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## The Influence of Voluntary Deposits on Improving Primary School Teachers' Welfare: A Case of Moshi Municipality Teachers SACCOs Limited

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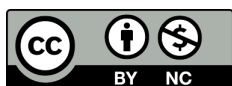
**Abstract.** In the growing landscape of education, the welfare of teachers is paramount to fostering an effective learning environment. Teachers often focus on basic options, such as bank savings and fixed deposits, neglecting other wealth maximisation services, like Savings and Credit Cooperative Societies (SACCOs). This study aims to determine the influence of voluntary deposits on enhancing the welfare of primary school teachers, specifically in the case of Moshi Municipality teachers' SACCOs Limited. The study is based on the Behavioral Finance Theory developed by Herbert Simon. The study employed a convergent research design within a mixed-methods approach targeting 1,135 primary school teachers in Moshi Municipality who are members of teachers' SACCOs. A sample size of 250 respondents was determined using the Yamane formula for known populations, which were sampled through a simple random method. Furthermore, three leaders from SACCOs were chosen purposively: chairman, secretary, and accountant. Data were collected using questionnaires for teachers and through a key informant interview guide for SACCOs leaders, and analyzed through both quantitative and qualitative data analysis methods. Before data collection, the research instruments underwent a pilot test involving 16 teachers from primary schools and 2 SACCOs leaders who were not included in the actual data collection. For the quantitative data, researchers used descriptive statistics to analyze and present the findings in the form of percentages, frequencies, and means. Additionally, inferential statistics were utilized to test hypotheses through a linear regression model. This process began with conducting a collinearity test, followed by an assessment of residual statistics, which ultimately resulted in a comprehensive model summary. Qualitative data were analyzed through content analysis. The study found that the majority of teachers agreed that voluntary deposits have a positive influence on their welfare. The analysis results confirmed a statistically significant relationship between voluntary deposits and teachers' welfare. Thus, policymakers should promote and support the establishment of voluntary deposit schemes within teachers' SACCOs to encourage teachers to save. Furthermore, participation in voluntary deposit programs is a good opportunity for primary school teachers to maximize their financial benefits.

**Keywords:** voluntary deposits, teachers' welfare, SACCOs, primary school teachers, financial benefits.

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## Вплив добровільних внесків на покращення добробуту вчителів початкової школи: випадок вчителів SACCOs Limited у муніципалітеті Моші

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**Анотація.** У зростаючому ландшафті освіти добробут вчителів має першочергове значення для створення ефективного навчального середовища. Часто вчителі зосереджуються на базових варіантах, таких як банківські заощадження та строкові депозити, нехтуючи іншими послугами максимізації багатства, такими як ощадно-кредитні кооперативні товариства (SACCOs). Мета цього дослідження – визначити вплив добровільних внесків на підвищення добробуту вчителів початкової школи, беручи за приклад вчителів із SACCOs Limited у муніципалітеті Моші (Танзанія). Дослідження опирається на постулати теорії поведінкових фінансів Г. Саймона. У дослідженні використовувався конвергентний дослідницький дизайн зі змішаним підходом, спрямований на 1135 вчителів початкової школи муніципалітету Моші, які є членами SACCOs Limited. Розмір вибірки із 250 респондентів було визначено за формулою Ямане для відомих популяцій, а вчителі були відібрані простим випадковим методом. Крім того, цілеспрямовано було обрано трьох керівників SACCOs: голову, секретаря та бухгалтера. Дані були зібрані за допомогою анкет для вчителів та за допомогою інтерв'ю з трьома ключовими представниками SACCOs. В процесі дослідження проведено як кількісний, так і якісний аналіз даних. Перед збором даних дослідницькі інструменти пройшли пілотне тестування за участю 16 вчителів початкових шкіл та 2 керівників SACCOs, які не брали участі у фактичному зборі даних. Для кількісних даних дослідники використовували описову статистику та представлення результатів у вигляді відсотків, частот та середніх значень. Для перевірки гіпотез за допомогою моделі лінійної регресії була використана залежна статистика. Цей процес розпочався з проведення тесту на колінеарність, а потім оцінки статистики залишків, що зрештою призвело до комплексної оцінки дослідницької моделі. Для аналізу якісних даних було використано контент-аналіз. Дослідження показало, що більшість вчителів погодилися з тим, що добровільні внески позитивно впливають на їхній добробут. Результати аналізу підтвердили статистично значущий зв'язок між добровільними внесками та добробутом вчителів. Таким чином, уряд повинен підтримувати створення програм добровільних внесків у рамках SACCOs, щоб заохотити вчителів до заощадження. Крім того, участь у програмах добровільних внесків є гарною можливістю для вчителів початкової школи максимізувати свої фінансові вигоди.

**Ключові слова:** добровільні внески, добробут вчителів, SACCOs, вчителі початкової школи, фінансові вигоди.

### 1. INTRODUCTION

In the growing landscape of education, the welfare of teachers is paramount to fostering an effective learning environment (Mendez et al., 2024). As primary education serves as the bedrock for lifelong learning, the conditions under which teachers operate significantly affect their performance and, consequently, student outcomes (Ahmad et al., 2023). Teachers often focus on basic options like bank savings and fixed deposits, neglecting other wealth maximization services like Savings and Credit Cooperative Societies (SACCOs) (Fernando & Abeyasekera, 2025). SACCOs are member-based financial institutions that provide services like savings accounts, loans, and investment opportunities, designed to promote the financial well-being of their members. They typically offer lower interest rates on loans and higher returns on savings than traditional banks, making them an attractive option for individuals seeking to maximize their wealth. SACCOs allow for voluntary deposits, which are contributions made by members over the required savings. However, teachers remain unaware of the benefits of voluntary deposits, limiting their financial growth and stability (Knapp et al., 2023).

