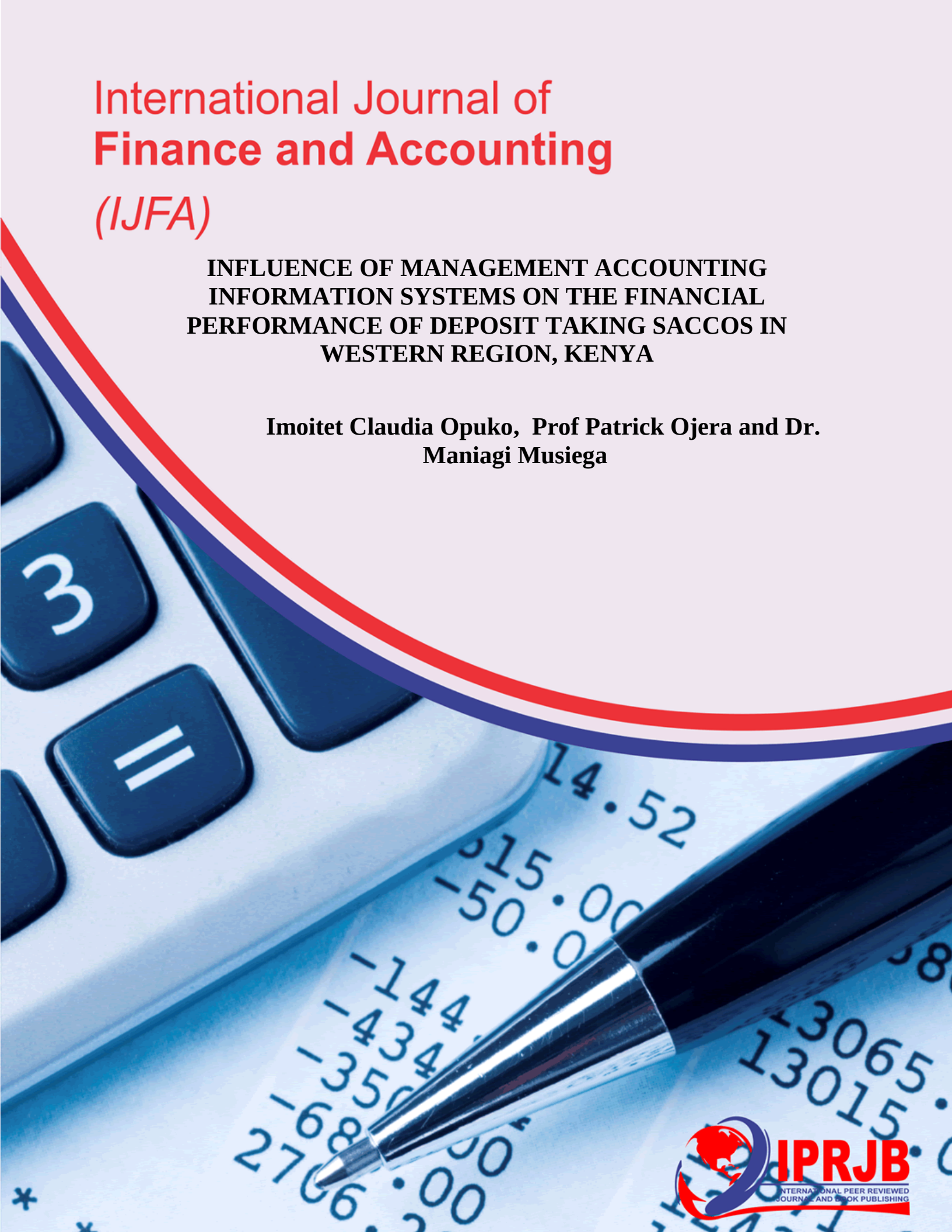
International Journal of
Finance and Accounting
(IJFA)

INFLUENCE OF MANAGEMENT ACCOUNTING INFORMATION SYSTEMS ON THE FINANCIAL PERFORMANCE OF DEPOSIT TAKING SACCOS IN WESTERN REGION, KENYA

Imoitet Claudia Opuko, Prof Patrick Ojera and Dr. Maniagi Musiega



International Journal of Finance and Accounting
ISSN 2513-4311X (online)
Vol.7 Issue 3, No.4. pp. 80 - 101, 2022

www.iprjb.org

INFLUENCE OF MANAGEMENT ACCOUNTING INFORMATION SYSTEMS ON THE FINANCIAL PERFORMANCE OF DEPOSIT TAKING SACCOS IN WESTERN REGION, KENYA

[1]Imoitet Claudia Opuko
Department of Accounting and Finance: Masinde Muliro University of Science and Techology
Email:claudiaopuko@yahoo.com

[2]Prof Patrick Ojera
Department of Accounting and Finance: Bomet University College
Email: pojera@buc.ac.ke

[3]Dr. Maniagi Musiega
Department of Accounting and Finance: Masinde Muliro University of Science and Techology
Email:gmaniagi@mmust.ac.ke

Article History

Received 30th August 2022
Received in Revised Form 10th September 2022
Accepted 27th September 2022

Abstract

Purpose: The study sought to investigate the influence of management accounting information systems on the financial performance of Deposit taking Sacco's in western region, Kenya

Methodology: The study adopted descriptive explanatory research design, 7 deposit taking SACCOs from western region with a total population of 61 employees in the management positions. Data was collected using questionnaires and analyzed through inferential statistics which involved testing of hypotheses using simple correlation regression model at 95% confidence level, multiple and hierarchical and descriptive statistics were also used, which included the use of frequencies and percentage. Data was presented by use of tables and figures.

Findings: Findings of the study showed scope of MAIS had positive beta coefficient (β_1=0.409, p=0.017) indicating that MAIS scope has significant influence on the financial performance of Deposit Taking Saccos Western Region, timeliness of MAIS had positive beta coefficient (β_2=0.415, p=0.008 suggesting that MAIS timeliness has significant influence on the financial performance of Deposit Taking Savings and Credit Co-Operative Societies Western Region, aggregation of MAIS had positive beta coefficient (β_3=0.329, p=0.021) revealing that MAIS aggregation has significant influence on the financial performance of Deposit Taking Saccos Western Region and integration of MAIS had positive beta coefficient (β_4=0.392, p=0.010) indicating that there is significant influence of MAIS integration on the financial performance of Deposit Taking Saccos Western Region.

Unique contribution to theory, practice and policy (recommendation): The study recommended that Deposit taking Sacco's implement Management Accounting Information System in their operational framework as it would lead to improved financial performance.

Keywords: *Financial performance, Management accounting information systems, integration, aggregation, timeliness, SACCOs*

INTRODUCTION

Formal cooperative societies enable their members to cooperate democratically and cooperatively toward common goals. According to Mvula (2013), Robert Owen founded the first cooperative movement in 1844. Globally, the SACCO business has recently confronted a number of obstacles, including mission drift, revenue creation, compliance, competitiveness, and inadequate capital (WOCCU, 2012). Typically, the success of the SACCO industry has an impact on economic growth and employment generation.

The International Co-operative Alliance (ICA) rated the Kenyan Co-operative Sector sixth in the world and first in Africa in 2007 in terms of membership, capital, number of firms, and contribution to the national economy. Kenya today has approximately 5,000 cooperatives registered, which can be loosely classed as non-financial and financial cooperatives (KUSCCO, 2020). Financial co-operatives are categorised as Savings and Credit Co-operatives (SACCO societies), Housing, Union of Savings and Credit Co-Operative Societies, and Investment Co-operatives. Non-financial co-operatives are further classed as trade, producing, and marketing co-operatives. The number of SACCO societies has increased considerably, accounting for fifty percent of all registered cooperatives in the country. In Kenya's national development strategy and Vision 2030, SACCOs are recognized as key actors in mobilizing savings for business and personal development investments (Mohammed, 2013).

