

Assessment of the Performance of Saving and Credit Cooperatives: The Case of Hawelti Sub-city, Mekelle, in Northern Ethiopia

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Abstract

The main objective of the study was to assess the performance of Saving and Credit Cooperatives (SACCOs) in Hawelti Sub-city. Various methodologies were used to conduct this research. A random sampling technique was used to take 214 respondents from the sample population. Both questionnaire and interview instruments were used to collect reliable data. The primary data was gathered from members of a sample SACCOs via a questionnaire. The mixed quantitative and qualitative research approaches were employed. The secondary data was used and collected from the SACCOs' audit records. Data were analyzed using SPSS version 25 and Microsoft Excel and results were analyzed using descriptive statistics to generate tables, frequency, percentages, and graphs. To analyze the financial performance of SACCOs the PEARLS model was employed. The study results exhibited that the services' delivery on diversified products of saving, and loans were decent and through the provision of loans, members got a significant change in their living standards. SACCO's membership was raised, but not to the standard, and the promotion was determined to be inefficient and ineffective. The governance perspective of SACCO was found that members have trust, clarity, transparency, and discuss freely in their general assembly meetings. Regarding the financial performance, the saving deposit and total assets of SACCOs achieved tremendous growth. However, the net loan portfolio was found to be below the standard and has come across serious liquidity problems. The key challenges hampering the SACCOs are lack of governance, weak financial monitoring system, lack of financial regulation and proper financial records, poor saving culture, lack of hiring professional manpower, and the absence of training and education. The possible recommendations are creating awareness among members regarding their rights, and by-laws, hiring the required professionals, training based on need and gap assessment, and developing and introducing financial regulatory and monitoring systems.

Keywords: Saving, Cooperatives, SACCOs, Performance assessment, Financial performance

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1. Introduction

Saving and Credit Cooperatives (SACCOs) are member-owned financial institutions with the core objective of mobilizing savings for lending to members thereby improving people's livelihood (Miriti, 2014). SACCOs are associations of people whose common goal is to encourage savings and provide credit to members to improve their lives (Eton, BC, & Fabian, 2020). SACCOs help to improve people's minds by promoting self-development and self-reliance. They also develop well-being by improving members' living standards, saving regularly, using money wisely, and achieving members' economic liberation (Takele & Mengesha, 2018).

SACCOs initially came out in Germany in the 1870s, and the concept was brought to North America by European immigrants in 1900. The most active and initiated movements were in Canada, the United States, Australia, and Ireland. Hermann Schultz-Deutsch and Fred Rich Rafison were the founders of SACCOs (de Dieu, 2019). Father John McNulty started the first SACCO association in Africa, specifically in Ghana, in 1959. Ghana, Uganda, Nigeria, and Kenya were among the first newcomers to the SACCO community. In the 1960s, most non-English speaking African countries began to appreciate SACCOs (Kinyua, 2016). SACCOs have been recognized for their contributions to the economy of their members. They mobilized US\$2.2 trillion in savings and shares and provided US\$1.85 trillion in loans for investments to members worldwide. In Africa, SACCOs mobilized US\$10.6 billion in savings and shares and provided US\$11.8 billion in loans to members (WOCCU, 2019).

Since 1964, when Ethiopian Airlines employees formed the first SACCOs, Ethiopia has lacked a contemporary and well-organized financial cooperative. Employees of many institutions gradually realized the concept of cooperatives. Cooperative Legislation No. 241/1966 was enacted during Haile Selassie's reign, resulting in the formation of 154 various types of cooperatives. During the Derg regime (1974-1991), various types of cooperatives were organized (housing cooperatives, agricultural cooperatives, mining cooperatives, and SACCOs promoted, and regulated by several ministries and institutions. The National Bank of Ethiopia was given responsibility for promoting and organizing SACCOs under Proclamation No. 138/70. These cooperatives were not demand-driven and member-managed and they were considered unnecessary institutions later many of

them were disbanded. But SACCOs, mainly in urban areas, remained unaffected by government intervention and continued to flourish (Amina, 2016).

Under the EPRDF government, many cooperatives were established to participate in various economic activities. The government has formulated different rules and regulations and deployed human resources. The current proclamation No. 985/2016 assists cooperatives in creating a conducive atmosphere for cooperative development. The espousal of the Economic Reform promotes cooperative development in a free market economy. This opportunity opened to turn cooperative societies into real people's organizations and the numbers of SACCOs mushroomed up both in urban and rural areas (Eton et al., 2020). In Ethiopia, cooperatives are essential economic entities that provide a wide range of services to residents, generate income, and create jobs (Dayanandan & Huka, 2019). Ethiopia's SACCOs have been valued because they are policy tools for increasing the output and productivity of households inducing technology adoption, and increasing income thereby helping them reduce their poverty and attain food security. The performances of SACCOs in Ethiopia as well as in the Tigray region have engaged in the provision of saving and credit facilities to their members and promoted financial service channels to improve the livelihoods of residents (Gebremedhin, 2016).

In Ethiopia currently, there are 20,463 SACCOs, with 4,763,275 members and mobilized savings of 21.4 billion birrs and provided 16.49 billion birr loans for investment. Furthermore, SACCOs in Ethiopia and the Tigray region play a significant role in people's economic growth by providing saving and credit facilities, teaching members how to save properly, and then borrowing for production and welfare purposes (FCA, 2020). Despite their benefits and roles, evidence suggests that SACCO's performance is poorly understood; the government and other stakeholders have paid little attention to it. As a result, they have encountered lots of challenges in their development. This motivated the researcher to assess the current performance of SACCOs and find the gaps in the study area Mekelle, Hawelti sub-city which could contribute to SACCO's development and its members.

1.1 Statement of the Problem

Although the tremendous exertions made by SACCOs, the provision of financial services to the poor in Ethiopia is severely restricted. Banking services are inaccessible to the majority of the needy population (Henock, 2019). The main problems of SACCOs in Ethiopia are poor participation of members and insufficient supervision of cooperatives. In most cases, insufficient financial sources for loan provision, poor entrepreneurial skills, lack of service delivery, and weak financial management systems also pose challenges to SACCO's performance (Abamagal & Abamagal, 2019). The problems in Ethiopia that hamper the performance of the SACCOs are limitation of the managerial capacity board of directors, limited capacity to employ professionals, poor saving culture, and limitation to satisfy yet high demand for loans. Moreover, it was also observed problems in increasing the size of membership, and savings and loan products are also restricted rather than required (FCA, 2020).

Despite the studies mentioned above, little is known and discussed SACCO performance in the study area. In particular, the performance of SACCOs in Mekelle, Hawelti sub-city, so far has not been discussed in the context of membership size, governance, service delivery, institutional capacity, financial performance, or challenges that are impeding SACCO performance. Therefore, this study sought to fill the knowledge gap in determining the SACCO's performance level in the Hawelti sub-city and suggesting measures to improve it. The objectives of this study are to: investigate the current performance of SACCOs in the study area; analyze the financial performance of SACCOs in line with the standards of the PEARLS, and determine the basic challenges that hamper the performance of SACCOs.

2. Review of Related Literature

2.1 Concepts of SACCOs

The SACCO concept gain traction across the globe especially in developing countries. SACCOs are conceived as instruments for economic development and means of social improvement (Kamau, 2015). It's also a member-driven, democratic, and non-profit financial cooperative. Membership is open to everyone who is committed to taking on the responsibilities of membership, such as paying the registration fee, purchasing shares, and actively participating in the economy (Henock, 2019). Saving is crucial in people's daily lives. Households that do not save money have a problem dealing with shocks like losing a job or being ill; they find it difficult to invest in education or other types of human capital and lack the financial reserves to ride out the hard time (Cavallo & Serebrisky, 2016).

2.2 Saving Products and Services of SACCOs

2.2.1 Savings: Savings refers to the money left over after deducting consumer expenditure from disposable income over time. It is a demand deposit that is used as security for loan advances (de Dieu, 2019). Saving is about preparing for any risks, as well as guiding yourself to create your future and become a self-sufficient and

safe person (Getachew, 2016). In the SACCO association, we have three types of savings products: 1) Compulsory savings 2) Voluntary savings, and 3) time deposit savings. Compulsory savings: This type of savings is the predetermined amount of savings, which is saved regularly every month without interruption by SACCO's members (Feleke, 2018). Voluntary savings: are saved based on the needs of the members. This ensures that the SACCO receives consistent funding and encourages members to participate. Time deposits: When the SACCO is in a good capacity to manage its savings and loans properly, this type of saving would be desirable (Tumwine, Mbabazize, & Shukla, 2015).

