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Factors Affect Financial Performance of Savings and Credit Co-Operative Societies During Covid 19 Pandemic in Dodoma Region

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ABSTRACT: *The objective of the study was to assess factors affect the financial performance of the Savings and Credit Cooperative Societies operating in Dodoma Tanzania. The quantitative method was used to analyse data. The descriptive survey was used whereas systematic and purposive sampling techniques were used to secure 63 respondents. Survey, and documentary review were used to collect data meanwhile descriptive and regressions analysis were used in data analysis. There study was guided by Resource Dependence Theory (RDT), and Cash Conversion Cycle Theory. The results revealed that the overall model was statistically significant since (Prob > chi2=0.000). The model's independent variables explained almost 63.8% of the variation in the return on asset of SACCOS in Dodoma. The following explanatory variables (such like interest rate, loan default and drop out of the members**)** were statistically significant influencing the return on asset for SACCOS selected from Dodoma Tanzania. Researcher recommended SACCOS should put more emphasis on online supervision and self-regulation in periods of pandemic, and considered it as one of the strategies to help the viability of the sector. Cooperative Audit and Supervision Corporation should opt to use off-site audit under hygienic environment to curb the spread of the virus.*

KEY WORDS: *COVID 19 pandemic, SACCOs, financial performance*

INTRODUCTION

Performance is defined as outcomes, end results and achievement; whether be negative or positive arising out of the activities carried out by an organization (Guest, Michie, Conway & Sheehan, 2003). The performance of the firm is evaluated in three dimensions which are the productivity or efficiency of the firm, profitability dimension and market premium (Abummar, 2019). Financial performance measures how well a firm uses its assets to generate revenue from its primary mode of business. The essence of financial performance measurement is to provide the organization with the maximum

return on the capital employed in the business (Ngui, 2010). PEARLS ratios are used to evaluate and monitor the financial stability of credit unions within the World Council of Credit Unions (WOCCU). PEARLS measures key areas of Credit Union operations: Protection, Effective financial structure, Asset quality, Rates of return and cost, Liquidity and Signs of growth. These ratios can be computed directly using financial statement information. Statement of Financial position and income statement items are used to compute ratios to analyze financial statements of the financial institutions.

Financial performance of SACCOs can be calculated using key financial ratios and other measures for a certain period. The period can be ranging from the past three to five years. Ratios can be compared year over year to measure progress and performance. Ratios are a comparison of two or more elements of the data for the set period and are usually presented in percentages (Ahmad et al, 2011). Then the law and regulations governed SACCOS in Tanzania have adopted those PEARLS Ratios to Measure the performance of Savings and Credit Societies (SACCOS) as it has stipulated on Microfinance Act No. 10 of 2018 and The Microfinance (Savings and Credit Cooperative Societies) Regulations, 2019 and Cooperative Societies Act (No.6 of 2013).

In global perspective financial performance of SACCOs is monitored by WOCCU that is in partnership with Credit unions created PEARLS in the late 1980s. WOCCU has refined and adjusted PEARLS over the past decade. WOCCU uses PEARLS with all credit unions participating in its technical assistance programs around the world.. According to (WOCCU, 2008) the rural communities were deemed nonbank able owing to very small, seasonal flows of cash and shortages of human resources. Since this period there has been a rapid growth in the cooperative movement worldwide premised upon the organizational methods of Raiffeisen.

The rapid growth in the cooperative movement worldwide go in hands with their Financial Performance Many different financial ratios and "rules of thumb" have been promoted for financial institutions worldwide, but few have been consolidated into an evaluation program that is capable of measuring both the individual components and the system as a whole. Since 1990, the World Council of Credit Unions has been using a set of financial ratios known as "PEARLS." Each letter of the word PEARLS measures key areas of Credit Union operations: **P**rotection, **E**ffective financial structure, **A**sset quality, **R**ates of return and cost, **L**iquidity and **S**igns of growth. "PEARLS" provides credit union managers with concise, easy-to-read reports that reveal institutional weaknesses and trends. The PEARLS Monitoring System includes, Ranking tool for comparing credit unions, Business planning tool to create strategic plans that help improve performance, Customizable labels that can be adapted to suit local language requirements. The analysis from the IMF indicates that co-operative banks in developed countries tend to be more stable than commercial banks, especially during financial crisis, as their investment patterns tend to be less speculative and returns are therefore less volatile as a result of stable financial performance (Hesse & Cihak, 2007).

Financial Performance is a measure of how well firm used assets from its primary mode of business to generate revenues. It measures the financial health of an organization. The common indicators of financial performance are; profits, return on investment, return on assets, value added and margins

among others. Financial performance guides management on the strategies and policies to adopt and improve sustainability of the organization (Almazari,2011). A good financial Performance for a credit union in developed countries tends to have a supply of funding that is more stable and less responsive to monetary policy and market rates. Whereas, for any Co-operative financial performance also tends to determine the financial services to offer to its members, that is comparatively lower fees than other types of commercial banks, which not only helps to increase access of the poor to credit, but also reduces the cost of remittance transfers (Schenk, 2007: WOCCU, 2009).

