda (2012) Asserts that the research instrument underutilization must produce seem less outcome that may be as a result of the repeated outcome. As noted by Orodho (2008) reliability aims at ensuring that research instrument gives the same results each time it is used in the same setting with the same type of subjects and thus it essentially means consistent or dependable results. The questionnaires were administered to one respondent in every deposit taking Sacco. The results were thereafter checked against responses given by respondents and there after a one on one interaction was conducted.

Internal consistency by Cronbach's α (the Greek letter alpha) psychology test, which is the consistency of people's responses across the items on a multiple-item measure. In general, all the items on such measures are supposed to reflect the same underlying construct, so people's scores on those items should be correlated with each other failure of conformity the information is declared unreliable because of inconsistency. On a uniform 0–1 scale, Cronbach's alpha assesses the degree of agreement. Higher numbers denote more significant agreement (Frost, 2022). It is

usually measured against a baseline of 0.7. The items are sufficiently consistent at this level and above to suggest that the measure is reliable (Frost, 2022).

3.7. Data analysis and Presentation

The presentation and analysis of the data collected was manipulated through the using of the SPSS Data was analyzed using descriptive statistics and correlation analysis. The study in cooperated and ascertain the process through the use of averaging to fit them in to multiple regression analysis in order to determine the relationship that subsists between the variables of interest. The research indicated in each variable form of an average indicator which was calculated on the composite score that was represented each variable. In this case following multiple regression model was to be adopted in the research.

$Y = \beta_0 + \beta_1 X_{1HB} + \beta_2 X_{2MA} + \beta_3 X_{3OC} + \beta_4 X_{4RA} + \varepsilon$ ……EQUATION I

Where:

Y = Investment Decisions of deposit taking saccos

{β1; β2; β3 and β4} = The coefficients for the various independent variables.

X_{1HB} = Herding bias

X_{2MA} = Mental accounting

X_{3OC} = Overconfidence

X_{4RA} = Regret aversion

ε =error term

The analyzed data was presented in the form of frequency tables and figures and relevant inference induced for each variable finding.

3.8 Diagnostic Tests

The researcher employed and carried out several tests to ascertain the validly of the instrument among the tests that were conducted included test for multicollinearity, linearity test, autocorrelation test and heteroskedasticity in order to ensure that the instruments conformed to the standards

3.8.1. Multicollinearity

Multicollinearity was first used by Regna Frisch, where it is used to describe and pinpoints the perfect and exact interconnectedness of the relation that subsists among the exploratory variables of the regression. It therefore assumes that that there exists an association among the exploratory variable many a time in regression analysis the violation of the assumption results to a problem of multicollinearity in the sense that when the R-square of the analysis of the model is High but results to a few significant t-values, it therefore shows the presence of multicollinearity in the data set.

The amount of high correlation among the variable indicates the presence of the problem of multicollinearity. The level of resistance and variance in the inflation factor (VIF) in the analysis of the regression data are often the other minus of the correlation of the exploratory variable called variance of the inflation factor (VIF) when there is an increase in the repressor variable it also results to VIF which also increases. when you have a High variance inflation factor (VIF) levels it is an indication of the presence of multi collinearity where opposite is referred to as the resistance of (tolerance) Variance inflation factor (VIF) explains the level of resistance in the amount of being fickleness of the independent variable, and the dependent variable exemplify a 2.1 R endurance of subjected values of 0.10 that represent and take the value of collinearity So, the VIF and TOI are directly connected in representation . Therefore, Multicollinearity was to be identified as a concern when the VIF is larger than 10, as a general rule of thumb.

3.8.2 Linearity test

This tests to whether the model on a straight-line linear regression are congruent and related, from the right or bottom right therefore linearity tests implies that if linear significant values is < 0.05, then there is presence of linear relationship. It therefore assumes that the average result of the model of the linear regression are correlated keeping another factor constant. The linearity test in research is a method used as a link of the correlational interaction among the variables of interest under study can be adequately represented by a linear model. It helps researchers decide if a non-linear model is necessary for accurate representation.

3.8.3 Autocorrelation test

This implies to the representation of the mathematical and the extend at which there is similarity between a given series and the lagged version of itself and the lag of the successive time intervals. Autocorrelation was used describes the view point upon which the two variables mirror each other in their relationship on their displayed intervals. If the value of the output from the autocorrelation are between the range of -1 to 1. A value between -1 and 0 is said to be negatively autocorrelation. Whereas a value between 0 and 1 is said to be positive autocorrelation. Where there is significant autocorrelation uses correlogram to diagnose (ACFs) autocorrelation functions was tested through the employment of the Durbin Watson tests to arrive at the result. In this regard we find when we have t $0 \leq d \leq 4$. The Durbin-Watson statistic thus provides a lower limit dL and an upper limit (dU). The computed value of d is therefore a value between 0 and 4. From such a value, we can infer on the nature of autocorrelation as follows: If d is closer to 0, there is evidence of positive autocorrelation, If d is closer to 2, there is evidence of no autocorrelation in the data and if d is

closer to 4, presence of the negative autocorrelation is witnessed in the dataset. Whenever the error term in the autocorrelation is found to be within the range, then the most appropriate remedial solution is to omit on the predictor variable and if at all such a predictor does not ultimately eliminate the autocorrelation of the error term, the most imperative action is to transfer on the variable performance

3.8.4 Test Heteroskedasticity

This happens when the implication of the standard deviation of the predictable variable that is being monitored at different valuer of the independent variable does not result to consistency through heteroskedasticity it is the tell-tale sign upon the visual inspection of the residual that may be realized over time. There conditional heteroskedastic is where non constant which relates the volatility of the prior period in other words unconditional heteroskedastic may be applied where there are future periods of low and high periods that can be identified. It therefore states that incase where p-value is below a certain level then for instance 0.1 0.05 there is presence of heteroskedasticity. when the null hypothesis of Breusch pagan test is not rejected this implies that there is no presence of heteroskedasticity therefore the original regression output can be determined and interpreted. this is to say that if the P-value is <0.05 you reject the null hypothesis and infer the presence but, in any case, if the P-value is > 0.05 then you fail to reject the null hypothesis and conclude the presence of heteroskedasticity

On decisional rule for the heteroskedasticity included where you perform a transform in regards to response variable. other ways include where weighted regression of the appropriate weights can be used to eliminate the problem of heteroskedasticity since they provide an accurate measure as per compared to standard error of true regression of the coefficient.

3.9. Ethical Consideration

Ethical consideration is generally the moral suasion that guides and governs an individual or an institution, therefore the researcher factored in the perspective of ethical consideration and validation when gathering the information in the process. At the onset, those taking a participatory role were asked to participate at their own will and any respondent who wished to withdraw from the exercise was allowed to do so. The researcher sought permission from the relevant authorities in the sense that it was also paramount for the researcher to explain and state the motive of the research the main reason for carrying that particular research, the intended purpose the respondents were to be furnished with the insights before engaging the entire process. The researcher carried out the research in utmost good faith by uplifting high standard and confidentiality in respect to the respondents and any information on the leads of the question regarding the organization it therefore means the type of question that were administered, the respondent's identities were omitted or withheld so as to protect them from being profiled

CHAPTER FOUR

DATA ANAYSIS AND PRESENTATION

4.1. Introduction

This chapter presents the study data analysis and interpretation on the criteria of study objective based on the summary view. This chapter also gives insight on the analysis and the finding of the study as defined in the research methodology. Among the key areas is the finding of the research based on the data that was collected from the respondent in reference to cognitive biases on investment decision of deposit taking savings and credit cooperative societies in Kenya. The appreciated method of data collection was through the questionnaire which was designed as per the objectives of the study

4.2 Response Rate

Out of the sample size of 176 deposit taking saving Saccos that were issued with questionnaires 110 of the total respondents responded to the questionnaires filled and returned these amounting to 62.5 % which is above 60% hence is declared adequate for data analysis. Therefore, the table 4.1 below outline and provides summary of the descriptive result that was drawn from the response rate from the study parameters. The response was sufficient enough to be analyzed which conforms to the Mugenda and Mugenda (2003) which states that a response rate of 50% is adequate for analysis and reporting, therefore a response of 60% is good and a response rate of 70% and above is considered excellent. The 66 of the administered questionnaires were never attended and returned this due to time constrain factors the issue of availability of the persons in charge to fill the questionnaire on time.