The growing global economic picture, typified by the imminent collapse of financial institutions and unstable market conditions, has placed a significant burden of survival and sustainability on the internal processes and management accounting information systems of enterprises. This dynamic and competitive economic environment has compelled numerous firms to continually reevaluate their strategy and streamline their business models to ensure their survival. "Going concern" refers to the belief that a company's operations will continue in the near future. (Wood & Sangster, 2005). For their part, company managers no longer rely on the rule of thumb in corporate decision making and management (Adesina, Ikhu – Omoregbe & Aboaba, 2015). In order to stay up with the ever-increasing rate of change, company managers want a reliable source of information to ensure that the right decisions are always made. Numerous organizations have used the Management Accounting Information System (MAIS) as a decision-making assistance. MAIS is a system for recognizing, measuring, documenting, and storing accounting information about a company's operations so that it can be presented in an accounting report (Roka & Bubi, 2012).

Management accounting information system (MAIS) are a significant part of an organization's entire management process. Good tactics must be underpinned by internal organisational variables, especially an effective MAIS, to be competitive (Girard & Girard, 2015). Nikoomaram (2012) said MAIS provides accounting data for planning, implementing, managing, and organizing company activities. MAIS applies to for-profit, non-profit, and service-oriented businesses as well as government agencies (Azize, 2016). When managers understand and trust the accounting system's data, they can accomplish their jobs efficiently. Accounting expertise helps managers plan and supervise daily operations.

MAIS techniques and management accounting practices seem disconnected. Pike's (1976) contingency theory explains MAIS and firm performance. The contingency approach to management accounting assumes no single accounting system can be applied to all organizations in all circumstances. Accounting systems that fulfill a company's demands and goals depend on its needs, objectives, and competitive environment. A contingency theory must link certain management accounting system components to certain conditions and show that they apply to the organization. A management accounting system's efficiency depends on its ability to adapt to external and internal changes.

SACCOs are more efficient when managers employ management accounting information systems (Mustafa, 2015). Insufficient and incorrect use of management accounting information systems in SACCOs causes many structural and administrative problems. According to Mnjama (2003), poor records management in Kenyan SACCOS is attributed to a lack of storage facilities, mismanagement of management information systems, and a lack of information flow. According to Chêne (2009), a reliable MAIS increases corporate efficiency and modifies existing procedures.

In Kenya, the majority of Savings and Credit Cooperative Societies face numerous obstructions to their administrative systems as a result of ineffective application of contemporary technical applications to their existing structural operations. According to Munene, Namusonge, and Iravo (2014), Financial Management Systems (FMS) are employed in Kenya to deliver cost-effective management solutions to financial service institutions in both the public and private sectors. However, training, cost, infrastructure, and laws all played a role in the deployment of MIS in a subset of Nairobi County's financial cooperatives. Wangari (2015) discovered that internal control mechanisms provided by IFMIS have a significant impact on credit rating among SACCOs in Nyeri. While an IFMIS can help SACCOs with budgetary management in a variety of ways, it is most frequently used to increase the certainty and credibility of the financial support by increasing the extent and openness of data. According to Moturi and Mbiwa (2015), SACCOs in Kenya lack the resources essential to acquire the best information systems. SACCOs place a premium on vendor support, technical training, and implementation processes.

Despite this, they have limited funding, poor management, and low financial performance due to poor decision making by top management, who makes decisions arbitrarily without considering organizational resources that could help them make better decisions (Atsango, 2018) Wealth creation for Sacco members helps grow economies. Despite their importance, Saccos have faced several obstacles. The government created SASRA to control and regulate their activities by specifying operating requirements. Due to the nature of deposit-taking Saccos' activities, they must implement a management accounting information system to track their actions and member funds, provide reports, and assist decision-making to ensure correct management of member funds at all times. A well-used MAIS guarantees that Saccos follow regulations and protect members' funds.

SACCOs that accept deposits are key actors in the provision of loans to families. According to SASRA (2017), total deposit-taking SACCO assets climbed to Kshs 442.27 billion in 2017, representing a 12.4 percent gain over 2016. On the other hand, total loans increased to Kshs 331.2 billion, an increase of 11.29 percent over the previous year, while deposits increased to

Kshs 305.3 billion, an increase of 12 percent over the previous year. Additionally, according to the 2019 Financial Access Household Survey, credit uptake via SACCOs climbed from 4.2 percent in 2006 to 5.1 percent in 2019. Additionally, the survey revealed that overall access to formal financial services and products, including deposit-taking SACCOs, increased from 75.3 percent in 2016 to 82.9 percent in 2019.

At the start of 2018, there were 138 licenced deposit-taking SACCO Societies (DTSs), out of a total of 215 DTSs that had submitted applications for deposit-taking business. SASRA's report (2020) indicates that there are 162 licenced DTSs, 12 Sacco's are licenced for DT with limits, and three DTSs licences are not renewed for the fiscal year 2020. SACCOs are financial firms that offer similar products to banks. While the majority of them were established decades ago, their performance pales in comparison to commercial banks and other financial institutions (Gathurithu, 2011). SACCOs in Kenya have experienced a slew of issues as a result of certain banks crossing the border to offer services in neighbouring East African states. (Mvula, 2013) presented a report on common issues affecting SACCO performance, noting that the issues affecting SACCO performance include insufficient capital, poor asset quality, poor governance, low profitability, low liquidity, and non-compliance. This was due of the SACCOs' people-centered business approach.

Kenya's Sacco sub-sector inspired the government to develop the Sacco Act of 2008 and the Sacco Societies Regulations of 2010. The Act established the SASRA, whose duty includes licensing, regulating, and managing Sacco societies engaged in deposit taking operations to protect the interests of SACCO members and boost public confidence in SACCOs (KUSCCO, 2003). SASRA was founded by the Kenyan government under the Ministry of Cooperative Development and Marketing in an effort to reform SACCOs and to instil public confidence in the sector, hence stimulating economic growth in Kenya through the mobilization of domestic funds (Ministry of Cooperatives and Marketing, 2008). SASRA highlights that, according with Vision 2030, the policy purpose of prudential regulation of deposit-taking SACCOs is to increase the subsector's openness and accountability.

There is compelling empirical evidence that management accounting practices and performance are related. Christina (2013) asserts that information is critical to optimizing performance, as the quality of decision-making is contingent on the quality of information available to decision makers. According to Mia and Clarke's (2015), the primary objective of MAIS is to create accounting data that will be used to assist managers in making decisions. According to management accounting system information and decision maker requirements, decision quality will improve, which will ultimately boost strategic business unit performance. Additionally, they emphasized the value of management accounting system information in assisting the business in implementing its strategies in response to a competitive climate. Managers can use management accounting system data to make more precise decisions, which results in greater performance (Mia) (2005). Similarly, Patiar and Mia (2008) demonstrated that the interaction impact of market rivalry and the usage of management accounting system information helps hotels improve their non-financial performance.

Given the prevalence of management accounting information systems in Kenyan SACCOS, this research sought to find out how those systems affect their financial performance. A company's financial performance is the result of a wide range of activities. Financial success is

typically expressed as operating income, earnings before interest and taxes, or net asset value (Cole, G. (2004). Companies should evaluate their financial success for two key reasons (Johnson & Whittington, 2008). The first step is to keep track of the company's finances. To get a better picture of the scheme's performance, it's also a good idea to look at the financial statements themselves.

