INFLUENCE OF SELECTED BEHAVIORAL FACTORS ON FINANCIAL PERFORMANCE OF DEPOSIT-TAKING SACCOS IN KENYA

BY

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DECLARATION

This project is my original work and has not been presented in any other University for examination in fulfillment of the requirement for the award of a degree.

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DEDICATION

This project is dedicated to my family members who supported me towards the fulfilment of this project.

ABSTRACT

Savings and Credit Cooperatives (SACCOs) are the major drivers of economic growth in developing countries and promise future growth and departure from poverty among the low economic regions. In Kenya, there was an increase in total assets from 556.7 billion in 2020 to 627.7 billion in 2021, which represented a 12.7% growth. The gross loans grew from 419.6 billion in 2019 to 474.8 billion in 2020 representing a 13.2% increase. However, SACCOs have continuously faced with large membership withdrawals, withholding of deposits and reduced share contributions. Previous studies concentrated on investigating the facilities offered by SACCOs, number of customers among the main factors in determining the SACCOs financial performance. Some other factors affecting the financial performance of SACCOs emanate from behavioral finance aspects which has received little focus on. This study sought to establish the influence of selected behavioral factors on the financial performance of deposit-taking SACCOs in Kenya. The specific objectives of the study were: to establish the effect of customers' credit-risk behavior on financial performance of deposit taking SACCOs in Kenya, to determine the influence of customers' transactions behavior on the financial performance of deposit-taking SACCOs in Kenya and assess the effect of management overconfidence on financial performance deposit-taking SACCOs in Kenya. The study adopted cognitive dissonance and the theory of behavioral finance. A correlational research design was used to establish the association between selected behavioral factors and the financial performance of the deposit-taking SACCOs. The study population was 175 deposit-taking SACCOs licensed by to undertake deposit-taking business in Kenya. The study used census method of sampling and a total of 150 deposit-taking SACCOs were analyzed. Secondary data on selected financial performance indicators were obtained using a data collection sheet from SACCOs financial statements covering from 2015 to 2021. Reliability was tested using the Levin-Lin-Chu unit root test and data was found to be stationary, while face validity was ensured using experts judgment and the tool was approved as valid. Both descriptive and inferential data analysis methods were used in the analysis, Linear and multiple regression analysis was also used. Results were presented using graphs and tables. The findings revealed that selected behavioral factors explains 22% variation of financial performance of deposit-taking SACCOs ($R^2= 0.22$). The results further indicated that customer's transaction has positive and significant effect; (B =0.015, p=0.000) on financial performance of deposit-taking SACCOs in kenya; management overconfidence negative and significant effect; (B =-0.043, p=0.000) while customer credit risk behavior has a positive and significant effect (B=0.687, p=0.000) on financial performance of deposit-taking SACCOs in Kenya. This implies that both customer transaction behavior and credit risk behavior positively and significantly affect financial performance, while management overconfidence negatively and significantly affects financial performance of deposit-taking SACCOs in kenya. The study recommended that SACCOs encourage more transactions and confidence among managers but take more precautions in lending. It is expected that the findings may be substantial for the scholars and will aid the stockholders improve their behavioral financial management to boost returns on their shares.

TABLE OF CONTENTS

LIST OF ABBREVIATIONS

EPS   Earnings per Share

GDP   Gross Domestic Product

NSE   Nairobi Securities Exchange

ROA   Return on Asset

ROE   Return on Equity

ROI   Return on Investment

ROS   Return on Sales

SASRA   Sacco Societies Regulatory Authority

OPERATIONAL DEFINITION OF TERMS

Behavioral factors   Refer to customer or management tastes, decisions, acts and perceptions on the cash transactions or investment

Financial Performance   Measure of how well a firm can use assets from its primary mode of business and generate revenues. This is also used as a general measure of a firm's overall financial health over a given period.

Return on Assets: A ratio which seeks to measure the amount of profit generated from the entire assets of the firm.

Customer-Credit Risk Behavior: This is the ratio of non-performing loans to total gross loan advanced by deposit-taking SACCOs in Kenya and measure the behavioral aspects associated with non-repayment of loans by customers.

Customer Transaction behavior: This is the ratio of interest income to gross deposit by deposit- taking SACCOs in Kenya, and measures the volume of transactions that customers carry out based on the influence of behavioral aspects.

Management Overconfidence: This is the ratio of investment to total assets by deposit-taking SACCOs in Kenya, and measure management investment decision behaviour towards business risk.

LIST OF TABLES

LIST OF FIGURES

CHAPTER ONE

INTRODUCTION

This chapter presents the background information, problem statement, objectives of the study, hypothesis, scope, justification and conceptual framework of the study.

1.1 The Background of the study

Financial performance is the measure of the monetary outcome or profit resulting from optimal utilization of firms' resources by the firm itself (Ichsan, Suparmin, Yusuf, Ismal & Sitompul, 2021). In the context of deposit-taking SACCOS, financial performance entails assessment of yields as a result of policies and operations in monetary terms due to resource allocation to the best projects that can generate profits to maximize members' or shareholders'' resources (Oyewumi, Ogunmeru & Oboh, 2018). The study aims of deposit-taking SACCOS depend largely on SACCOS' membership followed by Management operations (Kagonia, 2017). Specifically, the main aim of SACCOS is to pool membership resources together through deposits and shares and provides financial resources to empower its members (Felicien & Irechukwu, 2021).

In developing countries, SACCOS have been among the main pillars of economic growth and have continuously promised future, growth, which will see a decline in poverty index in countries with low economies. Previous studies show that in Kenya, SACCOS realized a growth of 12.7% in total assets between 2020 and 2021 from 556.7 billion to 627.7 billion respectively whereas gross loans grew from 419.6 billion in 2019 to 474.8 billion in 2020 indicating a 13.2% increase (Ahmed, Kilika & Gakenia, 2021). Factors associated with the growth of these SACCOS include the number of customers, savings and credit facilities offered by the SACCOS to their members, which are the main practices driving SACCOS' objectives and their

performance (Ntoiti & Jagongo, 2021). Despite the potential of SACCOs, an optimal level to give the expected return for a better Gross Domestic Product (GDP) of the country has not been realized. Based on Reports from SACCO Societies Regulatory Authority (2016), SACCOs were projected to contribute 30% of the GDP in Kenya by year 2020, due to growing membership and shift from Commercial Banks. According to Ndegwa (2020), factors largely attributing to failure to achieve an optimal level of financial performance include members' decisions, credit facilities, and financial decisions among others that are largely the product of behavioral biases.

Behavioral finance is important because it explains the new approach to market behavior that was previously dominated by traditional finance models that assume investors and customers are rational when making financial decisions. According to Pilch (2014) study, there are two aspects that justify irrational actions among people which includes psychological orientation and neurology and that logical actions are overcomed by people's emotional capabilities and hence people end up deciding actions as a result of personal character traits and perceptions of the outcomes. Balaz (2006) earlier works considered two classifications as the source of irrational behavior; emotional and cognitive aspects. In support of Plich (2014), Balaz (2006) observed that some decisions are based upon information processing, which entails incorrect collection, analysis and interpretation leading to deviation from rationality. Decision-making based on the second aspect, which is emotionally related, is driven by concern and desire and may support faster economic decisions in the processes referred to as heuristics (Gigerenzer, 2018). One advantage of emotions is that they do not always indicate irrational decisions, however, they can cause a mistaken outcome. This biases in the long run affect investors' decisions in terms of loan repayment, amount of investments as well as management decision making thus affecting the financial performance of SACCOs. This observation however, has not been documented to date, most studies on behavioral finance revolve around individual

financial performance or dealing with capital markets leaving behind SACCOs that form part of the large population that cannot invest in capital markets.

Customers often make short-term decisions of cutting their savings and transactions in an act to hood cash based on their prevailing short-term occurrences affecting their emotions a characteristic that Wera (2006) explains represents the cognitive and emotional aspects of customer risk aversion. Additionally, customers make decisions to hold cash and not to save in a bank or SACCO when in a negative mood or a negative perception that their cash could face more risks that they may eventually lose. Similarly, they may decide to save more cash on an investment that seems to blossom at that moment without considering future long-term impact through what Arifin and Soleha (2019) describe as overconfidence. Studies have indicated that in the process of overreacting to a loss in a profit-making business, managers can end up making less risky financial decisions or opt for a more risky venture due to overconfidence thus influencing the long-term or short-term financial performance either negatively or positively.

Pompain (2006) classified the psychological the biases by customers and investors as overconfidence, mental accounting, availability, representativeness and risk aversion. Tversky and Brack (1995) on the other hand, combined mental accounting, overconfidence and risk behaviour to cognitive illusions, which indicates irrationality, contrary to classical economic models. According to Arifin and Soleha (2019), overconfidence is assumed to be one of the reasons why there have been a number of anomalies in the capital markets. A better way to establish these behavioral biases is through SACCO performance or customer risk as measured by the SACCOs, management decisions or amount invested. However, financial performance is established through examining the traditional financial indices.

Ganyam and Ivungu (2019) state that there are many measures of financial performance including the accounting-based variables namely Return on Equity (ROE), Return on Assets (ROA) and Return on Investments (ROI). Beck, Frost and Jones (2018) note that the logic for financial measures is to appraise performance of managers which explains how well the management of a firm allocate assets to get returns from investments, their resources and trades. Nonetheless, as these procedures are used for examining the performance of the organization in form of productivity, this study relates all these measures for comparative purposes. Determinants of monetary performance of deposit-taking SACCOs mainly emanate from members' behavioral changes. Some of the key customers' behaviors include their transaction habits that largely generate the liquidity of the deposit-taking SACCOs, share capital deposits which generate the assets or liabilities of a deposit-taking SACCO and the institutional capital that remains as part of the deposit-taking SACCOs' assets (Ondieki, Okioga, Okwena & Onsase, 2017). Another aspect of behavioral factors is the customer preference to carry out all their financial transactions or activities using deposit-taking SACCOs (Ahmed & Rugami, 2019). Finally, one of the behavioral factors by the management is their behaviour with respect to investments, particularly overconfidence when making investment decisions which greatly determines the financial performance of deposit-taking SACCOs.