In sub-Sahara Africa, SACCOs grew by an average of 31.9 per cent, in the year 2008, which is comparable to average saving growth rates for previous years. It was also noted that the growth in new membership has been steady. Loans grew at an average of 12 per cent, which is lower than growth rates of previous years (WOCCU, 2009). For instance, in 2007 loans issued by SACCOs grew by 35.3 per cent; in 2006 loans grew by 21.2 per cent. This suggests that SACCOs across Africa may be exercising caution in responding to the loan requests of members. Indeed, it was reported that some SACCOs have been scaling down loans associated with export commodities in order to protect themselves from potential loss (WOCCU, 2009). Thus the introduction of PEARLS by WOCCU are primarily a management tool for a SACCOS, can also be used as a supervisory tool by regulators. As a management tool, PEARLS signals problems to managers before the problems become detrimental. For boards of directors, PEARLS provides a tool to monitor management's progress toward financial goals. For regulators, PEARLS offers indicators and standards to supervise the performance of Savings and Credit Cooperatives Societies (SACCOS) at large financial performance. In order SACCOs to provide two essential banking services through front office and back-office service activities, referred to as FOSA and BOSA respectively (Mutero, 2007). Such deposit taking activities have provided a significant source of credit for SACCOs to channel members' savings into loans Since the SACCOs utilize savings and credit mechanisms to accumulate deposits and provide loans to their members. Therefore; financial performance of a SACCO is measured through the ability of the institution to meet the financial demands of its members taking consideration of economic status of the members. SACCO is expected to give better and cheaper services to its members as compared to the main stream banks because SACCO understands the needs of the members because they are the owners of the SACCO (Wanyama, 2008) hence the ability of Savings and Credit Cooperatives Societies (SACCOS) to provide banking services enables African households to collectively save and promote access to inclusive financing regardless of their individual incomes. The development of Savings and Credit Cooperatives Societies (SACCOS) throughout Sub-Saharan Africa is arresting despite their regional prevalence and the way they adhered PEARS Ratios for measuring the institutional financial performance.

In Tanzania financial sector comprises of service providers from a diverse spectrum, including commercial banks, microfinance institutions and Savings and Credit Co-Operative Societies (SACCOS). SACCOS are democratic, member driven organizations which provide loan and saving products to their members. Members often share a common bond by working for the same employer, belonging to the same church, working at the same market, or living in the same community. Some SACCOS are also for the general public. Even employees of large corporate banks have formed their

own SACCOS, such as the CRDB Workers SACCOS. SACCOS are directly serving approximately two million people in Tanzania, most of whom are from the low-income population. The SACCO funds originate from members` saving deposits (Shrestha 2009). SACCO members registered high increases of incomes, assets, food consumption, education expenditure, improved housing and decline of health expenditures compared to nonmembers (Sharma et al., 2005). However, many cooperatives and SACCOs in Tanzania face problems of poor management, misappropriation, lack of working capital, poor business practice and high loan delinquency rates (Maghimbi 2010; Mwakajumulo 2011). To ensure the financial performance of Savings and Credit Cooperatives Societies (SACCOS) in Tanzania, the government has enacted laws and regulations to govern SACCOS, and have adopted the PEARLS Ratios to Monitoring and Measure the performance of Savings and Credit Societies (SACCOS) as it has stipulated on Microfinance Act No. 10 of 2018 and The Microfinance (Savings and Credit Cooperative Societies) Regulations, 2019 and Cooperative Societies Act (No.6 of 2013).

Statement of the Problem

In Tanzania Cooperatives societies have constituted part of the core variables in the political philosophy and development policies which have guided the development in the country. The saving and Credit Cooperative Societies (SACCOS) play a vital role in the growth of economy in Tanzania. The core business of saving and credit Cooperative Societies (SACCOS) is mobilization of savings from its members and issue credits to them. Actually, the savings and credit co-operative societies are important engines of the economic development in most parts of the world, in Tanzania for instance soon after independence in 1961, the government realized the need to use SACCOs to solve some of the problems of peasants and workers (Maseko, 2013). It is understood that cooperatives provide a model for pooling resources to people who have limited means to achieve commonly identified development needs of the respective people. According to Maseko,(2013), only forty percent (40%) of Tanzania's total population get financial services from the banks, thus it is important to have SACCOs which have strong financial performance or rather perform to the required standards so as to fill the gap of the required financial services needs.

However, (Kaleshu, 2006) argues that in Tanzania context, we have experienced co-operative institutions like SACCOs formed, growing, thriving and then collapsing without providing the intended services to the society. Likewise, the current situation where the operations were under pressure of COVID 19 pandemic that evaded the country has aggravated the operational trends of many SACCOs in Tanzania leave much to be desired. The unpleasant financial performances tend to predict the likelihood of SACCOs failing to meet the purposes for which they were established. Moreover empirical evidence from various studies shows that there is correlation between covid-19 pandemic with financial performance and economy of households and other business entity. According to UNDP 2020 report about the impact of COVID-19 has had on the banking and financial services sector in Tanzania. Most of researches conducted in this field were focused on covid-19 pandemic in health and other economic sectors, hence provide a room to study in saving and Credit Cooperative Society (SACCOS). Therefore researchers have proposed a study to assess the effects of COVID-19 on the financial performance of SACCOs in Tanzania.

The purpose of the study was to assess the effects of COVID 19 Pandemic on financial performance of SACCOs in Dodoma region. Specifically the study intended to examine the effect of interest rate on financial performance of SACCOs during COVID 19 Pandemic; investigate the effect of loan default on financial performance of SACCOs during COVID 19 Pandemic and examine the impact of drop out of members on financial performance of SACCOs during COVID 19 Pandemic. The study is significant in that it provided means of enhancing cooperative societies and came out with the suggested interventions for improvements in the area of government, financial institutions, Microfinance such as SACCOs as well as identifying some of the gaps in our knowledge related to improvement of financial performance of Saving and Credit Cooperative Societies (SACCOS) in Tanzania. Furthermore, the study is expected to add some knowledge in the body of knowledge pertaining to SACCOs. The study also rendered a way forward for the government to prepare policies SACCOS.