The co-operative movement contributes nearly 45% of Kenya's GDP with an estimate that 1 in every 3 Kenyan directly or indirectly draws his or her livelihood from the cooperative movement. Despite this, they have limited funding, poor management, and low financial performance due to poor decision making by top management, who makes decisions arbitrarily without considering organizational resources that could help them make better decisions (Atsango, 2018) Wealth creation for Sacco members helps grow economies. Despite their importance, Saccos have faced several obstacles. The government created SASRA to control and regulate their activities by specifying operating requirements. Due to the nature of deposit-taking Saccos' activities, they must implement a management accounting information system to track their actions and member funds, provide reports, and assist decision-making to ensure correct management of member funds at all times. A well-used MAIS guarantees that Saccos follow regulations and protect member cash.

Many SACCOs have MAIS, but management hasn't used the accounting information to increase profitability, expansion, and sustainability. This involves the liquidation and deregistration of SACCOs around the world due to abuse of funds, poor loan recovery, governance problems, dwindling member deposits, and non-adherence to operative cooperative principles. SASRA has deregistered 5 DT Saccos from FOSA activities in Kenya in the past five years. Scholars and professionals doubt the impact of MAIS on Sacco's financial success. In Kenya, few studies have been conducted on MAIS Scope, timeliness, aggregation, and integration, especially in the Sacco sector. It is difficult to replicate the findings of research done on AIS, MIS, and financial performance, as the former deals with financial data and the latter with non-financial data. Therefore, this study sought to fill this gap by producing evidence to fill the identified gaps. It is against this backdrop that this study sought to assess the effect a properly utilized MAIS will have on financial performance of Deposit Taking SACCOs operating in western region, Kenya.

LITERATURE REVIEW

Theoretical Review

Contingency Theory

According to Pike (1976), an accounting information system should be sufficiently adaptable to an organization's environment and organisational structure. According to (Donaldson, 2001), no single organisational structure is extremely beneficial for all organisations. According to the theory, the optimal structure varies according to various characteristics such as organisational strategy or size. Accounting information systems must be tailored to the particular considerations at hand. Accounting information systems must be constructed in an adaptive manner (Ferreira & Otley, 2009). A Contingency Framework for the Design of Accounting Information Systems' was one of the first research articles published in the accounting literature

to focus only on the contingency perspective on accounting information systems (Gordon & Miller, 1986). Their article laid the groundwork for thinking about accounting information systems from a contingency perspective.

Nicolaou (2010) stated that environmental uncertainty is a primary motivator of successful firms' management accounting systems design. One of the most significant outcomes of this research was that when decision makers perceive increasing environmental uncertainty, they choose to seek additional external information that is nonfinancial and ex ante in addition to internal financial and ex post information.

Since the effectiveness and utility of AIS is dependent on external factors like a market and environment and internal factors like technology, contingency theory says there is no universally appropriate AIS. As a result of the contingency model that has been developed, the amount of integration in an accounting information system is examined. Organizational formalization levels, functional interdependencies, and reliance on cross-organizational data sharing and electronic data interchange all factor into these requirements. The belief that a system is effective is influenced by the degree to which it meets those conditions (Abdirahman, 2018).

Using contingency theory, researchers were able to determine when certain forms of aggregation are the most beneficial (Hayes, 2017). Using this model, we may investigate the influence of integration variables in a specific MAIS context. Management accounting and Information Systems are currently taking on new implications from the perspective of contingency theory. It's time to look at how information technology may be both a help and a hindrance to an organization's ability to function at a high level. Because MAIS is designed to take this characteristic into account, theory was relevant in this regard because it brought together the many parts of MAIS such as aggregation and integration.

Though it wasn't explicitly stated in management accounting and AIS, contingency theory was nonetheless there. This idea has been strengthened by include context variables and research methods in the study. For these reasons and others, the impact of managing accounting as a management tool is likely to shift throughout time. It was possible to employ alternate theories to overcome these constraints in this study.

Empirical

Gaidiene and Skyrius (2010) conducted a survey to determine the utility of management accounting information in terms of user opinions. The study looked into how managers view management accounting's impact and evolution, as well as the value of the information it provides. The information gathered for this study came from the responses of 74 managers from 25 Lithuanian enterprises. Management accounting systems are defined by their ability to collect and analyse data. Scope, timeliness, aggregation level, and information that aids integration are all part of this package. Research shows that all managers surveyed found management accounting information (economic and non-economic) valuable. Consequently, the study could not establish a link between MAIS scope and the company's financial performance.

According to Chong (2009), there is a connection between the management accounting system's architecture and the task uncertainty of managing performance. Managerial performance was

found to be enhanced when broad-scope MAS information was utilised in situations with a high degree of task ambiguity. The use of broad-scope MAS information in low-uncertainty tasks resulted in information overload, which hindered managerial effectiveness. The study's reliance on managerial performance at the expense of financial performance is one of its flaws. Another feature of the MAIS scope that this study aimed to analyse was overlooked as well.

Researchers Ironkwe and Otti (2016) set out to look into the connection between the Nigerian banking industry's financial performance and the country's accounting information system. The study used a sample of 91 deposit banks, and primary data was acquired via a standardised questionnaire. Pearson Product Moment Correlation (PPMC) on SPSS was used to assess the results of the hypothesis test and other data breakdowns. Accounting data was found to be statistically important in influencing the profitability and quality of service provided by Nigerian banks, according to the research. Companies must factor information that falls within a certain MAIS's sphere of influence when assessing its usefulness to their business. Study did not reveal how AI's reach impacted the usefulness of the accounting information system, however

Muhindo, Mzuza, and Zhou (2014) studied the effect of accounting information systems on the profitability of small-scale firms in Kampala city, Uganda. East Africa's Uganda. When gathering qualitative information, the descriptive method was employed. The impact of accounting information systems on the profitability of small-scale firms was studied using secondary data. Numerous studies have demonstrated small enterprises' low profitability is largely due to the limited scope of their accounting information systems. In addition, the results demonstrate that the profitability of small enterprises is positively related to the use of accounting information systems. The use of secondary data to quantify the impact of AIS was inadequate, despite the study proving the link between information systems and profitability.

Kilonzo (2012) set out to investigate the following question: How do financial management information systems affect the financial performance of small and medium-sized businesses in Nairobi County, Kenya? The research included cross-sectional and descriptive survey techniques. This study looked on the activities of small and medium-sized enterprises (SMEs) along Moi Avenue in Nairobi's Central Business District. One hundred and thirty-five business owners and managers were interviewed in a randomized order for this survey. The study's findings suggest that the integration of financial management information system modules is related to the financial performance of small and medium-sized firms in Nairobi County. However, quantifying the connection between integration and economic success was still a challenge, even when qualitative data was incorporated into the analysis. The importance of the association between the variables was determined quantitatively in the current study.

Warsame (2013) sought to determine the effect of integrated management information systems on service quality in Mogadishu-based non-governmental organisations. To amass data on the impact of integrated management information systems on service levels in Mogadishu Somalia's non-governmental organizations, this study targeted 50 organisations that use integrated systems. The findings of this study imply that non-governmental organisations benefit greatly from implementing integrated management information systems. Because the study did not specify which modules were integrated, the study's conclusion was confusing and

inconclusive. Due to the fact that the research was done in non-profit organisations, it is impossible to determine the financial performance of MAIS integration.

Okpala and Afolabi (2018) studied the effects of short and long-term management accounting information systems (STmais and LTmais) on the effective business decisions of listed fast moving consumer products manufacturing enterprises in Nigeria. It was a descriptive survey design that was used in this study. Only 8 of the 28 quoted organisations were included in this study's source list, which included 903 randomly selected employees. Data was gathered and analysed using the regression method for the primary dataset. Findings from this study show that STmais and LTmais have a substantial impact on effective business decisions in FMCG firms in Nigeria. However, these impacts were not convincingly demonstrated by the research.