A few studies have documented determinants of financial performance of SACCOs across the globe. Samson (2021) investigated credit risk management and financial performance of commercial banks in Nigeria and found that non-performing loans and capital adequacy had a significant effect on financial performance of banks. Mulugeta (2018) found that the ratio of non-performing loans to total loans, loan provision to total loans and advance ratio to total loans provision had a negative and significant effect on financial performance of commercial banks in Ethiopia. Belete and Mboup (2018), Anwar and Murwaningsar (2017), Robert and Wamweya (2020) found that credit risk aspects such as non-performing loans and poor lending

habits had a negative effect on performance of commercial banks. On the contrary, Masinde (2017) found a positive relationship between credit risk and performance of commercial banks.

The above studies focused on a few variables such as non-performing loans, capital adequacy, and poor lending habits to describe credit risk and return on assets or equity for financial performance, moreover, all these studies used either one or two measures of financial performance that is, return on investment or return on equity. None of them used return on assets, also there is lack of consensus among the reviewed studies, some studies reveal significant results while others indicated non-significant findings. Others indicated positive relationships while others indicated negative relationships. Moreover, some of the studies adopted descriptive data analysis implying that they reviewed qualitative descriptions while omitting the quantitative descriptions of the behavioral factors. The current study therefore seeks to establish the effect of customers' credit risk behavior on financial performance of deposit-taking SACCOs.

Recent studies have established a relationship between customer transaction behavior and performance of financial institutions. Okun (2012) carried out a study on the effect of level of deposits on the financial performance of commercial banks and found a positive and significant effect. Tuyishime, Memba and Mbera (2015) and Ndegwa (2018) found a positive effect of deposit mobilization from customers on the financial performance of banks in Rwanda while Musembi (2018) found that customer deposits had a positive effect on return on assets. Contrarily, studies by Isanzu, (2017), Edem, (2017), Yusuf and Surjaatmadja (2018), Gadzo, Kportorgbi, and Gatsi (2019) found a negative relationship between customer transactions and financial performance.

Above reviewed studies focused on the banking sector alone while none was done on Deposit-taking SACCOs in Kenya. Moreover, findings from the above-cited studies provided mixed

results, some found a positive or significant relationship while others found negative results between customer transactions behavior and financial performance, therefore, leading to lack of a confirmatory conclusion. However, none of these studies got the attention of the customer transactions behavior and financial performance of deposit-taking SACCOs. This study, therefore, seeks to determine the influence of customer transactions behavior on financial performance of deposit-taking SACCOs Kenya.

Studies by Park, Byun and Choi (2019), showed the impact of overconfidence on financial performance based on the firm's financial performance as well as management, such findings cannot be generalized on deposit-taking SACCOs' investors since they could be influenced by other demographic characteristics such as lack of sufficient market financial information in their decisions. Arifin and Soleha (2019) study was not clear on how investors' overconfidence affected their financial performance, a finding that is yet to be shown in the current study. Sharma and Kumar (2019) elicited mixed findings while Aljuhani and Shaheen (2021) fell short of methodology and firmness of conclusion. Areiqat, Abu-Rumman, Al-Alani and Alhorani (2019) study niche focused on stock exchange, which may not be similar to investments in deposit-taking SACCOs Embun (2018) was not clear whether the decisions were negative or positive with respect to financial wellbeing of the Small and Medium Enterprises(SMEs).

Studies reviewed above indicated that there was a positive relationship between proper management decisions and financial performance of the institutions, however, a few studies found a negative correlation between the two variables. The majority of the studies tackled the banking sector whose main aim does not necessarily entail deposit taking as compared to the deposit-taking SACCOs. Financial performance measurements among the studies also focused on return on assets and equity but failed to accommodate all three accounting measures of

financial performance. Therefore, this study seeks to assess the effect of management overconfidence on the financial performance of deposit-taking SACCOs in Kenya.

In Kenya, many deposit-taking SACCOs are operating under the minimum requirement of the Sacco Societies Regulatory Authority (SASRA) (Rasugu, 2019). Statistics show that most of the deposits-taking SACCOs have low membership registration coupled with low deposits due to large dependence on banks. The existing deposit-taking SACCOs are at risk of failing due to changes in political orientation disparities among the population with varying behavioral characteristics that have little knowledge of the benefits of deposit-taking SACCOs. Despite this, it is not clear how customer behaviors and management behavior in investment decisions are positioned to influence the financial performance of deposit-taking SACCOs. Therefore, the current study sought to establish the influence of selected behavioral factors on financial performance of deposit-taking SACCOs in Kenya.

1.2 Problem Statement

Statistics indicate there was a growth of 12.7% in total assets from 556.7 billion in 2020 to 627.7 billion in 2021, which shows the potential of SACCO growth. The gross loans were 419.6 billion in 2019 that grew to 474.8 billion in 2020 indicating a 13.2% growth. There were large membership withdrawals, withholding of deposits and reduced share contributions. The changing business environment altered both members and management's behavioral characteristics leading to an unknown impact on financial performance which has not yet been documented. Previous studies on behavioral finance have examined individual performance, its effect on financial decision-making, or looked at the monetary outcome of financial biases and its effect on SACCO's financial performance. Majority of studies done on credit risk and financial performance revealed a positive relationship whereas others found a negative relationship leading to a conflicting conclusion. Moreover, most of these studies did not factor

in the behavioral biases. Studies done on customer transactions and savings behavior focused on either commercial banks or capital markets with little attention on deposit-taking SACCOs. Studies done on the effects of management overconfidence practices failed to incorporate the behavioral biases or examined individual financial decisions. It is not clear how behavioral factors have affected the financial performance of deposit-taking SACCOs in Kenya. This study, therefore, sought to analyze the influence of selected behavioral factors on financial the performance of deposit-taking SACCOs in Kenya.

1.3 Objectives of the Study

The main objective of the study was to analyze the influence of selected behavioral factors on financial performance of deposit-taking SACCOs in Kenya.

Specific objectives were to:

1. Establish the effect of customers' credit-risk behavior on financial performance of deposit-taking SACCOs in Kenya.
2. Determine the influence of customers' transactions behavior on financial performance of deposit-taking SACCOs in Kenya.
3. Assess the effect of management overconfidence on financial performance of deposit-taking SACCOs in Kenya.

1.3 Research Hypothesis

i. H_{01}: Customers' credit risk behavior has no significant effect on financial performance of deposit-taking SACCOs in Kenya.

ii. H_{02}: Customers' transactions behavior has no significant influence on financial performance of deposit-taking SACCOs in Kenya

iii. H_{03}: Management overconfidence has no significant effect on financial performance of deposit-taking SACCOs in Kenya.

1.4 Scope of the Study

The scope of the study entailed examining the study subject, area and time. In terms of the study subject, this study was confined to the area of finance by looking at three measures of behavioral changes which included customers' credit risk behavior, customers' transactions and management investment decisions quantified on scales. For financial performance, the study assessed the accounting performance measure of ROA. The area of the study was the registered and regulated deposit-taking SACCOs in Kenya. Secondary data on evaluation constructs were obtained from The Sacco Regulatory Authority database for a period of 7-year covering from 2015 to 2021.

1.5 Justification of the Study

In recent years, SACCOs have grown in number with deposit-taking SACCOs taking the position of banks due to the wide variety of services they offer. As a result, most of the population tend to go for SACCOs for their services instead of banks thus making deposit-taking SACCOs the most dynamic and recent area of interest. Studies done have not explored the behavioral factors affecting performance of deposit-taking SACCOs, this may aid

stakeholders in making sound financial decisions and also provide adequate scholarly information on the next move in the banking sector.

1.6 Conceptual Framework

The diagram below shows the conceptual framework that explains the relationship between the selected behavioral factors and financial performance.

Independent Variable   *Dependent Variable*

Selected Behavioral Factors

Customer's Credit Risk Behaviour

Customer's Transaction Behaviours

Management Overconfidence

Financial Performance of DT-SACCOs in Kenya
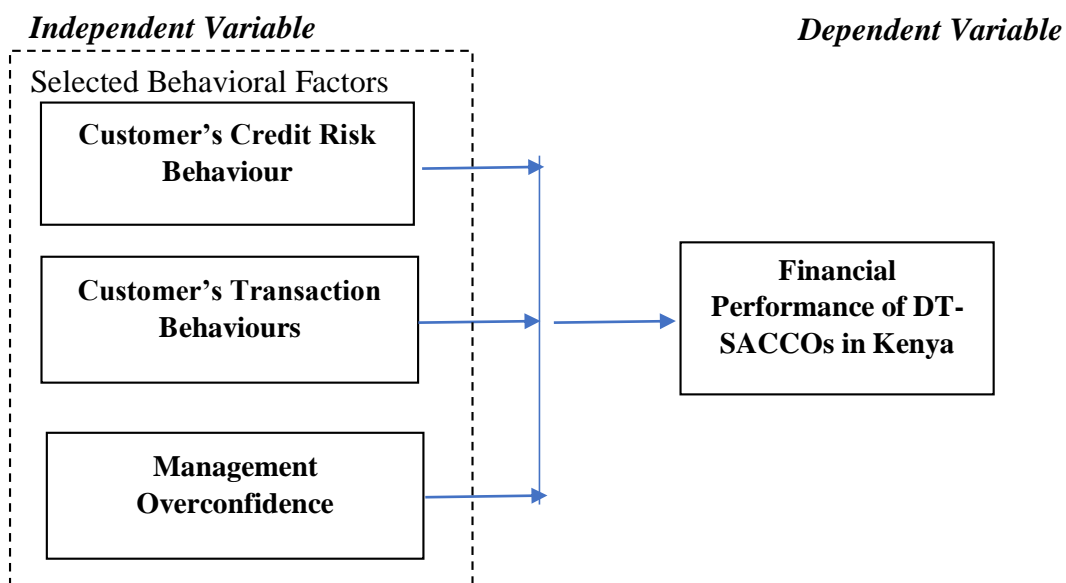
Figure 1. 1 Relationship between selected behavioral factors and financial performance

Source: Researcher (2022)

According to the conceptual framework, financial performance is the dependent variable or outcome and is measured by return on assets (ROA). On the left side are the measures of behavioral factors that could be well explained by the customers or managers' size of finance quantity. First, credit risk is largely dependent on the customers' default of a loan, which is subject to variability based on customers' perceptions and preferences. Customer credit risk behavior was measured by the ratio of non-performing loans to total gross loan advanced by

deposit-taking SACCOs in Kenya. Secondly, if customers decide to carry out large transactions with deposit-taking SACCO, there will be some financial transactions measured in terms of the SACCO revenue. Therefore, customer transaction behavior was measured as a ratio of interest income to gross deposit by deposit-taking SACCOs in Kenya. Management Overconfidence: This is the ratio of investment to total assets deposit-taking SACCOs in Kenya, and measure management investment decision behaviour towards business risk. Finally, the amount invested by management can be said to be reflecting management's overconfidence on the financial decision made thus reflecting their behavioral aspects. Management overconfidence thus was measured as a ratio of investment to total assets by deposit-taking SACCOs in Kenya.