2.2.2 Loan Services: loans are money or property provided to members in exchange for future loan repayments, interest, or other financial expenses (Nyamu, 2020). One of the cooperative's responsibilities is to give loans to its members. Loans are granted from the member's accumulated savings. SACCOs offer members loans to improve their living standards, based on a business plan for business activities, medical services, material purchases, and so forth (Kondiwa, 2019).

2.3 Empirical Studies of SACCOs Performance

According to studies reviewed (Ksoll, Lilleør, Lønborg, & Rasmussen, 2016), access to credit facilities through savings and loans boosted the welfare of its members by ensuring food security and enhancing household income. (Momanyi & Njiru, 2016) suggest that a large number of members in a SACCO ensures income flow and so increases financial performance. What's more, (Bonga & Mlambo, 2016) found that SACCOs did not vigorously promote financial literacy. Individuals, society, and SACCOs are expected to benefit from financial literacy through promotion and increased awareness, resulting in more savings deposits and shares. According to (Tirfe, 2014), the financial performance of SACCOs on savings deposits should be 70-80% of the standard ratio set by WOCCU; loans cannot be allocated from members' share capital, but rather from saving deposits. Hence, the SACCO is expected to keep enough capital in terms of savings deposits to meet the needs of its member borrowers. Consequently, the ratio of SACCO's savings deposits to assets in Tigray was found lower than the standard ratio. And it was found that the member's equity was 10-20% below the standard of total assets.

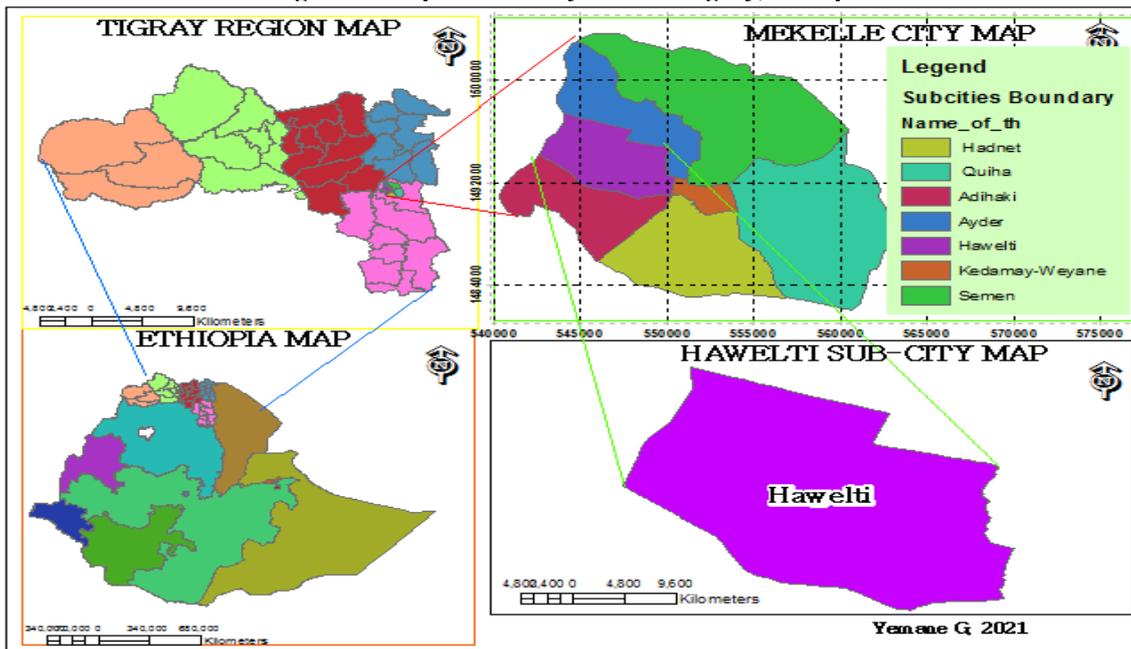
(Mmari & Thinyane, 2019) Also studied the financial performance of SACCO in Tanzania, Maseru District using PEARLS standards on loan delinquency should not exceed 5% and results showed that SACCO loan delinquency was 0,31% that is below the standard indicated experiencing good performance in terms of loan delinquency. Similarly, they also studied non-earning assets and found that SACCOS invested 38% of its total assets in non-earning assets, which is higher than the maximum 5% recommended by WOCCU. It reveals that SACCOs in the study area have over-invested in non-productive fixed assets. (Abebe, 2017) added that the financial performance of SACCOs in Addis Ababa, Ethiopia found that efficiency in managing costs and income over the total assets was achieved within the PEARLS standard and SACCOs have not practiced the loan loss provision which could lead them to risky. (Ahmed & Rugami, 2019) posit that the most critical challenges facing co-operatives among others include lack of governance, untrained leadership, and poor performance of the different SACCO committee members and this is seen to hinder SACCOs' performance.

3. Research Methodology

3.1 Description of the Study Area

The study area is situated in the Tigray region (Northern Ethiopia), which extends from 128 to 158 north latitude and 368 30' to 418 30' east longitude (Nugusse, Van Huylbroeck, & Buysse, 2013). The region has seven administrative zones including Mekelle and 94 Woredas. In the region, 80 % of the population lived in rural areas and rely on agriculture, and more than 27% lived in poverty and are food insecure (TCSA, 2019).

Figure 1: Map of the Study Area of Tigray, Ethiopia.



Source: (TBOFED, 2022)

Mekelle is located in Northern Ethiopia and is situated about 780 km north of the capital. It is situated in Ethiopia's temperate highlands, at an elevation of around 2200 meters. Its average temperature is 14°C to 34°C and 575-650 mm of rainfall (Mushir, 2013). The study area Hawelti sub-city is situated by the north Adihaki sub-city, west Enderta Woreda, south Adihaki, and East Kedameyweyane sub-city.

3.2 Data Sources

This study used a descriptive research design. (Creswell, 2014) stated that the descriptive research gathers information regarding the present condition. The advantage of this research design is that it can collect data flexibly so that respondents can freely provide information. It is suitable because respondents could not be manipulated (Van Wyk, 2012). Both quantitative and qualitative research approaches were used in this study. Initially, the Hawelti sub-city was purposively selected based on the higher numbers of SACCOs among the 7 sub-cities in Mekelle. Four SACCOs were chosen at random from the 18 found in the Hawelti sub-city, and 214 respondents were drawn from the sample population. The data was collected using both questionnaire and interview instruments. The primary data collection via questionnaire was taken from members of sample SACCOs and 15 key informant interviewees were also used from SACCO's management committee, Woreda, and regional cooperative agency officials purposively.

The secondary data was also gathered and used from the SACCO's financial records available from the main office of SACCOs. The simplified formula set by (Taro, 1967) was used to determine the sample size. This formula assumed a 95% confidence level and margin of error (e) 0.05. The sample size of the study is ascertained as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Where:

n = Sample size,

N = Total population size and

e = Sampling error at 95% of the level of confidence.

$$\text{Then } n = \frac{462}{1 + 462(0.05)^2} = 214$$

The 214 respondents sample size is sufficient to represent the total population. To obtain the sample size for each cooperative, the proportion formula was used as shown below.

Table 1: Proportional Sample Distribution Across SACCOs

Name of Sample SACCOs	Name of Kebeles SACCOs found	Establishment Year	Population size	Own computation	Actual sample size
Mikielmemona	Hidase	29/09/1996	110	$\frac{110 * 214}{462} = 51$	51
Tekleweyni	Hayelom	04/05/1997	53	$\frac{53 * 214}{462} = 24$	24
Marta	Adishumduhin	08/12/2009	97	$\frac{97 * 214}{462} = 45$	45
Mietidiliyet	Fireselam	25/5/2004	202	$\frac{202 * 214}{462} = 94$	94
Total			462	$\frac{462 * 214}{462} = 214$	214

Source: Own Computation, 2022

3.3 Methods of Data Analysis

The quantitative data were analyzed using Statistical Package for Social Sciences (SPSS) software version 25, Microsoft Excel, and for qualitative data analysis, narrations, and to examine the financial performance of SACCO, the internationally recognized ratio (PEARLS model) set by WOCCU was used (please refer to appendix A). Results were analyzed using descriptive statistics comprising of tables, frequency, percentages, and graphs to make them ready for interpretation.