Research on Organizational Structure and Integration: A Conceptual Model and Propositions was conducted by a team of researchers from Purdue University in Indiana. Teixeira, Koufteros, and Peng (2012) presented their findings. They discovered that a computer-based information system aided in the integration of the organization's internal and external operations. Using CBIS, personnel were able to better coordinate their efforts because of the enhanced integration and flow of information. According to them, better communication within the organisation would lead to more confident decision-making. An increase in productivity was a result of this. Because they only looked at manufacturing performance, generalising their conclusions will be tough. This third component, organisational structure, also undermines the nature of the link between MAIS and performance.

Gnawali (2017) set out to investigate the impact of Nepalese commercial banks' management accounting systems on their overall performance. Researchers opted for a more descriptive and informal approach to the study's research design. The data was gathered through the use of questionnaires and published accounts. Following the findings, it can be stated that the model used is suitable for use in Nepal as a whole. Management accounting system integration was found to have a positive impact on the overall performance of the business. Using MAIS as a predictor of an organization's success is highly recommended. There was no explanation of how the two descriptive research designs worked together or how they complemented one other. There were methodological flaws in the study, which didn't reveal the number of commercial banks sampled or the sampling methodology used.

Conceptual Framework

The conceptual framework for this study, as represented in Figure 1, illustrates the relationship between MAIS and SACCO financial performance.

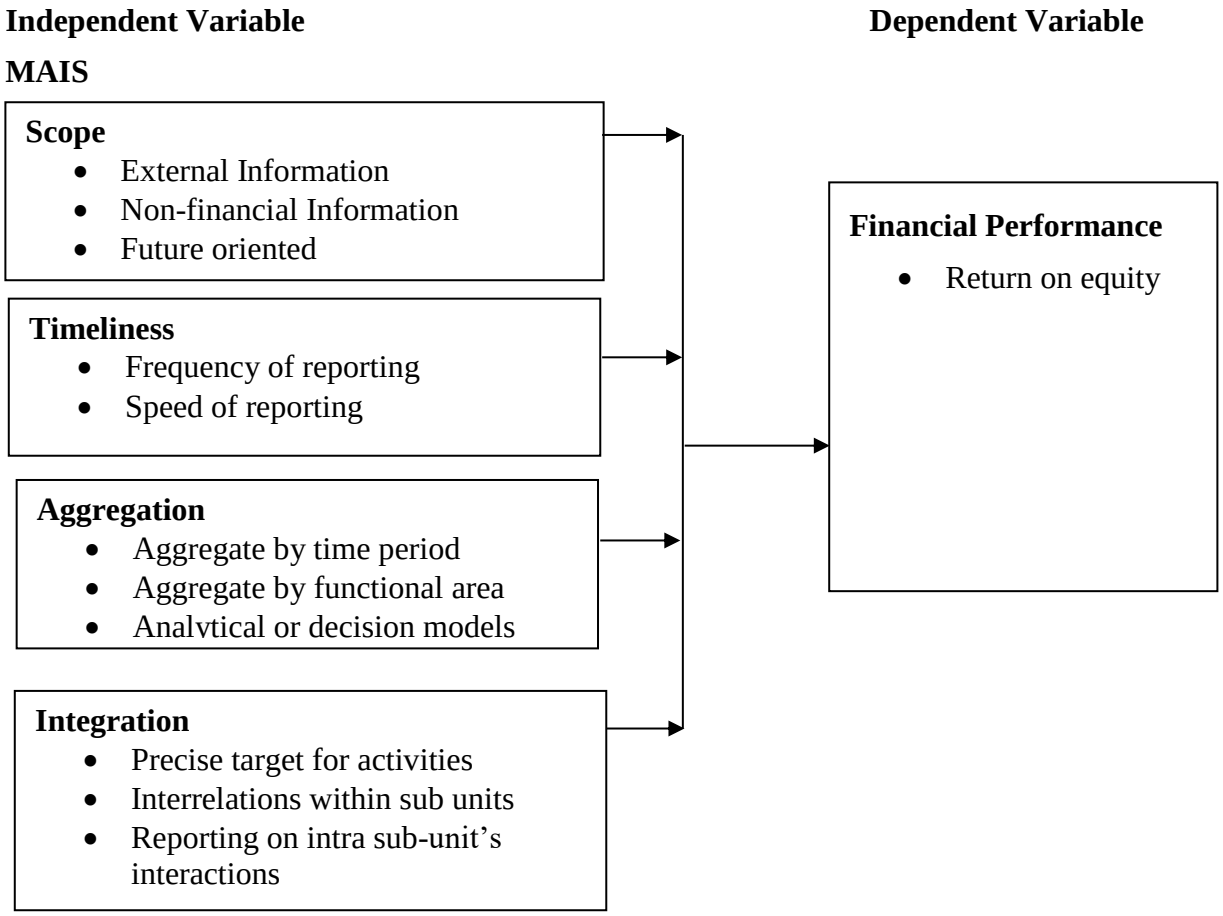


Figure 1: Conceptual Framework

Focus, quantification, and temporal horizon are all sub dimensions of the scope dimension. As a continuum, it has a narrow end and a wide range of possibilities. Traditional accounting systems have long been associated with a concentration on giving only internal, financial, and historical information of a company's operations. Managers have more options for solving problems when they have access to comprehensive data.

Both the frequency and the speed with which information is reported have been considered as sub dimensions of the timeliness dimension. Fastness refers to how quickly information can be delivered to managers, while frequency refers to how often information is delivered to managers (Bouwens and Abernethy, 2000).

Aggregation is the third characteristic of MAIS. There are many ways to aggregate data, from providing raw data to summaries of other business units' activities or other functions' activities by time period, or through decision models like marginal analysis, inventory models, discounted cash flow analysis and what-if analysis, cost-volume-profit analysis, and cost-volume-profit aggregation. Managers are able to process more information with the help of aggregated data. It reduces the quantity of information that can be handled in a given length of

time by condensing it into a format that can be processed rapidly. Decision-making errors due to information overload are thereby decreased. Managers can explore more options and build a better grasp of input/output linkages both inside and between departments thanks to the aggregation of information. By doing this, the odds of finding solutions that are best for your entire company are raised.

Lastly, we can define information integration as the efficiency with which data is shared throughout departments within an organization. Consequently, the sub-unit is able to share information more efficiently. It will be much simpler for managers in different departments to collect useful information from one another if data inside each sub-unit is integrated.

Research Gaps

Only a few researches have looked at the impact of MAIS on Saccos' financial performance. Syam (2018) studied the association between the characteristics of management accounting information systems and managerial performance in Aceh province banks. It was found that the effects of a short- and long-term management accounting information system (STmais and LTmais) on the efficiency of Nigerian fast moving consumer products manufacturing enterprises by Okapla et al. (2018). Management accounting information systems were studied by Christina (2013) to see if they may mediate the link between accounting function knowledge, perceptions of uncertainty in the environment, and managerial performance. When comparing the results of AIS and MIS to the results of MAIS, it is challenging since the former works with financial data, whereas the latter deals with non-financial data. As a result, this study intended to examine the impact of MAIS on the financial performance.

Banks in Aceh province, Indonesia, were shown to have a favourable effect on management performance due to business strategy moderations and uncertainty obligations, according to Syam (2018). Additionally, Odoyo, Adero, and Chumba (2014) found a link between the Kenyan national treasury's IFMIS and its cash flow management. According to the findings of Nicolaou (2010), a study on the perceived effectiveness of accounting information systems showed that the effectiveness of organisational coordination and control was directly linked to the accounting systems in use. As an alternative, Samuel (20013) noted in his findings that excellent performance in automobile firms in Kenya is not inherently related with a sophisticated Management Accounting System There is no direct association between management accounting information systems and firm performance, according to Christina (2013), despite her conclusion that MAIS mediates the relationship between accounting function expertise and performance. Only Okeyo (2018) found a positive correlation between operational efficiency and accounting information systems. His research does not include any mention of financial results.