This chapter explores the theoretical base of the study. It explains the key theories that informed the variables with the purpose of ascertaining the gap. The empirical studies are also covered.

2.1 Theoretical Literature Review

Friedman (1970) describes a theory as a set of interconnected concepts, models, delineations and proposals that present a logical interpretation of phenomena thus showing relations between variables with the main aim of predicting the phenomena. The concept of behavioral factors and financial performance will thus follow from the Cognitive Dissonance and behavioral finance theories.

2.1.1 Cognitive Dissonance

Festinger et al. (1956) introduced a new concept in social psychology: the theory of cognitive dissonance, which he defined as the state of having inconsistent thoughts, beliefs, or attitudes, especially as relating to behavioral decisions and attitude change. He reiterated that when two simultaneously held cognitions are inconsistent, they will produce a state of cognitive dissonance. Because the experience of dissonance is unpleasant, the person will strive to reduce it by changing their beliefs. Tversky and Kahneman (1973) introduced the availability heuristic: a judgmental heuristic in which a person evaluates the frequency of classes or the probability of events by availability that is by the ease with which relevant instances come to mind. The reliance on the availability heuristic leads to systematic biases.

Kahneman and Tversky (1979) developed a model, which they called the prospect theory. They found that human beings under weigh results that are simply feasible in evaluation to results acquired with inevitability. They noted that human beings discard modules pooled by all projections under deliberation. They realized that in prospect theory, price is dispensed to advantages and damages instead of final assets while likelihoods are substituted by weights of the verdict. Function of value is explained on nonconformities from a locus point, where gains are represented by concave while losses represented by convex which is usually steeper for losses as compared to gains.

. Thaler (1985) posits that there are circumstances when consumers act in a manner that is inconsistent with economic theory and he proposes that Kahneman and Tversky's prospect theory be used as the basis for an alternative descriptive theory. Topics discussed are underweighting of opportunity costs, failure to ignore sunk costs, search behavior, choosing not to choose and regret, and pre-commitment and self-control.

2.1.2 Theory of Behavioral Finance

Behavioral finance theory entails study of judgment models that lead to rational and deliberate choice. According to Amin and Pirzada (2014), the main authors were Amos Tversky, Daniel Kahneman, and Richard Thaler in 1974. The theory explains changes in the market and firm performance based on people's attitudes and behaviors emanating from some cause. The rational and irrational behaviors of investors or customers are a major issue in behavioral finance. Behavioral finance is very useful and applicable in all these concepts. In the context of deposit-taking SACCOs, behaviors of customers who are also shareholders can be changed because they depend on the prevailing conditions or financial circumstances (Millington, 1988). Other than this, the psychology of investors and their emotions can positively or negatively influence their decisions concerning investments.

An investor always thinks about his benefit but behavioral finance focuses on the benefit and welfare of the individuals (Daniel, 1998). The psychology of an investor deals with three strands of psychology, the cognitive behavioral psychology, emotional responses and the social psychology. The three strands affect shareholders, customers or management behaviors during their investment process. Cognitive behavioral psychology describes the mental state of thinking, learning of shareholders and how they calculate the value of an investment in their mind. Emotional responses refer to how wisely a shareholder applies his emotions while making financial decisions while social psychology explains how investors consider society's welfare and seeks encouragement from society or investment firm. If his investment is not violating his well-being, then he will be encouraged by the place of investment and he will be able to go ahead with the investment, otherwise, he will be discouraged by prevailing situations (DeBondt et. al, 2013).

Behavioral finance proves that human intuition is breakable and can be destroyed at any time. It needs to have a strong and undeniable concept that does not lead to crises but success. According to the author Glaser et al (2004), behavioral finance models are used to describe the behaviors of investors and market anomalies when there is not sufficient knowledge available by rational models. Modern theories considered that people select alternatives from the portfolio in a rational manner (Neuman and Morgenstern, 1944). However, the fact is that everyone who select alternatives not necessarily related to the finance cannot assume from the finance field.

This theory is relevant to the current study in that customers will make a particular decision based on some prevailing conditions. In this case, the dynamic business environment has altered the customers' way of thinking, that is, the SACCOs customers and shareholders to change their decisions about financial transactions, credit risk and management the type of decisions they settle. For instance, customers who previously had loans with the SACCOs

ended up defaulting due to fear of losing money with an unknown future. Likewise, those that were tailored to save or do some transactions held on to their money to wait for any unpredictable situations. Managers on the other hand are psychologically forced to make different investment decisions that could maximize the returns of the shareholders. The theory is thus expected to guide the study toward revealing the effect of these behavioral facets on financial performance of the deposit-taking SACCOs.

2.2 Empirical Literature Review

This section reviews empirical findings from previous studies on financial performance and the behavioral factors in SACCOs and other financial institutions.

2.2.1 Customer Credit-risk Behaviour and Financial Performance

Studies indicate that credit risk has an influence on bank performance, and particularly profitability, which differs based on the bank as found by Ruziqa (2013), who investigated the effect of credit risk on financial performance of banks in Indonesia between 2007 and 2011. The findings of the study revealed that credit risk had a significantly negative effect on return on assets and return on equity. This and other studies thus show a linkage between credit risk as customer behaviour and financial performance of financial institutions. There are therefore many studies on the same although on the commercial bank. There is yet more to be revealed in deposit-taking SACCOs, which have emerged as the alternative to most of banking services.

Isam and Malik (2020) carried out a study on the effect of credit risk, liquidity risk and bank capital on bank profitability using emerging market evidence. The study relied on econometric panel data which involved generalized mixed methods over a 9-year period between 2010 and 2018 using 13 commercial banks. The findings of the study revealed that credit risk had a negative effect on the profitability of commercial banks in Jordan. Even though the study

revealed a negative effect, Jordan lies in one of the developed countries whereas the present study seeks to establish the same in Kenya. Besides, the study was done on banks, which are highly developed in terms of assets, liquidity and systems. SACCOs are undergoing a metamorphosis from traditional methods to advanced methods in terms of service delivery, measure of performance and general practices.

Muriithi, Waweru and Muturi (2016) investigated impact of credit risk on financial performance of commercial banks in Kenya from 2005 and 2014. The study measured credit risk by capital to risk-weighted assets, period loss provision, loan and advance ratios and financial performance by return on equity. A balance sheet constituents and financial ratios for 43 commercial banks were used while panel data techniques of fixed effects estimation and generalized method of moments were employed to purge time-invariant unobserved firm-specific effects. The findings of the study revealed that credit risk has a negative and significant relationship with bank profitability. It was also established that poor asset quality or high non-performing loans to the total asset is correlated to deprived performance by banks in both the short term and longterm. It can however be noted that the study was not done on deposit-taking SACCOs whose assets and liabilities are slightly lesser than those of the banks.

Masinde (2017) carried out a study to establish the effect of credit risk on financial performance of commercial banks in Kenya with specific focus on impact of loan loss, effect of capital adequacy and impact of non-performing loans on financial performance. The study was guided by adverse selection and modern portfolio theories while employing descriptive research design on 42 commercial banks using a five-year period. The study findings discovered that whereas all the predictors accounted for 61.6% variance in performance of commercial banks using return on assets, loan loss and non-performing loans still had a positive effect on performance of commercial banks. These findings unlike other studies indicate that credit risk in terms of loan loss and non-performing loans indicates a positive effect on financial

performance. In addition, the studies are mainly on commercial banks and the findings cannot be generalized on deposit-taking SACCOs.

Studies by Siddique, Khan and Khan (2021) investigated the effect of credit risk management and bank-specific factors on the financial performance of South Asian commercial banks. The study focused on non-performing loans, capital adequacy and cost efficiency ratios as credit risk measures and return on equity and return on assets as financial performance measures. Other variables that were bank specific factors were average lending rate and liquidity ratio. Secondary data was used and was sourced from 10 commercial banks in Pakistan and 9 commercial banks in India for 10 years between 2009 and 2018 and the generalized method of moments used to analyze the data. The findings revealed that non-performing loans was negatively and significantly related to return on assets and return on equity while capital adequacy ratio was positively and significantly related to financial performance of commercial banks. It can be noted from these study that the countries that participated are developed; the besides, the unit of analysis was commercial banks. There is a need for such a study on deposit-taking SACCOs.

Isanzu (2017) carried out a study on the impact of credit risk on financial performance of commercial banks in India with specific focus on non-performing loans, capital adequacy, impaired loan reserves and impaired loan charges as independent variables whereas return on assets was measured as financial performance. Secondary data was collected for a period of 7 years between 2008 and 2014 using published statements of accounts from five largest commercial banks in China. The findings of the study revealed that whereas non-performing loans and impaired loan reserves had a negative significant effect on return on assets, loan impairment charges and capital adequacy had a positive and significant effect on return on assets. It can be noted that the study was carried on commercial banks and only used one

measure of financial performance which is return on assets. However, under practical occurrences, deposit-taking SACCOS will have other measures of financial performance such as return on equity and return on sales combined to approximate financial performance.

Murkomen, Njeje and Cherono (2017) also established that debt and equity had a weak positive influence on financial performance but only used qualitative data using non-accounting measures. It is imperative to note that although equity and debt are good predictors of financial performance, they do not fully reflect behavioral characteristics that would directly impact the financial performance to a greater extend. In addition, the measures used to establish such a relationship are non-financial or non-accounting, which may not have brought out a clear relationship among the variables.

From the reviewed studies, there are conflicting findings. Studies by Muriithi et al., (2016), Isam &Malik (2020), and Ruziqa (2013) established a significantly negative effect of credit risk on performance whereas Masinde (2017) found a positive and significant effect of credit on performance. Siddique (2021) and Isanzu (2017) also found conflicting results on the relationship between elements of credit risk and performance, with both positive and negative significant results using panel regression analysis. On the contrary, Murkomen et. al (2017) revealed a weak positive influence of debt equity on performance. Whereas these studies demonstrate a relationship between credit risk and performance, the findings are conflicting. This makes it difficult to have a substantive conclusion on the relationship between the two constructs.