4. Results, and Discussions

4.1 Investigating the Current Performance of SACCOs

This research investigates SACCOs' current performance and challenges, as well as their financial performance using the PEARLS model. It is analyzed with six basic indicators that are designed to determine if SACCOs are successful or not. Membership size and promotional activities, service delivery, governance, institutional capacity, and financial performance and challenges of SACCOs are factors considered. Accordingly, the above-mentioned parameters were employed and come up with a performance analysis of SACCOs.

4.1.1 Membership Size and Promotion

4.1.1.1 Membership Size

The primary pillar of SACCO's philosophy which determines the institution's development is the increase of members (ICA, 1995). In this study, the researcher used secondary data to determine the growth of SACCOs' membership. The outcomes are depicted below.

Table 2: Membership Growth Rate (2018-2020)

Name of SACCO	Establishment year	2018/19			2019/20			Growth Rate %	2020/21			Growth rate %
		M	F	Total	M	F	Total		M	F	Total	
Mikielmemona	29/09/1996	59	46	105	64	46	108	2.85	64	46	110	2
Tekleweyni	04/05/1997	35	18	53	35	18	53	0	35	18	53	0
Marta	08/12/2009	26	58	84	32	64	96	14.28	33	64	97	1.04
Mietidiliyet	25/05/2004	54	64	118	70	61	131	11	95	107	202	54.2
Total		174	186	360	201	189	388	7.8	258	204	462	19.1
Average growth rate %												13.5

Source: Survey Computation SACCOs' Financial Report, 2022

The membership growth rate of sample SACCOs is depicted in Table 2 of the study. As a result, the growth rate for Marta was 14.28 % from 2018/19 to 2019/20, Mietidiliyet 11%, Mikielmemona 2.85 %, and Tekleweyni 0%. From the year 2019/20 to 2020/21, the growth rate of membership has been shown for Mietidiliyet at 54.2%, for Mikielmemona at 2%, Marta at 1%, and Tekleweyni at 0%. On average membership growth for the category years of 2018-2020 was positive (13.5%) incremental. However, Mietidiliyet SACCO has dominated the membership growth, accounting for 54.2%.

Therefore, most (75%) of SACCOs showed a low membership growth rate comparing SACCO's standards around the world. This implies that SACCOs' engagement in promotional activities and the entry of new members is severely limited.

4.1.1.2 SACCOs Promotional Activities

SACCO can boost overall performance by attracting new volunteer members and raising awareness of

cooperative concepts and ideas by implementing a continuous promotional strategy. Hence, the researcher asked respondents via a questionnaire how are effective promotional efforts in the study area.

Table 3: Members' Evaluation of the Performance of Promotional Activities

How do you determine the performance of promotional activities conducted in your SACCO?				
Category	Frequency	Percent	Valid Percent	Cumulative Percent
Sufficient and effective	31	14.5	14.5	14.5
Sufficient but ineffective	28	13.1	13.1	27.6
Insufficient but effective	33	15.4	15.4	43.0
Insufficient and ineffective	122	57.0	57.0	100.0
Total	214	100.0	100.0	

Source: Field Survey, 2022

The study outcome, Table 3 shows that 57% of the respondents replied that promotional activities were insufficient and ineffective which covered the highest percentage and 15.4% of the respondents stated as it was insufficient but effective.

On the other side, 14.5% of the respondents replied promotional activities were sufficient and effective and the rest 13.1% of them believe it was sufficient but ineffective.

According to officials interviewed, these insufficient and ineffective promotional efforts emanated from weak understanding and skills in persuading members about cooperative science. This indicates that, despite some promotional and educational efforts, the members, board of directors, and government promotional and educational initiatives were deemed ineffective.

4.1.2 Service Delivery of SACCOs

For this study, the performance of service delivery was primarily focused on saving mobilization products and SACCO loan provision.

4.1.2.1 Saving Mobilization Products

In this portion of the study, the researcher requested respondents through a questionnaire to investigate if sample SACCOs are applied to the diversified savings products and members used to save money. The results are displayed below.

Table 4: Summary Statistics of SACCOs Saving Mobilization Products

Category of saving products	Responses					
	Yes		No		Total	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Compulsory saving	214	100	-	-	214	100
Voluntary saving	18	8.4	196	91.6	214	100
Time deposit	4	1.9	210	98.1	214	100
Children saving	151	70.6	63	29.4	214	100

Source: Field Survey, 2022

The survey finding depicts that all SACCO samples provide services to members with different savings products. Thus, 100% of the respondents used compulsory savings; this is due to the mandatory nature of the product used by SACCOs to maintain membership.

As to voluntary saving, 91.6% of the respondents didn't save money in terms of voluntary saving whereas only 8.4% of respondents save money in voluntary savings. Of the respondents, 70.6% of them save their children whereas 29.4% of the respondent didn't save their children. Of the total respondents, 98.1% didn't have time deposit saving only 1.9% of them can save money in terms of time deposit savings.

According to an interview with the SACCO board of directors, Woreda, and regional officials, although the saving products provided by SACCOs are designed to meet the needs of members and are developed to promote members to join SACCO, there were problems diversifying the saving products and competing in the market, as a result of which customers do not get the products from SACCO and instead find a way to bring these products to other places.

We can deduce from this that the majority of the respondents were introduced to child-saving products that encourage children to be future-oriented on saving culture. Furthermore, despite all SACCO samples introducing a diversity of saving products, voluntary savings and time deposit savings were not well adopted. Most of the respondents stated they did not save money through voluntary and time deposit savings. This could hinder SACCO's ability to compete in the market.

These findings are in line with (Momanyi & Njiru, 2016) findings that SACCOs offered diversified saving products compulsory, child savings, and facilities offered to their members to satisfy members' needs, attract new members, and thereby improve saving capacity. However, most of the members had not used the different saving products due to low awareness creation and poor operations carried out by SACCOs.

4.1.2.2 Growth in Saving Mobilization of SACCOs

The rise of sample SACCOs' saving mobilization is depicted below.

Table 5: Growth Rate of Saving Mobilization (Birr)

2017	2018	Rate in %	2019	Rate in %	2020	Rate in %	2021	Rate in %	Average growth in %
465630	532620.5	14	708,019	33	915,513.3	29.3	1,239,714.4	35.4	28
55822	73782	32	82,623.4	12	122,967.24	48.8	175,764.30	42.9	34
295630	379456	28	452,314.5	19	719,990	79	1,030,527	43.1	42.3
846940	1022645	21	1,523,527	49	2,098,527	37.7	3,030,228.9	44.4	38
1,664,022	2,008,503.5	24	2,766,484	28	3,856,997.5	49	5,476,234.7	42	36

Source: Own Computation Financial Record of SACCOs, 2022

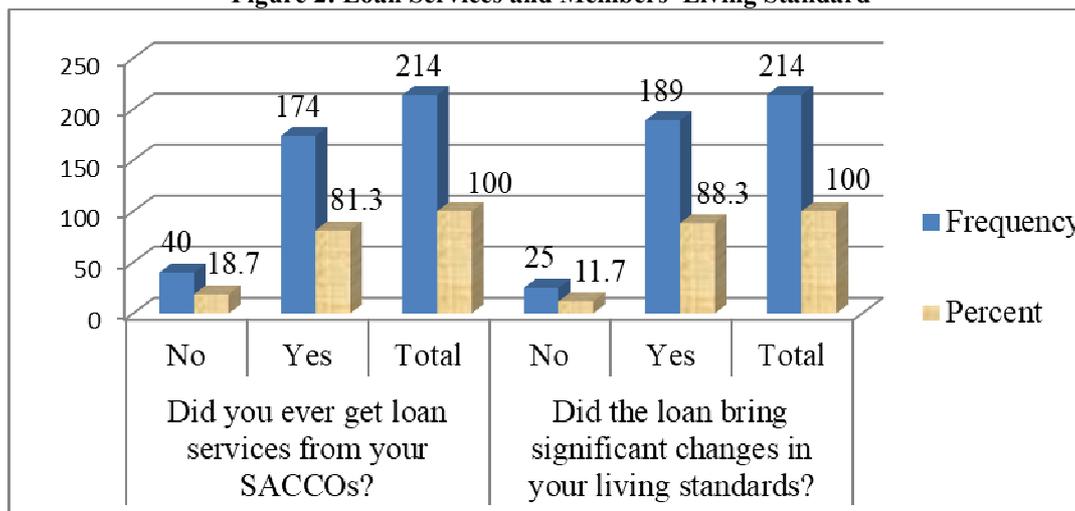
As per study results shown in Table 5, SACCO saving mobilization grew over the last five years from 2017 to 2021. The growth of saving mobilization for Mikelmomona was 28%, Tekleweyni 34%, Marta, 42.3%, and Mietidiliyet 38%. Saving mobilization has grown by 36% on average for all sample SACCOs during the last five years. The growth in saving mobilization is due to an increase in the amount of savings and, to some extent, an increase in the SACCO members.