METHODOLOGY

The study adopted explanatory research design, 7 deposit taking SACCOs from western region were targeted. There were seven deposit-taking Sacco Societies in the former Western Province studied: Mudete Factory Tea Growers Sacco Society Limited, Wevarsity Sacco Society Limited, Invest & Grow (IG) in Kakamega County, Vihiga County Farmers in Vihiga County, Stawisha Sacco Society Limited and Ng'arisha in Bungoma County, and Faridi in Kakamega County. These seven SACCOs have a total population of 61 people who hold various

managerial roles in accounting, finance, FOSA, information technology, credit, audit, and risk. It was decided to conduct the research using a census method because the population was so small. Purposive sampling technique was used to select the respondents of the study. Data was collected using questionnaires and analyzed through inferential statistics which involved testing of hypotheses using simple correlation regression model at 95% confidence level, multiple and hierarchical and descriptive statistics were also used, which included the use of frequencies and percentage. Data was presented by use of tables.

RESULTS AND DISCUSSION

Analysis on Respondents Background Information

According to the questionnaire, respondents were requested to provide information on their gender, age groupings, educational attainment, and time spent working at their present employer. Table 1 shows the results of the analysis of the data.

Table 1: Demographic Data

Variable	Data Set	Frequency	Percent
Age Bracket	Below 25 years	0	0
	25-34 years	16	34.0
	35-44 years	26	55.3
	45-54 years	3	6.4
	over 55 years	2	4.3
	Total	**47**	**100.0**
Gender	Male	32	68.1
	Female	15	31.9
	Total	**47**	**100.0**
Position	Accountant	12	25.5
	CEO	3	6.4
	credit Officer	8	17.0
	ICT Manager	3	6.4
	Internal Audit	5	10.6
	FOSA Supervisor	10	21.3
	Accounts assistant	3	6.4
	Financial Manager	3	6.4
	Total	**47**	**100.0**
Duration	Below 1 year	9	19.1
	2-5 years	11	23.4
	6-10 years	16	34.0
	11-15 years	8	17.0
	over 15years	3	6.4
	Total	**47**	**100.0**

Source: Field Data (2020)

The study discovered that the majority of respondents were male, with 32 (65.1 percent) being male and 15 (31.9 percent) being female. The study determined that 16 (34.0 percent) of respondents were between the ages of 25 and 34, 26 (55.3 percent) were between the ages of 35 and 44, and 3 (6.4 percent) were between the ages of 45 and 54. On the other hand, only 2 (4.3%) were over the age of 55. These findings suggested that the majority of sampled respondents were between the ages of 25 and 54, indicating that they possess the necessary experience with management accounting information systems.

Thirdly, the study established that 12 (25.5%) of the sampled respondents were accountants, 10(21.3%) were FOSA supervisors, 8(17.0%) were credit officers and 5(10.6%) were internal auditors. Others were CEOs (6.4%), Account assistants (6.4%), ICT managers (6.4%) and Financial Managers (3.6%).

Concerning duration of service in the DTS, the study determined that 9 (19.1 percent) had worked for the DTS for less than a year, 11 (23.4 percent) had worked for the DTS for between 2-5 years, 16 (34.0 percent) had worked for the DTS for between 6 and 10 years, and 8 (17.0 percent) had worked for the DTS for between 11 and 15 years (6.4%). This finding regarding the duration of services supplied to DTS suggested that respondents had spent sufficient time understanding the impact of MAIS on DTS's financial performance.

Descriptive statistics for Financial Performance

All the respondents confirmed that the overall performance of the Deposit Taking Sacco has improved over the past five years. Further, the respondents were asked to indicate the extent to which they are satisfied with the following: where VGE is Very Great Extent, GE is Great Extent, FGE is Fairly Great Extent, LE is Little Extent is and LE is No Extent. The results are as shown in Table 2.

Table 2: Primary Data Financial Performance

No	Statements	VGE	GE	FGE	LE	NE	Mean	SD
1.	The institution has kept on improving its infrastructure over the years	14.9% (7)	59.6% (28)	25.5% (12)	0% (0)	0% (0)	3.89	0.63
2.	The institution has a plan on the improvement of infrastructure	27.7% (13)	59.6% (28)	12.8% (6)	0% (0)	0% (0)	4.15	0.62
3.	In general, I am satisfied with the state of infrastructure available in the institution	0% (0)	70.2% (33)	25.5% (12)	4.3% (2)	0% (0)	3.66	0.56

From Table 2, the results indicated that 14.9 %(7) and 59.6% (28) were satisfied to a very great extent and great extent respectively that the DTS has kept on improving its infrastructure over the years although 25.5% (12) fairly great extent. A mean of 3.89 indicated that respondents agreed that DTS has kept on improving its infrastructure over the years with an insignificant standard deviation. The results also revealed that 59.6% (28) of the respondents agreed that DTS has a plan on the improvement of infrastructure and further 27.7% (13) agreed to a very great extent while 12.8% (6) to a fairly great extent. A mean of 4.15 indicated DTS has a plan on the improvement of infrastructure with an insignificant standard deviation. Lastly, 70.2 % (33) agreed to a great extent that they are satisfied with the state of infrastructure available in

the institution while 25.5% agreed to a fairly great extent. However, 4.3 %(20 disagreed on the same. A mean of 3.66 indicated that respondents are satisfied with the state of infrastructure available in the institution with an insignificant standard deviation.

Figure 2, Figure 3, Figure 4 and Figure 5 shows scatter plot for return on equity, dividend yield, asset quality and member deposits for between 2015 and 2019.

