

American Journal of Finance (AJF)



*Financial Management Practices and Financial Performance
of Deposit Taking Saccos In Nairobi City County, Kenya*

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Abstract

Purpose: The purpose of this study was to examine the effect of financial management practices on financial performance of SACCOs in Nairobi City County, Kenya.

Methodology: This study adopted an explanatory research design. The target population consisted of the 215 deposit taking SACCOs in Kenya. A sample of 41 deposit taking Saccos in Nairobi city County registered by SASRA for the period 2015 to 2019 was drawn from the target population. Thus, the 41 deposit taking SACCOs as registered by SASRA and their published financial statements constitute the unit of analysis and unit of observation respectively. The census sampling method was used in order to gather enough information since the number of SACCOs is limited and justifies the requirements of efficiency, reliability and representativeness. Further, secondary data was also collected through data collection schedule. Facts and figures were collected through published financial reports and statements of deposit taking SACCOs licensed by SASRA in Nairobi County for the period 2015 to 2019 and the key financial information on the variables of concern were discerned from these reports. The data for this study was panel and therefore the STATA software was used for analysis under panel regression model. Descriptive analysis were done to explain the basic features of the data. Inferential analysis was done afterwards based on panel regression which was then used to test the research hypothesis according to the research specific objectives. The testing was under the 5% significance level.

Findings: The results of the study revealed that fixed asset, loan portfolio, cash asset and financial investment management practices were positive and significantly correlated to financial performance of DT- Saccos in Nairobi City County. In addition, the results also indicated that financial investment management practices had a more positive and significant effect on financial performance, followed by loan portfolio management practices, then cash asset management practices and lastly fixed asset management practices. The moderating variable, sacco size was found to have a moderating effect on the relationship between financial management practices and financial performance of DT- Saccos in Nairobi City County.

Unique Contribution to Theory, Practice and Policy: The study recommended that the management of DT-Saccos should consistently ensure they prepare cash budgets and maintaining

a cash book so as to be able to manage their cashflows especially from the account receivables and account payables. They should also implement effective financial investment management practices that can help them reduce the risk of financial losses from investments such as projects or securities. The study findings may help policymakers in DT-Saccos such as the SASRA to enforce better loan portfolio management policies that encourage their customers to purchase loans and reduce cases of loan defaulting. Moreover, these policies may also be used to reduce the number of non-performing loans which have a significant effect on the ROA of the DT-Saccos. Researchers and Scholars could benefit from this study by use of the theories that were discussed in this study. They can also use the results to validate and corroborate findings of their own study.

Keywords: *Financial Management Practices, Financial Performance, DT-Saccos*

INTRODUCTION

Globally, the International Cooperative Alliance (ICA) is an apex body that unites, represents and serves all cooperatives worldwide. It is one of the oldest non-governmental organizations founded in 1895 to advocate for the interests and success of cooperatives (Brouder, 2010). The ICA also serves as a forum to boost cooperation between cooperatives and provide knowledge and expertise to improve the performance of its members. This is done through organising for a rich diversity of regional and international events where organisations meet regularly to share ideas and by facilitating training programmes, events, and publications developed in partnership with cooperative development agencies. This has led to development of business relationships and partnerships among its cooperative members and significantly improved their performance (ICA, 2018).

The Global Census on Cooperatives (2015) conducted a survey to analyze the economic and social impact of cooperatives in the world. This was measured by the membership penetration of cooperatives, employment by cooperatives and the annual gross revenue (Smith & Rothbaum, 2013). The survey revealed that there are approximately 3 million cooperatives in the world with 2.6 million cooperatives having over 1 billion members and clients. These cooperative societies have also played a significant role in reducing the world's unemployment rate by providing job opportunities to over 12.6 million people which represented 0.2% of the world's population. On the other hand, the total revenue generated by cooperatives in the financial year 2013/14 amounted to US\$ 2.98 trillion which was obtained through leveraging of their combined asset base of US\$19.6 trillion. This has significantly contributed to the GDP of countries with the large number of registered cooperatives. For instance, in New Zealand, cooperatives contributed 20% of the country's GDP, this was followed by Netherlands (18%), then France (18%) and Finland at (14%).

Furthermore, according to Allen and Maghimbi (2009), cooperatives in Africa have grown significantly since independence, when cooperative policies and legal frameworks provided African governments the capacity to direct and administer cooperative affairs. As a result, many cooperatives have been able to establish monopolistic positions in the economy. For instance, in agricultural marketing, cooperatives were declared the sole agents of State Marketing Boards in charge of processing and marketing export crops such as coffee, cotton, and pyrethrum (Birchall, 2004). These organizations have been given the powers by the Boards to purchase agricultural goods from the farmers and process it for export.

Moreover, state-sponsored agricultural credit schemes were also administered through these cooperatives, which provided another incentive for farmers to join cooperatives. However, the government's engagement in African cooperatives has entrapped cooperatives in state politics, causing them to lose their voluntary character, which is in line with the democratic member control principle (Wanyama, 2009). As a result, members' motivation to participate in cooperative administration reduced as their share capital or membership fee payments were limited or nonexistent. Furthermore, it resulted in undercapitalization of cooperatives and led to a high reliance on external investment (Wanyama, Develtere & Pollet, 2009).

According to the SACCO supervision annual report(2018), the crucial role played by Kenyan SACCOs is the provision of credit facilities to Kenyans, as well as the mobilization of savings

for national development, a safe, sound and secure environment continues to be the main focus of Sacco Societies Regulatory Authority (SASRA) in discharging its statutory mandate. Kenya Gazette Notice No. 671 dated 26th January 2018 reported that there were 176 SACCO Societies authorized to embrace deposit taking Sacco business in Kenya at the commencement of the year 2018, although two of the SACCOs had their respective deposit-taking licenses revoked over the span of the year leaving 174 SACCOs. An aggregate of fourteen DT-SACCOs operated on half-year restricted deposit-taking licenses to 30th June, 2018, twelve of which were from that point renewed for the half-year time frame ending December, 2018 while the remaining two restricted licenses belonged to the SACCOs whose deposit-taking licenses were withdrawn.

Financial performance refers to the final output recorded within a given timeframe. It is utilized to quantify the efficiency of the management team in utilizing the available resources to create wealth (Epstein, Buhovac & Yuthas, 2015). According to Van-Dooren and Van-de-Walle (2016) numerous individuals frequently assume that performance is all about profitability of a venture, however performance is analyzed and assessed explicitly to the kind of business association, methods of reasoning embraced, the board thinking, organizational mission and the predominant natural conditions. Financial performance is generally measured using financial statement analysis. This analysis measures the revenue, operating income and profit after tax, financial position, cash flow, the level of financial leverage and the ability to meet financial obligations.