Globally, the voluntary deposits have enabled individuals to save and invest, fostering financial security

and promoting economic resilience (Kakde, 2024). In India, it has been indicated that teachers who utilize SACCOs' services often report better access to credit and savings options, which contribute to their overall welfare (Kumar & Singh, 2022). In the Philippines, Arroyo and Bayani (2024) revealed that some teachers remain unaware of the advantages of voluntary deposits despite several initiatives that raise awareness about financial tools to increase teachers' welfare. Further, Zhao and Li (2023) indicated that there is a positive relationship between teachers' welfare and their engagement with cooperative savings schemes in China.

In Africa, literature has increasingly recognized SACCOs' vital role in providing financial assistance to teachers. Tukamuhebwa et al. (2022) revealed that in Uganda, SACCOs have significantly contributed to improving teachers' financial literacy and stability. In Rwanda, Mushinzimana and Faisal (2024) indicated that SACCOs services positively influenced the socio-welfare of teachers and had a positive effect. Further, Debela et al. (2025) revealed that the success of teacher SACCOs is attributed to factors like good relationships with government organs, membership in the International Cooperative Alliance (ICA), use of technology (Core Banking), and absence of political interference. Despite

the growing body of literature highlighting the benefits of voluntary deposits in SACCOs for teachers, there remains a gap in understanding how SACCOs' voluntary deposits influence the welfare of primary school teachers in Tanzania. Previous research has not adequately examined Tanzanian teachers' unique challenges and opportunities regarding voluntary deposits in SACCOs. This gap in the literature suggests a need for a targeted study to examine how voluntary deposits will enhance the welfare of primary school teachers in Tanzania.

Studies in Tanzania have indicated that voluntary deposits in SACCOs aim to provide teachers with a safety net, promoting financial security and stability (TCDC, 2023). However, awareness and participation in SACCOs' voluntary deposits have remained inconsistent. Msuya et al (2020) indicated that SACCOs' services in Tanzania significantly influenced the household livelihood outcomes. Further, Mrema and Kinyondo (2024) have recognized that quick access to finance through SACCOs' services significantly improved the standard of living, without mentioning the deposits as one of the SACCOs' services. However, in the study by Mallya (2020), it was recommended that the government should closely supervise SACCOs to increase their contributions to livelihood improvement. Despite initiatives to promote financial literacy among teachers, many may not fully understand the benefits of voluntary deposits or how to leverage these opportunities effectively. Understanding these dynamics is essential for creating tailored strategies that encourage teachers to engage with SACCOs and utilize voluntary deposits to improve their financial stability.

## 2. STATEMENT OF PROBLEM

The welfare of teachers is a critical aspect of educational quality and is increasingly recognized in many communities. The well-being of primary school teachers directly influences their performance and, consequently, the educational outcomes of students. However, many teachers face financial challenges that hamper their ability to provide quality education and support for their students. This is evidenced by some teachers' tendency to neglect their teaching professionalism and seek alternative sources of income. Further, parents have reached a point where they are hesitant to enroll their children in the teaching profession due to the perceived difficulties of a teacher's life (Christensen et al., 2022).

The Tanzanian government has implemented several strategies to enhance teachers' welfare, including enabling them to create their SACCOs. In Moshi Municipality, teachers have formulated the so-called Moshi Municipality Teachers SACCOs Limited, aiming to provide financial support, promote savings, and enhance overall economic stability (Paschal et al, 2024). Despite these efforts, teachers continue to experience inadequate financial support due to low or sometimes no voluntary deposits. This situation not only affects teachers' welfare but also influences their professional motivation and commitment to teaching. If this problem is not addressed, the consequences will be awful.

Teachers will become disengaged, decreasing teaching quality, increasing turnover rates, and ultimately, poorer student educational outcomes.

While previous studies have looked into the teacher's welfare, a gap remains regarding the voluntary deposits within microsavings services. Most previous studies, like Mabignay (2022) and Mazaki (2017), have concentrated on the relationship between microloans and primary school teachers' welfare without saying anything regarding voluntary deposits as a microsavings service. SACCOs have been growing fast by developing products like microsavings and money transfer. However, there remains an inadequate understanding of the influence of voluntary deposits on primary school teachers' welfare, hindering the development of effective strategies to address their financial challenges (Tsai, 2019).

## 3. RESEARCH OBJECTIVE

This study aims to determine how voluntary deposits in SACCOs are leveraged to enhance the welfare of primary school teachers in Tanzania, with a case of Moshi Municipality teachers SACCOs Limited.

Moshi Municipality Teachers SACCOs Limited has been selected as a case study for this research due to its role in supporting teachers. The SACCOs serve a diverse group of teachers, providing them with essential financial services including savings accounts, loans, and investment opportunities that are tailored to their unique needs. Moreover, the choice of Moshi Municipality is particularly relevant, as it represents a version of the broader challenges and opportunities faced by primary school teachers in Tanzania. The municipality has a rich educational history and a high concentration of teachers, making it an ideal setting to explore the impact of voluntary deposits on teacher welfare.

The research hypothesis is as follows:

H<sub>0</sub>: Voluntary deposits do not significantly influence teachers' welfare in primary schools.

## 4. THEORETICAL FRAMEWORK

### 4.1 Behavioral Finance Theory

This study is grounded in Behavioral Finance Theory (BFT), which was developed by Herbert Simon in 1947. The theory states that people rely on heuristics (mental shortcuts) and satisficing (settling for a satisfactory rather than optimal solution) when making financial decisions, rather than engaging in comprehensive, utility-maximizing analyses. Behavioral Finance Theory is an interdisciplinary field that combines psychology, sociology, and finance to provide a better understanding of financial decision-making and market behavior. BFT assumes that decisions are made amongst a certain set of alternatives, with given probabilities for their outcomes, and maximizing the expected value of the utility function.