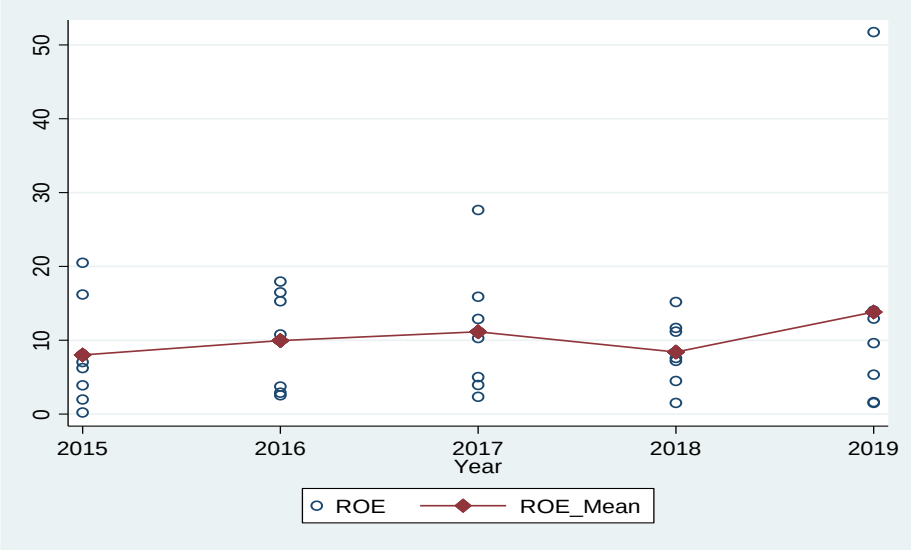


Figure 2: Scatter Plot for Return on Equity

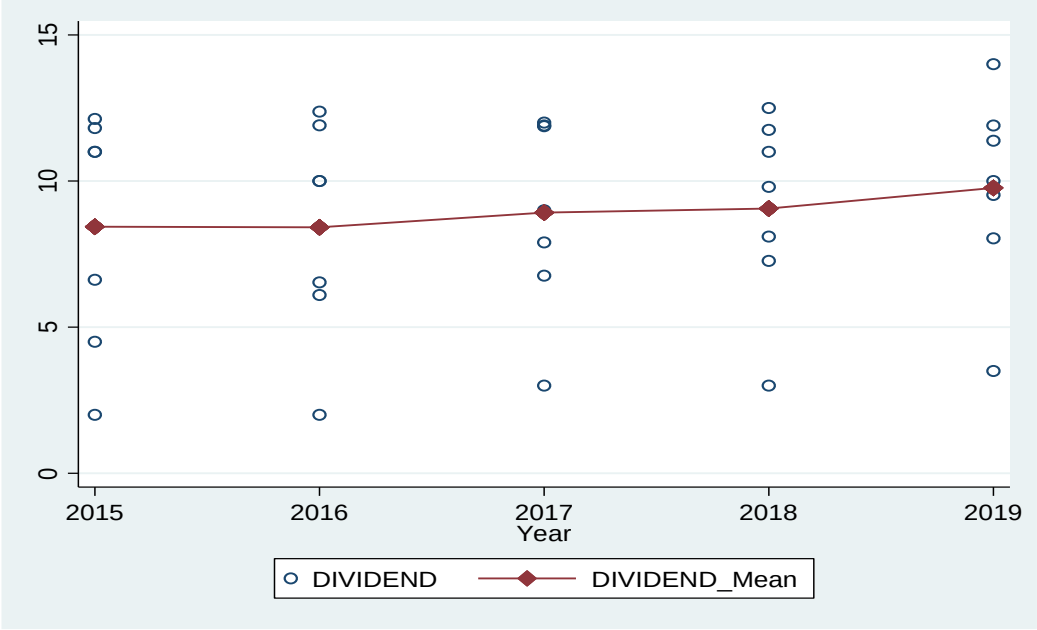


Figure 3: Scatter Plot for Dividend Yield

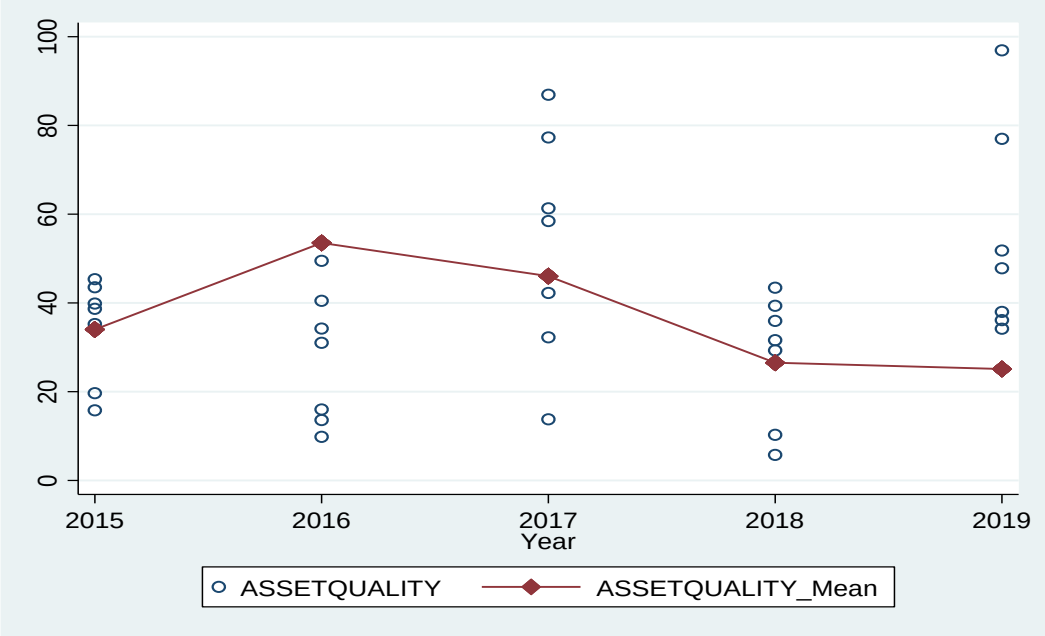


Figure 4: Scatter Plot for Asset Quality

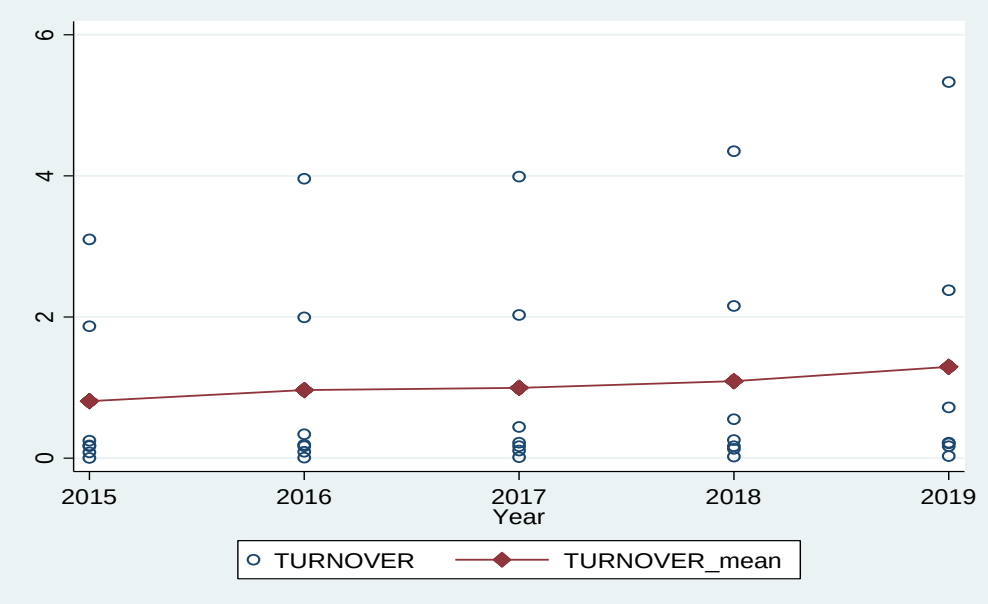


Figure 5: Scatter Plot for Member Deposits

Pearson Correlation Analysis

According to the results of Pearson correlation analysis, which computes the direction (positive/negative) and strength (ranges from -1 to +1) of the link between two continuous or ratio/scale variables, the correlation coefficient (r) is reported as indicated in Table 3.

Table 3: Multiple Correlation Matrix

		Scope	Timeliness	Aggregation	Integration	Member deposits
Scope	Pearson Correlation	1				
	Sig. (2-tailed)					
Timeliness	Pearson Correlation	.314*	1			
	Sig. (2-tailed)	.032				
Aggregation	Pearson Correlation	.475**	.438**	1		
	Sig. (2-tailed)	.001	.002			
Integration	Pearson Correlation	.556**	.206	.342*	1	
	Sig. (2-tailed)	.000	.165	.019		
Member Deposits.	Pearson Correlation	.239	.274	.117	.321*	1
	Sig. (2-tailed)	.106	.062	.434	.028	
Financial Performance	Pearson Correlation	.696**	.525**	.624**	.629**	.500**
	Sig. (2-tailed)	.000	.000	.000	.000	.000

*. Correlation is significant at the 0.05 level (2-tailed).
**. Correlation is significant at the 0.01 level (2-tailed).

According to Table 3, the MAIS scope is positively connected with financial performance; the correlation coefficient is 0.696 (p value <0.01), which is statistically significant at the 99 percent confidence level. Thus, expanding the scope of MAIS would result in an increase in the financial performance of Deposit Taking Saccos. These findings corroborate those of Ironkwe and Otti (2016), who conducted an investigation into the relationship between accounting information systems and bank financial performance in Nigeria. The findings of the analysis indicated that accounting information was statistically important in influencing the profitability and quality of service provided by banks in Nigeria.

