Firm-specific characteristics and IFRSs compliance: a study of savings and credit cooperative societies in Tanzania

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Abstract

Compliance with International Financial Reporting Standards (IFRSs) has been a subject of scholarly interest in the literature due to its recognised role in influencing the quality of financial reports and enabling users to make informed decisions. However, evidence on the association between firm-specific characteristics and compliance with IFRSs in Tanzanian Savings and Credit Cooperative Societies (SACCOS) is scarce. To address this knowledge gap, this study examines how size, age, category, leverage and liquidity affect compliance with IFRSs in Tanzanian SACCOS. The study employed a quantitative methodology, using panel data regression as the analytical approach. The research utilised eight years (2013 - 2020) of secondary data from 202 SACCOS in Tanzania. The findings reveal that SACCOS size, age, and leverage are positively significantly associated with the extent to which they comply with IFRSs. At the same time, no significant association was found between category, liquidity level, and compliance with IFRSs. The study recommends that policymakers make reforms that will enable SACCOS to improve the quality of financial reports through effective internal governance mechanisms. Also, sector regulatory bodies and accounting standard regulator are recommended to intensify their supervision of SACCOS and establish robust monitoring systems to improve overall SACCOS IFRSs compliance.

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I. Introduction

The primary objective of the International Financial Reporting Standards (IFRSs) is to improve the overall quality of financial information presented in financial statements. The adoption of IFRSs has attracted attention because of their ability to influence the quality of financial reports and enable users to make informed decisions (Alnaas & Rashid, 2019). Besides, accounting standards were created to safeguard the interests of users of accounting information (Bakr & Napier, 2022; Sellami & Tahari, 2017). As a result, accounting regulatory authorities in many countries worldwide demand reporting entities to generate financial reports under the IFRSs requirement (Mwakapala et al., 2024).

Tanzania joined the league in 2004, whereby the National Board of Accountants and Auditors (NBAA) released a technical declaration establishing IFRSs application for all publicly accountable entities or entities that represent public interest, which includes entities that take deposits or loans from the public, offer shares to the public, have essential public responsibility or privilege essential public service or entities that hold assets in a fiduciary capacity for a broad group of outsiders (NBAA, 2009). Among other entities, Savings and Credit Cooperative Societies (SACCOS) are listed by NBAA as publicly accountable entities and thus must apply full IFRSs in their financial reporting processes.

SACCOS are member-based, democratically run, and controlled non-profit co-operative microfinance institutions aiming at maximising their members' benefit (McKillop & Wilson, 2015; Towo et al., 2020). These institutions provide financial services by taking members' savings deposits and issuing low-interest loans to members who usually share common interests or bonds (Unda et al., 2017). They have been established to promote financial inclusion by offering loans to low-income individuals who are unable to access conventional financial institutions, such as banks (McKillop & Wilson, 2015). SACCOS offer financial services, specifically savings and credits, to individuals who are part of a specific geographic area, social group, or organisation (McKillop et al., 2011). SACCOS members and those who have the potential to become members demand relevant financial information for making investment decisions (Ward & Forker, 2017). This makes compliance with IFRSs a vital tool in influencing users of SACCOS financial reports.

Since adopting IFRSs in Tanzania, significant IFRSs compliance gaps have been observed in SACCOS (COASCO, 2023; Mwakapala et al., 2024). According to Bananuka et al. (2019) and Nalukenge (2020), most SACCOS do not follow IFRSs guidelines, rendering financial reports untrustworthy and creating opportunities to misappropriate funds. Similarly, Msuya and Maleko (2015) and Mwakapala et al. (2024), found that Tanzanian SACCOS failed to provide all the necessary information as the applicable IFRSs regulations mandated. Furthermore, the Cooperative Audit and Supervision Corporation (COASCO, 2023) annual audit report demonstrates that SACCOS in Tanzania

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have unacceptable IFRSs compliance. As a result, over numerous fiscal years (2012/13 - 2020/21), the majority of SACCOS issued qualified and adverse audit opinions (COASCO, 2022).

To address the challenges of non-compliance, Tanzania, in particular, has taken various initiatives to include the SACCOS financial reporting framework in the legislation, such as the Co-operative Societies Act of 2013, Cooperative General Regulation of 2014, SACCOS Regulations of 2016, Microfinance Act of 2018 and SACCOS Regulations of 2019. These formulations facilitate the legal basis to enforce compliance with accounting standards for preparing, auditing and submitting SACCOS financial reports (Mwakapala et al., 2024). All these aimed to simplify the reporting framework of SACCOS' financial statements. Despite the legal and regulatory efforts that the Tanzanian government and other stakeholders have taken, the low compliance level of IFRSs and the deprived quality of financial reports are still reported (Msuya & Maleko, 2015; Polo-Garrido et al., 2022).