The key strength of BFT lies in its ability to offer a more comprehensive and realistic perspective on financial behavior. By incorporating perspectives from various disciplines, BFT provides a deeper understanding of the psychological and social factors that influence how individuals and markets make financial decisions. Unlike the traditional finance theories that assume rational,

utility-maximizing behavior, BFT acknowledges the role of cognitive biases, emotions, and contextual factors in shaping financial decision-making. Further, this theory is a more psychologically grounded approach that allows for a better explanation of the observed deviations from the assumptions of classical finance theory. One of the limitations of BFT is that it does not fully account for the complex, systemic factors and interactions that shape financial markets and institutional behaviors beyond the individual level. Further, it is primarily descriptive in nature, which limits normative value in terms of providing clear guidelines for improving financial decision-making.

This theory is relevant to this study because behavioral finance theory helps explain why primary school teachers may or may not engage in microsavings products based on their cognitive biases, risk perceptions, and behavioral tendencies. The theory also sheds light on how the availability and usage of voluntary deposits influences teachers' financial well-being, as well as their overall welfare, considering the potential psychological and emotional factors involved. Furthermore, BFT considers the social, cultural, and institutional factors that may shape the teachers' financial decision-making and their perceptions of voluntary deposits in microsavings products.

Adopting the Behavioral Finance Theory as the grounding theory, the researcher will explore how psychological, cognitive, and behavioral factors interact with the availability and utilization of microsavings products to improve the welfare of primary school teachers in the Moshi Municipality Teachers SACCOs Limited. Hence, this theory is relevant to the study of Municipality Teachers SACCOs Limited.

### **4.2 Influence of Voluntary Deposits on the Teachers' Welfare: Empirical Literature Review**

Rutkowski et al. (2019) conducted a study evaluating an old-age voluntary saving scheme under incomplete rationality in Poland. The study adopted an ex-ante approach to assess the potential impact of Employees' Capital Plans (ECPs) on welfare, fiscal balance, and the broader macro economy. The study employed a range of quantitative analysis techniques. The study revealed that Voluntary old-age saving schemes in Poland, like ECPs, can reduce the welfare of fully rational agents unless they offer a sufficiently large annuity. However, their study employed a quantitative approach, which overlooks the important qualitative aspects of a problem or situation and does not capture the complexity and richness of human experiences or emotions. Therefore, our study employed a mixed method, allowing for a more comprehensive understanding of a problem or situation by capturing numerical data and rich descriptive information.

Prus (2019) studied voluntary saving in poems and rhymes of School Savings Union members in primary schools in Poland. The study used a descriptive research design to analyze rhymes and nursery rhymes on saving composed by primary school students. The selection of rhymes was random, focusing on 5 examples from a

designated textbook. The study employed a qualitative approach, gathering data through interviews and observations. Content analysis was used to examine the rhymes and nursery rhymes, focusing on saving and economic education themes. The study found that voluntary School Savings Unions in primary schools promote valid educational values, and the rational use of technology enhances children's and teachers' expertise, skills, and creativity in saving. However, the study conducted in Poland limits the generalizability of the findings to different contexts with different cultures and education systems in Tanzania. The cultural and educational nuances in Tanzania, where the current study is conducted, may yield different results, thus highlighting the necessity for more context-specific research.

Cupák et al (2019) investigated the causal relationship between financial literacy and voluntary savings in Slovakia. The study utilized a quantitative research approach, sampling 520 respondents to assess participants' knowledge of financial concepts and decision-making abilities. Respondents were selected from different regions to capture diverse perspectives on financial literacy and voluntary savings behaviors. The survey was administered online and face-to-face to reach a broader audience and enhance response rates. The study found that individuals with higher levels of financial literacy are more likely to engage in proactive retirement planning, reflecting a critical link between education and financial decision-making. Financial literacy positively influences voluntary retirement savings in Slovakia. Further, savings for retirement in the supplementary pension schemes are positively associated with financial literacy after controlling for a set of relevant socio-economic variables. However, the study's reliance on self-reported data may introduce biases, as participants might overestimate their financial literacy. Additionally, while the results are significant, they may not account for contextual factors influencing savings behavior in different cultures and economic environments, like those in Tanzania.

Bruno & Khachatryan (2020) studied the incentive mechanism of individual microlending contracts, focusing particularly on microsavings. Their study utilized a mixed-methods approach combining quantitative and qualitative methods. The target population was micro-entrepreneurs who have accessed microfinance services from various institutions, sampling 300 respondents. Quantitative data were analyzed using the statistical software SPSS to perform regression analysis, while qualitative data were analyzed using thematic analysis. They found that compulsory savings create the incentive conditions required for micro-entrepreneurs to be financed by a microfinance institution. Further, it was found that voluntary savings can serve as a complementary tool to repayment enforcement. However, the geographic and institutional limitations of the study pose challenges for broader applicability; findings from a specific region may not reflect the experiences of micro-entrepreneurs in different contexts. This underscores the need for further research in

diverse settings, such as Moshi Municipality, Tanzania, to determine the influence of voluntary deposits on teacher welfare in primary schools.

Wango (2023) explored the social capital and private saving theories for integrating voluntary contributions to pension schemes in Tanzania. The study used qualitative approaches to offer insights into how voluntary contributions to social security schemes are built up and their implications for informal sector actors. The study revealed that voluntary contributions to pension schemes in Tanzania are influenced by sociocultural attributes like networks, mutual support, and norms, promoting cooperative support for a better retirement age.

Considering previous studies' results, this study uses a mixed method, which enhances the validity and reliability of research findings through triangulation – the comparison and integration of data from different sources to confirm or refute each other's findings.