TABLE 2:

Response rate

Sample size	Frequency	Percentage
Returned questionnaire	110	62.5
Non-Response	66	37.5
	176	**100**

4.3 Reliability result of the study

From the analysis the reliability test was done to ascertain the Cronbach alpha test and also to check on the decisional rule based on the result that was conducted on the questionnaire. The items were found to be reliable and based on the decisional rule on Cronbach's alpha the reliability was (0.681) that indicated the data was reliable, therefore the items for the indicator were conducted to ensure they are reliable thus assuring credible result as indicated in the table 3 below

TABLE 3

Reliability test

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.681	.728	22

4.4. Demographic Response

This section presents the demographic information of the respondents, the respondents on the demographic information reflects the relevant attributes of the population which forms the basis under which the study can rightfully access the relevant information. The respondents' information captured included: gender, age and level of education of the respondents that were indicated in the questionnaire which were required to be filled and returned after being administered

4.4.1 Gender of the Respondents

This section sought to appreciate the gender of the respondents who played a pivotal role in the study, the findings were presented in the table below

TABLE .4:

Gender of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	68	61.8	61.8	61.8
	Female	42	38.2	38.2	100.0
	Total	110	100.0	100.0	

From the finding table 4 indicated that 68 of the respondents were male taking 61.8% of the total respondents while 42 were female taking 38.2 % of the total respondents, which indicated the dominance of male who highly responded to the questionnaire

From the analysis in the table 4 showed that a bigger portion of the respondents were aged between age 40 – 49 who took part exhibiting 53.6% ,followed by age 50- 59 that were 33 who were able to take 30% of the target population whereas the rest took 7,7 and 4 respectively on the frequency level being an indication that most of the deposit taking investors were in the range of middle age. The finding also revealed very few investors that were in the bracket nearing retirement

4.4.3 Highest level of education

The researcher sought to find out the highest level of education and the academic qualification the respondents had attained as indicated in the table 5 below

TABLE.5

Highest level of education

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Secondary	21	19.1	19.1	19.1
	Diploma	57	51.8	51.8	70.9
	Masters Degree	2	1.8	1.8	72.7
	Bachelors Degree	24	21.8	21.8	94.5
	PhD	6	5.5	5.5	100.0
	Total	110	100.0	100.0	

From the analysis in the table 6 showed that a bigger portion of the respondents were aged between age 40 – 49 who took part exhibiting 53.6% ,followed by age 50- 59 that were 33 who were able to take 30% of the target population whereas the rest took 7,7 and 4 respectively on the frequency level being an indication that most of the deposit taking investors were in the range of

From the analysis on table 5 above the result enlisted the respondents to have attained diploma level taking a bigger percentage of 51.8% of the qualification followed by 24 taking 21.8 % of the responded holding a bachelor's degree and 2 taking 1.8 % of those with a master degree and 6 taking 5.5% of those holding PHD as the high grade but with very few respondents respectively. This was a clear indication that majority of the respondents were knowledgeable and could resonate well with the subject of the study being a clear indication that the information delivered on the questionnaire was from the right source

4.4.2. Age of Respondents

This section was to establish and ascertain the age of the respondents who took part in the study as presented in table 5 below

TABLE.6

Age of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	20-30	7	6.4	6.4	6.4
	30-39	4	3.6	3.6	10.0
	40-49	59	53.6	53.6	63.6
	50-59	33	30.0	30.0	93.6
	60 and above	7	6.4	6.4	100.0
	Total	110	100.0	100.0	

middle age. The finding also revealed very few investors that were in the bracket nearing retirement.

From the analysis in the above table 7 the result showed 72.7% of the respondent had invested in the Sacco for the period between 11- 15 years while having 3.6 % had only invested in the deposit

taking saccos for a period of less than 5 years. Those that had taken a considerable long period had 8.2 % being over 16 years on the cumulative time they have invested in the Deposit taking saccos

4.4.4 Years of Experience

TABLE 7:

Years of Experience

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 5 Years	4	3.6	3.6	3.6
	5-10 years	17	15.5	15.5	19.1
	11-15 years	80	72.7	72.7	91.8
	Over 16 years	9	8.2	8.2	100.0
	Total	110	100.0	100.0	

in Kenya

4.4.5 Duration of investment of the Respondents

TABLE 8:

Duration of investment of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 5 Years	7	6.4	6.4	6.4
	5-10 years	29	26.4	26.4	32.7
	11-15 years	27	24.5	24.5	57.3
	Over 16 years	47	42.7	42.7	100.0
	Total	**110**	**100.0**	**100.0**	

In reference to duration of investment done by the prospects a bigger percentage of the respondents indicated to have been greater partakers of the deposit taking and savings for the period of over 16 years while other had been in the same Sacco for 11 - 15 years which indicated to have only taken less than 5 years being their minimal period in the deposit taking saccos

4.5 Effect of Herding behaviour on investment decisions

In refence the objective of the study on how Herding behaviour has had an effect on investment decisions of the deposit taking saccos in Kenya , in regards to this the study requested the respondents through the questionnaire to respond to the Likert scale on the effect of cognitive bias on investment decisions most of the result were achieved through analysis of the percentage , it was imperative to combine the no extend and smaller extend and Great extend and very extend so as to have an easy way of understanding as represented in the table 4.8 below

TABLE .9

Herding effect on investment decisions

Peer pressure	**Total**	**110**	**68**	**42**	**7**	**4**
		100%	**100%**	**100%**	**100%**	**100%**
Delayed response	No extent	0	0	0	0	0
		0%	0%	0%	0%	0%
Delayed reaction to news	Small Extent	4	2	2	0	0
		4%	3%	5%	0%	0%

Concentration in popular stock	Neutral	13	8	5	0	2
		12%	12%	12%	0%	50%
Attention focused on hot stock	Great Extent	84	52	32	7	0
		76%	76%	76%	100%	0%
Group think	Very great extent	9	6	3	0	2

From the analysis on the table 9 showed that herding behaviour indicated 84% , 93 % and 88% of peer pressure from other investors could influence how one makes or settles for a rational decision as indicated by Obumuyi (2013) who alluded to the facts that performance could be as a result of the exhibited herding behaviours by the investor of the deposit taking saccos .

4.5 Mental accounting and investment decisions

From the analysis in the table 10 below in regards to whether mental accounting has an effect on investment decision of deposit taking saccos. it was imperative to note that segregation of investment had 97% whereas rebalancing had 90 % on the greater extend also on understanding of the transaction cost had 97% of the respondents, this was evident that mental accounting in reference to rebalancing of its portfolio understanding of the transaction costs plays a pivotal role in making the ultimate rational investment decision towards deposit taking saccos in Kenya

TABLE 10:

Effect of mental accounting on investment decision

	Total	**1.Kindly indicate your gender:**		**2.Please select your age range:**				
	Total	**Male**	**Female**	**20-30**	**30-39**	**40-49**	**50-59**	**60 and above**

8a. Segregating investments	Total	110	68	42	7	4	59	33	7
		100%	100%	100%	100%	100%	100%	100%	100%
Segregating of investments	No extent	0	0	0	0	0	0	0	0
		0%	0%	0%	0%	0%	0%	0%	0%
Rebalancing of Resistance	Small Extent	0	0	0	0	0	0	0	0
		0%	0%	0%	0%	0%	0%	0%	0%
Understanding transaction costs	Neutral	3	2	1	1	0	1	1	0
		3%	3%	2%	14%	0%	2%	3%	0%
Overweighing certain costs	Great Extent	86	55	31	4	4	48	24	6
		78%	81%	74%	57%	100%	81%	73%	86%
Ignoring overall portfolio performance	Very great extent	21	11	10	29%	0%	17%	24%	14%
		19%	16%	24%	29%	0%	17%	24%	14%

This may be affirmed in reference to research by Jagongo and Mutsenje (2014) who found out that one of the most paramount factors that catapults the investment decision entails the reputation of the organization /firm status, its expected profits earnings and condition of statement on the feeling of the economy by its investor.