Previous empirical studies contended that the legal and external governance mechanism is an essential aspect in influencing compliance with IFRSs and relevant accounting information (Christensen et al., 2013; Hellman et al., 2018). However, in an environment with inadequate external governance enforcement, IFRSs compliance will be dictated by the efficacy of the firm's financial reporting incentives (firm-specific factors) and internal governance mechanisms (Alfaraih, 2009; Kabwe et al., 2021). This indicates the need to investigate the influence of firm-specific factors on compliance with IFRSs in Tanzanian SACCOS. Therefore, the present work contributes to the existing knowledge by examining how firm-specific characteristics, including size, age, category, liquidity, and leverage, affect IFRSs compliance levels in SACCOS.

While numerous researchers have dedicated significant empirical research to examining firm-specific characteristics and adherence to IFRSs, the majority of these studies have concentrated on publicly traded companies and overlooked non-market participant organisations such as SACCOS. For instance, the study by Degos et al. (2019) examining accounting standards in French-speaking African countries discovered that business size is the major driver of IFRSs compliance, but leverage and profitability are not. Alade (2018) studied the relationship between firm-specific factors and the level of IFRSs compliance by firms listed on the Nigeria Stock Exchange. The findings show that company size, auditor type, profitability, and firm leverage are positively associated with compliance.

Additionally, the study by Alnaas and Rashid (2019) in North Africa found that both institutional and firm-level factors influence the compliance process. The study recommends that future research be done on unlisted firms as the study was conducted only for listed firms, which may limit the generalizability of the findings. Moreover, Rudzani and Manda (2016) found an insignificant association between firm size, industry category and IFRSs compliance in South Africa. Nalukenge (2020) found that profitability and liquidity have no significant association with IFRSs compliance in Uganda, while Sellami and Tahari (2017) found a significant relationship in Tunisia. Msechu et al. (2024) studied the relationship between firm-specific factors and compliance with IFRSs for SMEs in Tanzania. However, this study focused only on IFRSs for SMEs, while SACCOS adopted full IFRSs. The diverse and unique nature of entities and their operational environment may be the reason for the contradictory and inconsistent facts, demanding empirical evidence on firm-specific characteristics and limited documentation on IFRSs compliance, especially on SACCOS in Tanzania.

Extensive studies have been conducted in developing nations to examine the relationship between the level of accounting disclosure and various features of firms (Bagudo, 2016; Bananuka et al., 2019; Kaaya, 2019; Mwakapala et al., 2024; Nalukenge, 2020). However, there has been limited focus on the relationship between IFRSs and the firm-specific characteristics in sub-Saharan countries. Tanzania provides a suitable environment and framework for examining the claimed relationship because economic development and access to finance are still low due to its status as a developing nation. Financial cooperatives, particularly those dealing with low-income earners, are trying to strengthen themselves by providing quality financial reports that will attract more savings and new members (Mathuva & Kiweu, 2016). Therefore, this study contributes to the stock of literature on how firm-specific characteristics affect IFRSs compliance levels in Tanzanian SACCOS.

This study addressed the knowledge gap by investigating the impact of firm-specific characteristics on compliance with IFRSs in SACCOS, utilising five metrics of firm-specific factors compatible with the SACCOS operating environment in Tanzania. SACCOS size, age, category, leverage ratio and liquidity positions enable firms to identify early indicators of complying with IFRSs, facilitate timely intervention, and implement corrective measures, therefore enhancing overall IFRSs compliance level (Alnaas & Rashid, 2019; Msechu et al., 2024). The study's findings provide essential direction to SACCOS professionals, sector regulatory bodies like Tanzania Co-Operative Development Commission (TCDC) and the Central Bank of Tanzania (BOT), and accounting standard regulator (NBAA) by offering relevant insights into how the firm-specific incentive can influence the compliance level; this will help SACCOS to monitor compliance level due to their surrounding environment so that they can improve overall IFRSs compliance level. This study contributes significantly to compliance with financial reporting standards, consequently fostering enhancements in the quality of financial reports in Tanzanian SACCOS.

The remaining part of the article is organized as follows: Section 2 presents the literature review, including the theoretical framework, the current body of studies related to IFRSs, and the development of hypotheses. Section 3 outlines the research methodology. Section 4 offers the findings, and Section 5 provides the conclusion, implications, and recommendations.

2. Literature review

This section covers a theoretical review that establishes the conceptual foundation for the study and the review of previous research on the association between firm-specific characteristics and the IFRSs compliance level. The literature review forms the basis for developing the hypotheses used in this study. Our goal is not to conduct a comprehensive evaluation of the literature; instead, we concentrate on studies that are relevant to the objective of the study and determine the possible impact of firm-specific characteristics (size, age, category, liquidity and leverage) on the IFRSs compliance level in the SACCOS subsector. These associations are covered in the following subsections.

2.1 Signalling theory

The theory was first advocated by Spence (1973). Information asymmetry is the norm in signalling theory, and it is based on the notion that information is not equally available to all parties simultaneously (Morris, 1987). Alfaraih (2009), argue that the firm's financial reporting incentives (firm-specific characteristics) differentiate the ability to disclose financial information among firms in the same industry. The impact of firm characteristics on compliance with IFRSs is examined through the lens of signalling theory, which suggests that managers are more inclined to comply with financial reporting standards based on the firm's specific characteristics (Nalukenge, 2020). Thus, based on a signalling philosophical lens, this study suggests that firm-specific characteristics, including SACCOS size, age, leverage, and liquidity, influence how SACCOS comply with IFRSs.