Further, financial performance determines how well a Sacco is generating value for its member's deposits and share capital. It can be measured in terms of Return On Assets, Return On Equity, earnings per share and profit after tax (Ngui, 2010). According to the annual supervision reports (2020), DT-SACCOs have witnessed a marginal increase on the rate of returns (ROA) on the total assets which measures the rate of income that DT-SACCOs can realise from their total assets to 2.65% in 2020 from 2.60% which is very commendable. This increase was however, slightly dimmed by the increase in the non-performing loans (NPLs) ratio which increased to 8.39% in 2020 compared to a NPL ratio of 6.15% reported in 2019 (Kivuvo & Olweny, 2014).

For financial performance and improvement of SACCO's results, management of finances is very important (Kibachia, Iravo & Luvanda, 2014). Financial management in SACCOs affect how assets are utilized in tending to the money related necessities and needs. Moreover, where there exist strong financial stewardship, transparency and accountability in the area of maximizing the shareholders wealth and maximizing on profitability, there is a higher chance that the SACCOs in general will build the trust of its shareholders.

In most SACCOs, practices on financial management include maintenance of sound financial records which form the basis of informed planning and keeping good track of credit history and seeing to it that bills of running the business are paid on time, development of a good system of collecting funds owed to the business and annual filling of tax (Kipsang 2019). With these financial management practices conducted in the most effective way, they will ensure that the business stay in operation for a long time. According to Githinji (2016), the success of SACCOs and their survival has become a global concern with the failure of the same being associated with poor financial management practices.

Sound financial management practices help SACCOs in realizing both their short-term and long-term financial needs, demands and obligations of their clients in the most effective and efficient way. Among the clients of SACCOs include the investors and depositors especially for DT-SACCOs that are exclusively structured and controlled by the SASRA. The licensing of DT-SACCOs allow them to take deposits from customers for saving which at the end of the day becomes a liability. On the other hand, SACCOs issue out loans to their members and investors at a given interest which results into an asset. The creation of a balance between the liabilities and assets in the SACCOs calls for the employment of financial management practices which would assure their financial performance (Agbada & Osuji, 2013). This study focused on establishing the effect of fixed asset management, loan portfolio management, cash asset management and financial investment management to the financial performance of DT-SACCOs.

Statement of the Problem

DT-SACCOs have been very instrumental financial institutions in Kenya that have provided better financial solution to low-income individuals in both rural and urban areas. They provide access to sustainable financial services, reduce poverty, provide a safe place for its members to save their income and in return receive loans from the organization (Owino, 2017). Additionally, according to the Sacco Societies Act of 2008, all SACCOs must have a core capital of not less than 10% of total assets and not less than 8% of total deposit liabilities, and an institutional capital of not less than 8% of total assets. It also establishes a Ksh10 million (\$92,590) minimum core capital requirement for Saccos.

However, the SASRA annual supervision report (2019) noted that there has been complaints from Sacco members of which majority relate to delayed or failure to refund savings or deposits to Sacco members upon their withdrawal from the membership and delayed issuance of loans and other credit facilities which members may have applied for (Ngaira, 2011). According to these reports, DT-SACCOs were found guilty of violating the regulation policy which states that "a Sacco Society may refund the amount saved in a non-withdrawable deposit account within 60 days after receiving a written notification from the member," by failing to refund member deposits within the 60-day period (Oyugi, 2014). This has been attributed to poor governance, limited transparency in management of DT-SACCOs, lack of capacity in management and weak capital base (Buluma, Kung'u & Mungai, 2017)

Moreover, quite a number of SACCOs in Kenya have a long line of pending loan applications from individuals, other SACCOs pay little or no dividends/ interest on individuals' savings. In addition, other SACCOs have low multiplier factor or limited concurrent loans compared to some well performing counter parts. All the mentioned complains were associated with insufficiency of funds and liquidity cash flow problems which is a sign of poor financial performance. Financial management practices have been developed to help the SACCOs attain financial performance following the failure of many SACCOs where members are not able to get loans on time and dividends are delayed in the name of insufficiency of funds, Liquidity/cash flow problems and loan backlog.

Studies on financial management and financial performance are numerous however, most of them investigate generally on all SACCOs but very few studies specify on the type of SACCOs in Kenya. For instance, Chege (2016) conducted a study on financial management practices on the performance of SACCOs in hospitality industry. He found out that most SACCOs have

adopted cash management as one of the financial management practices but only a few have not. The study also found out that most SACCOs do not retain earning but distributes them as dividends. Kamau (2015) also did a study on the effect of credit management practices on performance of savings and credit cooperative societies in the hospitality industry in Nairobi City County. In his study, he found and concluded that if credit management practices are sound the financial performance of SACCOs will also be sound. Mwangi and Wambua (2016) carried out a study on establishing the factors influencing performance of SACCOs in Kenya. The study's findings showed that organizational leadership capacity, organizational structure, organizational sub-culture and organizational rewarding practices had a positive and substantial influence on performance. Kahuthu (2016) explored on the impact of prudential regulations on the financial performance of deposit taking SACCOs in Kenya. The findings indicated that credit management, core capital, membership growth had a positive relationship while liquidity had an inverse relationship.

The aforementioned studies did not focus on deposit taking SACCOs and also majored on credit management practices on performance. Moreover, these studies did not consider the effect of moderating characteristic on the relationship between financial management practices and financial performance and therefore a research gap which this study sought to address by answering the question: What is the effect of financial management practices on financial performance of deposit taking SACCOs with DT-SACCO size as the moderating characteristic? Specifically, this study was therefore conducted to find out the effect of fixed asset management, loan portfolio management, cash asset management and financial investment management on financial performance of deposit taking SACCOs in Nairobi City County, Kenya.

Objectives of the Study

The objective of this study was to examine the effect of financial management practices on financial performance of SACCOs in Nairobi City County, Kenya.