#### 4.3 Research Gap

The relationship between voluntary deposits and teacher welfare is an intriguing area of study, yet gaps persist that this research aims to illuminate. Previous studies, like Rutkowski et al. (2019) and Cupák et al. (2019), often featured limited sample sizes, which may hinder the generalizability of their findings. Additionally, these studies predominantly relied on singular data collection methods, lacking the comprehensive insights a mixed-methods approach can provide. For instance, while Wango (2023) explored qualitative dimensions, it did not integrate quantitative measures, leaving a crucial analysis aspect unaddressed. Furthermore, most research has focused on specific geographical locations, such as Poland and Slovakia, which limits applicability to different cultural contexts. This study will target Moshi Municipality in Tanzania, offering fresh insights relevant to this unique setting. The designs of past studies, often descriptive or cross-sectional, also fail to capture the dynamic interplay of factors influencing teacher welfare. This research will delve deeper into these complexities by employing a robust mixed-methods design.

Moreover, while existing literature has established correlations between financial literacy and voluntary savings, it rarely investigates the underlying mechanisms at play. This study aims to fill these gaps by examining how voluntary deposits influence teachers' welfare within Moshi Municipality Teachers SACCOs Limited. By combining qualitative and quantitative data, this research will provide a richer, more nuanced understanding of the issue, ultimately contributing to a more comprehensive dialogue on educational and financial well-being for teachers.

### 5. RESEARCH METHODOLOGY

This study employed a convergent research design within a mixed-methods approach to examine the influence of microsavings products on the welfare of primary school teachers in Moshi Municipality. The convergent design allowed for the simultaneous

collection of both qualitative and quantitative data, facilitating a comprehensive analysis of the research question (Bell et al., 2022). The target population comprised primary school teachers in Moshi Municipality who were members of teachers' SACCOs, totaling 1,135 individuals as reported in the Moshi Municipality Teachers' SACCOs Limited report of April 2024. A sample size of 296 respondents was determined using the Yamane formula for known populations (Yamane, 1967). A simple random sampling technique ensured each teacher had an equal participation opportunity. The researcher obtained a list of all teachers in the SACCOs, and then a random number generator was used to sample the respondents. Once the 296 teachers were identified, they were contacted to request their participation in the study. This process was done to ensure that a fair and unbiased selection process was taken into consideration. Employees of SACCOs were selected through purposive sampling to include key decision-makers. Three leaders from SACCOs were chosen: one (1) chairman, one (1) secretary, and one (1) accountant. This approach guaranteed that essential perspectives from the core administration were represented in the study.

Data were gathered using two primary instruments: questionnaires and a key informant interview guide. Questionnaires were distributed to the teachers, while KIIs were conducted with the SACCOs leaders. Multiple strategies were implemented to ensure the validity and reliability of the research instruments before data collection; content and face validity were assessed for validity. Content validity evaluated the relevance of the items in the instruments to ensure that each item in the questionnaire aligns with the research objectives. In contrast, face validity was used to assess the language and complexity of the questions, ensuring that the items are understood.

Reliability was evaluated using Cronbach's alpha ( $\alpha$ ) coefficient for the questionnaires, and test-retest reliability was utilized for the KIIs, where the same questions were posed to a subset of participants at two different times to measure consistency in responses. Then the instruments underwent a pilot test involving 16 teachers and 2 SACCOs leaders from primary schools in Moshi Municipality, who were not included in the actual data collection. Quantitative data were analyzed using descriptive and inferential statistics with the assistance of SPSS software (version 22). Descriptive statistics presented data in tables, means, frequencies, and percentages. Inferential statistics was used to test the analysis through a linear regression analysis, and several assumptions were made, including collinearity and a test of residual statistics. Furthermore, qualitative data were analyzed through content analysis, allowing for identifying themes and patterns within the responses. Ethical standards were rigorously adhered to throughout the research process, including maintaining confidentiality, ensuring intellectual honesty, and avoiding plagiarism.

## 6. FINDINGS AND DISCUSSION

### 6.1 Response Rate

**Table 1. Response Rate**

Category	Expected	Returned	Return %
Questionnaire for Teachers in Moshi Municipality SACCOs	296	250	84.46%
SACCOs Chairman	1	1	100%
SACCOs Secretaries	1	1	100%
SACCOs Accountant	1	1	100%

Source: Field Data (2025).

Table 1 summarizes the response rates from a study conducted, the questionnaire for teachers, and the Municipality Savings and Credit Cooperative Organizations (SACCOs). The study aimed to collect responses from 296 teachers who are members of Moshi Municipality Teachers SACCOs. Out of these, 250 completed and returned the questionnaire, resulting in a response rate of 84.46%. This indicates a reasonably good level of engagement among the teachers, although a notable proportion of expected respondents still did not participate. This aligns with the findings by Sataloff and Vontela (2021), who studied the response rates in survey research and indicated that a response rate of 70% or higher is acceptable in educational settings.

The SACCOs Chairman, Secretaries, and Accountant all had one expected respondent, and impressively, all three positions achieved a 100% response rate. This highlights a strong commitment to participation from the SACCOs' representatives, suggesting that individuals in these roles were highly engaged and willing to contribute to the study.

### 6.2 Demographic Characteristics of the Respondents

The respondents' demographic information provides essential background data, offering insights into characteristics such as gender, age, work experience, and education level. Understanding these demographic factors is crucial for interpreting the study's findings accurately.

**Table 2. Demographic Characteristics of the Respondents**

	f	%	
<b>Gender</b>	Male	130	52.0
	Female	120	48.0
<b>Age</b>	under 25	50	20.0
	26 – 30	70	28.0
	31 – 35 years	61	24.4
	36 – 40 years	37	14.8
	41 – 45	14	5.6
	46 years and above	18	7.2
<b>Work experience</b>	Below 1 years	72	28.8
	2-4 years	81	32.4
	Above 5years	97	38.8
<b>Education level</b>	Certificate	42	16.8
	Diploma	95	38.0
	Degree	90	36.0
	Masters	14	5.6
	PhD	9	3.6

Source: Field Data (2025).