It is worth noting that signalling theory has been utilised in numerous prior investigations to elucidate IFRSs compliance level and firm-specific characteristics (Alade, 2018; Alfaraih, 2009; Nalukenge, 2020; Uyar et al., 2016). For instance, Nalukenge (2020) highlighted that the choice to implement International Accounting Standards (IAS) in Ugandan MFIs could be influenced by the need for institutional legitimisation (firm characteristics). Therefore, this study uses signalling theory to analyse and clarify how firm-specific characteristics influence IFRSs compliance levels in SACCOS.

2.2 Empirical review and hypotheses development

2.2.1 Firm size and compliance with IFRSs

Signalling theory posits that the size of the firm influences the way the firm complies with the financial reporting standards (Nalukenge, 2020). The theory indicates the positive relationship between large firms and the compliance level. Several studies have revealed a solid relationship between a company's size and its compliance with IFRSs. This is because larger firms have a greater incentive to uphold their reputation by adhering to IFRSs, attracting more investors and capital providers, and safeguarding themselves against political costs (Alfaraih, 2009; Kiliç et al., 2016). Additionally, increased compliance with IFRSs reduces potential information costs, as larger organisations with more owners tend to have higher agency costs (Alnaas & Rashid, 2019). Large firms are more likely to adopt IFRSs than small enterprises due to numerous factors. Nevertheless, there are still various flaws with the previously indicated line of reasoning. Contrary to this, other studies, such as those conducted by Abdul Rahman and Hamdan (2017) and Demir and Bahadir (2014), have found no substantial association between the size of a company and its adherence to IFRSs. Large corporations are more likely to provide information because they can take advantage of reduced capital or debt costs. The present debate may provide the following hypothesis:

H1: There is a significant positive association between firm size and IFRSs compliance level.

2.2.2 Firm age and compliance with IFRSs

Aged firms are more inclined to signal their information extensively and thus comply with IFRSs (Alfaraih, 2009), as positioned by signalling theory. Thus, the theory suggests a positive relationship between firm age and compliance with IFRSs. Research indicates that established firms should acknowledge the advantages of using IFRSs to improve the accuracy of their financial statements (Alnaas & Rashid, 2019). Older enterprises may better understand the significance of complying with IFRSs to enhance transparency and disclosure. Users of older organisations may require a significant level of transparency. These companies may attempt to utilise IFRSs to improve the quality of their financial information. Compared to older corporations, newly established firms may find the expense of implementing IFRSs more onerous. Nevertheless, actual evidence yielded conflicting outcomes. For instance, the research conducted by Marfo and Atsunyo (2014), as well as Al-shammari (2011), discovered a

notable correlation between the age of a company and its adherence to IFRSs. However, Iwiyisi (2018) and Demir and Bahadir (2014) reported no correlation between the age of a firm and its compliance with IFRSs.

Considering these criteria, it is logical to infer that a company's age could influence its compliance with IFRSs. The age of a company could also be a significant issue, as older organisations may possess more extensive experience in realising the need to comply with IFRSs to enhance their level of disclosure. Established companies are prone to having multiple stakeholders who want a high degree of transparency. Thus, these companies may embrace IFRSs to enhance the quality of their financial reporting data. Consequently, this study posits the following hypothesis:

H2: There is a significant positive association between firm age and IFRSs compliance level.

2.2.3 Firm category and compliance with IFRSs

According to signalling theory, firm type can provide different incentives to signal information to stakeholders (Morris, 1987), influencing the IFRSs compliance level. The category of the firm may exhibit varying degrees of IFRSs compliance levels (Alnaas & Rashid, 2019). In Tanzania, SACCOS are formed either employee-based or community-based (Bwana & Mwakujonga, 2013; Towo et al., 2020). Employee-based SACCOS membership is drawn from one employer and comprises salary and wages as a common bond. In contrast, community-based SACCOS membership is drawn from other social activities in the wards or villages, such as agriculture, fishing, and religious affiliations (Kembo & Mwakujonga, 2013).

Previous studies have provided conflicting findings regarding the connection between IFRSs compliance and industry-type (Alnaas & Rashid, 2019; Alsaeed, 2006; Haapamäki, 2018; Kiliç et al., 2016; Sellami & Tahari, 2017). However, in the era of globalisation, it has become evident that institutional differences can play a significant role. Organisations may tend to adopt and adhere to the same practices or standards in response to common institutional pressures from related members or shareholders (Alnaas & Rashid, 2019). The expected response varies across different sectors. As a result, companies in a particular industry would likely adhere closely to certain IFRSs relevant to their interests. Therefore, the SACCOS category may exhibit varying degrees of adherence to IFRSs. Consequently, the information above gives rise to the subsequent hypothesis:

H3: SACCOS category positively and significantly influences the extent of complying with IFRSs.