4.6. Over confidence and investment decisions

The objective of the study aimed to establish the effect of overconfidence on investment decision of deposit taking saccos in Kenya in regards to this the respondents were required to fill the questionnaires in reference to whether they agree strongly or disagree on the effect of overconfidence on investment decisions of deposit taking saccos as indicated in the table 11 below

TABLE 11:

Effect of overconfidence on investment decisions

From the analysis on the presence of overconfidence was noted to take 93% in reference to

		Total	**Male**	**Female**	**20-30**	**30-39**	**40-49**	**50-59**
7d. Underestimation for of risk	**Total**	**110**	**68**	**42**	**7**	**4**	**59**	**33**
		100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Overly optimistic Forecast	Strongly Disagree	0	0	0	0	0	0	0
		0%	0%	0%	0%	0%	0%	0%
Excessive trading	Disagree	0	0	0	0	0	0	0
		0%	0%	0%	0%	0%	0%	0%
Underestimation of Risks	Neither Agree nor Disagree	7	4	3	0	0	4	3
		6%	6%	7%	0%	0%	7%	9%
Overreacting to information	Agree	96	59	37	6	4	52	29
		87%	**87%**	**88%**	**86%**	**100%**	**88%**	**88%**
Disregard of diversification	Strongly Agree	7	5	2	1	0	3	1
		6%	**7%**	**5%**	**14%**	**0%**	**5%**	**3%**

underestimating of risk as an indicator by the investor , 88% by strongly agreeing on the effect of overconfidence on investment decisions , however overreacting to information also was noted to have enormous effect on investment decision of the investor , this may be reflected in a study done by Chon and Lai (2011) who alluded to the fact that the unbiased information may tend to play a significant role in influencing investors rational selection criteria towards investment . The analysis on the finding also conformed to the study done by Wendo (2015) who alluded to the fact that most of the rational investment criteria are influenced by a populist opinion.

4.7 Regret aversion and investment decisions

The final objective of the study was to investigate the effect of regret aversion investment decision of deposit taking saving saccos in Kenya, in this regard the respondents were required to indicate whether they agree or strongly agree dis agree on the effect of regret aversion on the investment decision of deposit taking as exhibited in the table 12 below:

TABLE 12

Effect of regret aversion on investment decisions

		Total	**Male**	**Female**	**20-30**	**30-39**	**40-49**	**50-59**
9 a. Holding onto losing positions	**Total**	**110**	**68**	**42**	**7**	**4**	**59**	**33**
		100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Hold on to losing portfolio	Strongly Disagree	0	0	0	0	0	0	0
		0%	0%	0%	0%	0%	0%	0%
Overconfidence on long term	Disagree	0	0	0	0	0	0	0
		0%	0%	0%	0%	0%	0%	0%
Hesitation to take profits on	Neither Agree nor Disagree	3	2	1	1	0	1	1
		3%	3%	2%	14%	0%	2%	3%
Excessive emphasis on bench marking	Agree	81	52	29	3	4	45	23
		74%	76%	69%	43%	100%	76%	70%
Resistance in revisiting investment	Strongly Agree	26	14	12	3	0	13	9

From the analysis it was clear that holding on the losing position as an indicator had 87% and affirmation on the effect of regret aversion where hesitation to take profit had 93% on how the effect on the investment decision, it was also clear that the preserved position as an indicator in terms of lack of coming to the process affect how one makes a decision. Most of the investors fear investing because of recency bias behaviour , where they may have fallen victim of the unclear process which implied that other investors decision on to invest on deposit taking saccos have higher impact on the investment decision in regards to the study done by Wang et.al (2009) alludes to the fact that well informed investors may exhibit high level of investment plan.

4.8 Investment Decisions

To find out the dependent variable on the investment decisions that is exhibited by the prospective investor the respondents were asked to state whether the investment decision is either important, very important or un important, very unimportant as indicated in the table 13 below on the findings

TABLE: 13

Investment decision

		Total	Male	Female	20-30	30-39	40-49	50-59
10 a. Investors preferences	**Total**	**110**	**68**	**42**	**7**	**4**	**59**	**33**
		100%	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
Information flow	Very Unimportant	0	0	0	0	0	0	0
		0%	0%	0%	0%	0%	0%	0%
Entry and exit strategy	Unimportant	0	0	0	0	0	0	0
		0%	0%	0%	0%	0%	0%	0%
Investment income	Neutral	11	7	4	2	0	4	4
		10%	10%	10%	29%	0%	7%	12%
Current price	Important	79	50	29	3	4	46	21
		72%	74%	69%	43%	100%	78%	64%
Investment preference	Very Important	20	11	9	2	0	9	8
		18%	16%	21%	29%	0%	15%	24%

From the analysis of the finding investor preference had 84% whereas entry and exit strategy as an indicator had 92% from the respondent, it was also imperative to note the presence of current price that plays pivotal role in deciding on the investment plan that is less costly took 85% which was an indication that investment criteria such that when it comes investing on deposit taking saccos is specific. when it comes to the track record and its profitability index, the research conforms with the research done by Ibrahim (2015) who appreciate the fact that when it comes to investment decision making it should be a plan or strategy that the prospect investor is able to spread on a wider spectrum

4.9. Multivariate analysis Results

The researcher carried an inferential statistic to establish the effect of cognitive biases on investment decision of deposit taking saving and credit cooperative societies in Kenya. The study delved in to further statistical analysis to determine the significance association of the relationship that subsists between cognitive biases and investment decisions of deposit taking saccos. Chatterjee and Hadi (2015) defined regression analysis as a statistical process for modelling and analyzing several variable when focusing on the relationship that is between one dependent and one or more independent variable. The finding of the model summary, ANOVA and Regression analysis were presented in tables 14 and 15 respectively

TABE 14:

Model Summary [b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.507[a]	.2570	.222	28.141

4.9.2 Regression Analysis

The study adopted multivariate regression analysis mode in order to establish the effect of the relationship that subsists between independent factor in regards to investment decision of deposit

The finding of the result in table 14 above shades light on the adoption of the model which explains 25.7% variability in the investment decisions of the deposit taking saving and credit cooperative societies in Kenya. This was a clear affirmation in the sense that if you combine the cognitive biases which include herding behavior, mental accounting, overconfidence and regret aversion could be used in in making the reference by explaining the 25.7% of the variance in deposit taking saving and credit cooperative societies, when R^2 is measured

4.9.1 Analysis of Variance (ANOVA)

The analysis of variance (ANOVA) model was carried out to further infer and investigate the link of the effect in the model summary above and the result of the outcome as presented in the table 4.14 below

TABLE 15:

Mean square Residual

ANOVA[a]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	28548.637	5	5709.727	7.210	.000[b]
	Residual	82358.863	104	791.912		
	Total	110907.500	109			

a. Dependent Variable: UID

b. Predictors: (Constant), 10a: INVESTMENT DECISIONS, 7a: OVER CONFICENCE AND INVESTMENT DECISIONS OF DTS, 9a: REGRET AVERSION AND INVESTMENT DECISIONS, 6: HERDING BIAS AND INVESTMENT DECISIONS, 8a: MENTAL ACCOUNTING AND INVESTMENT DECISIONS

The analysis of variance that was carried out was to determine the variability between cognitive biases on investment decision of deposit taking saving and credit cooperative societies in Kenya Therefore the result in table 15 shows that the highly independent variables can significantly predict dependent variables by $F(5, 104)=7.210$ It therefore state that if the P-value is ($P<0.05$) then it means the mode is fit to regress in this case the P-value is (<0.000) which $P<0.05$

taking saving and credit cooperative societies in Kenya the analysis was presented as indicated in the table 16 below

TABLE 15

Regression analysis results

Coefficients a

Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**T**	**Sig.**	**95.0% Confidence Interval for B**	
		B	***Std. Error***	***Beta***			***Lower Bound***	***Upper Bound***
1	(Constant)	0.035	0.472		0.074	0.041	-0.902	0.972
	6: HERDING BIAS AND INVESTMENT DECISIONS	0.105	0.119	0.089	0.88	0.381	-0.131	0.341
	7a:OVER CONFICENCE AND INVESTMENT DECISIONS OF DTS	0.157	0.102	0.159	1.539	0.012	-0.045	0.359
	8a:MENTAL ACCOUNTING AND INVESTMENT DECISIONS	0.94	0.114	0.818	8.235	0	0.714	1.166
	9a:REGRET AVERSION AND INVESTMENT DECISIONS	-0.212	0.134	-0.16	-1.589	0.115	-0.477	0.053

a Dependent Variable:

10a: INVESTMENT DECISIONS

The finding from the Regression analysis lead to the adoption of the regression model below

Where Y=0.035 + 0.105X1HB+ 0.157X2 OC+0.94X3 MA+ 0.212X4RA

The analyzed mode recorded a constant of 0.35 which is Y-intercept equivalent to 0.35 which implied that when the four independent variables (herding, mental accounting, overconfidence and regret aversion) are set to zero the investment decision would adjust at 0.035. The model recorded a B=0.105 which implied to a unit change in investment behaviour that can be explained by 0.105 which lead to 0.0381 change when other factors are held constant. The model also appreciated that B2= 0.157 which shows that a unit change in the overconfidence would be explained by 0,157 change in investment decision when other factors are kept constant , thirdly the model recorded B3=0.94 showing that a unit change in mental accounting would result and explained by 0.94 unit change in investment decision of the deposit taking saccos in Kenya when all other factors are kept constant . Finally, it is imperative to note that the analysis recorded a B4=-0.212unit change in investment which indicated that a one unit change in regret aversion could be explained by -0.212 unit change in investment decision of deposit taking saving and credit cooperative societies in Kenya when other factors are kept constant

From the finding the result it also revealed a positive significance relationship that exist between cognitive biases and investment decision of deposit taking saccos (B 0.035, P - 0.041) there was a positive significant relationship between relationship between herding which had (B 0.105, P< 0.0381)) mental accounting had a positive significant of (B 0.157, P .012)) Between

overconfidence and its respective variable and there was also a significant relationship between mental accounting of (B =0.94, P = 0.000) and finally regret aversion that had a positive significant relationship of (B =0.212, p=0.015) with investment decision this conforms to the study done by Muriuki who alludes to the fact that when you have quality asset it becomes a strong determinant of financial performance since most of its influence interest income while at the same time may tend to reduce the burden that may be as a result of bad debt management. according to a study by Dang (2011) adequate level of liquidity is positively linked with the ultimate profit on the most common financial that refers to ratio liquidity of financial institution who are customers asset and its loans to deposit.

4.10 Diagnostic testing

The research sought to carry out several tests to ascertain key outcome of the study from the research findings, several outputs and their outcomes were presented as indicated on various tables below

4.10.1 Multicollinearity

This occurs when the independent variable in a regression model have an exact relationship, the multicollinearity can be assessed by the use of VIF variance inflation factor and its tolerance values on decision rule when the purported tolerance is less than 0.2 there is presence of multicollinearity which results to a broken assumption. ideally the VIF should range between mean of above 2 and less than 10 to include no problem of multicollinearity the result on the table 4.16 below was found to have no presence of multicollinearity

TABLE 17:

Multicollinearity analysis

95.0% Confidence Interval for B		Collinearity Statistics
Upper Bound	**Tolerance**	**VIF**
0.972		
0.341	0.419	2.388
0.359	0.399	2.507
1.166	0.433	2.307
0.053	0.424	2.359

4.10.2 Autocorrelation

This may also be referred to as serial correction which result to a standard error to appear to be less than linear that ultimately result to an erroneous higher Square this can be done through the use of Durbin -Watson test and on the decisional rule the value should be between 1.5 to 2.5 to indicate a reasonable lack of autocorrection. in this regard the presentation of the result in table 18 indicated no presence of Autocorrelation being a decision rule based on the results that was displayed which indicates that the values between 1.5 to 2.5 indicates no presence of autocorrelation

TABLE 18.

Autocorrelation results

Model Summary b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin Watson
1	.742a	0.551	0.534	0.21333	1.671

a Predictors: (Constant), 9a: REGRET AVERSION AND INVESTMENT DECISIONS, 6: HERDING BIAS AND INVESTMENT DECISIONS, 8a: MENTAL ACCOUNTING AND INVESTMENT DECISIONS, 7a: OVER CONFICENCE AND INVESTMENT DECISIONS OF DTS

b Dependent Variable: 10a: INVESTMENT DECISIONS

4.10.3 Heteroskedasticity

From the table 19 below it is evident that there is no presence of heteroskedasticity , the decision rule is that if the null hypothesis is not rejected since the value was above or greater ($p > 0.05$) thus failing to reject the null hypothesis therefore this being an indication that dataset precipitated the presence of homoskedasticity through the tests that were ascertained by use of Breusch pagan test for homogeneity of the variance above 0.05 .In confirmation it is important that the homogeneity of variance to affirms data that can be used to conduct a regression analysis

TABLE 19:

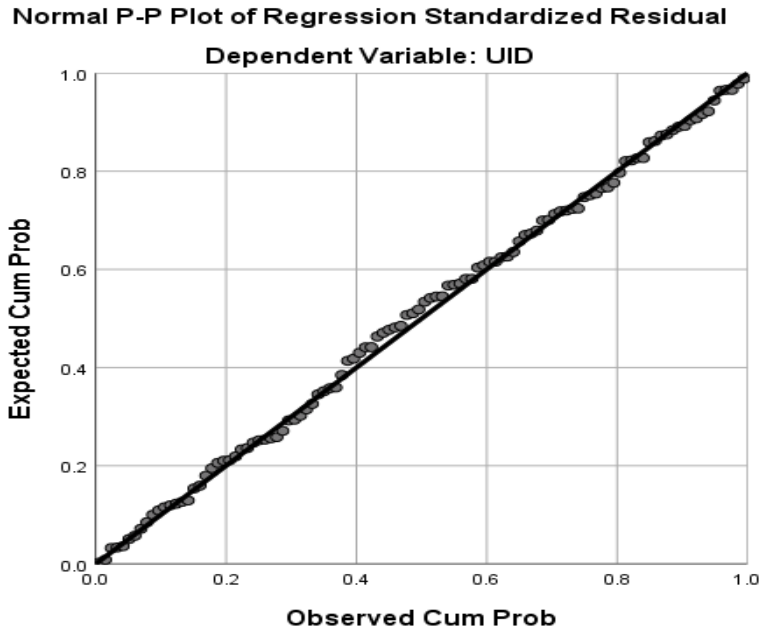
Heteroskedasticity

Model	Coefficients[a] Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig.	95.0% Confidence Interval for B Lower Bound	Upper Bound	Correlations Zero-order	Partial	Part
1 (Constant)	75.754	62.311		1.216	.227	-47.810	199.319			
6:HERDING BIAS AND INVESTMENT DECISIONS	.000	15.787	.000	.000	1.000	-31.306	31.306	-.101	.000	.000
7a:OVER CONFICENCE AND INVESTMENT DECISIONS OF DTS	.021	13.586	.000	.002	.999	-26.921	26.963	-.053	.000	.000
8a: MENTAL ACCOUNTING AND INVESTMENT DECISIONS	.503	19.317	.004	.026	.979	-37.803	38.809	-.110	.003	.002
9a:REGRET AVERSION AND INVESTMENT DECISIONS	51.674	17.823	.381	2.899	.006	16.330	87.018	.120	.273	.245
10a:INVESTMENT DECISIONS	-57.233	12.873	-.561	-4.446	.000	-82.760	-31.705	-.378	-.400	-.376

a. Dependent Variable: UID

TABLE 20

Linearity test



From the analysis on table 20 above on the slope coefficient, if a-value, is very small, the slope is near horizontal. Thus, this may be concluded that the bias is relatively constant across reference values, and linearity is not a significant problem. It therefore states that if Larger absolute values of the slope coefficient, a-value indicate a steeper slope of the line. On the decisional rule is that If the p-value of the slope is less than alpha, then linearity is significant. It therefore affirms that If the p-value is greater than the α-value, you fail to reject the null hypothesis, as follows: For the constant, and if the p-value is greater than the α-value, you fail to reject the null hypothesis and conclude that the bias for all reference values is equal to 0.For the slope, if the p-value is greater than the α-value, you fail to reject the null hypothesis and conclude that the measurement system has the same bias for all reference values (linearity is not present). From the finding it was clear to be the presence of linear relationship as indicated above

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1. Introduction

This chapter provides insight into the summary, the conclusion that were drawn from the findings and the recommendation inferences in regard to the effect of cognitive biases on investment decisions of deposit taking saving and credit cooperative societies in Kenya.