LITERATURE REVIEW

Theoretical Framework

Liquidity Preference Theory

This theory was developed by John Maynard Keynes in the year 1936. He advocated that people choose to keep their cash as cash itself because if they part with it, there is risk. Therefore, people desire to hold cash. Liquidity preference is the desire to hold cash. When people and organizations lend money, they part with their money for a certain time until the repayment begins then they can use the money. As a result, they suffer from several detriments and unless this problem is rewarded, they do not wish to part with their liquidity. For people and organizations to part with their cash there should be a reward and therefore, interest is the reward which makes them part with their cash. According to Keynes interest is dictated by the forces of demand and supply.

Keynes (1936) argues that liquidity preference theory of interest is a theory which should address the gap which was not addressed by what he considered as an unsound theory of classical interest. At first, it was assumed that liquidity preference is translated to the demand for money. Therefore, liquidity preference became the factor that would be used to decide on the interest in the money

market of Hicks' (1937) if none had a constant degree of money. The liquidity preference theory is criticized for treating the rate of interest as a solely financial issue, although other factors, such as capital productivity and thriftiness, also have a significant impact on how much money is borrowed (Lavoie & Reissl, 2019). Moreover, there are additional variables that affect the demand for and supply of investable money, which has an effect on the rate of interest, in addition to liquidity preference (Bertocco, 2013).

Thus, this theory was relevant to this study since the liquidity preference for SACCOs would be determined by transaction purposes, speculative purposes or precautionary concerns. Every liquidity management practice in a SACCOs must be driven by any of the three mentioned reasons as to why people prefer cash money. This theory was applicable to understand and establish how deposit taking SACCOs carry out cash asset management in order to evade the dangers by meeting all the short-term commitments and warrant financial performance. For everyday activities, together with over-the-counter withdrawals and payment of advances, cash money is needed by deposit taking SACCOs. To meet the unexpected events, cash management in SACCOs is crucial. The researcher in this study was to find out the extent to which the SACCOs are benefiting or losing out on the accruing advantages spelt by the liquidity preference theory.

Modern Portfolio Theory

In the year 1952, Harry Markowitz came up with the Modern portfolio theory. Markowitz recommended that an organization can minimize the instability of its collection of investments by spreading the risks between diverse types of securities and eventually increase its performance. The maximization of expected return in a given portfolio risk is one of the main arguments advocated by the modern portfolio theory of investment in finance. When an organization focuses on maximizing returns on their investments, then a trade-off between risk and expected gain has to be made. In investing, it is held that the higher the risk the higher the profits and vice-versa. In a given portfolio of investment with a given amount of risk, modern portfolio theory is used to define on how the highest expected return portfolio is going to be chosen. This theory is a type of diversification because it also describes how to choose a portfolio with the lowest risk. Modern portfolio theory describes how to come up with the most ideal diversification methodology under certain assumptions and for explicit quantitative meanings of risk and return. The best collection of investments will look at creating a sound balance between the most minimal risk for a given degree of return and the best yield for a suitable degree of risk.

Financial management encompasses decisions that are risky for instance long-term investments and credit advancement. The MPT is an essential tool for investors looking to diversify their portfolios. Indeed, the emergence of exchange-traded funds (ETFs) has increased the importance of the MPT by enabling investors to access a wider variety of asset classes (Kim & Francis, 2013). For instance, investors in stocks, can reduce risk by investing a part of their portfolios in government bond ETFs. This is because government bonds have a negative correlation with stocks hence the portfolio's variance will be substantially lower (Lydenberg, 2016). On the other hand, adding a small amount of treasuries to a stock portfolio will have no influence on predicted returns due to the loss-reducing effect (Chen, 2016). Therefore, the application of modern portfolio theory in this study was relevant in explaining financial investment management practices and its effects on financial performance.

Trade-off Theory

Zechner (1989), put across the Trade-off Theory. According to this theory, the realization of liquidity level is the eventual goal of any firm. The reason behind this is basically that a firm will indicate that a firm is able to create a balance between the cost of holding cash and the benefits accumulated afterwards. This theory therefore alludes that the financial policy of an organization becomes more complex in the presence of funding coming from external sources which comprises of asset managing and the liability clause. An organization can then make profit by comparing the cost of borrowing and the benefits thereafter. The cost of borrowing comprises of bankrupts cost and interest payment (Ghazouani, 2013).

It is hypothesized that debt financing has paybacks including discipline which is imparted in the firm and the taxes to be deducted. Out of the debts that a firm has, it can be able to grow its profits, cash flows and therefore be a source of working capital. However, the theory is criticized for according to (Shan & Khan, 2007) debts should not be used in the absence confines as this may rise the chances of bankruptcy. The significance of this theory is to this study is that it connects financial practices such as financial leverage management in firms to be directly linked to debt financing. Trade-off theory further forms the basis in the comprehension of the effect of financing practices like the effect debt financing on the performance of deposit taking Saccos. On the basis of this theory, the performance of DTs in Nairobi county was to a great extent governed by the efficiency, effectiveness and unwavering quality of their financing practices and sources of finances.

Empirical Review

Al-Ani (2013,) examined the effect of asset structure, both fixed and current assets, on the financial performance of manufacturing companies listed in Muscat Securities market. The study used secondary data where a sample of 28 out of 70 manufacturing companies' annual reports covering the years 2008 to 2012 were subjected to content analysis by the researcher. Fixed asset turnover and current asset turnover were used to gauge the assets structure, while return on assets (ROA) and return on equity (ROE) were used to gauge the financial performance. Overall, the research findings showed that asset structure doesn't significantly affect profitability in terms of ROA. As a result, even if asset structure changes, ROA will remain constant. Another finding of the study revealed that, in contrast to ROA, only fixed assets had an effect on ROE. This result suggests that the investment in fixed assets is more important for the Omani manufacturing companies to increase the wealth of shareholders. On the other hand, the results of the study also revealed that there was no impact of current assets on ROE and ROA. This study used the essential measures of asset structure and financial performance however the targeted study area were manufacturing companies which are not applicable in the current study. The identified research gap was filled in the current study by analysing financial performance of DT-Saccos in Nairobi City County.

A study by Lydia (2018) investigated on the effects of asset performance management on profitability of deposit taking Saccos in Nakuru County, Kenya. The study focused on loan performance management, fixed asset management, financial investment management and account receivable management as the asset performance management practices. The study was guided by the Modern Portfolio theory, Capital Asset Pricing model, Inventory Development

model and Operating cycle. The study adopted the explanatory research design and the sample size was obtained from the target population using stratified proportional sampling and simple random sampling. The study found that non-current asset portfolio management plays a significant part in determining profit ratios and assessing associated risk. The findings of the study also revealed that loan performance management, fixed asset management, financial investments management, and accounts receivables management have a positive and significant impact on the profitability of DT-Saccos in Nakuru County. There is also a relationship between fixed asset management and the financial success of DT-SACCOs in Nakuru county. However, this study focused on profitability of deposit taking Saccos in Nakuru County which limited the results to only measures of profitability of deposit taking Saccos in Nakuru county, hence creation of a research gap which this study sought to address by conducting the study in Nairobi City County.