2.2.4 Leverage and compliance with IFRSs

Leverage is defined as the extent of debt utilised to finance a firm's capital and operations, encompassing both short-term and long-term obligations (Msechu et al., 2024). The signalling theory states that high-leveraged firms are more likely to disclose more information to lenders (Alfaraih, 2009), influencing compliance with IFRSs. Organisations with larger leverage ratios may have more robust connections with their creditors than firms with lower leverage ratios; consequently, the IFRSs compliance level increases (Guerreiro et al., 2008).

Banks and other lenders usually have prompt access to companies' information. Therefore, this type of finance (leverage) requires decreased public disclosure (Guerreiro et al., 2008). Additionally, companies with higher debt levels encounter elevated monitoring costs. Thus, it can be deduced that there is a clear relationship between the level of leverage and the degree of IFRSs compliance (Sellami & Tahari, 2017). Enterprises with higher leverage ratios are more inclined to adopt IFRSs compared to enterprises with lower leverage ratios (Guerreiro et al., 2008). The information above gives rise to the subsequent hypothesis:

H4: There is a significant positive relationship between the leverage ratio and the level of compliance with IFRSs.

2.2.5 Firm liquidity and compliance with IFRSs

Liquidity level is defined as the availability of funds to meet short-term obligations, measured by the ratio of current assets over current liabilities (Alfaraih, 2009). Based on the signalling theory, firms with high liquidity ratios have less incentive to disclose financial information and low compliance levels (Alfaraih, 2009). According to Haapamäki (2018), companies with lower liquidity tend to include comprehensive information in their annual reports, unlike companies with more liquidity. Regulatory authorities also take into account a company's ability to meet its immediate financial obligations, as this could affect the company's long-term financial stability (Alfaraih, 2009). This motivates the lower liquidity firms to comply with IFRSs requirements.

Thus, Tanzanian SACCOS with low liquidity ratios are expected to be more inclined to signal financial information than those with high liquidity ratios and hence comply with IFRSs requirements. Two arguments provide credence for this prediction: The oversight and control of the SACCOS in Tanzania is conducted by two entities: TCDC and BOT. SACCOS must annually submit their reports to the monitoring department of each

regulatory body. As a result, regulatory authorities are more likely to scrutinise SACCOS with lower liquidity ratios thoroughly, leading to higher compliance with IFRSs-required disclosures. This study presents the subsequent hypothesis:

H5: The liquidity ratio is negatively and significantly associated with the IFRSs compliance level.

3. Research methodology

3.1 Sources of data and sample time

The present study utilises data from SACCOS located in the Dar es Salaam, Mbeya and Arusha regions of Tanzania. The decision was deliberately made considering the substantial number of SACCOS that have provided and verified financial statements (COASCO, 2023). In addition, TCDC mentioned in 2022 that these regions dominate the SACCO sub-sector in Tanzania. The research spans a period of eight years, specifically from 2013 to 2020. When choosing this time frame, we carefully analyse the latest available data for this research.

The data was collected from the physical offices of SACCOS in Tanzania, currently, their reports are not available online. We collected a total of 255 audited financial statements from SACCOS annually. Furthermore, SACCOS lacking comprehensive information for the specified period were excluded. After the screening process, a thorough analysis was carried out on 202 out of 255 SACCOS, which accounts for 79% of the total. The SACCOS have provided a total of 1616 observations for analysis.

The standards chosen for the study were based on their relevance to the context of SACCOS and their implementation date in fiscal years. This selection strategy was adopted from the methodology employed by Alnaas (2017), Alnaas and Rashid (2019), Bagudo (2016) and Mwakapala et al. (2024). In line with prior studies on adherence (Alnaas 2017; Dobre et al., 2015; Kabwe et al., 2021; Okafor et al., 2016; Zango et al., 2015), we developed a checklist for the specifications of IFRSs by utilising data from the IFRSs Foundation website. We conducted a thorough analysis and chose the appropriate accounting standards that are relevant to SACCOS. In order to confirm the accuracy and relevance of the information, the recently developed checklist for IFRSs compliance was compared with previous research and then integrated into the established checklist.

3.2 Measuring dependent variable

Based on previous studies (e.g., Al-Shammari et al., 2008; Alfaraih, 2009; Alnaas, 2017; Bagudo, 2016; Ezenwoke & Tion, 2020), the compliance index (CINDEX) of each Savings and Credit Cooperative (SACCO) was computed using a checklist that was created by the authors. A checklist was initially developed using the dichotomous disclosure index, which provides more reliable and informative results. The checklist was based on the published norms of the International Accounting Norms Board (IASB). All disclosures contained in the CINDEX carry equal significance. The code is assigned as one (1) if the proper disclosure has been made and as zero (0) if it has not. If a disclosure does not apply to an item, it is eliminated from the scoring system. The Total Disclosure (TD) score for a SACCO is calculated in the following manner:

$$CINDEX = \frac{T\sum_{i=1}^{n} di, jt}{M\sum_{i=1}^{m} di, jt}.$$
(1)

Where: T represents the aggregate count of items revealed (di) by SACCOS j in year t.

M is the maximum number of items (applicable disclosure items) that SACCOS j could have potentially disclosed in year t.