4.1.2.3 Loan Products and Services Provisions

Loans are disbursed to members based on their interest and fulfillment of the conditions outlined in the SACCOS bylaws and lending policy.

The researcher asked respondents via a questionnaire to investigate if their living standards changed significantly after they got and used loans. The findings are then detailed below.

Figure 2: Loan Services and Members' Living Standard



Source: Field Survey, 2022

The outcome on the provision of loan services in Table, 6 suggests that 81.3% of respondents got the loan services and 18.7% of them didn't get the loan service from their SACCOs. As a result, we can ascertain that the majority of members were SACCO loan beneficiaries. Regarding the credit bringing significant changes in living standards of the respondents, 88.3% replied that there had been changes in the members' living standards after they obtained loans whereas 11.7% of them replied that there is no change. This seems that members were able to earn money, and income, manage their housing problems, and improvements in living standards.

This finding agreed with (Ksoll et al., 2016) finding depicted that the operation of SACCOs on credit facilities conducted in Malawi was improved the well-being of members through the provision of credits and increased investments and income from business activities provided by SACCOs.

4.1.3 Governance of SACCOs and Institutional Capacity

For SACCO governance, the General Assembly (members) is the source of power and members' participation is critical to SACCOs' effective and efficient governance.

Then, the researcher requested respondents through the questionnaire to investigate members' participation, role in decision making, and awareness of the agenda meetings. The results are depicted below.

Table 6: Summary of Members' Participation, Decision Making, and Awareness in General Assembly Meetings

Description	Response	Frequency	Percent	Valid Percent	Cumulative Percent
Participation of members in annual and urgent general assembly meetings in the last 3 years?	No	52	24.3	24.3	24.3
	Yes	162	75.7	75.7	100.0
	Total	214	100.0	100.0	
Members' awareness of the agenda to be discussed in the general assembly meetings?	No	41	19.2	19.2	19.2
	Yes	173	80.8	80.8	100.0
	Total	214	100.0	100.0	
Members' role in decision-making general assembly meetings?	No	80	37.4	37.4	37.4
	Yes	134	62.6	62.6	100.0
	Total	214	100.0	100.0	

Source: Field Survey, 2022

To start with the first question on members' participation in general meetings in the last three years, Table 6 above depicts that 75.7% of the respondents attended general assembly meetings and 24.3% of the respondents didn't. The majority of respondents stated they had attended general assembly meetings in the last three years. It seems that effective governance appears to be in place, and members have trust in their SACCOs.

Secondly, members' awareness of the agenda to be discussed in the study result Table 6 describes the majority of 80.8% of the respondents knew the agendas in the general meeting, whereas 19.2% of the respondents didn't know. We can conclude from this finding that members have a decent understanding of the agenda to be discussed, allowing them to freely and effectively participate in meetings on proposed policies and issues, indicating better governance over their SACCOs' performance.

Thirdly, regarding members' role in decision making as displayed in Table 6, 62.6% of the respondents replied as they had a role in the decision-making of the general assembly meetings, while 37.4% of them didn't. This implies that the majority of members sitting in the General Assembly meeting played a significant role in deciding issues.

4.1.4 Institutional Capacity of SACCOs

The institutional capability performance was adopted and examined from the perspective of education and training. Training and education are the lifeblood of SACCOs, the founding principles of cooperatives, and drive cooperative development (Daniel, 2017).

Hence, the researcher asked respondents if they had received any financial literacy training in the past three years via a questionnaire. The outcome is shown below.

Table 7: Training of Members on Financial Literacy

Have you received financial literacy training from your SACCO in the last three years?				
Response	Frequency	Percent	Valid Percent	Cumulative Percent
No	126	58.9	58.9	58.9
Yes	88	41.1	41.1	100.0
Total	214	100.0	100.0	

Source: Field Survey, 2022

The findings as indicated in Table 7 above show that 58.9% of respondents didn't get training about financial literacy for the last three years and 41.1% of respondents got training.

According to interviews with Woreda officials, only the regional government has provided some training to the board of directors and members. The training, however, was not based on the knowledge and skill gaps. They do not undertake a need assessment before providing training. Even the training was quite short, with lots of recurrence on the same issue. It seems that SACCOs were not focused on member capacity building; a lack of knowledge and skill had a detrimental impact on SACCO's performance and development, which could harm both members' and SACCO's institutional capacity.

This finding is consistent with (Bonga & Mlambo, 2016) findings that SACCOs were not active in promoting and updating the knowledge of members through the provision of financial literacy and this restricts the performance of saving habits in boosting saving deposits and shares

4.1.5 Financial Performance SACCOs

To analyze the financial performance of SACCOs, a simplified version of the PEARLS model was used to take advantage of key financial ratios in the management of cooperatives. and it can be determined the efficiency, feasibility, and outreach of SACCOs operations (WOCCU, 2009). To determine this, All SACCOs should be legally audited by the cooperative promotion agency's auditors every year, as per the declaration of cooperative proclamation No. 985/2016. However, due to unemployed professional accountants who record SACCOs' day-to-day transactions, the SACCOs' record system is quite poor. Accurate financial data from the sampled SACCO

is difficult to get due to an improper record system. However, an effort has been made to analyze its financial position by using the internationally accepted monitoring system PEARLS designed by WOCCU. For each of these ratios, there is a “standard of acceptance or excellence” which signifies the optimal range for each indicator "P" means protection, "E" stands for an effective financial structure, "A" stands for asset quality, "R" stands for rates of return on cost, "L" refers for liquidity, and "S" stands for the growth sign.

Different quantitative financial indicators can be used to examine the SACCOs’ financial performance using the PEARLS. However, owing to limited required financial details, standard audit records, and solid data from the SACCOs' chart of accounts, only a limited set of indicators were computed, used, and analyzed for the standard of excellence.

4.1.5.1 Protection (Provision of Loan Loss)

To prevent unexpected losses and protect members' savings, a provision for loan losses (reserves) must be held. Loan losses overdue for more than 12 months require a 100% reserve, Whereas losses that are 1-12 months require a 35% reserve (WOCCU, 2009). In this sample SACCOs' findings, audit records, and other bookkeeping data revealed that didn't practice this key financial discipline.

The data revealed that all SACCOs are susceptible to loan loss and are unconcerned about the insufficiency of their loan loss allowance because they believe their rigorous collateral system is protected them from suffering loan delinquency. However, SACCOs have not yet faced financial risk due to loan non-payment under the current lending system, but if they alter their collateral system at any time without adjusting a mechanism to protect against loan default, a problem with sustainability and performance may occur.

This finding is agreed with (Abebe, 2017), who discovered that SACCOs didn't implement and practice the core discipline of loan loss reserves, which could negatively affect financial performance and lead to riskier operations.

4.1.5.2 Effective Financial Structure

The effective financing of the SACCO is the most essential component in examining the financial status of SACCOs (WOCCU, 2009).

Assets: In SACCOs, 95% of productive assets should compose of loans 70-80%, and liquid investments 10-20 %. The 5% unproductive assets should compose of fixed assets.

Liabilities: Member's deposit savings should be 70–80%, indicating that the credit union has created effective marketing strategies and is well on its way to financial independence. **Capital:** 10-20% of member share capital and 10% of institutional capital should be invested.

The researcher tried to analyze the financial performance represented by net loans, nonfinancial investment, saving deposits, external credit, share capital, and institutional capital. The findings are presented as follows.