Another study by Bwoma, Muturi and Mogwambo (2017) analysed the effects of loan management practices on the financial performance of deposit taking saccos in Kisii County. The study included all 120 employees from the six deposit-taking Saccos in Kisii County as its sample size. The study used a questionnaire was used to obtain data and adopted the census methodology. The findings of the study revealed that loan default, credit risk measures, and loan collection practices significantly affect the profitability of deposit-taking SACCOs. Therefore, the researcher recommended that SACCOs should learn to keep track of loans that are in default, penalize customers for making late payments, and restrict defaulters from access to future loans. Saccos should also control the transactions of business borrowers carried out through the SACCO's account, regularly check borrowers' reports, support borrowers in difficult situations, and maintain regular touch with borrowers. The results of this study were limited due to the small target population of DT-SACCOs in Kisii County, to fill this research gap the study focused on DT-SACCOs in Nairobi County which had a larger target population of DT- SACCOs.

Kakaire (2019) examined the effects of cash management techniques on the financial performance of Bugadde Sacco in Mayuge district, Uganda. The study focused on cash planning, cash budgets and cash controls on the financial performance of Bugadde Sacco in Mayuge district. The study used self-administered questionnaires and interview guide as its data collection methods. A cross-sectional study design was also adopted for quantitative and qualitative analysis of the 40 questionnaires obtained from the field work. Quantitative data was evaluated at the univariate level using mean and frequencies, percentages, and bivariate level using correlation coefficient, whereas content analysis was used to analyze the qualitative data by constructing explanations and validating them using respondents' open responses. The study discovered that Bugadde Sacco uses cash as a technique to prevent misappropriation, theft, and fraud of the Sacco's finances. The Sacco also uses additional methods such as cash banking and cash management. Both employee productivity and profitability are increasing. The findings of the study revealed that cash planning, preparing cash budgets, maintaining a cash book, a petty cash book had a positive impact on the growth and expansion of Bugadde Saccos in Mayuge district. The researcher concluded that cash planning is an effective cash management practice which ensures timely provision of cash resources to support Sacco activities. Therefore, the study recommended that Bugadde Sacco should put in place security measures to ensure that cash is safe by opening a bank account for the Sacco and prevent individual mishandling of its finances. The results of this study were quite limiting since they focused on one Sacco in Uganda, to fill

this research gap the current study aimed to target all deposit taking Saccos in Nairobi County, Kenya.

A study by Sitienei and Thuita (2021) examined the effects of cash management on financial performance of DT-SACCOs in Kenya. The study used cash ratios as a measure of cash management while ROA and ROE as a measure of financial performance. The study employed a descriptive research design and used purposive sampling to obtain a research sample of 56 deposit taking saccos from 135 DT-SACCOs licensed in Kenya by 2013. The study also used secondary data obtained from the audited financial statements of the respective DT-SACCOs. The findings of the study revealed that cash ratios had a positive and significant relationship with ROA and ROE. The researcher also used two linear regression models to determine the impact of cash management on financial performance. The regression results revealed that the cash management practices had a positive and significant effect on ROA and ROE.

According to the researcher, this may be attributed to the role that cash plays in enhancing the liquidity position of a firm. Cash increases the liquidity position of a firm hence reducing liquidity risks associated with cash outs. Therefore, the study recommended that deposit taking SACCOs should increase their cash levels since it impacted positively on financial performance. This study was limited to only one measure of cash assets but the current study considered other measures of cash assets so as to fill the identified research gap.

Further, Kiai, Kyalo and Maina (2020) study evaluated the moderating effect of Sacco size on cash management practices and financial sustainability of Saccos in Kenya. A positivist philosophical framework was applied to the study's descriptive cross-sectional survey design. Data was collected using an emailed questionnaire and data collection sheet, with a response rate of 95%. The regression results revealed that the addition of a moderator for the predictor sub-variables resulted in a negligible change in the strength of the relationship between variables, however the strength of the relationship between variables changed when an interaction term was introduced. In addition, the results also indicated that SACCO size had a statistically significant moderating effect on predictor sub-variables and the response variable. As a result, the study suggests that the management of Saccos should consider expanding their SACCOs through mergers, acquisitions of underperforming SACCOs, or even active marketing, because large SACCOs have a lower risk of becoming financially unsustainable. In this study, the researcher evaluated the moderating effect of Sacco size on cash management practices only, the current study aimed to fill the research gap by analysing the moderating effect of Sacco size on the other financial management practices and financial performance of DT-Saccos.

RESEARCH METHODOLOGY

This study adopted an explanatory research design. It is a type of research design that enabled the researcher to establish the cause and effect in the relationships between variables. Therefore, this kind of research design was fit for use in this study since it aims at determining the influence of financial management practices on the performance of deposit taking SACCOs in Nairobi county, Kenya. The target population consisted of the 215 deposit taking SACCOs in Kenya. A sample of 41 deposit taking Saccos in Nairobi city County registered by SASRA for the period 2015 to 2019 was drawn from the target population. Thus, the 41

deposit taking SACCOs as registered by SASRA and their published financial statements constitute the unit of analysis and unit of observation respectively. This sample was chosen because more than 70% of deposit taking SACCOs have their headquarters in Nairobi County and their branches are spread across the other 46 counties in Kenya. The census sampling method was used in order to gather enough information since the number of SACCOs is limited and justifies the requirements of efficiency, reliability and representativeness. Further, secondary data was also collected through data collection schedule. Facts and figures were collected through published financial reports and statements of deposit taking SACCOs licensed by SASRA in Nairobi County for the period 2015 to 2019 and the key financial information on the variables of concern were discerned from these reports. The data for this study was panel and therefore the STATA software was used for analysis under panel regression model. Descriptive analysis were done to explain the basic features of the data. Inferential analysis was done afterwards based on panel regression which was then used to test the research hypothesis according to the research specific objectives. The testing was under the 5% significance level.

RESULTS

The findings were presented in tables, charts and graphs since they provide a clear view of the findings of the study and are easy to interpret. The analyzed data was also arranged under themes that reflected the research objectives.