Before assigning a score to a specific item, we thoroughly examine the annual report to confirm its significance and prevent penalising a SACCOS for failing to disclose it. This guarantees the inclusion of all essential information. To enhance the dependability of the coding procedure, an authorised professional selected observation in a random manner for evaluation. We discovered no notable disparities in the scores after reviewing the investigators' data. After evaluating the investigators' data, ratings were similar.

3.3 Measurement of study variables

To achieve the goal of this study, five firm-specific factors were identified: SACCOS size, age, category, leverage, and liquidity. Data on firm-specific factors have been gathered from the SACCOS annual reports for the period from 2013 to 2020. Table 1 provides an account of the measurement of this variable.

Table 1. Operationalisation of study's variables

Variable	Measurement	Source of data	Literature source
Dependent variable			
IFRSs compliance	Is a continuous variable Measured in	Financial Statements of	Al-Shammari et al. (2008); Alfaraih
level (CINDEX)	percentage (extent) of compliance with	SACCOS	(2009); Alnaas (2017); Bagudo, (2016);
	IFRSs disclosures	(2013-2020)	Ezenwoke & Tion (2020)
Independent variable	s		
SACCOS size	Measured by the natural log of total	Financial statements report	Mlay et al. (2022); Towo (2020);
(SSIZ)	assets value	of SACCOS	Mwakapala et al. (2024)
		(2013-2020)	
SACCOS age (SAGE)	Quantified as the logarithm base of the	Annual report of SACCOS	Mlay et al. (2022); Mwakapala et al.
	duration in years from the establishment	(2013-2020)	(2024); Towo (2020)
	of an entity till the conclusion of 2020.		
SACCOS category	measured through a Dummy that equals	Annual report of SACCOS	Alfraih (2016); Mlay et al. (2022); Towo
(SCAT)	one if employee-based and zero	(2013-2020)	(2020)
	otherwise		
Leverage ratio	Measured by the total debt (long-term	Annual report of SACCOS	Alfaraih (2009); Alnaas & Rashid (2019);
	and short-term) over total assets	(2013-2020)	Towo, 2020)
Liquidity ratio	Measured as the ratio of current assets	Annual report of SACCOS	Alfaraih (2009; Alsaee, (2006);
	over current liabilities	(2013-2020	Haapamäki (2018); Samaha & Stapleton
			(2009)

Source: Table by the authors

3.4 Heteroskedasticity and serial correlation

Heteroskedasticity leads to biased estimators and standard errors (Wooldridge, 2013). Therefore, it is imperative to assess homoskedasticity and, if required, adjust the estimation methodologies (Wooldridge, 2013). Heteroskedasticity can be identified by the Breusch-Pagan/Cook-Weisberg test or White's General test. These tests evaluate the null hypothesis, asserting that the error variances are uniform. The current study employed the Breusch-Pagan test to detect heteroskedasticity.

Additionally, panel data are prone to serial correlation, which refers to the interdependence of observations of the same variable throughout designated time intervals. Serial correlation may arise if the excluded error term variables are consistent across periods (Saunders et al., 2019). Serial correlation distorts the standard errors and renders the outcomes less efficient (Wooldridge, 2013).

3.5 Multivariate analysis

The panel regression model facilitates the analysis of both cross-sectional and time series data, enhancing degrees of freedom and data volume, which may be unattainable with a singular approach (Gujarati & Porter, 2009). This study utilised panel data collected from various SACCOS from 2013 to 2020. Prior research has employed panel regression models to estimate the link from the SACCOS perspective (Jones et al., 2016; Mathuva & Kiweu, 2016; Towo et al., 2019). The panel regression model can be computed using both fixed-effect and random-effect models. In the fixed-effects model, the individual effect ai is associated with the independent variable Xit; in the random-effects model, the individual effect ai has no relationship to the independent variable Xit. Therefore, this study conducted the Hausman specification test to decide whether to use the random or fixed-effect models.

3.6 The model

The study employed multivariate regression analysis to determine the impact of firm-specific factors on compliance with IFRSs. This methodology has often been used in earlier investigations (Abdullah et al., 2023; Alfaraih, 2009; Alnaas, 2017, 2017; Alnaas & Rashid, 2019; Bananuka et al., 2019; Dobre et al., 2015; Ezenwoke & Tion, 2020; Kabwe et al., 2021; Kenneth & Grazyina, 2013; Mwakapala et al., 2024; Sellami & Tahari, 2017; Tsegba et al., 2017). The following model was developed:

Compliance level (CINDEX) = f {SACCOS size, age, category, leverage and liquidity} CINDEXit = $\beta \ 0 + \beta \ 1$ SSIZit + $\beta \ 2$ SAGEit + $\beta \ 3$ SCATit + $\beta \ 4$ SLEVit+ $\beta \ 5$ SLIQit + ϵi(2)

Where:

CINDEX denotes compliance index score SSIZ denotes SACCOS' size, the logarithm of the total assets

SAGE denotes SACCOS' age, the logarithm base of the duration in years from the establishment of an entity till the conclusion of 2020

SCAT denotes SACCOS' category, a dummy that equals one if employee-based and zero otherwise.