Reviewed studies have revealed that there is a connection between credit risk and the financial performance of financial bodies. Majority of the studies indicate that credit risk has a negative significant effect on financial performance whereas few indicate a positive relationship between the two variables. The findings indicate that most of the constructs tackled focused on

credit risk as the key variable itself, risk weighted assets, loan loss provision, non-performing loans, capital adequacy and impaired loan reserves for the predictors and return on assets and equity for the dependent constructs. Although there is a relationship, the empirical findings proved conflicting results leading to a contradictory conclusion. Besides relationships, majority of the studies only tackled either one or two of the financial measures and in most cases omitted return on sales. The current study therefore seeks to establish the effect of customer credit-risk behaviour on financial performance of deposit-taking SACCOs using a composite measure of financial performance.

2.2.2 Customer Transactions behavior and Financial Performance

Thaler (1985) posits that there are circumstances when consumers act in a manner that is inconsistent with economic theory and he proposes that Kahneman and Tversky's prospect theory be used as the basis for an alternative descriptive theory. This also includes underweighting of opportunity costs, failure to ignore sunk costs, search behavior, choosing not to choose and regret, and pre-commitment and self-control which leads to the notion of `mental accounting'. Mental accounting is the set of cognitive operations used by individuals and households to organize evaluate and keep track of financial activities.

Using 179 SACCOs over a period of five years, from 2010 to 2014, Matendechere (2014) discovered a positive association amid net profit after tax as well as revenues and dividends. These findings are interesting because to most of profit-making institutions, payout in lump sums is dangerous to liquidity rations and must be preceded by a very serious financial measure. However, to some, as in the current study, it proves a way of improving customer orientation and alignment. Moreover, dividends are highly regulated and their impact is known on the non-

financial strategic measures. This means that their actual outcome on rapidly growing SACCOs is still not fully known thus making the current study important.

Daniel (2018) studies were carried out using liquidity, financial leverage and equity as capital structure to establish their influence on return on assets as performance using causal research design. Panel secondary data on quarterly indices consisting of 175 SACCOs across Kenya over a five-year period, 2012-2016 was utilized. Using fixed random effects regression model, liquidity positively influenced ROA although not significantly whereas leverage had a negative but significant effect on ROA. Furthermore, equity was found to have a positive significant effect on ROA. This means that customer savings through equity would improve SACCO's performance. Although equity indicates an important SACCO deliverable, it does not fully reflect customer neither savings nor does liquidity and leverage either. Besides, using ROA alone does not fully reflect other aspects of financial performance as it is limited to the institutional assets. It is therefore of paramount importance to establish the influence of customer savings on financial performance of SACCOs in Kisumu county, Kenya.

Shibutse, Kalunda and Achoki (2019) sought the effect of liquidity and dividend payout on return on assets as a measure of financial performance. Mixed research design was employed to source secondary and primary data from 174 SACCOs between 2013 and 2017, which is a five-year period, with the aid of stratified and purposive sampling. Using regression and correlation analysis, the study established that financial leverage accounted for 26.2% variance in return on assets while dividend payout accounted for 26.0% variance in return on assets. Although both measures of capital structure show liquidity of the SACCOs determined by customer deposits, payout or leverage, they both positively contribute to SACCOs' performance.

Aduda, Kiragu and Ndwiga (2013) study on commercial banks' financial perfoemance and agency banking in Kenya using secondary data from banks that adopted agency banking with a descriptive research design. The variables included the cash withdrawal deposit transactions through agents, active agents totals, return on assets to evaluate profitability, cost to income ratio in order to measure cost efficacy of agency banks; and workforce cost to income ratio to measure the decrease of cost of human resource as a result of agency banking. Although the volume of money flowing through the agents did not have a substantial effect on financial performance, number of agents and number of transactions per agent was significantly correlated with financial performance. From these findings, it emerged that the more the transactions, the better the financial performance. However, the aspect of volume cannot be verified since larger amounts are riskier and therefore should be able to generate better profit for a firm.

Kinyua (2013), Shibutse et.*al*., (2019), and Murkomen et.*al*., (2017) investigated customer transactions and performance using ROA, deposits, assets, financial leverage and liquidity without clearly measuring the number of transactions that would reflect customer behavior. These studies were also confined to SACCO performance using either of the measures and mostly return on assets. Although they provided some solid evidence on the determinants on Sacco's performance, much was left out. One measure is also not sufficient for conclusive results that could better decision-making among stakeholders. It will thus be important to establish the influence of customer transactions on performance using a combination of measures for performance. The reduced or increased transactions by customers due to changes in their psychology and cognitive aspects was also not brought out in either of these studies, which could be attributed to the period of the study or lack of such information as purported to be sought in the current study.

Mwania (2017) sought to ascertain the association between deposit-taking SACCOs growth in terms of membership, turnover, deposits/savings & share-capital and financial performance based on ROA, ROE and earnings per share. The study used adopted a descriptive research design on a sample of 42 SACCOs drawn from a population of 175 deposit-taking SACCOs and gathered primary data with the aid of semi-structured questionnaires. Using regression and correlation analysis, the study revealed mixed findings. For instance, there was a positive correlation between ROA and deposit-taking SACCOs' growth whereas there was a negative correlation between earnings per share and growth of deposit-taking SACCOs. In addition, the study found that increase in profit after tax would reduce deposit-taking SACCO growth. Intuitively, these are mixed findings that cannot guarantee the actual performance and determinants. This is because it is expected that a deposit-taking SACCO would grow with increased profit and vice versa, consequently, increased earnings per share indicates a positive deposit-taking SACCO growth and therefore as per this study, it means that losses lead to deposit-taking SACCO growth. As a result of these mixed findings, there is a need for a study to establish the influence of customer savings on performance of deposit-taking SACCOs.

A study by Amahalu and Beatrice (2017) sought to establish cash holding effect on financial performance of designated cited insurance companies in Nigeria. The study applied secondary data from published records by adopting ex- post facto research design and time series data in order to achieve the objectives of the study. The main independent variable was cash holdings while the dependent variables were financial performance measures that included assets returns, equity returns and Tobin's q. The findings revealed that cash holding has a positive and statistically significant effect on financial performance, Tobin's Q at 5 percent significant level. Although the study shows a significant relationship between the two variables, insurance firms have different settings as compared to deposit-taking SACCOs and so cannot conclude findings on the SACCOs.

Aduda and Kingoo (2012) established the connection between electronic banking and financial performance of commercial banks in Kenya. The study key independent constructs were number of debit cards, investment in e-banking and the number of ATM cards while the dependent variable was the return on assets. Data was obtained from annually published reports of central bank. Descriptive and inferential analysis was carried out to bring out the findings. It was established that out of the three variables, e-banking was the only variable have a positive and significant effect on return on assets. Although e-banking indicates customer behaviour due to their preference to use electronic methods to manual traditional transaction methods, little is known about the scope of the deposit-taking SACCOs.

Matianyi and Ndirangu (2019) assessed the influence of cash management practices on financial performance of SACCOs in Kakamega County using senior managers, shareholders and board of directors. Stratified random sampling was adopted to achieve a sample size of 99 respondents with the aid of a descriptive research design and structured questionnaires to collect data. The main cash management practices utilized was liquidity management policy, monthly member contribution and cash budgets. Using Pearson product-moment correlation, the findings revealed that there was a positive and significant correlation between cash management and financial performance of firms. This implies that customers' behavior to entrust their cash with the deposit-taking SACCOs through ordinary savings and fixed savings accounts may positively impact on the performance of the deposit-taking SACCOs. However, in this study, little is known about customer cash or liquidity with the deposit-taking SACCOs and only deposit-taking SACCO's cash management practices are known. There is need for follow-up objective on the relationship between the amount of customer liquidity with the deposit-taking SACCO and the financial performance of the deposit-taking SACCOs.

A study carried out in Ghana by MacCarthy (2016) on cash reserves impact on financial performance of commercial banks by sourcing data on the reserve ratios of 20 commercial

banks in Ghana from 2013 banks' annual reports. From the findings, it emerged that the banks' cash reserve ratios positively influenced the financial performance of commercial banks. These findings imply that the decision by customers to retain their cash at banks positively impacts the bank's financial performance. Although not much is known about deposit-taking SACCOs, a similar situation is expected, however, an empirical objectively could accurately provide a more informative report on the possibility of such findings.

Kiaritha (2021) investigated on how members' saving culture influenced financial performance of deposit-taking SACCOs in Kenya's banking sector. Using quantitative and descriptive research designs, the study stratified and randomly sampled cooperatives from the banking sector and collected information using questionnaires. The findings of the study revealed that there was a positive and significant relationship between savings culture and financial performance of the cooperatives. It was concluded that customer savings positively impact on the financial performance of cooperatives in Kenya. Although there is a significant relationship that was established, it was not clear how financial performance can be measured using views and whether such findings can guide authentic decisions to stakeholders and fill a gap among scholars. As results of the weaknesses of such findings, the current study proposes an objective inquiry on the effect of customer savings on financial performance of deposit-taking SACCOs using the traditional financial measures of performance and the quantitative accounts of customer savings over a five-year period in order to make a substantive conclusion.

In Spain, it has been found that politicization of governing bodies in form of cooperate governance has insignificant outcome on financial performance of savings banks. B Board of directors' size only affects the banks social responsibility although the board mostly focuses on social issues just as non-executive members focus on non-financial issues. However, allocation of higher amount on social issues resulted in higher financial profitability due to competitive advantage, satisfaction of customers and reputation (Bachiller & Garcia-Lacalle,

2018). This was arrived at through research to establish corporate governance in savings banks of Spain and the effect on financial and social performance of savings banks.

In Botswana, a five-year panel analysis of savings societies revealed that there was a substantial relationship between capital employed ratio and ratio of net profit. The findings also showed that there was a growth in the financial position of the societies as well as income largely attributed to the capital structure that is associated with the internal share of funds (Sathyamoorthi, Mbekomize, Radikoko & Wally-Dima, 2016).

Matendechere (2015) established a positive relationship between dividend payout, which is a product of customer savings, and performance, although this is too indirect to reach a conclusion. Mwania (2017), Matianyi and Ndirangu (2019) also established mixed findings such as a positive correlation between ROA and deposit-taking SACCOs growth or negative correlation between earning per share and deposit-taking SACCO growth. These mixed findings are not clear and cannot provide enough evidence for a better conclusion for scholar information. Besides, use of descriptions to establish the influence of cash management on deposit-taking SACCOs performance yields very little on the customer savings behavior. MacCarthy (2016), Kiaritha (2021), Garcia-Lacalle, 2018), Sathyamoorthi, Mbekomize, Radikoko and Wally-Dima, (2016) uses a single element of performance or fails to bring out the customer behaviours in terms of their savings culture. Although these studies support the relationship between customer savings and deposit-taking SACCO performance, they are still inadequate and much is still unknown as to show customer behavior on deposit-taking SACCO's performance.