LITERATURE REVIEW

Savings and Credit Cooperative Society means a registered society whose principal objectives are to encourage thrift among its members and to create a source of credit to its members (URT, 2013). Financial Performance measures how well a firm uses its assets to generate revenue from its primary mode of business. The essence of financial performance measurement is to provide the organization with the maximum return on the capital employed in the business (Ngui, 2010). The financial performance of a SACCO is measured through the ability of the institution to meet the financial demands of its members taking consideration of economic status of the members. SACCO is expected to give better and cheaper services to its members as compared to the main stream banks since SACCO understands the needs of the members because they are the owners of the SACCO (Wanyama, 2008).In some instances financial performance is measured by the use of financial statements. Financial statements are the business documents that companies use to report the results of their activities to various users, groups, which include managers, investors, creditors and regularly agencies. In turn, these parties use the reported information to make a variety of decision, such as whether to invest in or loan money to the company (Charles, Walter & Thomas, 2012). The main financial statements include the comprehensive Income statements, Statement of financial position, Cash Flow Statement, Statement of Equity Changes.Corona virus disease 2019 (COVID-19) is defined as illness caused by a novel corona virus now called severe acute respiratory syndrome corona virus 2 (SARS-CoV-2; formerly called 2019-nCoV), which was first identified amid an outbreak of respiratory illness cases in Wuhan City, Hubei Province, China. It was initially reported to the WHO on December 31, 2019. On January 30, 2020, the WHO declared the COVID-19 outbreak a global health emergency. On March 11, 2020, the WHO declared COVID-19 a global pandemic, its first such designation since declaring H1N1 influenza a pandemic in 2009.

Theoretical Review

According to Bhattacherjee, (2012) a theory is a set of systematically inter-related constructs and propositions intended to explain and predict a phenomenon or behavior of interest, within certain

boundary conditions and assumptions. Essentially, a theory is a systemic collection of related theoretical propositions. While propositions generally connect two or three constructs, theories represent a *system* of multiple constructs and propositions. Hence, theories can be substantially more complex and abstract and of a larger scope than propositions or hypotheses. However, the foundation of the study is laid in the two theories explained below which are Resource Dependence Theory (RDT) and Cash Conversion cycle theory

Resource Dependence Theory (RDT)

Resource Dependence Theory (RDT) provides inter-firm governance as a strategic response to conditions of uncertainty and dependence between exchange partners (Pfeffer and Salanchik 1978). The theory further entails that organizational actions are primarily driven by resource considerations, and that resource complementarities among firms can, to a large extent, explain the relationships and interactions among them. The theory assumes that variations in uncertainties arising in the organization and business environment are responsible for both internal power distribution between organizational entities and external power distribution between market participants (Hillman et al., 2009). In co-operative performance under uncertainty condition of COVID-19 pandemic, resources mismatch creates dependencies among cooperatives and other participants in the cooperative sector. Thus, the theory provides an indication of the extent to which a firm in business environment needs to maintain information and material resources exchange with other fellow partners in business environment as the future is uncertain (Gulati and Sytch, 2007). As the COVID 19 outbreak continues to spread worldwide and crippling both internal and external business environment, thus the interdependence among participants is increasingly becoming vital for survival through sharing resources among cooperatives and other stakeholders where possible.

Cash Conversion Cycle Theory

According to (Gitman, 1974), the bigger the conversion cycle, the better the financial performance. Cash conversion cycle is very important in any business entity since the business entity can know the measure of cash required. Cash conversion cycle theory centers significantly around the timeframe the organization takes to secure the raw material and the cash inflow so as to operate effectively. Each individual business an element needs to examine its cash conversion cycle this will empower them to make any enhancement it will influence financial performance. The shorter the cycle, it suggests that the business entities require couple of assets to work. At the point when the cash conversion cycle is short, it suggests that business entities require couple of assets to work. At the point when money changes cycle is longer it suggests the business development is high which means higher benefits hence fourth enhanced financial performance (Gitman, 1974).

Therefore, in order for Savings and Credit Cooperative Societies (SACCOS) to have a better financial performance in terms of cash, needs Effective liquidity management as is important skill for SACCOS to shifts its financial structure from member shares to more volatile deposit savings. Liquidity is traditionally viewed in terms of cash available to lend a variable exclusively controlled by the credit union. With the introduction of withdraw able savings deposits, the concept of liquidity is radically changed. Liquidity now refers to the cash needed for withdrawals a variable the credit union can no

longer control. The maintenance of adequate liquidity reserves is essential to sound, financial management in the WOCCU credit union model. As this study adopt the PEARLS ratio of Liquidity Reserves as an indicator measures the financial performance of SACCOS in percentage of savings deposits invested as liquid assets in either a National Association or a commercial bank. The "ideal" target is to maintain a minimum of 15% (David, 2009).

Empirical Review

The effect of interest rate on financial performance of SACCOs during COVID-19 Pandemic
Interest rate is the amount of interest paid per unit of time expressed as a percentage of the amount borrowed (Anyanwu, 1997). High interest charged on loans increases the cost of loan to the borrower hence discouraging borrowing. Low interest charged on loans reduces the SACCOs profits. Therefore, for the interests of both the borrower and the SACCO financial performance to be met, interest rates should be fixed appropriately. According to Bulletin, 2020 found that Interest rates on loans and deposits by banks were reduced in response to the BOTs measures to limit and minimize the effects of COVID-19. The overall lending rate decreased from an average of 16.81% in the preceding quarter to 16.75% by June 2020. In addition, the rate of deposit eased to an average of 6.75% from 6.86% in the preceding quarter.

While the threat of potential recession in Africa is vivid mainly through the international trade links, very few countries have the capacity to implement stimulus packages to cushion their economies form such an impending COVID-19 global recession. Efforts in this regard are recorded in literature (Ozili & Arun, 2020) and the press mainly for Africa's big economies but most importantly, these do cover all the countries that have been badly hit by the infections. Most of the adopted measures include cutting interest rates and the provision of liquidity assistance to cushion households and firms. For countries with better fiscal policy space, they have also increased their social protection expenditure to effectively cushion the poorest households during the lockdowns. For example, South Africa has set aside about US$ 160 million to cushion vulnerable businesses, about US$ 8.4 billion for the unemployment insurance fund, tax subsidies for at least 75,000 small and medium enterprises with a turnover of less than US$2.7 million, among other relevant fiscal and monetary policies. Senegal has established a Euro 2.1 million response and solidarity fund "Force COVID-19" as well as a Euro 97.6 million contingency plan to cushion herself from the impacts of COVID-19.7 Furthermore, Egypt, Tunisia and Morocco are set to inject US$6.4 billion, US$0.9 billion and US$ 1 billion respectively into their economies as part of their economic stimulus packages for enhancing liquidity during COVID-19 (UNDP, 2020).