Table 8: Effective Financial Structure of SACCOs

Name of SACCOs	PEARLS Standards					
	E ₁ .Net loans /Total asset	E ₄ . Non-financial investment (fixed assets)/Total assets	E ₅ . Saving deposits/Total asset	E ₆ . External credit/Total asset	E ₇ .Members share capita/ Total asset	E ₉ . institutional capital/ Total asset
	70-80%	Maxim. 5%	70 - 80%	Max. 5%	10 - 20%	Min 10%
Mikielmemona	62	0.2	64.2	0	14.4	8
Tekleweyni	0	0	66.34	0	16.74	15.56
Marta	94	2.19	75.84	0	14.8	2.75
Mietidiliyet	70	0.1	78.58	0	10	7.29
average	56.5	0.623	71.24	0	13.99	8.4

Source: Own Computation Audit Report of Sample SACCOs, 2022

A. Net Loan Portfolio/ Total Asset (E1)

According to Table 8 of the survey sample SACCOs, Mikielmemona SACCO has a 62 % net loan to total assets ratio, indicating no invested liquid assets. Tekleweyni SACCO net loans accounted for 0% of total assets, showing that a highly liquid asset was not operating properly and was making unproductive cash. Marta SACCO's loan to total asset ratio of 94% indicates that the loan was invested over the standard, putting SACCO's capital at risk. While Mietidiliyet SACCO seems to have a good position that meets the actual standard with 70% of its loan over its total asset. Except for Mietidiliyet SACCO, the finding shows that 75% of the sample SACCOs have serious liquidity and over liquidity problems.

B. Non-financial Investment (Fixed Assets)/Total Assets (E4)

Having more capital invested on fixed assets leads to unproductive and little profit generated which affects the sustainability and existence of the SACCOs. As a result, the entire sample of SACCOs' findings in this study suggests that fixed asset investment is less than 5% of total assets. This implies that SACCO's asset is productive and has the potential to generate profit if they can invest their money.

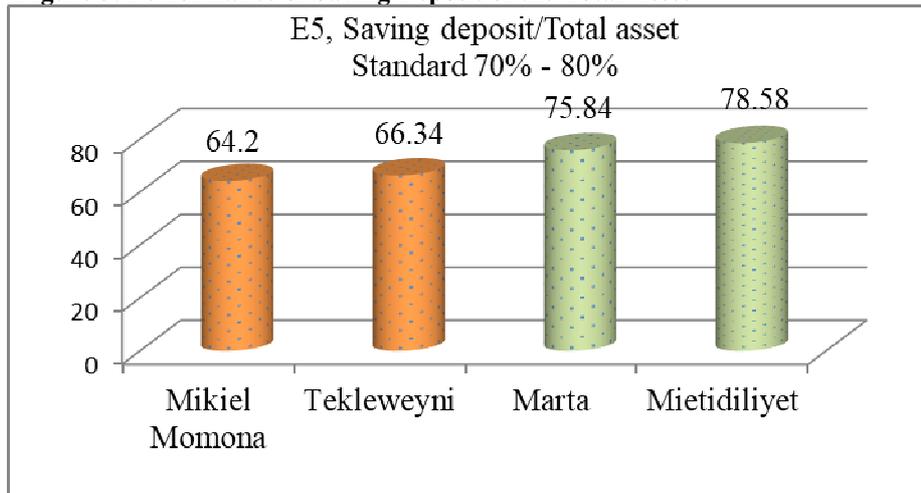
C. Saving Deposit/Total Asset (E5):

The SACCO's balance sheet should have 70-80 % of its total asset available in terms of saving deposits to access loan provisions for members.

The outcome in Table 8 shows that Mietidiliyet attained 78.58% and Marta 75.84%. Whereas Tekleweyni had 66.34%, Mikielmomona had 64.2% of saving deposits over a total asset. From this, we can ascertain that 50% of the SACCO samples (Mietidiliyet and Marta) meet the standards by having the required saving deposit to have access to savings for loan provision to members. In contrast, 50% of the sample SACCOs (Tekleweyni and Mikielmomona) attained below the standard, indicating unproductive assets.

This finding is congruent with the results of (Tirfe, 2014), who showed that SACCOs' saving deposit to total asset ratio was below the accepted standard, indicating that SACCOs had no successful marketing program to maximize loan disbursement. Figure 3 illustrates this graphically.

Figure 3: Performance of Saving Deposit of the Total Asset



Source: Own Computation Audit Report, 2022

D. External Credit /Total Asset (E6)

SACCOs shall have a maximum external credit of 5% of their total assets. Although external credits are necessary, having more than the standard is detrimental to the viability and existence of SACCOs; instead, keeping internal capital is critical.

In this case, the finding revealed that the entire sample of SACCOs has no external credit, implying that SACCOs' primary sources of finance were internal saving deposits and shares.

E. Members Share Capital /Total Asset (E7)

SACCOs must have a member's share capital of 10-20% of the total asset. Depending on the finding, the majority (75%) of SACCO's share capital meets the accepted standard across the total asset. The average ratio was determined to be 13.99%, implying that the SACCOs' capital was protected by the good performance of leverage ratios.

F. Net Institutional Capital /Total Asset (E9)

SACCOs should have a minimum of 10% institutional capital over their total assets. Having more than 10% of institutional capital is important to protect themselves against risk and expand their activities

The finding shows that Tekleweyni 15.56 % and Mikielmomona 8%, Mietidiliyet 7.29 %, and Marta 2.75 % had institutional capital. This indicates that, except for Tekleweyni SACCO, all of them were against the standard, had a lack of institutional capital, and may have difficulty expanding their activities.

4.1.5.3 Asset Quality

The surplus of non-earning assets in SACCOs hurts institutional earnings. Moreover, asset quality is examined by risk exposure in terms of delinquency rates in total loans. The desired target is to keep delinquencies below 5% and non-earning assets below 5% of total assets.

The researcher desired to know how loan delinquency and non-earning assets affected financial performance. Then, the findings are summarized below.

Table 9: Loan Delinquency & Non-earning Assets

S.N	Name of SACCOs	PEARLS standards	
		A ₁ Total Loan delinquency/ Gross loan portfolio <= 5 % (Standard)	A ₂ Non-earning assets/Total Asset Maxim. 5%
1	Mikiel Momona	0	0.04
2	Tekleweyni	0	0
3	Marta	0	2.19
4	Mietidiliyet	0	0.12
	average	0	0.6

Source: Own Computation Audit Report of SACCOs, 2022

A. Total Loan Delinquency to Total Loan Portfolio (A1)

The entire sample of SACCO data shown in this analysis found that there is (0%) delinquency, indicating that their loan portfolio is so healthy. This could be due to a strong collateral system they adopt to secure loan repayments, such as linking to compulsory savings and personal guarantees.

This finding is agreed with (Mmari & Thinyane, 2019), who discovered that SACCOs' loan delinquency was found to be below the accepted standard of 5%, with no non-repayment of loans. SACCOs had achieved better loan delinquency performance due to strict collateral systems and active management.

B. Nonearning Asset /Total asset (A2)

The maximum non-earning asset limit of 5% of the total assets should be maintained. According to this finding, the sample SACCOs Marta had 2.19 %, Mietidiliyet 0.12 %, Mikelmomona 0.04 %, and Tekleweyni 0% had non-earning assets over their total assets. We could observe that the entire sample of SACCOs met the standard, indicating that they invested less in non-earning assets and performed well.

This finding contradicts that of (Mmari & Thinyane, 2019), who found that SACCOs in Tanzania invested around 38 % of their total assets in non-earning assets, far exceeding the maximum 5% recommended standard, indicating that SACCOs had invested more than required in unproductive assets, negatively affecting their performance.

4.1.5.4 Rate of Return and Costs

SACCOs can be ranked according to their best and worst yields using rates of return. It can be analyzed how efficiently the SACCOs can allocate their productive resources into investments that create the highest yield.

The researcher desired to examine the total operating expenses and income on average of the total assets. The results are depicted below.

Table 10: Rate of Returns

S.No	Name of SACCOs	PEARLS standards	
		R 9. Total operating expenses/Average Total assets	R.12 Net income/Average Total assets
		Max 5%	Mini 10%
1	Mikiel Momona	0.08	0.05
2	Tekleweyni	0.04	0.07
3	Marta	0.01	0.13
4	Mietidiliyet	0.01	0.11
	average	0.035	0.09

Source: Own Computation From Financial Report of SACCOs, 2022

A. Total Operating Expense/Average Total Assets (R9)

One of the key reasons why many SACCOs are not profitable is their high operational costs. The ideal target for SACCOs, according to the PEARLS system, is to keep operational costs at 5% of average total assets.