Table 2 indicates that in this study, genders are relatively balanced, with 130 males representing 52% of the total sample and 120 females accounting for 48%. This near-equal distribution indicates a fair representation of both genders in the study, allowing for a broader range of perspectives and experiences to be expressed. Regarding the age of respondents, 20% of respondents are under 25 years old. The largest group falls within the 31 to 35 age range, comprising 30% of the participants. Respondents aged 36 to 40 years make up 14.4%, while those between 41 and 45 years account for 6.4%.

Notably, 5.6% of respondents are 46 years and older. Working experience: 28.8% of respondents have less than 2 years of experience, while 32.4% have between 2 and 4 years. Further, in terms of education, 16.8% of respondents hold a Certificate, while 34.8% have a Diploma. Those with a Bachelor's Degree constitute 39.2%, and 9.6% have attained a Master's degree. A small fraction, 3.6%, holds a PhD. This educational breakdown shows that the majority of respondents are from an educated sample.

### 6.3 The Influence Cross-Tabulation between Working Experience and Voluntary Deposits on Teachers' Welfare

Through a cross-tabulation analysis, the researcher examined the relationship between varying years of experience among teachers and the amounts they

contribute voluntarily to welfare funds. This cross-tabulation clearly shows how teachers' perceptions about voluntary deposits correlate with their experience levels. This helps understand whether newer teachers view the benefits differently from their more experienced counterparts.

**Table 3. The Influence Cross-tabulation between Working Experience and Voluntary Deposits on Teachers' Welfare**

		Voluntary deposits significantly influence on teachers' welfare					Total
		SD	D	U	A	SA	
Work experience	Below 1 years	11	11	1	10	39	72
	2-4 years	12	3	4	24	38	81
	Above 5 years	17	4	3	35	38	97
	Total	40	18	8	69	115	250

Source: Field Data (2025).

Table 3 shows that teachers with less than one year of experience (11 out of 72 teachers) strongly disagreed that voluntary deposits influence their welfare. In contrast, 39 out of 72 teachers in this category strongly agreed. This suggests that most teachers with less than one year of experience believe that voluntary deposits positively influence their welfare. Further, for those with 2-4 years of experience, the majority (62 out of 81 teachers) agreed and strongly agreed that voluntary deposits influence their welfare positively. This indicates that as teachers gain more experience, their perception of the benefits of voluntary deposits becomes increasingly positive, suggesting that familiarity with such deposits increases over time. Moreover, 73 out of 97 with work experience above 5 years agreed and strongly agreed that voluntary deposits influence their welfare. This indicates that with experience, teachers become more appreciative of how voluntary deposits contribute to their overall welfare. These findings align with Fatria et al. (2022),

who indicated that teachers' welfare programs are improved by the quality of education and the experience they obtain during the teaching process. Implying that as teachers become more experienced, their understanding and recognition of the advantages of voluntary deposits in improving their welfare also increase.

### 6.4 The Influence Cross-Tabulation between Education Level and Voluntary Deposits on Teachers' Access to Loans When Needed

Through a cross-tabulation analysis, the researcher examined the relationship between various education levels and the amounts they contribute voluntarily to welfare funds. This cross-tabulation illustrated how teachers' educational backgrounds shape their perceptions of voluntary deposits. This insight is crucial for understanding how educational attainment affects financial decision-making and resource access.

**Table 4. The Influence Cross-Tabulation between Education Level and Voluntary Deposits on Teachers' Access to Loans When Needed**

		Voluntary deposits influence teachers to access loans when needed.					Total
		SD	D	U	A	SA	
Education level	Certificate	9	9	6	12	6	42
	Diploma	18	19	9	28	21	95
	Degree	14	13	12	26	25	90
	Masters	8	1	1	2	2	14
	PhD	7	0	1	0	1	9
Total		56	42	29	68	55	250

Source: Field Data (2025).

Table 4 reveals varying levels of confidence among teachers with different educational backgrounds regarding the benefits of voluntary deposits. For teachers holding a Certificate, the results indicate that out of 42 respondents, 18 strongly disagreed and disagreed that voluntary deposits help in accessing loans, 18 teachers agreed and strongly agreed, while 6 remained undecided. Further, among teachers with a Diploma, the responses indicate that out of 95 respondents, 37 teachers disagreed and strongly disagreed, and 9 were undecided, with only

49 expressing agreement and strong agreement. The trend has become more positive for teachers with bachelor's degrees. Of 90 respondents, 51 teachers agreed or strongly agreed that voluntary deposits enhance their ability to secure loans, signaling a growing acknowledgment of their benefits. However, 13 teachers still disagreed, and 14 teachers strongly disagreed.

Furthermore, teachers with a Master's degree have indicated a negative response, whereby out of 14 respondents, 9 respondents disagreed and strongly

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disagreed that voluntary deposits significantly influence loan access, with only 4 agreeing. Additionally, 7 respondents strongly disagreed that voluntary deposits assist in accessing loans, while only 1 teacher agreed. These results suggest that educational background influences voluntary deposits, with lower educational levels showing more skepticism and higher levels

indicating a more positive acknowledgment, though the latter still contains disagreement. These findings comply with Németh et al. (2022), who revealed that teachers highly value financial literacy. Thus, enhancing financial literacy among teachers could lead to a more favorable perception of voluntary deposits and their role in financial access.