5.2 Summary of the Finding

5.2.1 Effect of herding behaviour on investment decisions

On the determination to whether herding has an effect on investment decisions of deposit taking saving and credit cooperative societies in Kenya, from the analysis it was noted that the presence of herding encourages the investment of deposit taking to a greater extend. In this regard this due to grouped behaviour was observed and many investors adopt the trend that is exhibited by others in settling on the rational decision.

Despite the challenges many prospective investors tend to go by the final decision and patterns that has been laid by others in exhibiting the same. The researcher also revealed that investors ultimate decision in investing in deposit taking saccos through the herding behaviour ultimately end up in good investment decision. This however ,the respondents agreed to a moderated extend that herding may tend to discourage investment decision simply because many may tend to reevaluate their decision later because of the grouped decision they made, therefore this had a moderate extend, in regards to the regression result it showed that herding had (B =0.105

P= 0.0381) which indicated a positive significant pivotal role towards investment decision that is made among deposit taking saccos in Kenya

5.2.2 Effect of mental accounting on investment decisions

The second objective was to assess the effect of mental accounting on investment decisions of the deposit taking saccos in Kenya, the study revealed that mental accounting plays a pivotal role in determining the right portfolio to invest in when it comes to final rational decision, the fact that prospective investor fears the loss it therefore calls for them to make a clear scrutiny on the investment portfolio and ultimately settling on the best portfolio with lesser risk but maximum return. The influence of mental accounting had a greater extend on the decision to invest. The ultimate regression analysis of mental accounting had (B= 0.94 P=0.00) which indicated a positive significant role on investment decision, the result could also mean that the investor don't just invest but they opt to choose among best alternative when it comes to rationality of investment decisions of deposit taking saccos.

5.2.3 Effect of overconfidence on investment decisions

The third most imperative objective was to establish whether overconfidence had an effect on investment decision of deposit taking saccos in Kenya, the research revealed that a big number of prospective investors with deep pockets and mostly with those located with the urban centers saccos are the most that exhibit the precipitation related to overconfidence when it comes to investment decisions. The study also found out that an overconfidence secondary opinion which may be from business news, stock exchange and other potential stakeholders, greatly affect

influence the investment decision to a greater extend the study also further revealed that information from other sources do not ultimately trigger or influence the decision .Many a time it may not be considered as important therefore this led to small extend as respondents query. From the regression analysis it revealed that overconfidence had a positive and significant effect when it comes to investment decision of **(**B=0.157, 0.012**)** which implies that business news and potential stakeholder opinion do encourage investment decision towards deposit taking saccos in Kenya

5.2.4 Effect of regret aversion on investment decisions

The final objective was to establish the effect of regret aversion on investment decision, the study revealed that by the fact that the prospective investor fear the pain of losing it makes them fear in committing towards investment plan the study found out that so long as the potential investor develops the fear and feeling that they will incur a loss they ultimately will not invest. The study also found that the fear that is exhibited by the prospective investor towards investment decision, it ultimately becomes the strongest pillar in revealing the direction one will take as an investor towards a rational investment decision therefore the prevailing euphoria on the market environment had an effect that is of greater extend. Therefore, the regression analysis results confirmed that regret aversion had a (B=0.212, P=0.011) Which implies gain and losses are key consideration by deposit taking investors when it comes to investment decision towards deposit taking saccos

5.3. Conclusion

In regards to the objectives, the research revealed that each objective had a pertinent and significant distinct role be it positive or negative in revealing the ultimate decision that is undertaken by an investor towards investment decision. In reference to the first objective the study concluded that the herding behaviours that are exhibited by the grouped pattern in the deposit taking market environment affect or ultimately has an effect on the investment decision in the long run. The study also concludes that deposit taking investment decision are also profoundly affected by the cognitive biases that are exhibited by the prospective investor from different perspective and background based on their mental orientation towards deposit taking saccos. The study also concluded that the overconfidence investor tends to see things beyond horizon, since most of them have deep pockets that gives them an upper hand when it comes to financial muscle therefore, they foresee possibilities in every news they consume, these factors are paramount during rational decision making towards the deposit taking by the prospective investor

In reference to the second objective it was imperative to note that mental accounting defines the ultimate decision the investor settle on, sometimes there is a dissonance in the best decision to be undertaken towards the investment. The study concluded that the best outcome from an investment with lesser risk is a determining factor in the rationality of the decision of the prospective investor. however, the study shades light in concluding that the presence of mental accounting may make the investor not to commit whole heartedly towards greater opportunity that is in line with investment goals.

Further in regards to the fourth objective the revelation from the study revealed that the fact that the pain that is associated which ultimately makes the prospective investors shun in exploring the greater opportunity , By the virtue of having the regret aversion it means a lot of

precaution will have to be made when it comes to ultimate decision making by an investor , This could be as a result of where the prospective has once fallen victim in the previous investment decision that he/she undertook , therefore this may act as a lesson which in the long run affects the decision to be settled on .

In regards to herding behaviour it was clear that grouped behaviour influences the investment pattern many prospective investors want to be where others are, thus settling where they feel many have entrusted their resources, therefore this may result in to bubble in investment pattern either it will go up or have a whiplash effect of going down. Finally, it was clear that the cognitive biases have a role in determining the investment decision and many a time there has been lack of better result because of poor decision that has been undertaken that is as a result of the cognitive biases. it is imperative to re-evaluate on the decision that ultimately yields greater result in regards when it comes to an investment decision and credit saccos.

5.4 Recommendation

One of the key recommendations from the study is that deposit taking saccos in the country (Kenya) should ultimately ensure that the prospective Sacco investor have access to information in relation to track record that reflects their investment plan, the deposit taking performance, the share prices and finally the financial soundness of the Sacco so as to be able to make investment decision from the knowledge perspective. The research also recommends that it is imperative for an investor to re-evaluate the decision in regards to investment in the deposit and to not only rely on cognitive biases but also from the expert point of view is that many a times a decision may be made in a rush without clear scrutiny, which ultimately results to wrong result and return.

The study also recommends that there is an urgent need for the deposit taking to continuously integrate technology through which deposit taking investors are in a position and able to analyze their investment contribution and their long-term gain, dividend payment, the share prices by the listed deposit taking saccos in Kenya.

There is further recommendation on policy making and regulating body which is the government to ensure that stringent measures are put in place to secure investor from losses that may occur or when a deposit taking Sacco is going under or when it's under receivership. Also, they should consider issues such as information disclosure and the issues of equitable investment information awareness that will campaign and ensure that more prospective deposit investors entrust their funds in the deposit taking Saccos.

There are still grey areas in regards to deposit taking Sacco's therefore there is still a lot needed in passing the precise information to the public in regards to deposit taking saccos very few prospect and potential investors don't have reliable source to channel their trust in terms of investment therefore, street awareness is paramount towards deposit taking growth.

5.5 Limitation of the study

One of the ultimate challenges faced by the researcher was the timely compliance in responding to the questionnaire, most of the Saccos that the researcher made physical visitation to, A bigger chunk of the respondents were reluctant to respond to the queries since most of them thought they were being profiled. The challenge of availability of the respondent to attend to the questionnaire in time was a major stabling bock. The researcher was luckily enough to have been accorded the much needed help through the help of general manager who had access to most of the Saccos in the country of deposit taking who was willing to help having a satisfactory response rate .The

researcher also was able to curb the challenge of administering the questionnaire by having an introduction letter from the institution stating the reason why the research was being undertaken and to clear the doubt and also the information gathered was for the academic purposes but not to profile any respondent of firm. The final challenge was the lack of sufficient fund time constraints which was quite limiting in reaching a larger spectrum trips to and out of different counties

5.6 Areas for further research

The study appreciates the facts that it contributes to resourceful knowledge on how cognitive biases and investment decision of deposit taking saccos it ignites how rational decision are made, there is still other areas that are not fully tapped and exhausted. The study suggests that there is need to have an in-depth analysis of research which is paramount that needs to be done in investigating how and if at all cognitive biases are the ultimate decisional criteria that that determine investment. The study also suggests that it will be proper to distinguish whether most of the wrong investment decision that are made relates to cognitive biases and if so where is the missing ling and the boiling pot. Further the study can be carried to ascertain the selection criteria and pubic information dispensation towards information to the prospective investor on how to reach the ultimate investment decision towards these deposits taking saccos in Kenya. There seem to be a gap in information dispensation channel that leads to information asymmetry which might be important in a way most of the cognitive biases influences the long run investment decision which most of the investors assume and may be key and pertinent and a cutline that touches on their investment