The effect of loan defaulters on financial performance of SACCOs before and after COVID 19
Loan default as a concept has different meanings depending on the microfinance policies. (Yegon et al., 2013) define loan default as the inability of a person to repay the loan when due. According to Consultative Group to Assist the Poor (CGAP) as reported in (Muthoni, 2016), loan default occurs when a loan payment is late. And, according to (Moti et al., 2012) loan default also called credit risk is a loss incurred as a result of the inability of a borrower to make payments as promised. Defaulting

on payment is a serious offence and should be avoided at all cost. Most of the time defaulting on payments is temporary in nature caused by client's loss of jobs, a temporary extra expenditure that left no money to make the pay or prolonged illness which may cause the client financial distress or keep him in hospital for few months. The majority of the loans that go towards small borrowers often are backed by salaries and reduction in wages or termination of contracts will likely leave a number of banks exposed. The most at-risk group, however, is the informal sectors (mostly women) that are heavily reliant on microfinance (SACCOs and microfinance banks). Because of the challenges faced by the informal sector operators as a result of aversive measures by the Government or individuals, repayments are likely to fall behind schedule leaving most microfinance institutions at risk in the medium and long terms (UNDP REPORT, 2020). This is likely to increase the already very high cost of credit for a group that has no viable alternatives from microfinance. In very rare cases people default because of permanent failure or sudden death of individual who wasn't insured or did not have enough resources left for his or her family. Temporary causes can be managed through close supervision and monitoring and evaluating the projects financed by the loan. Proper training of loan applicant is necessary before loan disbursement. In developed countries like Germany loan default is not frequent because of the mechanism they use to control and manage loan default. Loan defaults have caused a lot of nonperforming assets (NPAs) in SACCOs and other financial institutions in India. Banks especially those in public sector are in a mess owing to the mounting nonperforming assets. Public sector banks hold 95% of these defaulting loan accounts. The net nonperforming assets of the 26 public sector banks in India rose to 2.02 percent during the year 2012-2013 from the 1.53 in the previous year. That means loan worth big amounts of money are at the risk of default (India Weekly Journal, 2014).

According to UNDP, 2020 report, which assess the impact of COVID 19 in Tanzania and found that the closure of borders and lockdowns in countries where imports and exports originate, travel bans and social distancing were likely to hinder credit growth. This would severely affect businesses due to a reduced flow of credit facilities. Ultimately, customers will likely fail to service their loans because of the slowdown or total collapse of their businesses. As a result, Non-Performing Loans (NPLs) would increase beyond the Bank of Tanzania's target of 5% by December 2020.Furthermore, the UNDP Impact Assessment stated that it was likely that banks would face liquidity issues because of customers finding it difficult to repay outstanding loans, and a general decline of deposits from customers.

A number of finance institutions have been attributed to have managerial failures because of their inability to arrest the rising non-performing assets. A number of business entities have been lining up for restructuring their debt to escape bank action on nonpayment. In restructuring, the terms of the loan are eased up and borrowers get more time to get his house in order. SACCOs will also be expected to make adequate provision for loan losses as done by the commercial banks and other financial institutions (SASRA, 2012). According to Bulletin, (2020) found that the ratio of Non-Performing Loans (NPLs) to gross loans rose to 11% in April 2020 compared to 10.7% in June 2019, hence a deterioration of the quality of banks' assets. This was largely caused by the slowdown of business due to COVID-19.

The impact of members drop out on financial performance of SACCOs during COVID 19 pandemic

A member of SACCOS is a person who belongs to the SACCOS and paying the required membership fees in SACCOS and filling the membership form voluntarily. This feature makes a SACCOS to be an association of people who have come together with common goal geared at improving their livelihood economically (Sacco's operations report, 2006). SACCO's member pays entrance fees, purchases share and makes a minimum deposit but also members may at any time withdraw from the society by written notice and should be paid the shares and deposit that he /she own. The SACCOS funds derive from members` saving deposits (Shrestha, 2009). Therefore, if there is large number of members withdraw the capital will decrease hence the financial performance of SACCOS will be affected. However, many co-operatives and SACCOs in Tanzania face problems of poor management, embezzlement, lack of working capital, poor business practice and high loan delinquency rates (Maghimbi 2010; Mwakajumulo 2011).

METHODOLOGY

The study adopted a descriptive survey design, to examine the effect of COVID 19 Pandemic on the financial performance of Savings and Credit Cooperative Societies operating in Dodoma Tanzania. The study adopted a quantitative approach due to the nature of the study, where most of the information was taken from the financial statements. The quantitative approach in most cases engage on generation of data in quantitative form which can be subjected to thorough quantitative analysis in a prescribed and rigid way(Kothari,2004). However, Dawson (2002), provides that there are weaknesses and strengths in both quantitative and qualitative approaches and none is superior to another. Systematic and purposive sampling techniques were used to select respondents from board members and members of the SACCOS in Dodoma region. Responses were collected from sixty three (63) respondents from their respective SACCOS in Dodoma. These were asked to give their views on the effects of COVID 19 Pandemic on financial performance of SACCOS in Tanzania.The study used questionnaires as primary data collection method, and documentary review. The questionnaire design was pre-tested and redesigned through personal interviews with board members from the four Savings and Credit Cooperative Societies by undertaking the pilot study work (Aaker et al, 2001).