As Table 10 depicts the outcomes of the study, operating expenses were 0.08 % for Mikelmomona, 0.04% for Tekleweyni, 0.01% for Marta, and 0.01% for Mietidiliyet. The finding reveals that all SACCOs had slightly lower operational expenses, incurred fewer expenses, and got results that met the standards. However, this research also reveals that extremely low operating expenses might cause SACCOs to perform poorly unless they invest at reasonable and appropriate costs that enable them to deliver quality services and expand their performance prospects.

B. Net Income/Average Total Asset (R12)

The income generated by SACCOs has never been less than 10% of total assets. This is used to determine earning potential and the ability to build institutional capital. The finding revealed that 0.13% for Marta, 0.11% for Mietidiliyet, 0.07 % for Tekleweyni, and 0.05% for Mikelmomona have net income. This suggests that the return on the asset in terms of net income is low, remaining around 0.09% for all sample SACCOs and failing to meet the minimum standard, implying that the potential to build institutional capacity is inefficient.

These findings for the rate of return (operating expense and net income) are consistent with (Abebe, 2017),

finding that efficiency in managing costs and income over total assets was met with the accepted standard of around 5% of SACCOs in Addis Ababa, Ethiopia.

4.1.5.5 Sign of Growth

Savings growth drives total asset growth, but if loan growth does not keep up with savings, the institution will have high liquidity and low returns. Growth alone isn't enough; the PEARLS system's advantage is that it examines the entire system's strengths to link growth to profitability and other key areas (WOCCU, 2009).

The researcher is desired to determine financial growth based on withdrawals, savings deposits, and net change in the total asset. It is computed below.

Table 11: Sign of Financial Growth

Name of SACCOs	PEARLS standards	
	The annual net change in withdrawal shares, savings, and deposits/Total savings and deposits (S ₇)	The annual net change in total assets/Total assets of previous year (S ₁₁)
	> Inflation	> Inflation
Mikielmemona	39.45	77.97
Tekleweyni	36.39	5.10
Marta	61.24	444.62
Mietidiliyet	40.66	34.52
average	44.44	140.6

Source: Own Computation Financial Report of SACCOs, 2022

NB. Ethiopia's Inflation rate as of March 2021, is 34.7 % (Sanchez Martin, Mulugeta, Getachew, & Wieser, 2021).

A. The Net Change in Withdrawal Savings & Shares/Total Savings Deposits (S₇)

In this regard, the finding shows Marta 61.24 %, Mietidiliyet 40.66 %, Mikielmemona 39.45 %, and Tekleweyni 36.39 %. SACCO savings deposits and shares have grown by 44.44 % on average across all samples. This indicates that the growth rate for all sample SACCOs was above the inflation rate of 34.7 % in March 2021 and met the standard.

B. The Net Change in Total Assets/Total Assets of the Previous Year(S₁₁)

Above Table 11 finding shows that Marta 444.62 %, Mietidiliyet 77.97 %, Mietidiliyet 34.52 %, and Tekleweyni 5.10 %, were attained changes on asset.

This exhibits that 75% of the sample SACCOs had asset growth highly above PEARLS standards, while Tekleweyni SACCO had asset growth below the standard. We can ascertain that most SACCOs (75%) had significant asset growth. As a result, they are in a position to expand their performance and pay dividends to their members.

4.1.6 Challenges that Hamper the Development of SACCOs

The third aim of this research is to determine the basic challenges that hamper SACCOs' development. Utilizing the five-point Likert scale this study objective attempt to identify the most significant challenges faced by SACCOs. The results are depicted below.

Table 12: Descriptive Statistics of SACCO Challenges

S.No	Challenges that Hamper SACCOs Development	N	Mean	Std. Deviation
1	Limited member saving mobilization, members' awareness of the saving culture is low. There is a waste of money on the unnecessary ceremony	214	3.85	.969
2	Lack of financial regulation hinders them in financial linkage with government and private banks and developing their performance to higher-level unions and banks.	214	4.11	.791
3	Lack of banking infrastructures like mobile banking, internet access, computerized system of accounting, checking system, and others.	214	3.58	1.039
4	A weak financial monitoring system, including accounting and auditing, in SACCOs	214	4.22	1.177
5	lack knowledge of SACCO procedures, bylaws, and regulations, they are unable to make sound decisions.	214	2.07	1.254
6	A slow rate of decision making because of the democratic nature of coops	214	1.96	1.285
7	limited amount of loans available from SACCOs	214	2.30	1.341
8	Lack of hiring available professional manpower	214	3.35	.994
9	The SACCOs are not audited in time	214	3.29	1.012

S.No	Challenges that Hamper SACCOs Development	N	Mean	Std. Deviation
10	Limited training, & education opportunities are available to the SACCO members	214	3.23	1.026
11	lack of governance, untrained leadership, and poor performance of the different SACCO committee members,	214	4.28	1.157
12	lack of adequate assistance from the government	214	2.42	1.434
	Valid N (listwise)	214		

NB (1= Strongly disagree, 2 =Disagree, 3 =Neutral, 4= Agree, 5 =Strongly agree)

Source: Field Survey, 2022

Respondents are requested to rate their degree of concern about the challenges that SACCOs confront using five Likert scale questions and analyzed with the mean values.

Table 13 summarizes the findings of this study on the challenges that affect SACCO performance.

Depending on the result the most critical challenge is the lack of governance, untrained leadership, and poor performance of the different SACCO committee members (4.28).

This finding is in line with that of (Ahmed & Rugami, 2019), who found that SACCO owners and board of directors face significant obstacles in administering their SACCOs, including poor management and committee capacity. SACCOs' performance is limited and difficult to adjust their expected outcomes.

Furthermore, the key challenges that SACCOs in the research area faced were: a weak financial monitoring system, including accounting and auditing (4.22), a lack of financial regulation, which hampered their financial linkage with government and private banks, and the development of their performance to higher-level unions and banks (4.11),

limited saving mobilization; members' awareness of the saving culture is low, and money is wasted on unnecessary ceremonials (4.11), and limited saving mobilization; members' awareness of the saving (3.23).

The government does not provide adequate support (2.42), SACCO loan amounts are limited (2.30), and lack of knowledge of SACCO procedures, bylaws, and policies (2.07) are also challenges that faced SACCOs in the study area.

5. Conclusions and Recommendations

5.1 Conclusions

SACCOs were crucial in assisting people in obtaining financial assistance but they are unable to effectively meet the demands of their members due to a lack of capability for saving and loans. SACCO's membership growth was determined to be significantly higher on average than the standard. However, since a single SACCO dominated the growth, the majority of the sample SACCOs' membership growth was deemed insignificant and below the WOCCU standard and the promotional activities of SACCO were insufficient and ineffective. This implies that there is inactive engagement and persuasion of new members at all levels. SACCO saving mobilization has increased dramatically and compulsory saving and children's savings products have also enhanced progressively. Despite the provision of different saving products, the voluntary and time deposit savings have operated poorly by the SACCO members. Members' living standards improved dramatically as a result of the loans they received.

Regarding the governance of SACCOs, it was concluded that members have enough clarity and transparency in their general assembly meetings to discuss freely and practice good governance. But, the majority of members were not trained in financial literacy or saving education, and all SACCOs lacked the required professionals. This implies that SACCO's institutional capability is weak. SACCOs' saving deposits and total assets grew tremendously and highly in line with the standard around the world.

The other financial performance indicators such as non-financial investment, external credit, members share capital, asset quality, total operating expenses, and liquidity reserves for the majority of them were found to be in line with the standard. However, the finding on the net loan portfolio was not performed within the standard. The majority of them have run into severe liquidity problems. Furthermore, the sample SACCO financial performance was found against the standard in certain financial measures, such as loan loss reserve protection, the ratio of net income, and institutional capital. We can conclude that, despite some limitations, the financial performance of most SACCOs met the standards.

The key challenges hampering SACCOs are weak governance, lack of banking infrastructures, lack of financial cooperative regulation and financial monitoring system, lack of efficient qualified manpower who leads the day-to-day performance, limited member saving mobilization and poor saving culture, lack of adequate support, and the absence of training and education.

5.2 Recommendations

The following are suggestions based on findings for boosting SACCO performance and enabling members in

acquiring finance.

1. SACCOs should diversify their products, such as voluntary and time deposit savings, to compete in the market, meet member demand, and attract more customers.
2. It is critical to give concern to financial literacy and saving education. Each SACCO member and committee must be closely involved in persuading and promoting new members by showing the benefits of saving and lending. SACCOs should also invest and allocate a budget for effective membership growth and promotion.
3. SACCOs are not generating enough income to ensure their sustainability, and they also face liquidity problems. Hence, SACCOs should involve in an effective market plan to expand loans and invest in profitable opportunities such as lending to consumers and multipurpose cooperatives.
4. SACCOs lacked proper financial records, and difficult to assist and control them. It is the mandate for the Cooperative Agency and concerned stakeholders to design and introduce a financial monitoring system guideline.