SLEV denotes SACCOS' leverage ratio, the total debt (long-term and short-term) over total assets

SLIQ denotes SACCOS' liquidity ratio, the ratio of current assets over current liabilities

4. Results

4.1 Preliminary results

4.1.1 Descriptive statistics

Table 2 presents the results of the descriptive statistical tests run for each variable in the study. The findings indicate that the mean degree of compliance with IFRSs among Tanzanian SACCOS is 44.2%. The minimum score obtained was 30%, while the maximum score attained was 71.1%. The findings reveal that none of the Tanzanian SACCOS fully complied with all the IFRSs statutory disclosures. Researchers assert that a compliance level of 70% or higher is considered satisfactory (Alfaraih, 2009; Alnaas & Rashid, 2019; Bananuka et al., 2019; Dobre et al., 2015; Ezenwoke & Tion, 2020; Kabwe et al., 2021). Furthermore, the degree of compliance falls short of the minimal requirement of 75% set by the NBAA for assessing adequately produced financial reports (NBAA, 2023).

Table 2. Descriptive statistics for the dependent and independent variables

Panel A: Continuous varia	ables						
Variable	Observations	Min	Maxi	Mean	SD	Skew	Kurt.
Dependent variable							
CINDEX	1616	0.3	0.711	0.442	0.108	1.19	2.61
Independent variable							
SACCOS size	1616	7.216	12.072	9.651	1.328	0.46	2.58
SACCOS age	1616	3	48	14	11	0.53	2.83
Leverage ratio	1616	0.021	0.972	0.2507	0.1390	0.81	2.93
Liquidity ratio	1616	0.19	39.63	4.51	6.81	0.86	3.07
Panel B: Dummy variable	S						
Variable .	Frequency	Percentage		Valid per	entages	Cumulative	e percentages
Employee-based	776	48		48	_	48	_
Community-based	840	52		52		100	
Total	1616	100		100		-	

Source: Table by the authors

4.1.2 Diagnostic assessments

Before examining the regression analysis findings, verifying the model's validity was informative. Regression analysis, as the initial stage of model testing, necessitates fulfilling specific assumptions concerning the data quality. Inadequate data quality can result in skewed outcomes. Hence, data screening is a crucial aspect of conducting high-quality research, as highlighted by Andren (2007), Gujarati and Porter (2009) and Milanzi (2009). Many diagnostic checks were conducted to ensure that the assumptions of multiple regression analysis were not broken. The checks primarily addressed multicollinearity, normalcy, heteroscedasticity, endogeneity, and outliers. Table 3 shows that the correlations between explanatory variables were below 0.6, indicating the absence of multicollinearity. Afterwards, the variance inflation factors (VIF) were evaluated for each independent variable.

Table 3. Correlation matrix

Variables	1	2	3	4	5	6
CINDEX	1					
SACCOS size	-0.0421	1				
SACCOS age	0.1317***	0.4093	1			
SACCOS category	0.0881**	0.0152**	0.351	1		
Leverage ratio	0.0183	0.2210**	0.0043	0.2101***	1	
Liquidity ratio	0.0222	-0.0714	0.0524	0.0243	0.0588	1

Source: Table by the authors

The results are revealed in Table 4. The highest VIF observed was 2.279, far lower than the maximum allowable threshold of 10.0, providing further evidence of the absence of multicollinearity. The histogram-normality test resulted in p-values greater than 0.05, indicating that the data followed a bell-shaped distribution (Saunders et al., 2019), suggesting that the data followed a normal distribution. The assumption of heteroscedasticity implies that the remainders have identical discrepancies across all predictor(s) levels. This means that regardless of the number

of explanatory factors, the variance of errors remains relatively consistent. In addition, the study additionally examined heteroscedasticity by plotting the standardised residuals (ZRESID) against the standardised predicted values (ZPRED) for all models.

Table 4. VIF and Breusch-Pagan

Variable	VIF	Breusch-Pagan
SACCOS size	1.332	0.4
SACCOS age	2.279	0.1
SACCOS category	1.123	0.3
Leverage ratio	1.048	0.2
Liquidity ratio	1.195	0.3

Source: Table by the authors

This approach provided evidence that the residuals exhibited a random distribution, indicating the absence of heteroscedasticity. Furthermore, the presence of heteroscedasticity was evaluated using the Breusch test and the Koenker test Pagan, following the methodology outlined by Bordens and Abbott (2011) and Wooldridge (2013). Both tests produced identical results, suggesting the absence of any issues with heteroscedasticity. The endogeneity problem occurs when the independent variable is associated with the error term in a regression model (Wooldridge, 2013). When there is endogeneity, the estimate obtained by ordinary least squares (OLS) will be unreliable (Gujarati & Porter, 2009). Upon further analysis, it was concluded that the model did not substantiate such an endogeneity problem.

4.1.3 Model fitness test

The panel regression analysis was used to test hypotheses. The Hausman specification test was employed to decide whether to use the random or fixed-effect models (see Table 5). Year dummies are included in all models to account for changes in the macroeconomic environment that influence the IFRSs levels in Tanzanian SACCOS. The regression models created in the methodology section above are used in this study to evaluate the effect of firm-specific factors on compliance with IFRSs.