The reviewed literature above on the effect of customer transactions on financial performance proved conflicting results. Matendechere (2014), Amahalu and Beatrice (2017) found a positive significant influence of customer transactions on performance while Daniel (2018)

found positive but non-significant influence of customer transaction (liquidity) on financial performance. Shibutse et.al (2019) and Aduda and Kingoo (2012) used mixed research design and descriptive analysis as well as regression analysis and established a positive influence of transactions on performance while Aduda et.al (2013) found a non-significant effect. Furthermore, Kinyua et.al (2013) did not indicate the methods used in analysis but established a positive influence, unlike Mwania (2017) who adopted a descriptive analysis and found a negative relationship between earning per share and growth of SACCOs.

The previous studies reviewed are important to the discovery of the patterns in the relationship between customer transactions and financial performance. They bring out the most determinant of financial performance and find a positive important effect of equity on ROA. Majority of the studies also established either relationship between liquidity, leverage or dividend payout and performance but failed to bring in the customer transaction behavioral aspects. In addition, other studies also looked at various determinants of financial performance mainly return on equity. It is imperative to note that these studies although good in information, lack adequate knowledge on customer transaction behaviour as well as a wealthy combination of accounting financial measures as composite measures thus enhancing the need for such a study. Therefore, the study seeks to determine the influence of customer transactions behaviour on financial performance of SACCOs in Kenya.

2.2.3 Management overconfidence and Financial Performance

Overconfidence refers to investors' cognitive bias, according to which they demonstrate unwarranted belief in their own judgments and capabilities. A few studies have been carried out on this topic, particularly in developing countries and more so, on management. Subsequent review is presented scarcely trouncing on its effect on financial performance or markets and

corporate institutes as opposed to the need to touch individual investors in local settings in Kenya.

To start with, Park, Byun and Choi (2019) provided a new measurement of overconfidence among chief executive officers through textual analysis of management discussion and analysis (MD&A) of documents by making use of the US Securities and Exchange Commission (SEC) database. Overconfidence was obtained from optimism using a setup program called the Diction program. From a sample of 19,367 US firms from 1994 to 2016, the study found that overconfidence of CEO had a negative correlation   corporate social responsibility undertakings. Overconfidence caused CEOs to view activities of CSR as not crucial compared to their capability, they seemed to moderate CSR undertakings. In addition, CSR activities initiated by overconfident CEOs were negatively related to firms' long-term performance. However, CSR activities led to a positive long-term performance in firms that were financially constrained. Therefore, the findings revealed that CSR activities undertaken were because of Chief Executive Officer (CEO) overconfidence by financially unconstrained firms and could be harmful to shareholder value in the long term. Whereas this study adequately showed the impact of overconfidence on financial performance, it was based on firm's financial performance as well as management, who make firms decisions. Therefore, such findings cannot be generalized to deposit Sacco investors since they could be influenced by other demographic characteristics such as lack of sufficient market financial information in their decision-making.

Arifin and Soleha (2019) study classified overconfidence as a condition where a person overestimates the completeness of his knowledge or the precision of the private information he has or the truth of the interpretation he does. This study aimed to investigate the factors that influence overconfidence. The three factors investigated were; investor attitude to risk, investor knowledge of company performance, and investor knowledge of macroeconomic conditions,

which reflects financial literacy of investors. By using 133 stock investors who were trading in the Capital Market Gallery of the Indonesian Islamic University of Yogyakarta as a respondent, the study found that investor attitudes towards risk had a positive effect on overconfidence. Investor information on macroeconomic situations and performance of a company has no influence on the attitude of overconfidence. However, it was not clear in the study how investors' overconfidence affected their financial performance, a revelation that is yet to be shown in the current study.

Sharma and Kumar (2015) reviewed papers on the emerging behavioral finance trends with the main aim of establishing appropriate pricing of assets against and also in favour of the long held theory and belief of efficiency of markets. The paper entailed three aspects, which were; discussion of behavioral biases of investors and their influence of prices of stocks while providing empirical evidence on how their sentiments affected stock prices, evidence from stock markets on the failure of efficient market hypothesis and finally theories that supported the efficient market hypothesis. The findings revealed that both behavioral finance and efficient market hypothesis plays a pivotal role in asset pricing. This was seen from the discovery that the incorporation of available psychological information in the efficient market hypothesis model could lead to early detection of sudden shifts in market movement. It is however imperative to note that behavioral finance is gaining popularity and therefore financial experts are coming up with new behavioral finance models to disapprove the traditional efficient market hypothesis, which does not hold in times of uncertainty. In addition, the study cannot generalize the conclusion on practical settings in developing countries which have not yet approved the traditional classical financial models, hence need for study on the influence of overconfidence on individual financial performance among deposit - taking SACCOs in Kenya.

Aljuhani and Shaheen (2021) sought the effect of behavioral finance on businesses and employees' growth. This study targeted 80 employees of consulting firms in Jeddah, Saudi Arabia using simple random and stratified methods. Questionnaires were used to collect data and analyzed descriptively. The findings revealed that behavioral finance is important as it determines the process of making decisions, the performance of employees and firms, and the extent of business growth. Whereas the study affirms the importance of behavioral finance in investors' decision-making, it fell short of methodology and firmness of conclusion. It would have been necessary to come up with cross-sectional coefficients resulting from appropriate application of correlational statistical tools rather than using descriptive. Besides, the study combined behavioral finance as a common constructs, falling short of specific breakdown that could adequately bring out the specific aspects such as overconfidence.

Areiqat, Abu-Rumman, Al-Alani and Alhorani (2019) explored whether overconfidence, loss aversion, risk perception and herding as behavioural finance biases had influence on the stock investment decision-making at Amman Stock Exchange (ASE). Data was collected using questionnaire and examined using multiple regression and Hierarchal regression analysis. The results indicated that those behavioural biases had impact on the investment decisions of investors and over confidence bias had the highest significance. Whereas it is commendable to come up with such strong findings, the niche of the study revolved around stock exchange, which may not be similar to investments in deposit-taking SACCOs. The current study, therefore, seeks to explore the influence of overconfidence by management on financial performance of deposit-taking SACCOs.

Aduda et.al. (2012) carried out a study on the individual investors' behaviour and financial performance in shares of companies listed Nairobi stock exchange to ring out the general principles of behavioral finance such as overconfidence, cognitive dissonance, regret theory, and prospect theory on financial decision making of individual investors. The study employed

both Secondary data and Questionnaire survey from the Nairobi Stock Exchange (NSE) and Capital Market Authority (CMA) were used to ascertain financial performance and behaviors of individual investors respectively. The results concluded that behaviours and individual financial performance of investors trading in shares of firms varied. Some investors were rational in their investment decisions while other investors were poised to realize negative results due to herding behavior and their irrational behaviour.

Hidayati, Wahyulina, and Suryani (2018) study explored the impact of behavioral finance on corporate performance through debt decision making among small and medium enterprises in Lombok Island. The study narrowed down on the influence of overconfidence, an illusion of control and availability on debt decision making and corporate finance. While adopting an exploratory research with a quantitative approach on 25 small and medium-sized enterprises, it was realized that availability and overconfidence had a significant impact on debt decision making while the illusion of control did not have a significant effect. Although debt decision-making could indirectly touch on issues of financial performance, it was not clear how the decisions were negative or positive with respect to financial well-being of the SMEs. The current study seeks to unearth these effects on the financial performance of individual deposit-taking Sacco's investors.

Whereas Park, Byun and Choi (2019) study adequately showed the impact of overconfidence on financial performance, it was based on firm's financial performance as well as management, who make the firm's decisions. Therefore, such findings cannot be generalized to deposit SACCO investors since they could be influenced by other demographic characteristics such as lack of sufficient market financial information in their decision-making.   Arifin and Soleha (2019) study was not clear on how investors' overconfidence affected their financial performance, a revelation that is yet to be shown in the current study. Sharma and Kumar

(2019) elicited mixed findings while Aljuhani and Shaheen (2021) fell short of methodology and firmness of conclusion. Furthermore, Areiqat, Abu-Rumman, Al-Alani and Alhorani (2019) study niche revolved around stock exchange, which may not be similar to investments in deposit-taking Saccos. Embun (2018) was not clear how the decisions were negative or positive with respect to financial wellbeing of the SMEs. These inadequacies in imperical studies, it was important to assess the influence of overconfidence on financial performance of deposit-taking SACCO customers in Kisumu County in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

This section presents the methodology adopted to explain the problem of the research, realize the study's objective including study area, study population, research design, , sampling structure, data type, procedures of data collection, tests for both reliability and validity, analysis of data and presentation tools of the data used.

3.1 Research Design

The study employed correlational design. Kothari (2003) explains a correlational research design as the most suitable design for measuring the causal relationship between variables. Due to the quantitative nature of the variables of the study, correlational research design was therefore the most appropriate since it established the causal correlation between the selected behavioral factors and financial performance of the deposit-taking SACCOs Kenya.

3.2 Area of Study

The area of Study was in deposit-taking SACCOs registered and licensed to operate in Kenya. According to SASRA supervisory report there are 175 deposit-taking licenses in Kenya as at end of 2021. The total number of membership in the DT-SACCO system distributed among the 175-DT-SACCOs stand at 5.47 Million persons in 2020. In terms of distribution, 49 DT-SACCOs are farmers based, 43 DT-SACCOs are Teachers based and 22 DT-SACCOs are community based. In addition, 37 are government based DT-SACCOs while 24 are private sector-based DT-SACCOs. The study area was chosen because of sparse distribution of SACCOs within the country and analysis of a particular region or county might not give fair representation of the phenomena under study. In addition, obtaining branch financial

performance data was impossible since the SACCOs use integrated financial system controlled from their headquarters thus the need for census.