Response Rate

Response rate refers to the degree of availability of the data items required that meet the minimum threshold level from the units studied (Rowley, 2014). The importance of including the response rate is to indicate the study units that meet the minimum threshold which for this study was the availability of data in the selected 41 DT-Saccos in Nairobi City County, Kenya in the period between 2015 to 2019. Table 4.1 below indicates the response rate based on the total asset sizes of the 41 DT Saccos in Nairobi County, Kenya.

Table 4.1: Response rate in terms of sizes of the DT Saccos in Nairobi County

Size of the DT-SACCOs	Frequency	Percentage (%)
Large	16	39.02
Medium	20	48.78
Small	5	12.20
TOTALS	41	100

Descriptive Statistics

Descriptive statistics describe, illustrate and summarize the fundamental characteristics of a data set found in a specific study. The summary provides details on the data sample and its measurements which makes it easier for analysts to comprehend the data. The financial management practices were analysed based on fixed asset turnover ratio, loan portfolio ratio, current ratio, return on investment ratio, shareholder equity ratio while financial performance was

analysed based on ROA and ROE, so as to determine the mean, standard deviation and trends of the data over period between 2015 to 2019.

Table 4.2 Descriptive analysis

Variables	Minimum	Maximum	Mean	Std. Deviation
Fixed asset turnover Ratio	0.49	461.43	161.93	127.72
Loan Portfolio ratio	0.56	82.48	68.32	15.34
Current ratio	0.41	1277.34	474.32	362.03
Return on investment ratio	0.73	530.34	185.34	155.58
Shareholder equity ratio	0.58	25.3	16.60	4.84
ROA	0.79	36.29	8.05	7.03
ROE	0.79	108.66	46.16	30.73

The findings of this study found that the mean of the fixed asset turnover ratio which was measured by dividing the net revenue with net fixed assets was 161.93%. The standard deviation of 127.72% accounted for the variations between the maximum value of fixed asset turnover ratio of 461.43% and the minimum value of 0.49%. This implied that the targeted DT-Saccos on average have a fixed asset turnover ratio of 161.93% with some of the DT-Saccos, especially large DT-Saccos reporting a fixed asset turnover ratio of as high as 461.43% while others reporting fixed asset turnover ratio of as low as 0.49%.

The results also showed that the mean of loan portfolio ratio which was measured by dividing net loans with net total assets was 68.32% while the standard deviation of 15.34% attributed to the variations between the maximum value of loan portfolio ratio and the minimum value of 82.48% and 0.56% respectively. This means that on average the targeted DT-Saccos hold a loan portfolio ratio of 68.32% with some of the DT-Saccos hold a loan portfolio ratio as high as 82.48% while others hold a loan portfolio ratio of as low as 0.56%.

Further, the findings also revealed that the mean of current ratio which was measured by dividing the current assets with the current liabilities was 474.32%. The standard deviation of 362.03% accounted for the variations in the maximum value of current ratio of 1277.34% and the minimum value of 0.41%. These findings suggest that on average the selected DT-Saccos report a current ratio of 474.32% with some of the DT-Saccos reporting current ratios as high as 1277.34% which means that the value of the saccos' current assets was higher than that of the current liabilities, while other DT-Saccos report current ratios of as low as 0.41%.

The results also found that the mean of return on investment ratio which was measured by dividing net profits with total investments was 185.34% while the standard deviation was 155.58%. The standard deviation measured the variations in the maximum value of return on investment ratio which was 530.34% while the minimum value was 0.73%. This implied that on average the targeted DT-Saccos reported that the investment returns that contributed to their net profit was 185.34% with some of the DT-Saccos reporting return on investment ratio of as high as 530.34% while others reported return on investment ratio of as low as 0.73%.

In addition, the mean of shareholder equity ratio which was measured by dividing total shareholder equity with the total assets was 16.60% while a standard deviation of 4.84 revealed the variations between the maximum value of shareholder equity ratio of 25.3% and the minimum value of 0.58%. This means that on average the percentage of the total equity held by the shareholders to the total assets of the selected DT-Saccos was 16.60% with some recording a shareholder equity ratio of as high as 25.3% while others recorded a shareholder equity ratio of as low as 0.58%.

Moreover, the mean of the ROA which was measured by dividing the net profits with the total assets was 8.05%. The standard deviation of 7.03 was used to show the variations between the maximum value of ROA of 36.29% and the minimum value of 0.79%. This means that on average the total assets that contribute to the net profits of the DT-Saccos was 8.05% with some of the DT-Saccos reporting an ROA of as high as 36.29% while others reporting an ROA of as low as 0.79%.

On the other hand, the mean of the ROE was 46.16% while the standard deviation of 30.73% demonstrated the variations of the maximum value of ROE of 108.66% while the minimum value was 0.79%. This implied that on average the total shareholder equity that contributes to the net profits of the selected DT-Saccos was 46.16% with some of the DT-Saccos registering ROE as high as 108.66% while other DT-Saccos registered low ROEs of 0.79%.

Correlation Analysis

The study used Pearsons Correlation coefficient in the data analysis to show the relationship between financial management practices and financial performance of DT- Saccos in Nairobi City County, Kenya.

Table 4.3: Correlation Analysis

Variables		Fixed asset turnover Ratio	Loan Portfolio ratio	Current ratio	Return on investment ratio	Shareholder equity ratio	ROA	ROE
Fixed asset turnover Ratio	Pearson Correlation	1	.442**	.764**	.654**	.632**	.654**	.599**
	Sig. (2-tailed)		0.000	0.000	0.000	0.000	0.000	0.000
Loan Portfolio ratio	Pearson Correlation	.442**	1	.435**	.430**	.869**	.402**	.481**
	Sig. (2-tailed)	0.000		0.000	0.000	0.000	0.000	0.000
Current ratio	Pearson Correlation	.764**	.435**	1	.626**	.564**	.489**	.608**
	Sig. (2-tailed)	0.000	0.000		0.000	0.000	0.000	0.000
Return on investment ratio	Pearson Correlation	.654**	.430**	.626**	1	.612**	.759**	.809**
	Sig. (2-tailed)	0.000	0.000	0.000		0.000	0.000	0.000
ROA	Pearson Correlation	.654**	.402**	.489**	.759**	.638**	1	.810**
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000		0.000
ROE	Pearson Correlation	.599**	.481**	.608**	.809**	.652**	.810**	1
	Sig. (2-tailed)	0.000	0.000	0.000	0.000	0.000	0.000	

The findings in table 4.3 showed that there was a positive and significant relationship between fixed asset turnover ratio, ROA ($r = 0.654$, $p=000$) and ROE ($r = 0.599$, $p=000$). This finding concurred with that of the study by Lydia (2018) which indicated that there is a significant relationship between fixed asset management and the financial success of DT-SACCOs in Nakuru county. There was also a positive and significant relationship between loan portfolio ratio, ROA ($r= 0.402$, $p=000$) and ROE ($r = 0.481$, $p=000$). This results were similar to those of Clotey (2019) who found that loan size with diversification had a significant and positive relationship with ROE. Duncan, Njeru and Tirimba (2015) study also highlighted that loan repayment and financial performance of DT-SACCOs in the MT. Kenya Region had a strong positive correlation.