REFERENCES

Adielyani, D., & Mawardi, W. (2020). The influence of overconfidence, herding behavior, and risk tolerance on stock investment decisions: The empirical study of millennial investors in Semarang City. Jurnal Maksipreneur: Manajemen, Koperasi, dan Entrepreneurship, 10(1), 89-101. DOI: http:// dx.doi.org/10.30588/jmp.v10i1.691

Adil M., Singh Y., Ansari M. S. (2022a). Does financial literacy affect investor's planned behavior as a moderator? *Manage. Finance* ahead-of-print(ahead-of-print) 10.1108/MF-03-2021 0130

Agha J., Saif ur R. (2012). Implication of behavioral finance in investment decision-making process. *Inf. Manage. Bus. Rev.* 4 532–536. 10.22610/imbr.v4i10.1009

Ahmad M. U., Mahmood A. (2020). An empirical study on herd mentality in Indian investors. *JIMS8M J. Indian Manage. Strategy* 25 58–61. 10.5958/0973- 9343.2020.00025.3

Ahmad M., Wu Q. (2022). Does herding behavior matter in investment management and perceived market efficiency? Evidence from an emerging market. *Manage. Decis.* 60 2148–2173. 10.1108/MD-07-2020-0867

Ahmed Z., Noreen U., Ramakrishnan S. A. L., Abdullah A. D. F. B. (2021). What explains the investment decision-making behaviour? The role of financial literacy and financial risk

tolerance. *Afro Asian J. Finance Account.* 11 1–19. 10.1504/AAJFA.2021.111814

Ainia, N. S., &Lutfi, L. (2019). The influence of risk perception, risk tolerance, overconfidence, and loss aversion towards investment decision making. Journal of Economics, Business, and Accountancy Ventura Vol. 21, No. 3, December 2018 – March, 401 - 413

Ainia, N. S. N., & Lutfi, L. (2019). The influence of risk perception, risk tolerance, overconfidence, and loss aversion towards investment decision making.Journal of Economics, Business, and Accountancy Ventura, 21(3), 401-413.https://doi.org/10.14414/jebav.v21i3.1663

Alaaraj H., Bakri A. (2020). The effect of financial literacy on investment decision making in Southern Lebanon. *Int. Bus. Account. Res. J.* 4 37–43. 10.15294/ibarj.v4i1.118

Aljuhani, N., & Shaheen, R. (2021). THE ROLE OF BEHAVIORAL FINANCE ON EMPLOYEES AND BUSINESS GROWTH. *PalArch's Journal of Archaeology of Egypt/Egyptology*, *18*(13), 1117-1129.

Almansour, B. Y. (2015). The impact of market sentiment index on stock returns: An empirical investigation on kuala Lumpur stock exchange. *Journal of Arts, Science and Commerce*, VI(July 2015), 1–28.

Alwathainani A. M. (2010). *Market reaction to an earnings shock: a test of the conservatism effect. CAAA annual conference 2012*. Available online at: 10.2139/ssrn.1725623 (accessed December 14, 2010).

Anderson J. E., Marcouiller D. (2002). Insecurity and the pattern of trade: An empirical investigation. *Rev. Econ. Stat.* 84 342–352. 10.1162/003465302317411587

Andriamahery A., Qamruzzaman M. (2022). Do Access to finance, technical know-how, and financial literacy offer women empowerment through women's entrepreneurial development? [original research]. *Front. Psychol.* 12:776844. 10.3389/fpsyg. 2021.776844

Antony A. (2019). Behavioral finance and portfolio management: Review of theory and literature. *J. Public Aff.* 20 1–7. 10.1002/pa.1996

Antony A., Joseph A. I. (2017). Influence of behavioural factors affecting investment decision-An AHP analysis. *Metamorphosis J. Manage. Res.* 16 107–114. 10.1177/09726225177388

Arik, S. L., & Sri, A. L. (2021). The Effect of Overconfidence and Optimism Bias on Stock Investment Decisions with Financial Literature as Moderatin Variable. Eurasia: Economics & Business, 12(54), 84-93. https://dorg/10.18551/econeurasia.2021-12

Arisanti, I., and Oktavendi, T. W. (2020). Herding behaviour in sharia stock?: the Moderation effect of good governance business sharia disclosure. J. Account.Invest. 21, 45–60

Arianti B. F. (2018). The influence of financial literacy, financial behavior and income on

investment decision. *EAJ Econ. Account. J.* 1 1–10. 10.33122/ijase.v1i6.107

Bagchi, S., Mukherjee, D., Mohanty, D., & Verma, A. (2022). Influence of behavioral biases while making decision on mutual fund investment. Journal of Information and Optimization Sciences, 43(7), 1733-1747. https://doi.org/10.1080/02522667.2022.2128529

Bird, R. B, & Smith, E. A. 2005. Signaling theory, strategic interaction, and symbolic capital. Current Anthropology, 46: 221-248

Branch, B. &Cifuenes, M. (2001).Outwards maximising credit union financial sustainability. Research Monograph, World Council Of Credit Unions, Madison: WI, USA

Brown, J., Diamond, I., Chambers, R., Buckner, L., and Teague, A. (1999). A methodological strategy for a one-number census in the UK. Journal of the Royal Statistical Society:Series A, 162(2):247-267

Civek, F. (2019). The Effect Of Investors' Cognitive Bias On Stock Decision . Quantrade Journal of Complex Systems in Social Sciences ISSN: 2687-5098 Vol 1 (Issue 1), 13-21

Cooper, D., & Schindler, P. (2003). *Business Research Methods.* NY; New York: McGraw Hill.

Cooper, D. R. & Schindler, P. S. (2001). Business Research Methods, 7th Edition. New York: McGraw-Hill.Credit Cooperative Societies In Hula Woreda, Sidama Zone,

Snnpr, Ethiopia. Hawassa University, College of business and economics, Department of cooperative.

Cooksey, R. W. (2020). Descriptive Statistics for Summarising Data. In *Illustrating Statistical Procedures: Finding Meaning in Quantitative Data* (pp. 61-139). Springer,Singapore.

Creswell, J. W., Plano Clark, V. L., Gutmann, M. L., & Hanson, W. E. (2003). Advanced mixed methods research designs. Handbook of Mixed Methods in Social and Behavioral Research, 209-240.

ECB (2007).Progress towards a framework for financial stability assessment, speech by José-Manuel González-Páramo, Member of the Executive Board of the ECB.

Desrita, L. (2022). The Influence of Financial Behavior with Risk Perception as Moderation in Determining Investment Decisions in Batam City. Inovbiz: Jurnal Inovasi Bisnis, 12(2), 170-178. https://doi.org/10.35314/inovbiz. v10i2.2782

Deuskar, P., et al. (2020). How does regret affect investor behaviour? Evidence from Chinese stock markets. Accounting & Finance. https://doi.org/10.1111/acfi.12646

Elshqirat, M. K. (2019). Testing Sectoral Herding in the Jordanian Stock Market. International Business Research, 12(8), 88-106. https://doi.org/10.5539/ibr. v12n8p88

Evans A. C. (2001). Strengthening Credit Unions in Sri Lanka: Research Monograph, World Council Of Credit Unions, Madison:WI, USA.

Festinger, L., Riecken, H. W., & Schachter, S. (1956). When prophecy fails Minneapolis.

Friedman, M. (1970). A theoretical framework for monetary analysis. *journal of Political Economy*, *78*(2), 193-238.

Gachara, J. R. N. (2010). An Investigation into the Investment of Reserve Funds in Savings and Credit Co-operatives in Nairobi. Unpublished MBA Project, University of Nairobi 48

Gadzo, S. G., Kportorgbi, H. K., & Gatsi, J. G. (2019). Credit risk and operational risk on financial performance of universal banks in Ghana: A partial least squared structural equation model (PLS SEM) approach. *Cogent Economics & Finance*, *7*(1), 1589406.

Gijselinckx, C. &Develtere, P. (2007).The co-operative trilemma. Cooperatives between market, state and the civil society. Research Paper, Catholic University, Leuven, Belgium.

Gray, D.F., Merton, R.C. &Bodie, Z. (2007).New framework for measuring and managing macro financial risk and financial stability, NBER Working Paper no 13607.