3.3 Population of the Study

The population of the study was registered and regulated deposit-taking SACCOs in Kenya. According to the Sacco Regulatory Authority Supervision Report (2022), there were 175-DT-SACCOs which were licensed to carry out deposit-taking business for the period ended December 2021. The target population was all the 175 deposit taking SACCOS, however only 150 deposit taking SACCO were analyzed since the provided all the information of interests for the study. The SACCOs was chosen from the financial institutions because of the high number of its customers who have different characteristics with respect to financial management. Besides, deposit-taking SACCOs also support economic and financial need for majority of entrepreneurs and SMEs in rural habitants in Kenya.

3.5 Data Types

Kothari, (2004) states that data collection is connecting empirical evidence with intention of gaining new understandings about a state and respond interrogations that prompt the research's undertaking. The study used secondary data sourced from SACCO Financial records. Data collection was done using the designed datasheet to capture financial data from Saccos supervisory reports as published by The Sacco Societies Regulatory Authority (SASRA), a regulatory body that regulates SACCOs operation in Kenya. Secondary data was chosen because it already exists and entails records of financial performance across the years which provide wide range of financial measurements parameters relevant for the study. This cannot be achieved with primary data which is first hand and cannot reflect performance of SACCOs accurately.

3.5.1 Data Collection Procedures

Permission was sought from the university before embarking on collection of data. Data was then sought from the SASRA's database of financial reports. Financial reports and bank supervision reports from financial year 2015 to financial year 2021 were then downloaded from the SASRA website. The data collection was strictly done by the researcher with assistance from a research assistant.

3.5.2 Instruments of Data Collection

The instrument for data collection was a document guide (datasheet table in APENDIX 2). The data collected was classified based on credit risk, which entails the ratio of non-performing loan to total loan and advances; transactions by customers, which specifically dealt with interest income, other operating income and customers' deposits and measured as a ration of interest income to customer deposit. The sheet also had information on management investment behavior as measured by degree of leverage between financial investments relative to total assets. Finally, the data to assess financial performance was estimated from Return on Assets (ROA).

3.6 Reliability and Validity

3.6.1 Reliability

Reliability refers to the internal consistency of any measurement procedure (Chandran, 2004). Use of secondary data extracted from financial audited and published annual reports as required by law is considered to be reliable since such accounts are prepared based on International Accounting Standards (IAS) 1 and International Financial Reporting Standards (IFRS) 1 adopted globally.

Unit root test was used to create its stationarity conditions of data. Narayan and Liu, (2015) explains stationarity conditions are piloted to avoid estimates changing over time in the variables of the study which may report estimates that are not authentic. Levin-Lin-Chu unit root test was conducted to establish these conditions of the data series in the study. The findings revealed a unit test for Customer credit risk behaviour; Adjusted $t^* = -13.572$, p= 0.00, Customer transaction behaviour = -79.049, Management Overconfidence= -9.587, p = 0.00, and Average financial ratios Adjusted $t^* = -15.693$, p=0.00 indicating all panels had unit root, Therefore, as recommended by Narayan and Liu (2015), we reject the null hypothesis and conclude that the time series is stationery.

3.6.2 Validity

Instrument validity was assessed with the guidance of lecturers from School of Business and Economics, Maseno University through the face validity method. They assessed the instrument to ensure it is consistent and measures the subject of the study through a series of revisions of the study instrument, in a content validity process.

3.7 Data Analysis

Quantitative approaches was used to analyze data; descriptive statistics and panel multiple regression analysis by pooling 175 Deposit –taking SACCOs over 7 years period that is 2015 to 2021. Descriptive statistics enables researcher to describe a scores distribution meaningfully using only a few indices (Cooksey, 2020). Mean and standard deviation were used to analyze the descriptive statistics. Panel regression analysis was employed to determine the influence of behavioral outcomes on financial performance.

Panel data is a recurrent interpretations on the identical cross-section, usually of specific variables observed for numerous periods of time. The analysis of panel data method gives

chance for several regression analyses in dimension of units and time. Also, it gives mean for analysis of the data longitudinally mainly with data from different time and sources. Panel data analysis provides various techniques to help examine variation over a period of time with a distinct unit cross- sectional. Which is applicable in scenarios where observations involved are extensive for a particular analysis.

3.8 Model Specification

The model adopted was used by Abbasi and Malik (2015) however with adjustments. Panel data used contained estimates characterized time series and cross-sectional to study the influence of selected behavioral factors on financial performance of 175 deposit-taking SACCOS in Kenya. The models of the study are specified as follows;

First Model developed to study the relationship between customer credit-risk behavior and financial performance.

$$FP_{it} = \alpha + \beta_1 CCRB_{it} + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{(3.1)}$$

Second Model developed to study the relationship between customer transaction behaviour and financial performance.

$$FP_{it} = \alpha + \beta_1 CTB_{it} + \varepsilon_{it} \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{(3.2)}$$

Third Model developed to study the relationship between management overconfidence and financial performance.

$$FP_{it} = \alpha + \beta_1 MO_{it} + \varepsilon_{it}$$

$$\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots \text{(3.3}$$

)

Finally, the overall model developed to study the association between behavioral outcomes and financial performance is as follows.

$$Y = \alpha + \beta_1 CCRB_{it} + \beta_2 CTB_{it} + \beta_3 MO_{it} + \varepsilon_{it} \dots\dots\dots (3.4)$$

Where;

Y is the measure of financial performance and consisted of Return on assets (ROA),

CCRB is Customers' Credit Risk Behaviour

CTB-Customers' Transaction Behaviour

MO- Management Overconfidence

β_i ;refers to the model coefficients and i=1, 2,3

ε ;Refers to the error term

CHAPTER FOUR

FINDINGS AND DISCUSSIONS

This chapter presents the study findings on the basis of objectives of the study's summary overview. The study summary subjects involved the total observations pooled, standard deviations, mean and also minimum values and maximum values for the study variables. The variables under the study included customer credit risk, transaction amount, amount invested by deposit-taking SACCO management and financial performance of deposit-taking SACCOs which was Return on Assets (ROA).

4.1 Findings and response return

The study sought to collect secondary data from 175 deposit-taking SACCOs in Kenya. A data collection sheet was used to organize the data from Sacco supervisory report downloaded from SASRA database from which only 150 firms out of the 175 provided all the data on the study variables. The response return was therefore 85.71%, which is above 60% hence adequate for data analysis and conclusion. Table 4.1 below provides a summary of descriptive result of the study parameters as follows.

Table 4.1: Descriptive Statistics summary of Deposit-Taking SACCOs

| Parameters	Min Stat	Max Stat	Mean Stat	Std. Dev Stat
NPL	14.57	46.27	28.5100	12.05625
GLA	297.60	522.25	403.2767	85.71201
II	46.87	93.52	66.8267	18.53251
OOI	1.93	8.13	4.5117	2.63014
TI	55.26	108.59	78.1250	21.12788
CD	272.58	474.25	367.6567	76.40319
FI	15.08	56.86	32.7000	15.04600
TA	393.50	691.09	534.4183	112.80273
ROA	0.165	0.201	0.006	0.004

(Number of Saccos=150, period=7 years)

KEY: *Std.Dev.-standard deviation; Min-minimum; Max-maximum; NPL-non-performing loan, GLA gross loan advances, II - interest income, OOI - other operating income, TI - total income, FI - financial investment, TA - total assets, and ROA - return on assets*

Source: Documented deposit taking SACCOs Reports (2015 to 2021)

A summary statistics obtained from pooling of panel data of the findings are presented as shown in Table 4.1. The base study year was 2015 while the end year was 2021. The findings for customer credit behavior indicator NPL min and max average were 14.57 and 46.27, mean of 28.51; std.dev of 12.5; while average descriptive result for GLA min and max average were 297.6 and 522.25 respectively, mean of 403.27 and std.dev of 85.71. Descriptive result for customer transaction behavior showed that the minimum average amount for II was 46.87, max was 93.52, mean was 66.82 and std.dev was 18.53; for OOI min was 1.93, max 8.13, mean of 4.51 and std.dev of 2.63; while for customer deposit min was 272.58, max average was 474.25, mean of 367.65 and std.dev of 76.40. The findings further indicate that the SACCOs' management behavior indicator investment in financial assets min and max average were 15.08 and 56.86 respectively with a mean of 32.7 and std.dev of 15.04. Total asset min and max average were 393.5, and 691.09 respectively, with a mean of 534.41 and std.dev of 112.80. The minimum and maximum values of return on assets were .006 and 0.904. There is high degree of variability as indicated by varying standard deviations. These finding implies high differences in the behavioral aspects across the SACCOs.

A comparison of the deposit-taking SACCO's performance trend over the analysis period were also carried out. The findings are presented as shown in Figure 4.1
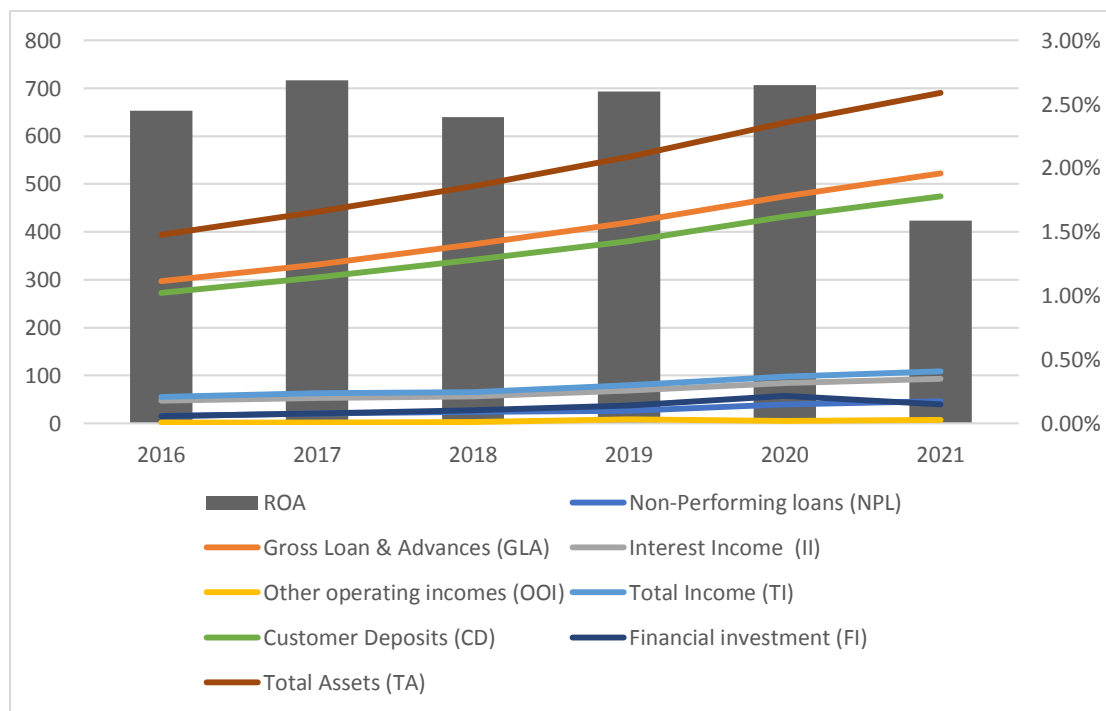
Figure 4. 1: Comparative analysis of performance across deposit-taking SACCOs

Figure 4.1 indicates that within the analysis period, total assets (TA) registered the highest growth trend followed by gross loan advances (GLA) and customer deposits (CD). Further results indicate that non-performing loans, interest income, and financial investment also registered a moderate growth rate within the analysis period. However, income from other operating income and financial investment shown a slight growth within the analysis period. On the other hand, return on assets showed a slight decline in growth within the operating period. Overall finding for growth trend revealed that deposit-taking SACCOs within the analysis period registered growth in assets and loan advances, similarly to growth in nonperforming loans. However, a decline in return on asset.