Then the reliability of the questionnaire was tested using the Cronbach's alpha correlation coefficient with the aid of Statistical Package for Social Sciences (SPSS) software. The results of the reliability test produced an overall Cronbach Alpha correlation coefficient of 0.726 .The rule of thumb is for a newly developed questionnaire a coefficient of 0.7 is recommended, therefore 0.726 was considered adequate for this study. The internal consistency reliability is considered higher when the Cronbach's alpha coefficient is closer to 1,(Sekaran, 2003)**.**

Data Analysis Techniques

The study variables and measurement procedures were as follows; the independent variable is COVID 19 Pandemic measured by interest rate, drop out of SACCOS members, Loan defaults, and intermediating variable measured by adherence Cooperative laws and regulations, while the

dependent variables is the financial performance of Savings and Credit Cooperative Societies operating in Dodoma Tanzania, measured by liquidity, assets quality, Effective financial structure, rate of returns and signs of growth. The researcher used quantitative and qualitative analysis techniques to analyses data. Stata software was used to analyse quantitative data, while Content analysis technique was used for qualitative data, analysis. The analysis of data done by using correlation performed to assess associations and effects of the selected variables on the financial performance of SACCOS. Linear Regression analysis was performed to examine the effects of COVID 19 Pandemic on the financial performance of SACCOS in Dodoma Tanzania.

The model setting

Multiple regression models

$y = Y_0 + Y_1X_{\text{interest rate}} + Y_2X_{\text{loan defaults}} + Y_3X_{\text{drop out of members}} + B$

Where y = dependent variable of regression; Y_0 = Slope of the regression; X_1 = interest rate X_2 = loan defaults; X_3 = drop out of members and B = Constant

. Descriptive statistics which give the shape of the data was used and inferential statistics analysis by the use of multiple linear regression model of analysis (Kothari, 2004).

FINDINGS AND ANALYSIS

The findings and analysis covered the factors affect financial performance of Savings and Credit Cooperative Societies, in Dodoma Tanzania during COVID 19 pandemic. Members from boards and different committees were put under scrutiny so as to collect relevant information for this particular study. However discussions of the findings centered on the following sub topics, and where need be supplementary information may be used to strengthen the study.

(i) The Influence of interest rate on financial performance of SACCOs in the era of COVID 19 Pandemic;
(ii) The effect of loan default on financial performance of SACCOs in the era of COVID 19 Pandemic and
(iii) The impact of drop out of members on financial performance of SACCOs during COVID 19 Pandemic.

Demographic characteristics

The study revealed that 54% of members from selected sample SACCOs are affiliated to the SACCOs, only 11% of supervisory committee is affiliated with SACCOs. This implies that, good numbers of members of SACCOs are affiliated with SACCOs unlike the management personnel (Supervisory committee (11%), and Board member 13%).Further, the results revealed that, majority (35%) of the respondents have working experience of 4 to 6 years which indicated that, they are experienced enough to the issues related to financial performance of SACCOs also be part of the experience of the effect of interest rate, loan default and drop out of members and their implications on financial performance of SACCOs during COVID 19 pandemic **.**Moreover, most of the respondents (48%) of the selected SACCOs are those with a higher level of education of which they were able to attend

college education while 44% had secondary school education and unlike to 8% of respondents who attained only primary education level. This implies that, majority of respondents are knowledgeable about the subject matter on hand, hence makes easier for the researcher to access required information for the study. Refer table 4.1 appended herewith

Descriptive Statistics

The descriptive statistics results include the minimum and maximum of each variable as well as the mean and the standard deviation of each variable as revealed in table 4.2 appended. The interest rate normally indicates the cost of borrowing or lends money to someone. The interest rate is expressed in term of percentage. The study revealed interest rate average was 14.029%, with a maximum of 15.500% and a minimum of 14.1%. The standard deviation was 1.518, indicating that the size of the interest rate among the selected SACCOs in this study varied insignificantly. Therefore, this implies that the interest rate is almost the same in all SACCOs. "Unless otherwise directed by the general meeting, the Board may set the interest rates, fees and penalties for loan which shall be reviewed from time to time." Microfinance Regulation (SACCOS) of 2019 allow SACCOS to set the Sustainable Interest rate for them which may help SACCOS to maintain the Interest Rate that generate the sufficient revenue from loan to members as core activities so as to meet the operational cost for that particular SACCOS.However, the study revealed that the size of Interest rate for selected SACCOS varied insignificantly due to nature of operational costs which were the same and some of them were directly proportional to the income generated as the result the sustainable interest rate tends to be of slight difference as the results of this study depicted in Table 4.2.appended. In addition to interest charged on loans, it was found that SACCOS may charge members reasonable expenses in connection with making, closing, disbursing, extending, collecting or renewing of loans. A SACCOS may also assess charges to members, in accordance with the bylaws, for failure to repay loans in the agreed-upon manner (WOCCU 2015)

The term "Loan default" refers to the event where a borrower quits making the necessary loan repayments schedule. The Loan default average was 0.031, with a maximum of 0.048 and a minimum of 0.012. The standard deviation was 0.021, indicating that the Loan default in this study varied significantly. From PEARLS ratios, the delinquency ratio due to loan default is the most important measurement of institutional weakness of SACCOS. If delinquency is high, it usually affects all other key areas of credit union operations. By using the PEARLS ratio formula to accurately measure delinquency, Savings and Credit Cooperative Societies (SACCOS) are properly informed of the severity of the situation before a crisis develops. The ideal goal is to maintain the delinquency rate below 5% of total loans outstanding. As it is directed by prudential standards for PEARS Ratio by WOCCU and adopted by United Republic of Tanzania Microfinance Act of 2018 and its Regulations of 2019.Therefore, according to results it was revealed for the data collected on loan default is well maintained from the Sample selected since the maximum rate was 0.048 equivalent to 4.8% with average of 3.1% which are all less than ideal prudential ratio for loan default.