Gottman, J., M., Katz, L., F., & Hooven, C. (1996). Parental Meta-Emotion Philosophy and the Emotional Life of Families: Theoretical Models and Preliminary Data. Journal of family Psychology, 10(3), 243.

Gigerenzer, G., & Gaissmaier, W. (2011). Heuristic Decision-making. Annual Review of

Psychology, 62(1) 451-482.

Gigerenzer, G., & Selten, R. (2001). Bounded Rationality: The Adaptive Toolbox. London: The MIT Press. 37-50.

Gilovich, T., Griffin, D., & Kahneman, D. (2002). Heuristics and Biases: The Psychology of Intuitive Judgement. UK: Cambridge University Press. 1-855.

Glaser, B., G., & Holton, J. (2004). Remodelling Grounded Theory. Forum: Qualitative Social Research, 5(2). 1-22.

Goel, V., Gold, B., Kapur, S., & Houle, S. (1997). The Seats of Reason? An Imaging Study of Deductive and Inductive Reasoning. NeuroReport, 8(5) 1305-1310.

Goetzmann, W., N., Li, L., & Rouwenhorst, K., G. (2001). Long-Term Global Market Correlations. Yale International Centre for Finance. Working Paper (No. 00-60). USA: New Haven.

Goswami, S., Goswami, B. K., Panicker, A., & Sharma, A. (2020). Exploring the role of emotions and psychology in financial investment decisions in Indian securities market. International Journal of Advanced Science & Technology, 29(1), 532–547.

Gweyi, M., Olweny, T., & Oloko, M. (2018). Effect of liquidity risk on financial performance of deposit taking savings and credit societies in Kenya. International Journal of economics, commerce and management, 6(1), 1-6.

Hawkins, J. &Klau, M. (2000).Measuring potential vulnerabilities in emerging market economies, BIS Working Papers, no 91.

Harry Markowitz. Portfolio selection. The Journal of Finance, Vol. 7(No. 1):77–91, March 1952.

Harry M. Markowitz. Portfolio Sellection Effcient Diversifcation of Investments. Cowles Foundation for Research in Economics at Yale University, 1959.

Highhouse, S., Thornbury, E. E., & Little, I. S. 2007. Social-identity functions of attraction to organizations. Organizational Behavior and Human Decision Processes, 103: 134-146.

Isanzu, J. S. (2017). The impact of credit risk on financial performance of Chinese banks. *Journal of International Business Research and Marketing*, *2*(3).

Isanzu, J. S. (2017). The impact of credit risk on financial performance of Chinese banks. *Journal of International Business Research and Marketing*, *2*(3).

Ismail, N., Kinchin, G., & Edwards, J. A. (2018). Pilot study, does it really matter? Learning lessons from conducting a pilot study for a qualitative PhD thesis. *International Journal of Social Science Research*, *6*(1), 1-17.

Jain, S., & Angural, V. (2017). Use of Cronbach's alpha in dental research. *Medico Research Chronicles*, *4*(03), 285-291

Jain, J., Walia, N., & Gupta, S. (2020). Evaluation of behavioral biases affectin investment

decision making of individual equity investors by fuzzy analyti hierarchy process. Review of Behavioral Finance, 12(3), 297-314. https://doi org/10.1108/RBF-03-2019-0044

Jetter, M., & Walker, J. K. (2017). Anchoring in financial decision-making: Evidence from Jeopardy!. Journal of Economic Behavior & Organization, 141, 164-176.

Kahneman, D., & Tversky, A. (1979). Prospect theory, an analysis of decision under risk. Econometrica, 47(2), 264-291

Kaloi, J.M. (2004). Factors contributing to liquidity problems on saving credit cooperatives. MA thesis, Moi University, Eldoret, Kenya.

Khan, I. et al. (2020). The impact of heuristic biases on investors' investment decision in Pakistan stock market: Moderating role of long-term orientation, Qualitative Research in Financial Markets, 1-24, DOI 10.1108/QRFM-03-2020-0028

Kimani, A.W. (2007). In financial performance and ineffectiveness in credit administration. A case study of Chuna Sacco Society ltd. MBA Thesis, Jomo Kenyatta University of Agriculture and Technology, Juja, Kenya

Kinuthia, P.M. (2007). Management of loan default problems in SACCOs in Nairobi province. MBA Thesis, Jomo Kenyatta University of Agriculture and Technology, Juja Kenya .

Kahneman, D., & Tversky, A. (1984). Choices, values, and frames. *American Psychologist, 39*(4), 341-350.

Kahneman, D., Slovic, S. P., Slovic, P., & Tversky, A. (Eds.). (1982). *Judgment under uncertainty: Heuristics and biases*. Cambridge university press

Kapoora, S. & Prosad, J. M. (2017). Behavioural finance: A review, Procedia Computer Science, 122, 50-54

Khan, M. T. I., & Tan, S. H. (2020). Does family affect financial outcomes and psychological biases? Evidence from small investors in Bangladesh. Journal of Family Business Management, 10(2), 167-186.

Kumar, A. A., & Babu, M. (2018). Effect of loss aversion bias on investment decision: A study. Journal of Emerging Technologies and Innovative Research, 5(11), 71-76.

Kumar, S., & Goyal, N. (2016). Evidence on rationality and behavioural biases in investment decision making. Qualitative Research in Financial Markets, 8(4), 270–287. https://doi.org/10.1108/QRFM-05-2016-0016

Kumar, A. A., & Babu, M. (2018). Effect of loss aversion bias on investment decision: A study. Journal of Emerging Technologies and Innovative Research, 5(11), 71-76

Kumar, Y., & Nayak, R. (2019). Role of Behavioral Factors in Share Market Investment Decision Making. International Journal of Innovative Technology and Exploring Engineering

(IJITEE) Volume-8 Issue-12S2, October, 786-796.

Laopodis, N. T. (2021). Understanding Investments: Theory and Strategies. In Routledge (2nd ed.). Routledge. https://doi.org/10.4324/9781003027478

Leković, M. (2020). Cognitive Biases as an Integral Part of Behavioral Finance . Economic Themes 58(1) , 75-96

Mallik, K. A., Munir, M. A., & Sarwar, S. (2017). Impact of Overconfidence and Loss Aversion Biases on Investor Decision Making Behavior: Mediating Role of Risk Perception. international Journal of Public Finance, Law & Taxation Vol. 1, Issue 1, 13-24.

Mascareñas, Juan and Yan Fangyuan. (2017). "How People Apply Mental Accounting Philosophy to Investment Risk?", International Journal of Economics and Financial Issues, 7 (3), 145-151.

Mugenda, O. M., & Mugenda, A. G. (2012). *Research Methods, Quantitative and Qualitative Methods, Revised 2012.* Nairobi, Kenya: Acts Press.

Musembi, D. M. (2018). *Effect of Liquidity Risk Determinants on Financial Performance of Commercial Banks Listed At Nairobi Securities Exchange, Kenya* (Doctoral Dissertation).

Mwania, V. M. (2017). *Relationship between financial performance and growth of SACCOs in Kenya*. Doctoral dissertation, University of Nairobi.

Mumanyi .E.A.L.(2014) Challenges and opportunities facing saccos in the current devolved

system of government of Kenya . Acase study of mombasa county

Mumanyi E.A.L.(2018) Determinants of financial performance among savings and credit cooperatives in Kakamega county Kenya

Munene, H. N., Ndegwa, J., & Senaji, T. (2020). Influence of Board Characteristics on Financial Distress of Deposit-taking SACCOs in Nairobi County, Kenya. Retrieved fromhttps://repository.cuk.ac.ke/xmlui/handle/123456789/681

Nderitu et al. (2018) The effect of behavioural biases on individual investment decision on real Estate prices

Ngahu, A. N. (2017). Factors Influencing Investment Decisions in Equity Stock among Retail Investors in Kenya (Doctoral dissertation, KCA University).

Nyakundi, J. B. (2017). Effect of behavioral biases in ranking of financial decisions by financial managers of firms listed at the Nairobi Securities Exchange.

United States International University, Chandaria School of Business. Nairobi: USIU.

Nofsinger. (2017). The Psychology of Investing. Routledge.

Ogunlusi, O. E., & Obademi, O. (2019). The Impact of Behavioral Finance on Investment Decision-making: A Study of Selected Investment Banks in Nigeria. Global Business Review, 22(6), 1345-1361. 0972150919851388.