Policy Implications

5. SACCOs should be regulated by financial cooperative law to make financial linkage with other financial institutions, like government and private banks to satisfy members' financial needs. Therefore, to enhance the financial linkage and enable the operation of SACCOs, there should be financial regulation that helps SACCOs to promote, develop, and regulate like any other microfinance institution.

Area for Further Studies

6. This study is limited to a few SACCO performance indicators, future research should include other indicators that were not investigated in this paper, as well as other financial performance indicators such as profitability, financial investments, loan growth, and other PEARLS financial indicators.

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Abbreviations:

PEARLS-----Protection of assets, Effective financial structure, Asset quality, Rates of return and cost, Liquidity, and Signs of growth.

SACCOs-----Savings And Credit Co-operatives

WOCCU-----World Counsel of Credit Union

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References

- Abamagal, A. W., & Abamagal, P. W. (2019). Role and Determinants of Saving and Credit Cooperative on Financial Intermediation in Hadiya Zone, Southern Ethiopia. *Economics*, 8(4), 134-141.

- Abebe, M. (2017). Governance in Saving and Credit Associations Operating in Addis Ababa University Faculty of Business and Economics Accounting and Finance.
- Ahmed, A. F., & Rugami, M. (2019). Corporate governance and performance of savings and credit cooperative societies in Kilifi County, Kenya. *International Academic Journal of Economics and Finance*, 3(3), 61-79.
- Amina, A. (2016). The Effect of Core capital on the Financial Performance of Deposit Taking Saccos in Nairobi county. The University of Nairobi.
- Bonga, W. G., & Mlambo, N. (2016). Financial literacy improvement among women in developing nations: A case for Zimbabwe. *Quest Journals, Journal of Research in Business and Management*, 4(5), 22-31.
- Cavallo, E., & Serebrisky, T. (2016). Saving for Development: How Latin America and the Caribbean can save more and better: Springer Nature.
- Creswell, J. W. (2014). The selection of a research approach. *Research design: Qualitative, quantitative, and mixed methods approach* 3-24.
- Daniel, K. K. (2017). Assessing the impact of Co-operative education/training on co-operatives performance. *Journal of Strategy and Performance Management*, 5(1), 23.
- Dayanandan, R., & Huka, R. (2019). Determinants Of Leadership Efficiency In Cooperative Organizations!! An Investigation. *International Journal of Research in Social Sciences*, 9(2).
- de Dieu, U. J. (2019). The Contribution Of Saving And Credit Cooperatives Services On Rural Economic Development In Rwanda.
- Eton, M., BC, B., & Fabian, M. (2020). Co-operative and saving societies (SACCOS) and poverty reduction in Lango and Kigezi sub-regions of Uganda: A comparative empirical study.
- FCA. (2020). FCA (Federal Cooperative Agency) Cooperatives Statistical Report, Ethiopia.
- Feleke, A. (2018). Review on the Role of Rural Saving and Credit Cooperatives in Improving Rural Farmers 'Socio-economic Activities in Ethiopia. *Pacific International Journal*, 1(3), 116-128.
- Gebremedhin, G. M. (2016). Practices and Challenges of Rural Saving and Credit Cooperatives in Adwa Woreda. *International Journal of Science and Research*, 5 (10), 508, 511.
- Getachew, M. (2016). SACCO Business Performance and Governance Efficiency Assessment. *AGP-made, USAID, ACIDI & VOCA, pdf, Assessed in February*.
- Henock, M. S. (2019). Financial sustainability and outreach performance of saving and credit cooperatives: The case of Eastern Ethiopia. *Asia Pacific Management Review*, 24(1), 1-9.
- ICA. (1995). The international co-operative alliance statement on co-operative identity. *Review of International Co-operation*, 88(3), 3-4.
- Kamau, S. I. (2015). Effect of credit management practices on the financial performance of savings and credit cooperative societies in the Hospitality Industry in Nairobi. The University of Nairobi.
- Kinyua, J. M. (2016). Stakeholder Management Strategies and financial performance of deposit-taking SACCOs in Kenya. Jomo Kenyatta University of Agriculture and Technology.
- Kondiwa, N. (2019). An assessment of savings and credit cooperatives as a source of finance in Zimbabwe. Case study of BESACCO. Buse.
- Ksoll, C., Lilleør, H. B., Lønborg, J. H., & Rasmussen, O. D. (2016). Impact of Village Savings and Loan Associations: Evidence from a cluster-randomized trial. *Journal of Development Economics*, 120, 70-85.
- Miriti, J. M. (2014). Factors influencing financial performance of savings and credit cooperative societies. A case of Capital SACCO, Meru County, Kenya. The University of Nairobi.
- Mmari, G. A., & Thinyane, L. C. (2019). Analysis of factors influencing financial performance of savings and credit co-operative societies in Lesotho: Evidence from Maseru District. *International Journal of Financial Research*, 10(2), 121-136.
- Momanyi, O., & Njiru, A. (2016). Financial Risk Management And Performance Of Savings And Credit Co-Operative Societies In Nakuru East Sub County, Kenya. *International Journal of Research in Business Management*, 4(4), 55-66.
- Mushir, A. (2013). Socio-Economic Status of Tigrean Ethnic Immigrants, the Case of North Ethiopia. *Journal of Settlements and Spatial Planning*, 4(2), 239-247.
- Nugusse, W. Z., Van Huylenbroeck, G., & Buysse, J. (2013). Determinants of rural people to join cooperatives in Northern Ethiopia. *International Journal of Social Economics*.
- Nyamu, C. G. (2020). Effects of credit assessment determinants on credit uptake in the Agriculture financing sector in Kenya: A case of South Imenti Sub-County, Kenya. Africa Nazarene University.
- Richardson, D. C. (2009). PEARLS Monitoring System World Council of Credit Unions Toolkit Series: USA.
- Sanchez Martin, M., Mulugeta, S., Getachew, Z., & Wieser, C. (2021). Ethiopia Economic Update, No. 8.
- Takele, E. A., & Mengesha, A. H. (2018). Challenges and Prospects of Rural Saving and Credit Cooperatives in Sekota Woreda, Amhara-Ethiopia. *International Journal of Cooperative Studies*, 7(1), 14-21.
- Taro, Y. (1967). How to Calculate a Reliable Sample Size Using Taro Yamane Method.
- TBOFED. (2022). Tigray Bureau of Finance and Economic Development, GIS Department, Mekel, Ethiopia.

- TCSA. (2019). TCSA (Tigray Central Statistics Agency, Summary and Statistical Report of the Population and Housing in Tigray.
- Tirfe, A. G. (2014). Financial performance of rural saving and credit cooperatives in Tigray, Ethiopia. *Research Journal of Finance and Accounting*, 5(17), 63-74.
- Tumwine, F., Mbabazize, M., & Shukla, J. (2015). Savings and credit cooperatives (SACCOs) services terms and members economic development in Rwanda: a case study of Zigama SACCO LTD. *International Journal of Community & Cooperative Studies*, 3 (2), 1, 56.
- Van Wyk, B. (2012). Research design and methods Part I. The University of Western Cape.
- WOCCU. (2009). Prepared for the United Nations Expert Group Meeting on Cooperatives April 28–30, 2009. *New York*.
- WOCCU. (2019). World Council Of Credit Unions The Global Network of Credit Unions and Financial Cooperatives, Statistical Report.