4.2 Effect of Customer Credit-Risk Behavior on Financial Performance of deposit-taking Saccos in Kenya

The first objective of the study was to establish the effect of customer credit-risk behavior on financial performance of deposit-taking SACCOs in Kenya. An average of the two financial measures was thus used in the analysis. Analysis was carried out with the ration of NPL to GLA as the predictor of customer credit-risk behavior on financial performance. The findings on the effects of customer credit-risk behavior on performance using regression model are presented in tables 4.2, 4.3 and 4.4 below.

Table: 4.2 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.303ᵃ	.092	.087	.08185714

a. Predictors: (Constant), credit-risk behavior

The result from Table 4.2 indicates that the R-Square value; coefficient of determination is 0.092, it implies that customer credit risk behavior explains 9.2 % variation in financial performance of deposit-taking Saccos in Kenya. The result implies that other factors not

analyzed accounts for 90.8%. The result is in agreement with studies by Isam and Masinde (2017) who reported variation of 38.4% and Murkomen et.al (2017) who also reported a positive but weak variation but used debt equity ratio. The results imply a reduction in variation explained by customer credit risk behavior on financial performance of deposit-taking Saccos in Kenya.

The analysis of variance (ANOVA) which explains the model fit for the study and the independent variable ability to predict the dependent variable was performed. The result of ANOVA is presented in Table 4.3.

Table 4.3: ANOVA results

<div align="center">

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.703	1	.703	105.877	.000[b]
	Residual	6.955	1048	.007		
	Total	7.658	1049			

</div>

Probability is below 0.05, the overall model was statistically significant, and the construct of independent variable (customer credit risk behavior) is a predictor of financial performance of deposit-taking SACCOs.

Model coefficients that provides for unstandardized and standardized coefficients are captured in Table 4.4. The coefficients explain the direction of the regression model and establish the significance level of the study variables as follows:

Table 4.4: Coefficients results

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.041	.006		6.456	.000
	credit-risk behavior	.727	.174	.303	4.181	.000

From table 4.4 that presents the regression coefficient, findings shows that the unstandardized beta coefficient value of customer credit risk behavior is 0.727 and the p-value is 0.000. The finding further explains that, taking all other factors constants or at zero, a unit increase in customer credit risk behavior would cause 0.727 increase in financial performance of deposit-taking SACCOs in Kenya. The finding is in agreement with studies by Masinde (2017) and Murkomen, Njeje and Cherono (2017) who all reported significant effect of credit risk on financial performance. However, these studies did not seek how credit risk featured as a customer financial behavior that could influence the financial institutions. On the contrary, these studies used multiple variables and were conducted on commercial banks using qualitative data hence findings cannot be generalized on deposit-taking SACCOs. It can therefore be established that customer credit-risk has a positive effect on financial performance of deposit-taking SACCOs in Kenya.

4.3 Influence of Customer Transaction behavior on Financial Performance of Deposit-Taking SACCOs in Kenya.

The second objective of the study sought to establish the effect of customer transaction behavior on financial performance of deposit-taking SACCOs in Kenya. A ratio of two financial measures namely interest income (II) and customer deposit (CD) was used in this analysis as the predictor of customer transaction behavior. The finding liner regression model are presented in tables 4.5, 4.6 and 4.7 as discussed below.

Table 4.6: Model Summary

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.318[a]	.101	.096	.08144075

a. Predictors: (Constant), customers' transactions behavior

The result from Table 4.6 indicates that the R-Square value (coefficient of determination) is 0.101, which suggests that customer transaction behavior (independent variable) accounts for 10.1% variation in financial performance (dependent variable) of deposit-taking SACCOs in Kenya. The result also implies that the other factors not analyzed would contribute 89.9% variation of financial performance of deposit-taking Saccos in Kenya. These findings are in line with previous studies such as those of Daniel (2018), Shibutse et.al. (2019) and Aduda et.al., (2013), who reported variation explained by customer transaction as 12.5% and 18.9% respectively.

The analysis of variance (ANOVA) which explains the model fit for the study and ability of the independent variable to predict the dependent variable was performed. The result of ANOVA is presented in Table 4.7

Table 4.7: ANOVA results

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.773	1	.773	117.706	.000[b]
	Residual	6.885	1048	.007		
	Total	7.658	1049			

a. Dependent Variable: Financial performance
b. Predictors: (Constant), customers' transactions behavior

Probability is less than 0.05, the overall model was statistically significant, and the construct of independent variable (customer transaction behavior) is a predictor of financial performance of deposit-taking SACCOs.

Model coefficients that provides for unstandardized and standardized coefficients are captured in Table 4.8. The coefficients explain the direction of the regression model and establish the level of significance of the study variables as follows:

Table 4.8: Coefficients results

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.015	.010		1.621	.107
	customers' transactions behavior	.019	.004	.318	4.408	.000

a. Dependent Variable: Financial performance

The finding of regression coefficient from Table 4.8 shows that shows that the unstandardized beta coefficient value of customer transaction behavior is 0.019 and the p-value is 0.000. This finding suggests that customer transaction behavior has a positive and significant contribution to financial performance of the deposit-taking SACCOs. The finding further explains that, taking all other factors constants or at zero, a unit increase in customer transaction behavior would cause 0.019 factor change in financial performance of deposit-taking Saccos in Kenya.

This implies that an increase in customer transactions behavior (income and deposit transactions) leads to significant increase in financial performance. Further implication could be that more transaction by customers increases the amount transacted and therefore leads to an increase in deposit-taking SACCO interest income and customers deposit, thus financial performance. When customers carry out more transactions, it is an indicative of either

increased expenditure or deposits and thus shows their aim to achieve a particular objective. Consequently, deposit-taking SACCOs end up benefiting through financial gains.

These findings are in line with previous studies such as those of Daniel (2018), Shibutse et.al. (2019), Aduda et.al., (2013), Kinyua (2013), Shibutse et.*al*., (2019) who found that customer's way of transacting had a positive influence on financial performance although in different institutions. This can easily be transformed to their behavioral orientation. Hence, it can be concluded that customer transaction has a positive and significant effect on financial performance of deposit-taking SACCOs in Kenya.

4.3 Influence of Management Overconfidence on Financial Performance of Deposit-Taking SACCOs in Kenya.

The third objective of the study sought to determine the influence management overconfidence on financial performance of deposit-taking SACCOs in Kenya. Management overconfidence was measured by the ratio of investment in financial assets to total value of assets invested by the SACCO's management across all deposit-taking SACCOs within the analysis period. The findings from regression analysys are presented as shown in tables 4.9, 4.10 and 4.11 below.

Table 4.9: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.292[a]	.085	.080	.08214970

a. Predictors: (Constant), management overconfidence

Table 4.9 findings indicates that management overconfidence recorded a coefficient of

determination R-square of 0.085 which suggests that management overconfidence causes 8.5% variation on financial performance of deposit taking Sacco in Kenya. The result also imply that the other factors not analyzed would accounts for 91.5%. The result is in tandem with Park et.al. (2019) who reported a slightly higher variation at 19.2% and Arifin and Soleha (2019) whose study reported a variation of 8.7%.

The analysis of variance (ANOVA) which explains the model fit for the study and ability of the independent variable to predict the dependent variable was performed. The result of ANOVA is presented in Table 4.10

Table 4.10: ANOVA results

	ANOVA[a]				
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.653	1	.653	97.673	.000[b]
	Residual	7.005	1048	.007		
	Total	7.658	1049			

a. Dependent Variable: Financial performance
b. Predictors: (Constant), management overconfidence

Probability is below 0.05, the overall model was statistically significant, and the construct of independent variable (management overconfidence behavior) is a predictor of financial performance of deposit-taking Saccos.

Findings of the model coefficients for both unstandardized and standardized coefficients are shown in table 4.11.

Table 4.11: Coefficients

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.089	.012		7.377	.000
	management overconfidence	-.067	.017	-.292	-4.015	.000

a. Dependent Variable: Financial performance

From table 4.11 the regression unstandardized beta coefficient value of management overconfidence behavior is -0.067 and p-value was less than 0.05. This finding implies that management overconfidence behavior causes a negative and significant effect on financial performance of deposit-taking SACCOs in Kenya during the analysis period. The finding further explains that, putting all other factors constant, a unit change in management overconfidence behavior would cause 0.067 decrease in financial performance of deposit-taking Saccos in Kenya. This finding is consistent with those of Park et.al. (2019) which also revealed a negative impact of overconfidence on however on CSR activities. Aljuhani and Shaheen (2021) and Hidayati et al. (2018) and Areiqat (2019) found overconfidence has significant effect amongst other behavioral biases however conducted on small and medium-sized enterprises as well as stock exchange. Those results can't be conclusive to deposit-taking SACCOs since it is a different demography. In term. This can therefore be concluded that management overconfidence has a negative and significant effect on financial performance of deposit taking SACCOs.

4.4.1 Overall model on Influence of Selected Behavioral Factors on Financial Performance of Deposit-taking SACCOs in Kenya.

The overall study objective was to analyze the influence of selected behavioral factors on financial performance of deposit-taking SACCOs in Kenya. The mean of all the financial performance ratios was regressed against all the predictor variables which were customer credit risk behavior, customer transaction behavior and finally management overconfidence. The findings are presented in tables 4.12, 4.13 and 4.14.