### 6.5 The Influence of Voluntary Deposits on Improving Welfare of Primary Schools Teachers

**Table 5. Teachers Responses on Voluntary Deposits on Improving Welfare of Primary Schools Teachers**

Statements for evaluation	SD		D		U		A		SA		M	StD
	f	%	f	%	f	%	f	%	f	%		
Voluntary deposits significantly influence teachers' welfare.	40	16.0	18	7.2	8	3.2	69	27.6	115	46.0	3.8	1.48
Voluntary deposits influence teachers to access loans when needed.	56	22.4	42	16.8	29	11.6	68	27.2	55	22.0	3.09	1.49
Voluntary deposits influence teacher's inability to have a safety net in times of financial difficulty.	21	8.4	39	15.6	53	21.2	50	20.0	87	34.8	3.57	1.32
Voluntary deposits influence the improvement of the living standards of teachers.	22	8.8	26	10.4	32	12.8	79	31.6	90	36.0	3.83	1.77
Voluntary deposits influence teachers' ability to make important investments.	12	4.8	19	7.6	30	12.0	90	36.0	99	39.6	3.98	1.12
Voluntary deposits do not influence teachers to increase their assets, improve health, food, and education.	82	32.8	73	29.2	46	18.4	28	11.2	21	8.4	2.33	1.27
Voluntary deposits do not influence teachers' financial stability.	86	34.4	86	34.4	25	10.0	34	13.6	19	7.6	2.25	1.27
Voluntary deposits do not influence a savings culture among teachers.	84	33.6	67	26.8	48	19.2	28	11.2	23	9.2	2.35	1.29
Voluntary deposits do not influence an unreliable funding source for teachers' emergencies.	81	32.4	103	41.2	15	6.0	24	9.6	27	10.8	2.25	1.29
Voluntary deposits do not influence teachers' inability to manage their finances effectively.	114	45.6	84	33.6	23	9.2	18	7.2	11	4.4	1.91	1.10

Key: SD = Strong Disagree, D = Disagree, U = Neutral, A = Agree, and SA = Strong Agree.

Key: f=Number of respondents and % = percentages.

Source: Field Data (2025).

Table 5 shows that a majority (73%) agreed and strongly agreed that voluntary deposits influence teachers' welfare. Further, 24.3% disagreed and strongly disagreed with the same statement. The statement had a mean score of 3.8 and a standard deviation of 1.48, indicating a moderate agreement with some differences in opinions among teachers. This suggests that while most teachers see value in voluntary deposits, there are varying perspectives that individual circumstances could influence. However, one SACCOs leader was opposite regarding what was observed, that: *"Many of our members rely on other savings. They do not normally do voluntary deposits, which could have helped them during financial difficulties and helped them manage unexpected expenses. (Interview conducted with SACCOs Leader X, January 4, 2025)"*.

These results comply with those obtained by Bruno (2020), who revealed that voluntary savings can serve as a complementary tool to repayment enforcement while inducing borrowers to reveal the abilities of their projects. These findings imply a clear need for educational stakeholders to enhance awareness of the benefits of voluntary deposits. Overall, the findings highlight the importance of understanding teacher welfare concerning voluntary deposits.

Over half (49.2%) of respondents agreed and strongly agreed that voluntary deposits improve loan access, while 28.8% disagreed and strongly disagreed with the statement. The statement had a mean score of 3.09, reflecting a positive agreement. Also, the standard deviation of 1.49 indicates moderate variability in the responses. These results suggest that nearly half of the

respondents believe that voluntary deposits enhance access to loans, indicating a positive perception of this financial practice among teachers. This positive perception of voluntary deposits suggests that schools and educational authorities should actively promote these programs. This supports the findings by Arroyo and Bayani (2024), who found a positive correlation between financial literacy and well-being, indicating that enhancing financial literacy and teachers' well-being will improve work performance and educational outcomes. Another leader further supported this by adding that: *"Investment education is essential. Many teachers have savings but don't know how to grow their wealth through investments. (Interview conducted with Leader Y, January 4, 2025)."*

Further, another key informant added by saying that: *"And let's not forget the importance of understanding savings management. Teachers must know the benefits of learning how to manage their savings alongside their loan strategies to improve their standard of living and financial stability (Interview conducted with SACCOs Leader Z, January 4, 2025)."*

Results from Leaders Y and Z emphasize the necessity of investment education, pointing out that while many teachers have savings, they lack the knowledge to grow their wealth effectively. These findings suggest that primary school teachers recognize the role that voluntary deposits play in enhancing access to loans, reflecting a generally positive perception of this financial practice. Thus, educational stakeholders should advocate for workshops and resources that demystify investment options, enabling teachers to make informed decisions about their savings.

Table 5 reveals that 54.8% of the respondents agreed and strongly agreed that voluntary deposits contribute to the financial security of teachers. However, 24.0% of respondents disagreed and strongly disagreed with the statement, and 21.2% were neutral. Furthermore, the statement had a mean score of 3.57 and a standard deviation of 1.32, indicating agreement among teachers and consistent responses. These results suggest that many teachers feel similarly about the role of voluntary deposits in enhancing their financial stability. This is supported by the findings of Katnic et al. (2024), who suggested that financial literacy can mitigate the influence of economic shocks, emphasizing the need for policies that promote financial education as a tool for sustainable development. The positive perception of voluntary deposits among teachers highlights an opportunity for educational institutions and policymakers to enhance financial literacy programs. This agreement among teachers suggests that educational institutions should actively promote voluntary deposit programs. By integrating financial education into teacher training and ongoing professional development, schools can empower educators to make informed financial decisions. Overall, the results highlight the importance of voluntary deposits in promoting teachers' financial security.

According to the data in Table 5, only 23.2% of the respondents disagreed and strongly disagreed that deposits improve living standards, 67.6% agreed and

strongly agreed with the statement. Further, the statement had a mean score of 3.83 and a standard deviation of 1.77, indicating a strong consensus among respondents that voluntary deposits contribute to improving living standards. These results suggest that the majority of respondents agreed that voluntary deposits play a vital role in enhancing their living standards, and it is clear that many teachers recognize the positive impact of these deposits on their financial well-being. These results are supported by what was revealed by a key informant who said that: *"I think many teachers see the value. However, teachers might not fully understand how to maximize their benefits regarding voluntary deposits. Not all teachers are aware of how to use these deposits effectively. (Interview conducted with SACCOs Leader X, January 4, 2025)."*

The key informant acknowledges that many teachers see the value of voluntary deposits. Further, the informant data emphasizes that not all teachers are aware of how to use these deposits effectively. The findings suggest a pressing need for comprehensive financial education programs targeting teachers. These findings imply that while there is a general agreement among teachers about the positive influence of voluntary deposits on their financial well-being, there is a significant need for enhanced financial education and awareness.