Drop out of the members refers to the action where by some of the members of the SACCOs decide to withdraw themselves from the SACCOs as the one of the members of the SACCOs. The findings

revealed that on average 2 members of SACCOS drop out in SACCOS in one year. The minimum numbers of drop out 0 while the maximum number 4. It was further revealed that the overall variation is 2.378 which implied that there is big gap or variation in terms of number of the member drop out in SACCOS.In this case the SACCOS through their Board Member should create succession plans for both Members and management that is to ensure the continued existence of the Savings and Credit Cooperative Societies (SACCOS). The Drop out of Members leads to loss of partial members that could be involved in SACCOS' activities so as to enhance maximization of Return on Asset (ROA). The drop out of members led to lack of competent board members or supervisory committee which can devastate to a Savings and Credit Cooperative Societies (SACCOS). Often, considerable time is required for a new member to become familiar with the Savings and Credit Cooperative Societies (SACCOS) operations. This lag creates a serious competitive disadvantage for the institution, which may possibly affect the way the Savings and Credit Cooperative Societies (SACCOS) serves its members since the study revealed that the overall variation is 2.378 which implies that there is big gap or variation in term of number of the member drop out in selected SACCOS.

The study investigated on the return on Asset variavble,and it was revealed that there is the division of the company's net income by its average shareholders' asset (ROA). ROA averaged 3.829, with a maximum of 8.53 and a minimum of 2. The standard deviation was 2.388, indicating that return on asset varies greatly among the SACCOS in this sample. The size of loan to members relative to total asset was positive and highly significant predictor of performance, confirming a prior premise that loan is the most productive asset of any Savings and Credit Societies (SACCOS). High growth in assets and loan to members is related to high financial performance.

Diagnostic check of Model variables

Before running the model, the study checked on stationarity and normality assumptions to determine whether the data were normally distributed and stationarity at their level form. For example the study investigated the association between the factors or variables by using pairwise correlation. The pairwise correlation was used to determine correlation from a single observation. The correlation analysis is employed to determine the strength and directional relationship between independent variables and dependent variables and also serves as the way to detect the presence of multicollinearity if the coefficient of correlation between independent variables is at least 0.8 (Gujarati, 2012). The study revealed that the Interest rate is statistically significant association with loan default, drop out of member, and return on asset since this pairwise correlation depicts the p-value less than 0.05 level of significance. **Refer table 4.3** appended. It was further revealed as in table 4.2 that there is a weak negative association between Interest rate and Loan default ($p\text{-value}<0.05$, $r = -0.215$). However, for the case of drop out of member, there was a strong positive correlation with Interest rate ($p\text{-value}<0.05$, $r = 0.698$). Moreover, the findings depicted that there is no strong positive or negative correlation above 0.8 for the case of independent variables this implies that there is no the presence of multicollinearity. Moreover the multicollinearity test using the variance inflation factor was conducted to examine to see if independent variables influence one another, and the results revealed that there is no problem with multicollinearity in the data, as the mean VIF is 2.93, which is less than 10. The rule of thumb is that if a variable's VIF is larger than 10, it indicates that there is a

multicollinearity concern. As a result, **Table 4.4** reveals that there is no problem with multicollinearity. The study investigated on whether the model is suffering from autocorrelation or not, since the null is hypothesis is accepted then the model is not suffering from an autocorrelation problem because the P-value > 0.05.Refer to **table 4.5** A skewness/Kurtosis test for normality was performed and the data are said to be normally distributed if their probability is greater than 0.05, and it was noted that that all the variables were normally distributed since the p-value for all the variables were greater than 0.05 level of significance. This implies that the error term obtained from these variables is pure random due to the one-to-one relationship between a dependent variable and error distribution.

The nature of the data was time series; hence it was vital to determine if the data were stationary or non-stationary. The unit root is a property of some stochastic processes (such as random walks) that can pose complications when using time series models for statistical inference. We evaluated the null hypothesis that panels have unit roots, and all five variables had p-values less than 0.05, which are significant at a 0.05 level of significance. As a result, the null hypothesis was rejected, and the variables studied are stationary. Refer to **table 4.6** appended. The study examined random effect of the model, by considering the individual-explicit implications of the hypothesis of the random effect are uncorrelated with the free factors. The free factors are linked to the fixed impact hypothesis, which was the individual-explicit impacts (Hausman, 1978). If the effect sizes of the investigation are considered as having been tested from an appropriation of impact sizes, then the arbitrary impacts model that reflects this notion is the correct one to use. If the difference between examinations is large (and statistically significant), the fixed-effect model is not applicable to run this study (Hausman, 1978).

Table 4.8 shows the Breusch and Pagan Lagrangian multiplier test findings for random effects. The LM test assumes that the variation between entities is zero. This signifies that the units are not statistically different (i.e., no panel effect). Based on findings, **Table 4.8** the P-value (0.000) being less than 0.05, the null hypothesis was rejected and the alternative hypothesis accepted (i.e., there is panel effect). For SACCOS, to examine the influence of drop out of the member, interest rate, loan default on return on asset panel model (fixed effect or random effect) is more useful than ordinary (pooled) regression analysis. Table 4.9 shows the results of the Hausman test used to decide between the fixed and random effect models that are appropriate to determine the influence of drop out of the member, interest rate, loan default on return on asset. The Hausman test always examines endogeneity. **Table 4.9** shows that the p-value for the test (p-value = 0.829) was greater than 0.05, indicating that the model did not have an endogeneity effect. This implies that the random effect model is appropriate to determine the influence of drop out of the member, interest rate, loan default on return on asset.

Random Effect Model Regression Result

The study employed random effect model of panel regression to examine the determinants of return on asset, which is presented herein below.