Similarly, the correlation coefficient for MAIS timeliness was 0.525, P=0.000, indicating a substantial positive link between MAIS timeliness and financial performance of Western Region Deposit Taking Saccos. This implies that improving the MAIS's timeliness results in a significant improvement in performance. These findings concurred with Sugut (2014) who aimed at investigating the effects of management accounting systems timeliness on financial performance of Non-Governmental Organizations (NGOs) in Nairobi County. The results revealed that timeliness of MAIS reports contributes to financial performance. Therefore, timeliness has significant relation with financial performance of NGOs in Nairobi County.

Similarly, a correlation coefficient of 0.624** implied that there is significant positive relationship between MAIS aggregation and financial performance of Deposit Taking Savings and Credit Co-Operative Societies in Kenya. These results are in agreement with Kobi (2015), whose objective was to assess the performance of financial accounting information systems in public institutions in Kenya, with a focus on Kenyatta University. The inquiry and analysis

concluded that the aggregation level of financial accounting information systems has a substantial effect on the performance of Kenya's public universities.

There is significant positive relationship between MAIS integration and financial performance of Deposit Taking Saccos Western Region as indicated by 0.629**, p=0.000. This implies that improvement in MAIS integration would result to an increase in financial performance. These results are in agreement with Okpala and Afolabi (2018) who examined the impact of short and long term management accounting information system (STMAIS and LTmais) on effective business decisions of quoted Fast moving consumers' goods manufacturing firms in Nigeria. The analysis results established that STMAIS has significant effects on effective business decision in FMCG companies in Nigeria and LTMAIS has significant impact on effective business decision in FMCG companies in Nigeria.

Lastly, there is significant positive relationship between member deposits and financial performance of Deposit Taking Saccos Western Region as indicated by 0.500**, p=0.000. This implies that improvement in member deposits would results to increase in financial performance.

Multiple Linear Regressions

The study's primary purpose was to determine the effect of management accounting information systems on the financial performance of Deposit Taking Saccos in Kenya. This was accomplished through the use of typical multiple regressions. The study sought to determine the influence of each of the management accounting information system characteristics on financial performance when all of these components were entered into the model as a block. This contributed in the development of the study model's coefficients and R^2, which were used to test the null research hypotheses. The results are as shown in Table 4.20.

Table 4: Model Summary MAIS and Financial Performance

Model	R	R^2	Adjusted R^2	Std. Error of the Estimate
1	.755[a]	.570	.530	.88161

a. Predictors: (Constant), Integration, Timeliness, Aggregation, Scope
b. Dependent Variable: Financial Performance

Source: Field Data (2020)

The findings in Table 4 revealed a positive and linear association between financial success and the four predictor factors of timeliness, scope, aggregation, and integration. Correlation coefficient was 0.755 (r=0.755). The coefficient of determination (r2) was 0.570, indicating that 57.0 percent of the variance in financial performance can be explained by the four predictor variables included in the study, while the remaining 43.0 percent is explained by additional factors not included in the model.

Table 5: ANOVA for Management Accounting Information System

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43.356	4	10.839	13.945	.000[b]
	Residual	32.644	42	.777		
	Total	76.000	46			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Integration, Timeliness, Aggregation, Scope

Source: Field Data (2020).

As shown in Table 5, an F test result of F (4, 46) =13.945, p .01 was large enough to validate the model's ability to explain variance in the dependent variables. Deposit Taking Saccos in Kenya's management accounting information system can be used to anticipate their financial performance.

Table 6: Coefficients of the Independent Variables and Performance

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		β	Std. Error	β		
1	(Constant)	4.000	.129		31.105	.000
	Scope	.409	.165	.318	2.483	.017
	Timeliness	.415	.149	.323	2.781	.008
	Aggregation	.329	.137	.256	2.402	.021
	Integration	.392	.146	.305	2.682	.010

a. Dependent Variable: Financial Performance

Source: Field Data (2020)

Table 6 shows the results of a multiple linear regression using four predictor factors and financial performance as the dependent variable:

Financial Performance = 4.000+ 0.409 $\mathbf{X_1}$ +0.415 $\mathbf{X_2}$ + 0.329 $\mathbf{X_3}$+ 0.392$\mathbf{X_4}$

$X_{1=}$ MAIS Scope
$X_{2=}$ MAIS Timeliness
$X_{3=}$ MAIS Aggregation
$X_{4=}$ MAIS Integration

Positive and substantial predictive power (P<0.05) was found in table 4.22 for scope, Aggregation, integration, and Timeliness. If the management accounting information system is maintained at zero or is not present, the financial performance is 4.000, p<0.05. If this is correct, then financial results will be significantly negative.

When the variables of aggregation, integration, and timeliness are controlled, scope has a β of 0.409, which indicates that it is a good predictor of financial performance and that an increase in scope by a unit would result in a statistically significant increase in performance by 0.409 units. The first null hypothesis was rejected because the financial performance of Saccos in the western region of Kenya had a significant effect on the scope of the management accounting

information system. In this regard, the financial performance of deposit taking is dependent on the system scope of management accounting information. As Saccos that accept deposits improve their focus, quantification, and time perspective, so does their financial performance. According to Muhindo, Mzuza, and Zhou (2014), many small-scale organizations have accounting information systems with a limited scope, resulting in low profits for the businesses. Moreover, the results indicated that accounting information systems were related with a higher degree of profitability in small businesses. Therefore, the studies supported the current findings in asserting that scope of the MAIS influences performance.

When aggregation, integration and scope are controlled, timeliness with a β of 0.415 is at statistically significant level implying that an increase in timeliness by a unit will result to significant increase in financial performance by 0.415 units. The findings indicate that the timeliness of management information accounting systems has a favorable and substantial link with the financial performance of Deposit taking Saccos in the former western region. This indicates that as the timeliness of the management accounting information system improves, so does the financial performance. Therefore, the second null hypothesis was rejected, as the influence of management accounting information system timeliness on the financial performance of Saccos in the western region of Kenya was substantial. These results supported Sugut's (2014) findings that financial performance is influenced by the timely submission of MAIS reports. Therefore, promptness has a substantial relationship with financial performance. On the basis of these data, it can be stated that the existing financial reporting, auditing, and financial control AIS utilized by agencies has an impact on these processes.

When timeliness, integration and scope are controlled, Aggregation with a β of 0.329 is at statistically significant level implying that an increase in aggregation by a unit will result to significant increase in financial performance by 0.329 units. The results demonstrate that the aggregation of management information accounting systems has a positive and significant relationship with the financial performance of Deposit taking Saccos in the former western region. This indicates that when MAIS aggregation improves, so does financial performance. Therefore, the third hypothesis was rejected, as management accounting information system aggregation had a significant impact on the financial performance of Saccos in Kenya's western region. In this regard, the financial performance of deposit taking is contingent on the aggregation of management accounting information system data. These results are consistent with those of Mukangu and Ndungu (2016), who discovered that CBIS positively affected Kenya Airways' performance. The performance of an organization was influenced by only two factors (aggregation and e-commerce strategy). The factor of aggregation had the biggest statistically significant impact on Kenya Airways' performance, according to the analysis. These findings concur with those of Kobi (2015), who discovered that the aggregation level of financial accounting information systems has a substantial impact on the performance of Kenyan public universities.

Lastly, when timeliness, aggregation, and scope are regulated, integration has a β of 0.392, indicating that an increase in integration by one unit would result in a significant rise of 0.392 units in financial performance. In the former western region, the financial success of Saccos that accept deposits is strongly connected with the integration of management information and accounting systems. Integration of management accounting information systems improves

financial performance. Thus, the fourth null hypothesis was rejected, as the integration of management accounting information systems considerably affected the financial performance of Saccos in western Kenya. According to Kilonzo (2012), who sought to establish a relationship between a company's financial management information system and its financial success, these findings are consistent. According to Okpala and Afolabi (2018), the incorporation of MAIS has a substantial effect on the efficacy of business decisions made by Nigerian FMCG companies. These results confirm their conclusions.