In addition, the results also revealed that there was a positive and significant relationship current ratio and ROA ($r=0.489$, $p=000$) and ROE ($r= 0.608$, $p=000$). The results of the study

were similar to that of Yahaya et al., (2015) study which concluded that there is a strong correlation between the cash and bank balances, financial assets held for trading, loans and advances to customers and ROA. Sitienei and Thuita (2021) study also indicated that cash ratios had a positive and significant relationship with ROA and ROE.

Moreover, the results also found that there was a positive and significant relationship return on investment ratio and ROA ($r=0.759$, $p=000$) and ROE ($r= 0.809$, $p=000$). These results differed with that of Njenga and Jagong'o (2019) which revealed that investment portfolio management practices have a significant relationship on the financial performance of non-depositing Saccos in Kiambu County instead of DT-Saccos in Kenya.

On the other hand, it can also be observed that ROA and ROE are highly correlated ($r=0.801$, $p=000$). Therefore, in the regression analysis the researcher opted to use ROA for the hypothesis testing of the relationship between fixed asset management practices, loan portfolio management practices, cash asset management practices, financial investment management practices and financial performance of the DT-Saccos in Nairobi County, Kenya.

Regression Analysis

The diagnostic tests conducted by the study affirmed that the OLS assumptions were not violated and hence the study can further carryout regression analysis to determine the effect of financial management practices on the financial performance of DT Saccos in Nairobi City County, Kenya. In this study, ROA was used as the measure of financial performance. Therefore, ROA was regressed on the measures of the independent variables, fixed asset turnover ratio, loan portfolio ratio, current ratio and shareholder equity ratio respectively using the Ordinary Least Square (OLS) regression model. The regression analysis was also used to test the research hypotheses of the study at 5% significance level.

Regression Analysis of Financial Management Practices and Financial Performance of DT-Saccos in Nairobi City County, Kenya.

Table 4.4: Model Fitness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.800a	0.64	0.605	4.41571

a Predictors: (Constant), Return on investment ratio, Loan Portfolio ratio, Current ratio, Fixed asset turnover Ratio

The results of the model summary indicated that fixed asset turnover ratio, loan portfolio ratio, current ratio and return on investment ratio was found to be a satisfactory variable in explaining ROA. This was supported by the coefficient of determination (R square) of 64%. This implied that fixed asset turnover ratio, loan portfolio ratio, current ratio and return on investment ratio explain 64% of the variations in ROA. In addition, this also meant that the model applied to link the relationship between fixed asset turnover ratio, loan portfolio ratio, current ratio and return on investment ratio and ROA was satisfactory.

Table 4.5: Analysis of Variance (ANOVA)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1422.207	4	355.552	18.235	.000b
	Residual	799.438	41	19.498		
	Total	2221.645	45			

a Dependent Variable: ROA
 b Predictors: (Constant), Return on investment ratio, Loan Portfolio ratio, Current ratio, Fixed asset turnover Ratio

The results from analysis of variance in table 4.5 showed that the overall model of regression was statistically significant and fixed asset turnover ratio, loan portfolio ratio, current ratio and return on investment ratio were good predictors of ROA. This is according to the calculated F statistic of 18.235 and the reported p-value of (0.000) which was less than the conventional probability of 0.05 significance level.

Table 4.6: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	0.241	2.895		0.083	0.000
	Fixed asset turnover Ratio	0.022	0.009	0.398	2.444	0.000
	Loan Portfolio ratio	0.027	0.049	0.06	0.551	0.000
	Current ratio	0.004	0.003	0.226	1.333	0.000
	Return on investment ratio	0.028	0.006	0.614	4.721	0.000

The findings of the regression coefficients in table 4.6 revealed that fixed asset ratio had a positive and significant effect on ROA ($\beta=0.022$, $p=0.000$). This implied that a unit increase in fixed asset turnover ratio leads to a corresponding increase in ROA by 0.022 units. This finding disagreed with that of Al-Ani (2013) study which indicated that asset structure doesn't significantly affect profitability in terms of ROA. As a result, even if asset structure changes, ROA will remain constant. This study suggested that the investment in fixed assets is more important for the Omani manufacturing companies to increase the wealth of shareholders. However, the study by Lydia (2018) concurred with the findings of the study since it noted that non-current asset portfolio management plays a significant part in determining profit ratios and assessing associated risk.

Loan portfolio ratio was also found to have a positive and significant effect on ROA ($\beta=0.027$, $p=0.000$). This means that a unit increase in loan portfolio ratio will result in an increase in ROA by 0.027 units. The results of this study were similar to those of Clotey (2019) who noted that average loan collection time, performance cycle, diversification, and liquidity significantly impacted the ROA of microfinance companies. Duncan, Njeru and Tirimba (2015)

study also noted that loan repayments had a positive and significant effect on financial performance of deposit taking Saccos in Mt. Kenya region.

In addition, current ratio also had a positive and significant effect on ROA ($\beta=0.004$, $p=0.000$). This revealed that a unit increase in current ratio will result in an increase in ROA by 0.004 units. These results concurred with that of Alslehat and Al-Nimer (2017) study which found that net cash flows from operating activities had a positive influence on return on assets while net cashflows from investing activities had a significant impact in the overall financial performance of Jordanian insurance companies. Further, the results from Kakaire (2019) study can also be related to the study findings since the researcher concluded that cash planning, preparing cash budgets, maintaining a cash book, a petty cash book had a positive impact on the growth and expansion of Bugadde Saccos in Mayuge district. The study also concluded that cash planning is an effective cash management practice which ensures timely provision of cash resources to support Sacco activities.