Appendixes

Appendix A: The PEARLS Model Monitoring System Goals

PEARLS ratios	Standard excellence
Protection	
P1. Allowance for loan losses/delinquency>12 months (*)	100%
P2. Net allowance for loan losses/Delinquency of 1-12months (*)	35%
P3. Total Write-off Delinquency loans > months	100%
P4. Annual write-offs/average Loan Portfolio	Minimal
P5. Accumulated Loan Recoveries/ Accumulated loan Write-offs	100%
P6. Solvency (Net value of Assets /Total Shares and posits	>= 110%
E= Effective financial Structure	
E1. Net Loans / Total Assets (*)	70-80%
E2. Liquid Investments / Total Assets	Maximum 20%
E3. Financial Investments / Total Assets	Maximum 10%
E4. Non-Financial Investments / Total assets (*)	0%
E5. Saving Deposits /Total assets (*)	70-80%
E6.External Credit/ Total Assets (*)	Maximum 5%
E7. Member Share Capital /Total Assets (*)	10-20%
E8. Institutional Capital/ Total Assets	Minimum 10%
E9. Net Institutional Capital/ Total Assets (*)	Same as E8
A= Asset Quality	
A1. Total Loan Delinquency / Gross Loan Portfolio (*)	<=5%
A2. Non-earning Assets /Total Assets (*)	<=5%
A3.NetZero Cost Funds (Net Institutional & Transitory Capital + Non-Interest-bearing Liabilities) / Non- earning Assets	>200%
R= Rates of Return and Costs (annualized)	
R1. Net Loan Income /Average Loan portfolio	Entrepreneurial Rate
R2. Total Liquid Investment Income /Average Liquid Investments	Market Rates
R3. Total Financial Investment Income/ Average Financial Investment	Market Rates
R4. Total Non-financial investment Income/Average Non-financial Investments	>R1
R5. Total Interest Cost on Savings Deposits/ Average Savings Deposits	Market Rates >Inflation
R6.Total Interest Cost on External Credit/ Average External Credit	Market Rates
R7. Total Interest(Dividend) Cost on Shares /average Member Shares	Market Rates >=R5
R8.Total Gross Margin/ Average Total Assets	Variable Linked to R9, R11, R22,
R9.Total Operating Expenses/ Average Total Assets (*)	5%
R10.Total Loan Loss Provision Expense /Average Total Assets	Dependent on Delinquent Loans
R11. Non-recurring Income or Expense /Average Total Assets	Minimal
R12. Net Income/. Average Total Assets (*)	Linked to E9
L=Liquidity	
L1.ST Investments +Liquid Assets –ST Payables/Saving Deposits	Minimum 15%
L2.Liquidity Reserve /Savings Deposits (*)	10%
L3. None-earning liquid Assets/ Total Assets	<1
S= Sign of Growth	

PEARLS ratios	Standard excellence
S1. Growth in Loans to Members	Dependent on E1
S2. Growth in Liquid Investments	Dependent on E2
S3. Growth in Financial Investments	Dependent on E3
S4. Growth in non-financial investments	Dependent on E4
S5. growth in Savings Deposits	Dependent on E5
S6. Growth in External Credit	Dependent on E6
S7. Growth in Member Shares (*)	Dependent on E7
S8. Growth in Institutional Capital	Dependent on E8
S9. Growth in Net Institutional Capital	Dependent on E9
S10. Growth in Membership (*)	>12
S11. Growth in Total Assets (*)	>Inflation

Note: (*) shows key ratios and target goals that have been selected as minimum standards for measuring credit union/SACCOs' financial performance.

Source: (WOCCU, 2009); (Richardson, 2009)

Appendix B: The PEARLS Mentoring System Model Formula

Purpose	Account	Formula
R.9, to measure total operating expenses/Average Total assets	Total operating expenses Total assets as of current year-end Total assets of the last year-end	$\frac{a}{\frac{(b+c)}{2}}$
R.12, to measure Net income/Average Total assets	Total current withdrawals share, savings and deposits Total previous withdrawals share, savings and deposits	$\frac{a}{\frac{(b+c)}{2}}$
S.7, to measure the annual net change in withdrawals shares, savings, and deposits/Total savings and deposits	Total current withdrawals share, savings and deposits Total previous withdrawals share, savings and deposits	$\frac{(a-b)}{b} \times 100$
S.10, The annual net change in total membership /Total Membership of the previous year	Total current number of members Total previous number of members	$\frac{(a-b)}{b} \times 100$
S.11, to measure the annual net change in total assets/Total assets of the previous year	Total current assets Total previous assets	$\frac{(a-b)}{b} \times 100$

Source:(WOCCU, 2009); (Richardson, 2009)

Appendix E: Financial Statement Report, Balance Sheet

Name of SACCO	Mikielmemona	Tekleweyni	Marta	Mietidiliyet
Financial Year	2020/21	2020/21	2020/21	2020/21
Currency	Birr	birr	birr	birr
Cash on hand	313.56		41,522.71	
Cash on bank	210,559.39	147,806.15		787,563.45
A/R from members (net loan)	1,009,067.73		1,287,195.98	2,665,369
from union shares	408513.94	23,993.94		340,045
Expense Stationary	160			835
From penalty	132.18			
Reserve in union		12934		
Total current asset	1,628,744.81	184,734	1,328,718.68	3,793,812.45
Fixed Asset				
Office furniture	1700	-	7226.56	6580
Accumulative Depreciation	(1070)	-	722.65	2718
computer			23500	
Current price			6503.91	
Net Value of office furniture	630			
Total Fixed Asset	630		30003.91	3862
Total Assets	1,629,374.81	184,734	1,368,722.55	3,797,674.45
2. Liability				
Payable liability for members saving	1,239,714.42	122567.24	1,029,127	2,984,278.93

Liability for government tax	17413.5	1665.57		
Payable liability for rent house	3828			
For members participation payable for members	2599.43	806.49		
Payable for children			2768.74	
Dividend payable to members			1400	
Payable for auditor			83,326.06	
Total Liability	1,263,555.35	125039.306	1,120,121.80	2,984,278.93
3. Capital				
Share	234,361.14	30932	201,123	384,367.96
Reserving fund (a)	82389.035	20147.152	37477	139,498.61
Profit not allocated (b)	48865.635	8612.26		289267.14
total institutional capital (a+b)	131254.67	28759.412	37477	428,765.75
Excess At inventory of cash	205.65	2.23		261.81
Total Capital	365,821.46	59,693.642	238,600	813,395.52
Total Liability and Capital	1,629,376.81	184,732.948	1,358,722.55	3,797,674.45

Source: Own Computation from SACCO audit report, 2022

Appendix F: Income Statement

Name of SACCO	Mikielmemona	Tekleweyni	Marta	Mietidiliyet
Financial Year	2020/21	2020/21	2020/21	2020/21
Currency	birr	birr	birr	birr
Income from members loan interest	54,010.43	1004.09	85203.58	254,628
Income from passbook sales	60	-	1360	2491.96
Income from penalty	1270	204	17805.13	7393
Registration income	150		5540	2440
Income from bank interest	15,565.9		7454.10	122,759.092
Income from special revenue		6864	-	778.69
Other income			34.90	
Total Revenue	71,126.33	19,214.9	117,397.71	390,491.282
Expense				
The expense of buying a passbook			2,175	
For stationery	350	120	401	5749.9
For general assembly recreation			1,285	990
Bank service charge	798.28	591.57	372.70	5988.23
For conducting audit			7,000	
Cumulative depreciation	170		722.65	657
For salary		6200	-	23,255
For rent house				5400
For transport				50
Total expense	1318.28	6911.57	11,956.35	42,091.13
Net profit	69,808.05	12303.33	105,441.36	348,400.15

Source: Computed from SACCOs audit report, 2022

Appendix G: Withdrawal Shares, Savings Deposits, and Financial Performance

Year	2016				2017				2018			
	Name of SACCO	Mikielmemona	Tekleweyni	Marta	Mietidiliyet	Mikiel memona	Tekleweyni	Marta	Mietidiliyet	Mikiel memona	Tekleweyni	Marta
Payable liability for members saving (saving deposit)	465,630	55,822	295,630	846,940	532,620.5	73,782	379,456	1,022,645	708,019	82,623.4	452,314.5	1,523,527
Total	465,630	55,822	295,630	846,940	532,620.5	73,782	379,456	1,022,645	708,019	82,623.4	452,314.5	1,523,527

Source: Computed from SACCOs financial records, 2022

Year	2019				2020			
	Name of SACCO	Mikielmemona	Tekleweyni	Marta	Mietidiliyet	Mikielmemona	Tekleweyni	Marta
Payable liability for members saving (saving deposit)	915,513.26	122,567.24	719,990	2,098,527	1,239,714.4	175,764.30	1,029,127	3,030,228.93
Payable for children		395		42,950			1400	
share	141,528.20	28,584	43,867	253,381	234,361.14	30932	201,123	384,367.96
Receivable loan					1,009,067.73		1,287,195.98	2,665,369
Total	1,057,041.46	151,546.24	763,857	2,394,858	1,474,075.5	106,696.3	1,231,65	6,034,015.89

Source: Computed from SACCOs financial records, 2022