Table 4.10 Determinant variables on return on Assets

Return on asset	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
Loan default	-5.236	1.920	-2.72	0.003	-0.4886	-10.958	***
Drop out of member	0.348	0.087	3.99	0.000	0.177	0.519	***
Interest rate	0.059	0.020	2.95	0.004	0.008	0.231	***
Constant	1.271	0.099	12.84	0.000	0.099	2.641	***

Mean dependent var	2.029	SD dependent var	1.518
Overall r-squared	0.638	Number of obs	105.000
Chi-square	61.409	Prob > chi2	0.000
R-squared within	0.003	R-squared between	0.716

**** p<.01, ** p<.05, * p<.1 Note**: the cluster robust standard error was employed.***
Source: Stata Output (2022)

The study investigated on the influence of drop out of the member, interest rate, loan default on return on asset for SACCOS in Dodoma. The cluster robust standard error was employed for the sake of controlling the effect of the heteroscedasticity problem and to get the robust standard error as in Table 4.10. From the table it was revealed that the overall model was statistically significant since (Prob > chi2=0.000). The model's independent variables explained almost 63.8% of the variation in the return on asset of SACCOS in Dodoma. The following explanatory variables (such like interest rate, loan default and drop out of the members**)** were statistically significant influencing the return on asset for SACCOS selected from Dodoma Tanzania.

The Influence of Interest rate on return on asset of SACCOS in Dodoma city

The study findings revealed that Interest rate is statistically significant (p-value = 0.004) influence the return on asset with a positive regression coefficient (i.e., 0.059). This keeps other variables constant for each unit increase in Interest rate, on average, the return on asset increases by 0.059 units. This study finding concur with that of Ali, Muema and Murjuki (2021) who noted that return on asset and dividend payout had a $\beta = 0.889$, $t = 6.217$ and a p-value of 0.001. This showed that return on asset had a positive and significant influence on dividend payout in deposit-taking SACCOs in Kenya. Also, study findings concur with that of Bostanci, Kadioglu and Sayilgan (2018) who found out that return on asset is statistically significant and positive related to dividend payout. Additionally, the study findings are in line with that of Okoro, Ezeabasili and Alajekwu (2018) who noted that return on asset has a positive but insignificant effect on dividend payout in Nigeria. Similarly, the study findings are in line with that of Lin, Thaker, Khaliq and Thaker (2018) who found out that the drop out of members has a positive and significant relationship with return on asset of SACCOs. Also, the study findings resemble that of Purwanto and Elen (2017) who noted that the interest rate of Sacco's was chosen as the most statistically significant factor which influences dividend payout ratio in these companies. In line with this study finding, Lyimo and Mtawa (2021) also noted that return on asset had a positive implication on dividend payout among commercial banks in Tanzania. Thus, the board

of directors was advised to consider the return on asset of the banks when determining the dividend payout decisions of banks.

Moreover, the study finding is in line with that of Mazengo and Mwaifyusi (2021) who noted that there is a positive and significant relationship between interest rate of financial companies and return on asset of the financial institution. Based on the findings it was also noted that investors were advised to invest in Cooperative societies with large profits which have a great chance of paying dividends. On the other hand, the study findings showed direct relevancy with cash conversion theory developed by (Gitman, 1974). The theory argues that Savings and Credit Cooperative Societies (SACCOS) need to have a better financial performance in terms of cash, needs Effective liquidity management as is important skill for SACCOS to shifts its financial structure from member shares to more volatile deposit savings.

The effect of loan default on SACCOs' return on asset in the era of COVID 19 Pandemic

The study examined the effect of loan defaults on return on assets of SACCOS in Dodoma city. It was revealed that loan default is statistically significant (p-value = 0.000) affect the return on asset with a negative regression coefficient (i.e., -5.236). This keeps other variables constant for each unit increase in loan default, on average, the return on asset decreases by 5.236 units. This agrees with the finding of Koskei and Naibei (2017) who established that the performance of the SACCOs depends to a great extent on the ability of the members to manage their loans and hence reduce the rate of loan default.

The impact of Members' Drop out on return on asset of SACCOS during COVID 19 pandemic

The study analysed the impact of drop out of members on return on assets of SACCOS during COVID 19 It was revealed that drop out of member is statistically significant (p-value = 0.000) influencing the return on asset with a positive regression coefficient (i.e., 0.348). This keeps other variables constant for each unit increase in drop out of member, on average, the return on asset increases by 0.348 units. The finding concur with the study done by (Shrestha, 2009), provided, that if there is large number of members withdraw the capital will decrease hence the financial performance of SACCOS will be affected.

CONCLUSION AND RECOMMENDATIONS

The study has concluded that the interest rate, can significantly or insignificantly affect the financial performance of SACCOs,while, a successful SACCOs need to have better control of loan defaults to ensure that there is better financial stability hence good performance. On the other hand the study concluded that there is big gap or variation in terms of number of member drop out in SACCOs. This situation had an impact on return on assets of the SACCOS, which ultimately affected the overall financial performance of SACCOs, in Dodoma especially in the era of COVID-19 pandemic. It is further said that COVID 19 disease has been one of the biggest factors affecting the financial performance of SACCOs in Dodoma region and the community in general. Moreover there is a close relationship between the effects escalated by COVID-19 pandemic and the financial performance of

SACCOs in Dodoma, as the study revealed presence of big gap or variation in term of number of members drop out in SACCOs, which ultimate has an impact on the, changes of profit trends among the SACCOS, since the occurrence of COVID-19 pandemic. The process of measuring the financial performance of SACCOs in the study involves interest rate, loan default, drop out of members and the profit of the Savings and credit cooperative societies. All these were used to examine the financial performance of SACCOs during COVID-19 pandemic particularly in Dodoma region. Besides financial sector, is one amongst the key economic sectors, which has been greatly affected by the COVID 19 pandemic, particularly savings and borrowing habits which have been tremendously changing negatively with respect to COVID-19. As for now the effects of COVID 19, spread on the socioeconomic, financial performance of SACCOS and its diversity on the population of Tanzania in general are yet or rarely studied, hence unclear and there is likelihood to be diverse.. For all these to be realized, effects of COVID-19 pandemic on financial performance of SACCOs have to be given priority for the better economy, community and the nation at large.