On the other hand, the return on investment ratio also had a positive and significant effect on ROA ($\beta=0.028$, $p=0.000$). This implied that a unit increase in return on investment ratio will result in an increase in ROA by 0.028 units. The findings of this study agreed with that of Karago and Okibo (2014) which concluded that investment decisions made by Saccos on prudent projects have a positive influence on the financial performance of Saccos in Kenya. However, a study by Tuan (2018) disagreed with these findings since it concluded that adoption of effective financial management practices have a positive influence on returns on investment of agricultural cooperatives.

Test of the Moderating Variable

Table 4.7: Model Fitness

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.830a	0.689	0.65	4.15799

a Predictors: (Constant), Shareholder equity ratio, Current ratio, Return on investment ratio, Fixed asset turnover Ratio, Loan Portfolio ratio

The fitness model of regression in table 4.7 revealed that shareholder equity ratio was a satisfactory moderating variable in explaining the relationship between the fixed asset turnover ratio, loan portfolio ratio, current ratio, return on investment ratio and ROA. This was supported by the coefficient of determination (R square) of 68.9%. This implied that shareholder equity ratio explain 68.9% of the relationship between the fixed asset turnover ratio, loan portfolio ratio, current ratio, return on investment ratio and ROA. Furthermore, it can also be noted that the model used to explain the moderating role of Sacco size in the relationship between financial management practices and financial performance was satisfactory.

Table 4.8: Analysis of Variance (ANOVA)

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	1530.09	5	306.018	17.7	.000b
	Residual	691.555	40	17.289		
	Total	2221.645	45			

a Dependent Variable: ROA
 b Predictors: (Constant), Shareholder equity ratio, Current ratio, Return on investment ratio, Fixed asset turnover Ratio, Loan Portfolio ratio

The results from the analysis of variance showed that the overall model of regression was statistically significant and shareholder equity ratio was a good moderator of the relationship between the fixed asset turnover ratio, loan portfolio ratio, current ratio, return on investment ratio and ROA. This is according to the calculated F statistic of 17.7 and the reported p-value of (0.000) which was less than the conventional probability of 0.05 significance level.

Table 4.9: Regression Coefficient of the Interaction Factor (Shareholder equity ratio*Independent Variables)

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.97	0.934		6.39	0.000
	Shareholder equity ratio	0.823	0.329	0.567	2.498	0.000
	Interaction_Factor	0.036	0.0072	0.602	4.998	0.000

a Dependent Variable: ROA

The findings of regression coefficients in table 4.9 revealed that shareholder equity ratio had a positive and significant effect on the relationship between financial management practices and financial performance ($\beta=0.823$, $p=0.000$), this is according to the formulated regression model 2 in chapter three under empirical model. This implied that a unit increase in the shareholder equity ratio will have a positive contribution on both the financial management practices and financial performance of DT-Saccos. The interaction factor also confirmed that Sacco size had a moderating effect ($\beta=0.036$, $p=0.000$) on the relationship between financial management practices and financial performance, this is according to the formulated regression model 3 in chapter three under empirical model.

These findings agreed with those of Mwangudza, Jagongo and Ndede (2020) study which showed that financial performance of Teachers DT Saccos was significantly influenced by their ability to acquire capital and manage their finances and that the size of the Sacco influences the relationship between liquidity management and financial performance. However, the cash position, total deposit, and core deposit had no effect on Teachers DT Saccos' financial

performance, and that the size of the Sacco influences the relationship between liquidity management and financial performance.

Therefore, the general presentation of the regression model will be;

$$\text{Financial Performance} = 0.241 + 0.022 \text{ Fixed Asset Management} + 0.027 \text{ Loan Portfolio Management} + 0.004 \text{ Cash Asset Management} + 0.028 \text{ Financial Investment Management} + e$$

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Summary

In summary, the results of the study revealed that fixed asset, loan portfolio, cash asset and financial investment management practices were positive and significantly correlated to financial performance of DT-Saccos in Nairobi City County. In addition, the results also indicated that financial investment management practices had a more positive and significant effect on financial performance, followed by loan portfolio management practices, then cash asset management practices and lastly fixed asset management practices. The moderating variable sacco size was found to have a moderating effect on the relationship between financial management practices and financial performance of DT-Saccos in Nairobi City County.

Conclusion

The results of the study led to the conclusion that a good number of the DT-Saccos employ fixed asset management practices, cash management practices, loan portfolio management practices and financial investment management practices. The study also concluded that fixed asset management practices, loan portfolio management practices, cash asset management practices, financial investment management practices had a positive and significant effect on the financial performance of DT-Saccos in Nairobi City County.

Recommendations

Based on the study findings and conclusion, the study recommended that;

1. The management of DT-Saccos should embrace leasing more of their properties and equipments rather than the actual purchase. They can also reduce the repair and maintenance costs by carrying out regular inspection of their equipments and replacing them when need be.
2. The management of DT-Saccos should consistently ensure they prepare cash budgets and maintaining a cash book so as to be able to manage their cashflows especially from the account receivables and account payables.
3. They should also implement effective financial investment management practices that can help them reduce the risk of financial losses from investments such as projects or securities.
4. The study findings may help policymakers in DT-Saccos such as the SASRA to enforce better loan portfolio management policies that encourage their customers to purchase loans and reduce cases of loan defaulting. Moreover, these policies may also be used to reduces the number of non-performing loans which have a significant effect on the ROA of the DT-Saccos.

5. Researchers and scholars could benefit from this study by use of the theories that were discussed in this study. They can also use the results to validate and corroborate findings of their own study.