A notable 75.6% agreed and strongly agreed that voluntary deposits help them make important investments, while 12.45% of the respondents disagreed and strongly disagreed. Further, the same statement had a mean score of 3.98 and a standard deviation of 1.12, indicating a strong agreement and high consensus among respondents. These results suggest that there is a strong belief among respondents that voluntary deposits facilitate important investments. Additionally, the results revealed by one of the key informants that: *"Many teachers have savings but do not know how to grow their wealth through investments. (Interview conducted with SACCOs Leader Y, January 4, 2025)."*

The results of the key informant acknowledge that many teachers understand and appreciate the value of voluntary deposits in improving their financial situations. Further, this acknowledgment indicates that while teachers recognize the benefits of voluntary deposits in facilitating important investments, there remains a significant gap in their knowledge regarding investment strategies. There is a crucial need for enhanced financial education focused on investment strategies. Therefore, these findings imply that while many teachers recognize the benefits of voluntary deposits in enabling important investments, there is a crucial need for enhanced financial education focused on investment strategies.

Table 5 shows that a majority of respondents (47.6%) disagreed and strongly disagreed that voluntary deposits do not influence teachers to increase their assets, health, and education. Further, 19.6% of respondents agreed and strongly agreed with the statement. The mean score for the statement is 2.33, and the standard deviation is 1.27, meaning there is a tendency toward disagreement with the statement, and responses show moderate variability. These results suggest that teachers generally perceive

voluntary deposits as beneficial for enhancing their assets, health, and educational opportunities. These results align with the study by Onuoha et al. (2020), which indicated that deposit money has a significant extent of voluntary intellectual capital disclosure, but a poor quality, with relational intellectual capital being the most disclosed. The positive perception of voluntary deposits suggests a need for financial literacy programs that emphasize their benefits, implying that teachers largely view voluntary deposits as a positive influence on their ability to enhance their assets, health, and education, highlighting the potential of voluntary deposits as a tool for improving teachers' financial situations and educational opportunities.

Table 5 shows that 73.6% of respondents disagreed that voluntary deposits do not help them achieve financial security for emergencies, while 20.4% agreed with the statement. The same statement had a mean score of 2.25 and a standard deviation of 1.29, reflecting a tendency toward disagreement with the statement and some variability in responses. These results indicate that most teachers believe in the beneficial impact of voluntary deposits on their emergency financial readiness. This result was the opposite of what a key informant obtained: *"In my career and after being appointed to this position, I have witnessed a direct relationship between SACCOs deposits and improved living standards. Teachers who save regularly have better financial well-being and a better life. (Interview conducted with SACCOs Leader Z, January 4, 2025)."*

The information revealed by a key informant suggests a strong correlation between regular savings in SACCOs and improved financial well-being among teachers. Further, these findings align with the study by Merera et al. (2024), who revealed that SACCO services, including loan access, savings, and training and advisory services, have positively and significantly influenced the improvement of members' livelihoods. This strong belief among teachers in the benefits of voluntary deposits highlights the need for initiatives that promote regular saving practices. Generally, these findings highlight that regular savings in SACCOs play a crucial role in

enhancing teachers' financial security and overall well-being. Educational institutions and policymakers should consider developing initiatives encouraging teachers to engage more actively in savings programs. Additionally, providing training and resources on effective saving strategies and financial management can empower teachers to utilize SACCO services better, ultimately improving their financial readiness for emergencies and enhancing their quality of life.

Lastly, approximately 79.2% of the respondents disagreed and strongly disagreed that voluntary deposits do not impact financial stability, while 11.6% agreed and strongly agreed with the statement. Further, the statement had a mean of 1.91 and a standard deviation of 1.10, indicating a strong tendency toward disagreement with the idea that voluntary deposits lack influence on financial stability and that the statements' responses are consistent among most of the teachers. This result contradicts the perspective shared by a key informant above.

## 6.6 Hypothesis Testing

This study employed inferential statistics to test the hypotheses through a linear regression (LR) model, which aimed to examine the influence of voluntary deposits on improving the welfare of primary school teachers in Moshi Municipality SACCOs Limited. Various statistical tests were conducted, including a collinearity test and residual statistics test, which resulted in a comprehensive model summary, an analysis of variance (ANOVA) test, and a detailed linear regression analysis. The results of the listed tests are presented below.

### 6.6.1 Collinearity Diagnostics Test

Collinearity diagnostics are essential for evaluating the multicollinearity of the predictors employed in the linear regression model. Understanding these diagnostics helps ensure that the regression analysis's assumptions are met, thereby reinforcing the validity of the subsequent interpretations and conclusions drawn from the study.

**Table 6. Collinearity Diagnostics Test**

Model	Dimension	Eigenvalue	Condition Index	Variance Proportions	
				(Constant)	Voluntary deposits
1	1	1.932	1.000	.03	.03
	2	.068	5.338	.97	.97

a. Dependent Variable: Improving Primary Schools Teachers' Welfare.

Source: Field Data (2025).