Table 4. 12: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.469[a]	.220	.207	.07628219

a. Predictors: (Constant), management overconfidence, credit-risk behavior , customers' transactions behavior

The result from Table 4.12 indicates that R-Square value (coefficient of determination) is 0.220, indicating that customer credit risk behavior, customer transaction behavior and management overconfidence (independent variables) all combined explains 22.0 % variation in the dependent variable (financial performance of deposit-taking SACCOs in Kenya). The results suggest that the other factors not analyzed accounts for only 78.0% variation.

This result also imply that if all selected factor are regressed together, the variation explain on the dependent variable (financial performance) increases and higher than individual factor contribution thus suggesting the multiplication contribution effect. This finding is in agreement with study by Isam and Malik (2020) who reported variation multiple increase in a combined model.

The result of model fitness test (ANOVA) is presented in table 4.13 below.

Table 4. 13: ANOVA results

<table>
<tr><td colspan="7" align="center">**ANOVAª**</td></tr>
<tr><td>Model</td><td>Sum of Squares</td><td>Df</td><td>Mean Square</td><td>F</td><td>Sig.</td></tr>
<tr><td>1   Regression</td><td>1.688</td><td>3</td><td>.563</td><td>98.558</td><td>.000ᵇ</td></tr>
<tr><td>Residual</td><td>5.970</td><td>1046</td><td>.006</td><td></td><td></td></tr>
<tr><td>Total</td><td>7.658</td><td>1049</td><td></td><td></td><td></td></tr>
</table>

a. Dependent Variable: Financial performance
b. Predictors: (Constant), management overconfidence, credit-risk behavior , customers' transactions behavior

Probability is less than 0.05, the overall model is statistically significant, and the construct of independent variable (customer credit risk behavior, customer transaction behavior and management overconfidence) are predictor of financial performance of deposit-taking SACCOs.

Model coefficients results for both unstandardized and standardized coefficients are captured in Table 4.14.

Table 4. 14: Coefficients results

<table>
<tr><td colspan="7" align="center">**Coefficientsª**</td></tr>
<tr><td rowspan="2">Model</td><td colspan="2">Unstandardized Coefficients</td><td>Standardized Coefficients</td><td rowspan="2">t</td><td rowspan="2">Sig.</td></tr>
<tr><td>B</td><td>Std. Error</td><td>Beta</td></tr>
<tr><td>1   (Constant)</td><td>.043</td><td>.011</td><td></td><td>3.893</td><td>.000</td></tr>
<tr><td>credit-risk behavior</td><td>.687</td><td>.114</td><td>.286</td><td>6.018</td><td>.000</td></tr>
<tr><td>customers' transactions behavior</td><td>.015</td><td>.003</td><td>.249</td><td>4.925</td><td>.000</td></tr>
<tr><td>management overconfidence</td><td>-.043</td><td>.012</td><td>-.187</td><td>-3.685</td><td>.000</td></tr>
</table>

The finding reveals that a unit change in customer risk behavior, holding other factors constant, would result to a 0.687 increase in financial performance of deposit-taking SACCOs in Kenya.

The finding reveals that a unit change in customer transaction behavior, holding other factors constant, would result to significant increase of 0.015 in financial performance of deposit-

taking SACCOs in Kenya. Finding reveals that a unit change in management overconfidence behavior, holding other factors constant, would result to significant decrease of 0.043 in financial performance of deposit-taking SACCOs in Kenya. These findings thus, suggest the ideal model for predicting financial performance of deposit-taking SACCOs in Kenya using behavioral factors as shown below:

$$Y = 0.043 + 0.687CCRB + 0.015CTB - 0.043MO \quad \text{.......................... (3.4)}$$

<div align="center">

Where; Y is the measure of financial performance

CCRB is Customers' Credit Risk Behaviour

CTB-Customers' Transaction Behaviour

MO- Management Overconfidence

</div>

These findings imply that when the selected variables are put together to predict deposit-taking SACCOs financial performance, both customer credit risk behavior and customer transaction behaviors contributes positively and significantly whereas management over confidence contributes negatively but significantly to financial performance of deposit-taking SACCOs. These findings also imply that behavioral aspects are important to the performance of deposit-taking SACCOs. When customers increase their transactions, deposit-taking SACCOs tends to perform well. Similarly customer credit-risk behavior through defaults affects financial performance of deposit-taking SACCOs However, management overconfidence behavior results to a decrease in the amount that they invest for the deposit-taking SACCOs negatively. Generally, credit risk behavior would positively affect the financial performance of deposit taking SACCOs due to precautionary measures such as provision for bad debts through high interest rates by deposit taking SACCOs for high risk customers, hence the positive effect.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

This chapter presents summary of the study, the conclusion and finally study's recommendations. Study's limitations and delimitations and further suggestion for future research are also presented.

5.1 Summary of the Study Findings

Objective one of the study sought to establish the effect of customer's credit-risk behavior as a behavioral finance aspect on financial performance of deposit-taking SACCOs in Kenya. Using the linear regression model, the percentage variance in the financial performance explained by customer's credit-risk behavior was significant. It was also noted that when customer's credit-risk behavior is used as a single predictor, it significantly increases financial performance. However, when compared with other variables, it was established that customer's credit-risk also significantly contributed to financial performance of deposit-taking SACCOs in Kenya.

The second objective of the study sought to determine the influence customer's transaction behavior of financial performance of deposit-taking SACCOs in Kenya. The variance in SACCOs' performance explained by customer transaction behavior was significant. Using linear regression model, the findings on the effect of customer transaction behaviors' on financial performance of the deposit-taking SACCOs was significant. A comparison for the effect of customer transaction on performance of SACCOs with other predictors still indicated a positive and significant effect.

The last objective of the study was to establish the influence of management overconfidence on performance of deposit-taking SACCOs in Kenya. Measured through the ratio of investment

in financial assets to total asset value held by deposit-taking SACCOs, the findings revealed that there was a negative and significant effect.

5.2 Conclusion

Three conclusions were drawn from summary of the study's findings. Firstly, is that customer's credit-risk behavior has a positive influence on financial performance of deposit- taking SACCOs. Therefore, customer expression of defaults remains a significant predictor to the performance of deposit-taking SACCOs of performance. However this will only apply in the short run due to measures such as high interest rates on provision of bad debts by deposit-taking SACCOs. Long run effect will be negative.

Based on second objective, financial performance increases as customers carry out more transactions and declines as customers change their transaction behavior to minimize. This implies that when customers fail to withdraw or deposit, minimal activities goes on at deposit-taking SACCOs and therefore they end up making little profit. Therefore it can be concluded that improved customer transactions positively improve performance of deposit-taking SACCOs.

Finally, the findings revealed that management overconfidence was important for deposit-taking SACCOs performance even though negatively. This was expressed through large amounts of investments by management to projects that might not yield profit which are subject to variability of both microeconomic and microeconomic factors. It can therefore be deduced that management should ensure proper analysis before venturing into investments, formulating measures to ensure they lend loans to rational customers hence improving the financial performance of deposit-taking SACCOS in Kenya.

5.3 Recommendations of the Study

A few recommendations were therefore made based on the study findings as follows;

The dynamic nature of customers to take up credits without proper records, deposit-taking SACCOs should employ improved predictive methods to forecast the customer credit payment before giving them loans. This will improve the performance of deposit-taking SACCOs.

It was also established that customers' transactions positively improved deposit-taking SACCO's performance. Deposit-taking SACCOs should carry out comprehensive marketing practices in order to influence customers to carry out more transactions. This will also improve their profits through large transactions.

Deposit-taking SACCOs' managers need ensure rational decisions are undertaken with respect to financial decisions as opposed to being overconfident in their operations as this behavioral aspect can impact the deposit-taking SACCOs' performance negatively.

5.4 Limitations of the Study

This study was limited to financial monetary measures, which may not indicate perceptions given the study were in an area related to behavioral factors. However, this limitation was overcome because people's perception may not really reflected their resultant behavior, such as through transactions or credit uptake. Therefore, it was more preferable to assess the result in terms of financial measurements. The study was also limited to deposit-taking SACCOs as opposed to all financial institutions in Kenya. This was justifiable from the fact that SACCOs are intermediary financial providers and also enable members to save and carry out transactions such as banking. Banks do not offer customers better platform to save while microfinance institutions do not give customers adequate platform for investments. The study was limited to a 7-year period financial data across the deposit- taking SACCOs. This was justifiable due to

the fact that it reflects true financial stand for the deposit taking SACCOS as opposed overdue data beyond 2015 before SACCOs underwent transformations.

5.5 Suggestion for Further Research

There are limited studies on behavioral finance especially among the local financial institutions. Most studies are done on stock markets and therefore the current study suggests a study on the effect of customer personal credit uptake and their financial wellbeing based on online credit uptake. A study on the individual credit transactions and its influence on customer investments is also timely. Finally, a study should be conducted on management operations, financial management and personal attributes regarding financial performance.

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APPENDICES

APPENDIX 1: INTRODUCTORY LETTER

Dear

Sir/Madam

My name is Monicah Asumani a postgraduate student at Maseno University. I am carrying out a study on "Influence of selected behavioral factors on financial performance of deposit taking SACCOs in Kenya**",** as partial fulfillment of my Master's degree. I kindly request you to spare a few minutes of your time to filling the attached questionnaire on behavioral aspects and perceived financial performance. The information given will be handled confidentially, and will only be used exclusively for research purpose.

Sincerely,

Monicah Asumani

ADM. NO: MSC/BE/00050/019

APPENDIX 2:DATA COLLECTION SHEET

Indicators/Categories	2015	2016	2017	2018	2019	2020	2021
Credit Risk							
Non-Performing loans (NPL)							
Gross Loan & Advances (GLA)							
NPF/GLA							
Customer Transaction							
Interest Income (II)							
Other operating incomes (OOI)							
Total Income (TI)							
Customer Deposits (CD)							
TI/CD							
Investment Behaviour							
Financial investment (FI)							
Total Assets (TA)							
FI/TA							
Financial Performance							
ROA							

APPENDIX 3 : RESEARCH BUDGET

Item Description	Cost in Kenyan Shillings(Ksh)
Stationery and computer Services	15,000
Printing and photocopying	25,000
Travelling costs	Traveling
Data collection costs(Research Assistant payments)	25,000
Data analysis	25,000
Total	**110,000**