Ondieki, A. N., Okioga, C., Okwena, D. K., & Onsase, A. (2012). Assessment of the Effect of

External Financing on Financial Performance of Savings and Credit Cooperatives in Kisii Central District, Kenya. Nairobi, Kenya: University of Nairobi.

Orodho, J. A. (2008). Techniques of writing research proposal & reports in educational and social science: Maseno University Press.

Pradhana, R. W. (2018). Pengaruh Financial Literacy, Cognitive Bias, dan Emotional Bias Terhadap Keputusan Investasi (Studi Pada Investor Galeri Investasi Universitas Negeri Surabaya). Jurnal Ilmu Manajemen Volume 6 Nomor 3 – Jurusan Manajemen Fakultas Ekonomi Universitas Negeri Surabaya, 108-117.

Rengku, R. B. (2012). Faktor Internal dan Pengaruhnya Terhadap Risk Perception dan Expected Return Perception. Journal of Business and Banking Vol 2, No 2, 185-198.

Ross, S. A. 1977. The determination of financial structure: The incentive signaling structure. Bell Journal of Economics, 8: 23-40

SACCO Societies Regulatory Authority. (2011). SACCO supervision report-2010: Deposit taking SACCOs. Nairobi: Government Printers.

SACCO Societies Regulatory Authority. (2014). SACCO supervision report-2013: Deposit taking SACCOs. Nairobi: Government Printers.

SACCO Societies Regulatory Authority. (2016). SACCO supervision report-2015: Deposit

taking SACCOs. Nairobi: Government Printers.

Saunders, M. N., Lewis, P., & Thornhill, A. (2009). *Research Methods for Business Students.* Prentice Hall.

Santi, Fitri; Valetta, Nelsi and Kamaludin, Sahara. (2019). "The Effect of Mental Accounting on Student's Investment Decisions: A Study At Investment Gallery (GI) Feb University of Bengkulu and Syariah Investment Gallery (GIS) Feb Lain Bengkulu", Journal Ilmiah Economic Biasness, 24 (2), 139-152

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.

Shah, W. A. (2019). The impact of self-attribution bias and overconfidencee bias on perceived market efficiency. Islamabad: Capital University of Science and Technology. Retrieved from https://ssrn.com/abstract=3417271

Spence, M. 1973. Job market signaling. Quarterly Journal of Economics, 87: 355-374.

Spence, M. 2002. Signaling in retrospect and the informational structure of markets. American Economic Review, 92: 434-459.

Stiglitz, J. E. 2002. Information and the change in the paradigm in economics. American Economic Review, 92: 460-501

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

Thaler, R. H. (1999). Mental accounting matters. *Journal of Behavioral Decision Making, 12*,183- 206.

Thaler, R. H. (1985). Mental accounting and consumer choice. *Marketing Science, 4*(3), 199-214.

Thaler, R. H., & Johnson, E. J. (1990). Gambling with the house money and trying to break even: The effects of prior outcomes on risky choice. *Management Science, 36*(6), 643-660.

Weru, G. W. (2019). Effect of behavioural biases on investment decision for structured products by retail investors at NSE. Nairobi: Strathmore University. From http://suplus.strathmore.edu/handle/11071/6667

Wu, G., Yang, B., & Zhao, N. (2020). Herding behaviour in Chinese stock market during COVID-19. Emerging Markets, Finance and Trade, 56(15), 3578-3587.

Yuniningsih, & Taufiq, M. (2019). Investor Behavior in Determining Investment on Real Asset. MIX: Jurnal Ilmiah Manajemen, Volume 9, No. 2, Juni, 327

Yusuf, M., & Surjaatmadja, S. (2018). Analysis of Financial Performance on Profitability with Non Performace Financing As Variable Moderation. *International Journal of Economics and Financial Issues*, *8*(4), 126.

Zahera, S.A., & Bansal, R. (2018). Do investors exhibit behavioral biasesin investment decision making? A systematic review. Qualitative Research in Financial Markets. 10(2), 210-251. https://doi.org/10.1108/QRFM-04-2017-0028

Zhang, C. Y., & Sussman, A. B. (2018). Perspectives on mental accounting: An exploration of budgeting and investing. *Financial Planning Review, 1*(1-2), e1011

Zhang, Y., & Wiersema, M. F. 2009. Stock market reaction to CEO certification: The signaling role of CEO background. Strategic Management Journal, 30: 693-710

Zohrabi, M. (2013).Mixed method research: Instruments, validity, reliability and reporting findings. Theory and Practice in Language Studies, 3(2), 254.

APPENDICES

APPENDIX I : RESEARCH QUESTIONNAIRE

Part A: General Information

Please give your answers to each of the following questions. Read all the answers first and choose the appropriate answer box by ticking (√) clearly or circling against one item for each question.

1. Kindly indicate your gender: Male [ ] Female [ ]

2. Please select your age range: 20-30 [ ] 30-39 [ ] 40-49 [ ]
50-59 [ ] 60 and above [ ]

3. What is your highest level of education?

Secondary [ ] Diploma [ ]

Master's Degree [ ] Bachelor's Degree [ ]

PhD [ ] Other [ ]

4. How long have you invested at the deposit taking saccos

Less than 5 Years [ ] 5-10 years [ ] 11-15 years [ ] Over 16 years [ ]

5. How long have you invested using the current saccos

Less than 5 Years [ ] 5-10 years [ ] 11-15 years [ ] Over 16 years [ ]

PART B: HERDING BIAS AND INVESTMENT DECISIONS

6. State the extent to which the following herding bias indicators affect your investment

decision in deposit taking saccos. Rate the statements using a scale where 1 - No extent, 2 - small extent, 3 – Great extent and 4 – very great extent

Herding behaviour	**1**	**2**	**3**	**4**	**5**
-Peer pressure					
-Delayed reaction to news					
-Concentration in popular stocks					
-Attention focused on hot stocks					
-Group think					

PART C: OVER CONFICENCE AND INVESTMENT DECISIONS OF DTS

7 (a). State the extent to which you agree with the following Cognitive bias overconfidence influence your investment decisions of deposit taking saccos 1 - Strongly Disagree 2 – Disagree 3- Neither Agree nor Disagree 4 – Agree 5 - Strongly Agree

Overconfidence indicators	**1**	**2**	**3**	**4**	**5**
-Excessive trading					
-Overly optimistic forecast					
-Disregard for Diversification					
-Underestimation for of risk					
-Overreaction to information					

7 (b). What other effect has overconfidence has on your investment decisions?

……

……

……

PART D: MENTAL ACCOUNTING AND INVESTMENT DECISIONS

8. State the extent to which mental account has an effect on your investment decision Of deposit taking saccos . Rate the statements using a scale where 1 - No extent, 2 - small extent, 3 - Great extent, and 4 – very great extent

Mental accounting indicators	**1**	**2**	**3**	**4**
-Segregating investments				
-Rebalancing resistance				
-Understanding transaction costs				
-Overweighing certain holding				
-Ignoring overall portfolio performance				

8 (b). What other ways has mental accounting influenced the investment decisions of deposit taking saccos ?

……

……

……

PART E: REGRET AVERSION AND INVESTMENT DECISIONS

9. State the extent to which you agree on influence of regret aversion on your investment decision of deposit taking. Rate the statements using a scale saccos 1 - Strongly Disagree 2 – Disagree 3- Neither Agree nor Disagree 4 – Agree 5 - Strongly Agree

Regret aversion indicators	**1**	**2**	**3**	**4**	**5**
-Holding onto losing positions					
-Overconcentration on short on short term investment performance					
-Hesitation to take profits on					
-Excessive emphasis on benchmarking investment performance against market indices					
-Resistance in revising investment plans or strategies					

PART E: INVESTMENT DECISIONS

10 (a). Indicate your rating on importance of the following investment decisions in your deposit taking Sacco Where 1- very Unimportant, 2- Unimportant, 3- important and 4 - very important

Investment Decisions indicators	**1**	**2**	**3**	**4**	**5**
-Investors preferences					
-Information flow					
-Entry and exit strategy					
-Investment income					
-Current price					

10 (b). What recommendations would you propose to ensure there are good investment decisions made in deposit taking saccos in Kenya?

……

……

……

Thank you for your humble time sand cooperation