Recommendation

The study recommended that it is necessary to examine the effect of interest rate, loan default and drop out of members on financial performance of SACCOs during COVID 19 pandemic which should not be neglected because Cooperative societies are at risk of losing the incomes and if the pandemic is prolonged and becomes more severe it would be disastrous in the sector. It is further recommended that there is a need for establishment of Co-operative COVID-19 Response Committee (CCRC) to collect information and maintain statistics of the COVID-19 effects in the cooperative sector. The introduction of online supervision and emphasis on self-regulation is of greater importance during this period, and recommended as one of the strategies to help the viability of the sector. Cooperative Audit and Supervision Corporation should opt to use off-site audit under hygienic environment to curb the spread of the virus.

The government should intervene, particularly in terms of infrastructure, because the SACCOs alone cannot afford to restore the financial return and the government should provide unending support for the industry's long-term development. Also, the government should have the political will to see things through with the Ministry of Finance and Planning for more studies to be done in this field and to improve and develop the SACCOs and other Cooperative societies. The study suggests that further research into the economic issues as the result of occurrence COVID-19 pandemic, its impact on the country's Gross Domestic Product (GDP) as well as its impact on improving the financial performance to Cooperative societies like SACCOs.

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APPENDIX

Table 4.1: Demographic characteristics of respondents

Variable		Frequency	Percentage
Affiliation to the SACCOS			
	Board Member	8	13
	Supervisory committee	7	11
	Staff	14	22
	Member	34	54
Working experience			
	Less than 1 Year	4	6
	1 -3 Years	16	25
	4 to 6 years	22	35
	7 to 9 years	17	27
	More than 9 years	4	6
Level of education			
	Primary	5	8
	Secondary	28	44
	College/University	30	48

Source: Research field data (2022)

Table 0.2 Descriptive statistics

Variable		Mean	Std. Dev.	Min	Max	Observations
SACCOs	overall	4.5	2.301	1	8	N = 63
	between		2.449	1	8	n = 21
	within		0	4.5	4.5	T = 3
Year	Overall	2020	4.339	2019	2021	N = 63
	Between		0	2019	2019	n = 21
	Within		4.339	2019	2021	T = 3
Interest rate	Overall	14.029	1.519	14.1	15.500	N = 63
	Between		1.526	13	15.207	n = 21
	Within		0.501	13	15.875	T = 3
loan default	Overall	0.030	0.021	0.012	0.048	N = 63
	Between		0.023	0.012	0.048	n = 21
	Within		5.03E-17	0.031	0.031	T = 3
Drop out of members	Overall	2178	2.378	0.13	4	N = 63
	Between		2.532	0.13	4	n = 21
	Within		8.47E-16	4.178	4.178	T = 3
ROA	Overall	3.829	2.388	2	8.530	N = 63
	Between		2.518	2	8.528	n = 21
	Within		0.327	2.529	4.529	T = 3

Source: Stata Output (2022)

Table 0.3 Pairwise correlations

Variables	(Interest rate)	(Loan default)	(Leverage)	(Return on asset)
Interest rate	1.000			
Loan default	-0.215**	1.000		
Drop out of member	0.698***	0.050	1.000	
Return on asset	0.147*	0.829***	0.279***	1.000

Source: Stata Output (2022)
*** p<0.01, ** p<0.05, * p<0.1

Table 0.4: Multicollinearity Test

Variable	**VIF**	**1/VIF**
Interest rate	3.92	0.255
Loan default	3.6	0.278
Drop out of member	1.28	0.782
Mean VIF	2.93	

Source: Stata Output (2022)

Table 0.5: Serial autocorrelation test

Wooldridge test for autocorrelation in panel data

H0: no first-order autocorrelation

F (1, 4) = 1.574

Prob > F = 0.278

Source: Stata Output (2022)

Table 0.6: Skewness/Kurtosis Tests for Normality

Variable	**Obs**	**Pr(Skewness)**	**Pr(Kurtosis)**	**adj chi2(2)**	**Prob>chi2**
Interest rate	120	0.058	0.258	1.62	0.431
Loan default	120	0.031	0.341	4.24	0.142
Drop out of member	120	0.059	0.396	4.39	0.111
Return on asset	120	0.035	0.433	3.08	0.207

Source: Stata Output (2022)

Table 0.7: Panel Unit Root Tests for the Variables at Level

Variable	Statistic	p-value
Interest rate		
Unadjusted t	-6.091	0.000
Adjusted t*	-5.5814	
Loan default		
Unadjusted t	-4.056	
Adjusted t*	-0.346	0.000
Drop out of member		
Unadjusted t	-9.108	
Adjusted t*	-7.282	0.000
Return on asset		
Unadjusted t	-6.509	
Adjusted t*	-5.029	0.000

It tests the following hypothesis
Ho: Panels contain unit roots
Ha: Panels are stationary

Table 0.8: Breusch and Pagan Lagrangian multiplier test for random effects

Estimated results:	Variance	Standard Deviation
Return on asset	2.305	1.518
E	0.269	0.518
U	1.485	1.219
Var(u)=0		
Test:	chibar2(01) =	378.770
	Prob>chibar2=	0.000

Source: Stata Output (2021)

Table 0.9: Hausman specification test

Variable	Coefficient		Difference	standard error
	B	B	b-B	sqrt(diag(V_b-V_B))
	Fixed	random		S.E.
Interest rate	-2.937	-3.587	0.650	0.388
Loan default	-0.046	-0.027	-0.020	0.165
Drop out of member	0.007	0.013	-0.006	0.005
Chi-square test value	0.699			
P-value	0.829			