Stepwise Regression

Using stepwise regression, a regression model can be fitted by an algorithmic technique that selects the predictive variables. Variables are taken into account for inclusion or exclusion from the set of explanatory variables depending on predetermined criteria at each stage. The results are as shown in Table 7.

Table 7: Stepwise Regression

Variable	R^2	F Statistics	df1	df2	Sig. F
Scope	.398	29.812	1	45	.000
Aggregation	.059	5.771	1	42	.021
Integration	.058	4.698	1	44	.036
Timeliness	.055	4.836	1	43	.033

Based on the above values in Table 4.23, it shows that scope contributes 39.8% in explaining variance in financial performance of Deposit Taking Savings and Credit Co-Operative Societies Western Region, while the contribution of aggregation is 5.9%, the contribution of integration to the model is 5.8% and timeliness is 5.5%. This shows that scope contributed the highest followed aggregation, integration then timeliness.

Summary

The objective of the study was to determine the impact of management accounting information system integration on the financial performance of Western Region Deposit Taking Saccos. According to descriptive data, the DTS's division into sections and divisions enables staff to do their responsibilities effectively and continuously improves its control methods with the goal of enhancing performance. The management guarantees that each department's goods and operations are highly compatible with those of the other departments.

The inferential findings established a direct correlation between MAIS integration and financial performance. This suggests that a greater degree of integration would result in improved financial performance. The coefficient of determination indicates that MAIS integration accounts for a considerable portion of the variation in financial performance. This means that financial performance is significantly influenced by integration. Increased unit integration of MAIS results in a considerable improvement in financial performance. As a result, sufficient evidence existed to reject the fourth null hypothesis, which states: H04: Management accounting information system integration had no discernible effect on the financial performance of Sacco's in the Western Region.

Conclusion

The study concluded that management accounting information system, scope, timeliness, aggregation and integration significantly influenced financial performance of Deposit Taking Savings and Credit Co-Operative Societies Western Region. The DTS management ensured every department adjusts its operations to be compatible with the other departments. Further, by ensuring that the whole organization paid close attention to all the factors above enabled data from various sources to be analyzed conclusively for effective decision making which has improved financial performance.

Recommendation

The findings show MAIS Scope, Timeliness, Aggregation and integration have a positive and significant impact on financial performance of DT Sacco's. The study consequently recommends clearer and open departmentalization frameworks and design to be implemented in Sacco's where functions and roles are divided and aligned adequately based on their operational relationships to enhance efficiency and effectiveness of staff output, the management of the DT Sacco's to utilize of data from each department in making decisions as data on past departmental performance is key in projecting aggregated future performance of the Sacco, strategy and accounting departments of Sacco's to prepare monthly or weekly financial statement and strategic targets and achievements. This should be availed to all responsible parties to be able to gauge the society's performance as at that date to give room for corrections, adjustments and adaptions to the set goals. This is likely to lead to better decisions being made about the operational efficiency and performance of Sacco's and periodic financial statements be prepared and archived in an efficient protected and easily accessible form as they are key in making financial decisions of the Sacco especially budget making process.

REFERENCES

Adesina J:D.Ikhu-Omoregebe, :. A. (2015). Capital structure and Financial performance. International Journal of Business.

Atsango, V. I. (2018). *Relationship between firm charateristics and profitability of deposit taking saccos.* Nairobi: Unpublished thesis.

Christina, V. (2013, May). The Mediation Effect of Management Accounting Information System on the Relationship between Knowledge of Accounting Function, Perception of Environmental Uncertainty and Managerial Performance. The 6th International Conference of the Asian Academy of Applied Business Bandung, Indonesia, Universitas Padjadjaran Dan University Malaysia Sabah.

Chong, K. (2009). *Effect of Management Information Systems on performance of Communication industry.* Malaysia.

Clarke, M. (2015). An empirical Investigation of the Management Accounting on Structural capital and business performance. *Journal of intellectual capitalEmeral publishers*

Gall, W. B. (1985). *Validity of research Instruments.* Oregon: University of Oregon.

G.Mugenda, O. M. (2002). *Research Methods.* Nairobi: Acts Press.

Girard, J., & Girard, J. (2015). Defining Knowledge Management; Toward an Applied Compendium. *Online Journal of Applied Knowledge*.

Gnawali, A. (2017). Management Accounting Systems and Organizational Performance of Nepalese Commercial Banks. *Journal of Nepalese Business Studies*, *10*(1), 8-19.

Ismail, S. T. (2011). The Influence of Marketing Information System on Decision Making" an Applied Study on Royal Jordanian Air Lines (Rja)". *International Journal of Business and Social Science*, *2*(3).

Mia Clarke, M. (2015). An empirical Investigation of the Management Accounting on Structural capital and business performance. *Journal of intellectual capitalEmeral publishers*.

Mia, P. (2008). The interactive effect of Market competion and use of MAIS on business performance. Journal of hospitality and Tourism

Muhindo, A., Mzuza, M. K., & Zhou, J. (2014). Impact of accounting information systems on profitability of small scale businesses: A case of Kampala City in Uganda. *International Journal of Academic Research in Management (IJARM)*, *3*(2), 185-192.

Munene, I. W. (2015). *Factors affecting implementation of management information system in selected financial cooperatives in Nairobi, Kenya* (Doctoral dissertation).

Munene, I. W., Namusonge G. S. & Iravo, M. (2014). Factors affecting the implementation of management information system in selected financial cooperatives in Nairobi. *International Academic Journal of Information Sciences and Project Management, 1* (2), 44-58

Mustafa, O. (2015). MAIS utilization; Efficiency change in Pakistani cooperative banking sector.

Mvula, John. (2013, August 8th). Common Issues affecting performance of Saccos in Malawi.

Nikoomaram, H. (2012). *An Empirical Analysis of Earnings Management motives in Firms listed on Tehran Stock Exchange.* Tehran.

Okpala, c. (2017). Magament Decision Making. *International Journal of Research in Commerce and Management*.

Patiar and Mia, P. (2008). The interactive effect of Market competion and use of MAIS on business performance. *Journal of hospitality and Tourism* .

Sugut, O. C. (2012). The Effect of Computerized Accounting Systems on the Quality of Financial Reports of Non-Governmental Organizations in Nairobi County, Kenya. *Signature*, *61*, 79527.

Smyth, R. (2004). *Exploring the Usefulness of a conceptual framework as a research tool.* New England.

Teixeira, R., Koufteros, X., & Peng, X. D. (2012). Organizational structure, integration, and manufacturing performance: A conceptual model and propositions. *Journal of Operations and Supply Chain Management*, *5*(1), 70-81.

Tindi, P. O. & Bogonko, J. P. (2017). Effects of agency banking on customer satisfaction in the banking industry in Kenya. *International Academic Journal of Economics and Finance, 2*(3), 141-160

Vongjaturapat, S. (2018). Application of the Task-Technology Fit Model to Structure and Evaluation of the Adoption of Smartphones for Online Library Systems. *Science & Technology Asia*, 39-56.

Wangari, J. K. (2015). Integrated Financial Management Information System (IFMIS) and Credit Scoring in Cooperative Societies: A Survey of Deposit Taking Sacco's in Nyeri County, Kenya. *International Journal of Innovative Research and Development*, *4*(13), 451-467

Warsame, A. M. (2013). Impact of Integra Ted Management Information Systems on Service Level in Non-Governmental Organizations in Mogadishu Somalia. *Unpublished master's dissertation, University of Nairobi*.