Table 5. Selection of fixed or random effects models

Dependent variable	Model	Hausman test	Fixed/ Random effect model
CINDEX	1	17.35, <i>p<</i> 0.01	Fixed effect model

Source: Table by the authors

4.2 Multiple regression results

The regression findings in Table 6 show that the F-ratio is 6.837, and the p-value is less than 0.001. The statistical study verifies the model's importance. The R² score of 0.678 signifies a substantial outcome, indicating that the independent variables explain 67.8% of the variation in the IFRSs compliance index. This implies that the firm-specific characteristics can predict IFRSs compliance level. In the upcoming discussion, we provide commentary on the outcomes of the regressions presented in Table 6.

Table 6. Regression results

Variable	Coeff	t-stat	p-value
Intercept (Constant)	-0.649	-3.199	0.002
SACCOS size	0.048	3.169	0.003*
SACCOS age	0.198	2.113	0.029*
SACCOS category	0.173	1.986	0.059
Leverage ratio	0.158	2.496	0.016*
Liquidity ratio	1.068	1.044	0.302
Adj.R ²	0.678		
F-statistic	6.837**		

Source: Table by the authors

Firm size. Based on the derived coefficient, as expected, there is a significant positive association between the size of a firm and its level of compliance with IFRSs disclosure ($\beta = 0.048$, p<0.05). This suggests that larger SACCOS tend to reveal more information than smaller ones. One possible reason for these findings is that huge SACCOS have ample capacity to collect, analyse, and present vast amounts of data at a low expense (Towo, 2020). In other words, large organisations are more likely to possess the financial and human resources necessary to implement the

IFRSs framework than small firms. This finding is consistent with previous findings of Iwiyisi (2018), Alnaas and Rashid (2019) and Alsaeed (2006). However, the results are contrary to those of Demir and Bahadir (2014), who found no association between firm size and IFRSs compliance by the listed companies in Turkey. This current study aligns with the signalling theory philosophical view that large firms are more inclined to disclose financial information to stakeholders, as argued by Morris (1987), hence improving the IFRSs compliance level. Therefore, considering the operating environment of SACCOS in Tanzania, the firm's size influences compliance with the IFRSs requirements.

Firm age. As anticipated, our analysis reveals that the correlation between the firm's age and IFRSs compliance level was statistically significant (β = 0.198, p < 0.05). Hence, confirm H2. Older SACCOS recognise the benefits of complying with IFRSs to enhance the significance and utility of their financial statements. Users of established SACCOS have a greater expectation for transparency and a robust accounting system (Towo, 2020). The findings are consistent with Al-Shammari et al. (2008) and Yiadom and Atsunyo (2014). Nevertheless, it contradicts the conclusions made by Alnaas and Rashid (2019), Alsaeed (2006) and Rahman & Hamdan (2019), who found a negative association between age and the extent of compliance with IFRSs.

The findings support the signalling theory perspective that stakeholders of aged firms demand more disclosure of financial information, resulting in high compliance at the IFRSs level (Morris, 1987). The positive relationship in SACCOS may be explained by the accumulation of experience that helps SACCOS to correct previous non-compliance matters and provide future action plans for improvement. Moreover, aged SACCOS have a better plan to pass on experience to its employees who prepare financial reports. As contended by Kiliç et al. (2016), older entities have a reputation to protect. Therefore, they diligently attempt to adhere to standards to enhance their longstanding reputation.

SACCOS category. Contrary to our predictions, the analysis reveals the correlation between the category of SACCOS and IFRSs compliance level was statistically insignificant ($\beta = 0.173$, p > 0.05). Hence, H3 is not confirmed. The category of SACCOS does not appear to be a determining factor in explaining the differences in disclosure levels among Tanzanian SACCOS. This result aligns with the conclusions of Alsaeed (2006). However, it contradicts the findings of Alnaas and Rashid (2019), Rahman and Hamdan (2019) and Yiadom and Atsunyo (2014).

The findings suggest that employee- and community-based SACCOS members demand financial reports to be prepared per accounting standards. These findings contradict the signalling theory viewpoint that differences in the type of firm can alter the IFRSs compliance level. The reasons behind this could be attributed to the fact that whether SACCOS are formed community or employee-based, the kind of members in both types can have the attributes of demanding a high compliance level of IFRSs contrary to the notion that employee-based SACCOS can comply more to IFRSs requirements than community-based ones.

Leverage ratio. As anticipated, our analysis reveals that the correlation between leverage ratio and IFRSs compliance level was statistically significant (β = 0.158, p < 0.05). Aligned with H4. This indicates that a higher leveraged SACCOS comply more with IFRSs requirements than lower leveraged firms. Based on these results, it can be concluded that lenders put pressure on SACCOS to prepare their financial reports under IFRSs frameworks. According to Towo et al. (2020) Banks that lend to SACCOS demand full disclosure of financial information; thus, a higher leverage ratio seems to increase SACCOS's compliance level. This finding is consistent with that of Rahman & Hamdan (2019). Though, it contradicts the findings of Alnaas & Rashid (2019), who found that leverage is not associated with the extent of IFRSs compliance in North Africa.