REFERENCES

- Agbada, A. O., & Osuji, C. C. (2013). An empirical analysis of trends in financial intermediation and output in Nigeria. *Global Journal of Management and Business Research*.
- Al-ani, M. K. (2013). Effects of assets structure on the financial performance: Evidence from sultanate of Oman. In *11th EBES CONFERENCE* (p. 147).
- Allen, E., & Maghimbi, S. (2009). *African cooperatives and the financial crisis*. Geneva: ILO.
- Bertocco, G. (2013). On Keynes's Criticism of the Loanable Funds Theory. *Review of Political Economy*, 25(2), 309-326.
- Buluma, F. C. O., Kung'u, J., & Mungai, F. N. (2017). Effect of SASRA regulations on financial performance of Nyandarua County's deposit taking SACCOs in Kenya. *International Journal of Economics, Commerce and Management*, 5(7), 614-636.
- Bwoma, G. N., Muturi, W. M., & Mogwambo, V. A. (2017). Effects of loan management practices on the financial performance of deposit taking SACCOs in Kisii County. *International Journal of Recent Research in Commerce, Economics and Management*, 4(1), 126-139.
- Chege, E. M. (2016). *The Effect of Financial Management Practices on the Performance of Saccos in Hospitality Industry: A Case Study of Five Star Hotel Saccos in Nairobi* (Doctoral dissertation, United States International University-Africa).
- Chen, J. M. (2016). Postmodern portfolio theory. In *Postmodern Portfolio Theory* (pp. 27-38). Palgrave Macmillan, New York.
- Duncan, N. M., Njeru, A., & Tirimba, O. I. (2015). Effect of loan repayment on financial performance of deposit taking Saccos in Mount Kenya Region. *International Journal of Innovation and Applied Studies*, 10(4), 1238.
- Epstein, M.J., Buhovac, A. R., & Yuthas, K. (2015). Managing social, environmental and financial performance simultaneously. *Long Range Planning*, 48(1), 35-45.
- Ghazouani, T. (2013). The capital structure through the trade-off theory: Evidence from Tunisian firm. *International Journal of Economics and Financial Issues*, 3(3), 625-636.
- Githinji, E. (2016). *Determinants of financial stability among commercial banks in Kenya* (Doctoral dissertation, United States International University-Africa).
- Hicks, J. R. (1937). Mr. Keynes and the "classics"; a suggested interpretation. *Econometrical: Journal of the Econometric Society*, 147-159.
- Kahuthu, D. G. (2016). *Impact of prudential regulation on financial performance of deposit taking savings and credit cooperative societies in Kenya* (Doctoral dissertation, COHRED, JKUAT).
- Kakaire, A. (2019). Cash management practices and financial performance of SACCOS in Mayuge District-Uganda; a case study of Bugadde sacco.
- Kamau, W.A. (2019). Financial management and performance of commercial state-owned enterprises in Kenya. Kenyatta University.

- Karagu, J. M., & Okibo, B. (2014). Financial factors influencing performance of Savings and Credit Co-operative Organization in Kenya.
- Kiai, R. M., Kyalo, T. N., & Maina, J. N. (2020). Cash management practice, SACCO size and Kenya's deposit taking saving and credit co-operatives financial sustainability.
- Kibachia, J., Iravo, M., & Luvanda, A. (2014). A survey of risk factors in the strategic planning process of Parastatals in Kenya. *European Journal of Business and Innovation Research*, 2(3), 51-67.
- Kim, D., & Francis, J. C. (2013). *Modern portfolio theory: Foundations, analysis, and new developments*. John Wiley & Sons.
- Kipsang, P. K. (2019). *Effect of Interest Rate Capping on Loan Volumes of Commercial Banks in Kenya* (Doctoral dissertation, University of Nairobi).
- Kivuvo, R. M., & Olweny, T. (2014). Financial performance analysis of Kenya's SACCO sector using the Altman Z score model of corporate bankruptcy. *International Journal of Business and Social Science*, 5(9).
- Lavoie, M., & Reissl, S. (2019). Further insights on endogenous money and the liquidity preference theory of interest. *Journal of Post Keynesian Economics*, 42(4), 503-526.
- Lydenberg, S. (2016). Integrating systemic risk into modern portfolio theory and practice. *Journal of Applied Corporate Finance*, 28(2), 56-61.
- Lydia, C. (2018). *Effect of Asset Performance Management on Profitability of Deposit Taking Saccos in Nakuru County* (Doctoral dissertation, JKUAT).
- Mwangi, E., & Wambua, L. (2016). Factors influencing performance of SACCOS in Kenya: A case of UNAITAS SACCO. *European Journal of Business and Strategic Management*, 1(1), 20-38.
- Mwangudza, C. K., Jagongo, A., & Ndede, F. W. (2020). Liquidity Management and Financial Performance of Teachers Deposit Taking Savings and Credit Cooperative Societies in Kenya. *International Journal of Finance and Accounting*, 5(2), 1-26.
- Ngaira, L. U. C. Y. (2011). *The impact of SACCO regulatory authority guidelines on SACCO operations in Kenya-the case of Nairobi deposit taking SACCOS* (Doctoral dissertation).
- Ngui, A. M. (2010). *A survey of the financial performance indicators used by savings and credit Societies (SACCOS) in Kenya* (Doctoral dissertation, University of Nairobi).
- Njenga, R., & Jagongo, A. (2019). Effect of financial management decisions on financial performance of selected non-deposit taking SACCOS in Kiambu County, Kenya: Theoretical Review. *International Academic Journal of Economics and Finance*, 3(3), 204-217.
- Owino, C. A. (2017). *Service quality and customer loyalty in deposit taking Saccos in Kenya* (Doctoral dissertation, University of Nairobi).

- Oyugi, I. G. (2014). *The effect of automated service on financial performance of savings and credit cooperative societies licenced by sacco society regulatory authority in Kenya* (Doctoral dissertation, University of Nairobi).
- Shah, A., & Khan, S. (2007). Determinants of capital structure: Evidence from Pakistani panel data. *International review of business research papers*, 3(4), 265-282.
- Sitienei, C. K., & Thuita, J. M. (2021). Effect of Cash Management on Financial Performance of Deposit Taking Saccos in Kenya.
- Smith, S. C., & Rothbaum, J. (2013). *Cooperatives in a global economy: Key economic issues, recent trends, and potential for development* (No. 68). IZA Policy Paper.
- Tuan, P. T. (2018). Factors Influencing Member Value in Agricultural Co-operatives in Vietnam.
- Van Dooren, W., & Van de Walle, S. (Eds.). (2016). *Performance information in the public sector: How it is used*. Springer.
- Wanyama, F. O. (2009). Cooperatives for African development: Lessons from experience. *School of Development and Strategic Studies, Maseno University*.
- Wanyama, F. O., Develtere, P., & Pollet, I. (2009). Reinventing the wheel? African cooperatives in a liberalized economic environment. *Annals of Public and Cooperative Economics*, 80(3), 361-392.
- Yahaya, O. A., Kutigi, U. M., Solanke, A. A., Onyabe, J. M., & Usman, S. O. (2015). Current assets management and financial performance: Evidence from listed deposit money banks in Nigeria. *International Journal of African and Asia Studies*, 13, 45-57.