The findings align with the signalling theory viewpoint that the external stakeholders, such as creditors and lenders, demand additional information from the reporting entity and hence influence the compliance level (Samaha & Stapleton, 2009). Also, the current results posit that, though there are limits on borrowing above 25% of SACCOS assets (Towo, 2020), the majority of Tanzanian SACCOS use external debts to finance their activities. For the SACCOS to provide credits to members, they need a certain amount of funds. Thus, borrowing from banks and other financial institutions is vital to improving fund availability.

Liquidity ratio. Contrary to our expectations, the analysis reveals that the correlation between the liquidity ratio and IFRSs compliance level was positive but statistically insignificant (β = 0.191, p >0.01). It was anticipated that companies with lower liquidity would disclose more information and comply better with IFRSs disclosures than those with more liquidity. However, our findings indicate that the liquidity ratio does not appear to be a determining factor in explaining the differences in disclosure levels among Tanzanian SACCOS. It aligns with the results of Alsaeed (2006) as well as Al-Shammari et al. (2008) Who discovered no correlation between IFRSs compliance and liquidity ratios.

These results contradict the signalling theory perspective that lower-liquid firms are more inclined to disclose additional information and hence influence the compliance level (Abdullah et al., 2023). In contrast, the highly

liquid SACCOS seem to comply more with IFRSs than lower ones. This might be attributed to the fact that highly liquid firms have more incentives in terms of resources to improve compliance with IFRSs, contrary to the signalling notion.

4.3 Robustness test

Following Alfaraih (2009), Bagudo (2016), and Mwakapala et al. (2024), the robustness test entailed re-estimating the principal regression by dividing the CINDEX scores (the dependent variable) into three sub-groups (high, medium, and low). Nothing appreciable changed when the dependent variable was swapped out for its logarithm in the primary model. Furthermore, the findings demonstrate that the explanatory variable coefficients' size and significance were unaffected by the CINDEX's collapse into three subgroups. These robustness tests validate the outcomes of the core model. Another test included substituting the independent variable (CINDEX) with its logarithm. Non-tabulated results indicate that the findings remain consistent when subjected to various robustness tests.

5. Conclusion, implications and recommendations

5.1 Conclusion

This study provides insights into the level of compliance with the disclosure requirements of IFRSs among SACCOS in Tanzania. It additionally investigates the correlation between the extent of disclosure and specific characteristics of SACCOS. Based on the descriptive results, the study concluded that, on average, SACCOS in Tanzania comply with 44.2% of IFRSs disclosures. This level of compliance is categorised as a low level of compliance threshold. Furthermore, the study revealed a significant correlation between the extent of IFRSs compliance and certain firm-specific characteristics. More specifically, this study concludes that larger-sized SACCOS, aged SACCOS, and highly leveraged SACCOS are more inclined to comply with IFRSs requirements. Nevertheless, the SACCOS category and liquidity ratios were found to be insignificant in influencing the IFRSs compliance level.

5.2 Study's implications and recommendations

The current study provides several significant contributions to the existing literature. Practically, this study evidenced that no Tanzanian SACCOS fully complied with all the IFRSs-required disclosures. Thus, SACCOS practitioners are advised to improve their financial reporting practices through training and professional consultants. Furthermore, the study elucidates the correlations among several variables, including firm size, age, category, leverage rate, liquidity rate and IFRSs compliance level. This has advantageous implications for many users worldwide. The findings of this study could potentially enhance compliance with IFRSs requirements by ornamental investors' knowledge of accounting practices in the SACCOS sub-sector.

Theoretically, applying the signalling theory, the study has evidenced that firm-specific characteristics, such as SACCOS size, age, and leverage, positively correlate with IFRSs compliance level regarding SACCOS size. On the other hand, results show that the SACCOS category and liquidity level have a nonsignificant relationship with the IFRSs compliance level. The signalling theory highlights the dimension of the firm's features, which brings different abilities and incentives to improve information signals of IFRSs to SACCOS members.

From a policy perspective, these results suggest that the government, specifically SACCOS regulators, should establish policies to ensure that SACCOS financial reports adhere to all IFRSs requirements. Furthermore, the present research highlights the concern regarding non-compliance with IFRSs in developing economies since it uncovers a notable lack of adherence. Regulators, standard-setters, and other stakeholders should prioritise addressing these non-compliance issues and implementing effective ways to enhance conformity with IFRSs within a cooperative society.

5.3 Implications for future researchers

The study explains the relationship between firm-specific characteristics and compliance with IFRSs in Tanzanian SACCOS. Future research should continue from this research by addressing the relationship using a sample from regions that were not covered by this study. Furthermore, Future research should address the relationship in another country. Also, Future research efforts may delve further into these associations by broadening the range of independent variables to include additional factors, such as the mediating influence of corporate governance. Alternatively, refinement could be attained by excluding specific indicators that lacked statistical significance in this study, including firm category and liquidity level. Implementing these methodological improvements will enable future research to provide a more detailed comprehension of the examined interrelationships, thus enhancing academic dialogue and furthering knowledge in the discipline.

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