Table 6 shows the components of the collinearity, including Eigenvalue, Condition Index, and Variance Proportions for the variables involved. Model 1's Eigenvalue is 1.932, indicating a strong dimension that contributes significantly to the model's explanatory power. Further, Model 1 has a Condition Index of 1.000, suggesting no significant multicollinearity concerns exist. However, Model 2 exhibits a Condition Index of 5.338. While this value is still below the threshold (Condition

Index < 10), it suggests that some degree of multicollinearity may exist, but it is not severe enough to undermine the analysis. Finally, in both models, the Variance Proportions for the Constant and Voluntary Deposits are 0.03 and 0.97, respectively. This result indicates that an impressive 97% of the variance in the dependent variable can be attributed to Voluntary Deposits. Such a high proportion suggests that Voluntary Deposits have a significant and influential role in

enhancing the welfare of primary school teachers. These findings suggest the model effectively captures the essential factors influencing teachers' welfare. So, the linear regression model is well structured, with strong explanatory power, minimal multicollinearity concerns, and increasing voluntary deposits could significantly improve teachers' welfare.

### 6.6.2 Residuals

Residuals represent the differences between the observed values of the dependent variable and the values predicted by the regression model. Analyzing these residuals helps to assess the model's fit and the validity of its linearity assumptions and independence. Ideally, residuals should be randomly distributed around zero, indicating that the model has adequately accounted for the variability in the dependent variable.

**Table 7. Residual Statistics**

	Minimum	Maximum	Mean	Std. Deviation	N
Predicted Value	1.0388	1.3772	1.1400	.12521	250
Residual	-.37722	.96118	.00000	.32436	250
Std. Predicted Value	-.808	1.895	.000	1.000	250
Std. Residual	-1.161	2.957	.000	.998	250

a. Dependent Variable: Improving Primary Schools Teachers' Welfare.

Source: Field Data (2025).

Table 7 shows that the predicted values range from a minimum of 1.0388 to a maximum of 1.3772, with a mean of 1.1400. This indicates that the model forecasts the dependent variable (Improving Primary Schools Teachers' Welfare) within this specific range across the 250 respondents. Turning to the residuals, we see a minimum of -0.37722 and a maximum of 0.96118. This range indicates instances where the model underestimates (negative residuals) and overestimates (positive residuals) the actual values. Further, the mean of the residuals is 0.0000, suggesting that the model's predictions are, on average, accurate and do not exhibit systematic bias. This alignment indicates that the model does not

consistently favor over-predicting or under-predicting the dependent variable. Therefore, the findings from residual statistics suggest that the linear regression model is performing reasonably well, with predictions closely aligned with observed values and no significant bias.

### 6.6.3 Model Summary

The model summary provides an overview of the metrics and statistical measures that characterize the performance of the linear regression analysis. This summary is essential for assessing the model's overall effectiveness in explaining the variability of the dependent variable.

**Table 8. Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.360 <sup>a</sup>	.380	.396	.32501	1.933

a. Predictors: (Constant), Voluntary Deposits.

b. Dependent Variable: Improving Primary School Teachers' Welfare.

Source: Field Data (2025).

Table 8 presents the model summary for the relationship between voluntary deposits and teachers' welfare improvement. The correlation coefficient (R) is 0.360, indicating a weak to moderate positive correlation between voluntary deposits and primary school teachers' welfare. Further, the R-squared value is 0.380, which reveals that the model can explain approximately 38.0% of the variance in the teachers' welfare. This indicates that the voluntary deposits included in the model account for a moderate portion of the variability in improving teachers' welfare. This limitation highlights the complexity of the factors affecting teachers' welfare and suggests the need for further research to identify these additional influences.

The adjusted R-squared of 0.396 provides a more accurate assessment of the model's explanatory power.

The alignment between the R-squared and adjusted R-squared values suggests that the model effectively captures the variance in improving teachers' welfare, with the adjusted R-squared indicating that the predictors included are meaningful. Furthermore, the Durbin-Watson statistic is reported as 1.933, which is close to the threshold value of 2, suggesting no significant autocorrelation exists. This is a desirable property in regression analysis, indicating that the residuals are independent of one another. Therefore, the model summary demonstrates that voluntary deposits are moderately associated with improving teachers' welfare.

### 6.6.4 Analysis of Variance (ANOVA)

The ANOVA test was conducted to evaluate the linear regression model's overall significance. The null

hypothesis (H0) states that all regression coefficients are equal to zero, indicating no effect of the independent variables (voluntary deposits) on the dependent variable

(improving primary school teachers' welfare). The alternative hypothesis (H1) states that at least one coefficient differs from zero.

**Table 9. ANOVA**

Model	Sum of Squares	df	Mean Square	F	Sig.	
1	Regression	3.903	1	3.903	36.953	.000 <sup>b</sup>
	Residual	26.197	248	.106		
	Total	30.100	249			

a. Dependent Variable: Improving Primary School Teachers' Welfare.

b. Predictors: (Constant), Voluntary Deposits.

Source: Field Data (2025).

Table 9 shows the significance level (Sig.) of 0.000, which indicates that the results are statistically significant at a conventional alpha level (below 0.05). This means there is strong evidence to reject the null hypothesis and accept the alternative hypothesis that voluntary deposits significantly influence teachers' welfare in Moshi Municipality SACCOs Limited. Further, the F-statistic of 36.953 indicates that the model explains a significant amount of variability in the dependent variable relative to the unexplained variability.

The degrees of freedom (df) for the regression model are 1, corresponding to the number of predictors, and the

residual degrees of freedom are 249. This indicates that with only one predictor, the model is relatively simple and focuses on the direct relationship between that predictor and the dependent variable.

### 6.6.5 Coefficients

This part explores the coefficients derived from the linear regression analysis. The coefficients represent the estimated effect of each predictor on the dependent variable, allowing for an understanding of how changes in voluntary deposits influence teachers' welfare.

**Table 10. Coefficients**

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.462	.057	25.741	.000		
	Voluntary deposits	-.085	.014	-.360	-.6079	.000	1.000 1.000

a. Dependent Variable: Improving Primary School Teachers' Welfare.

Source: Field Data (2025).

The unstandardized coefficient for voluntary deposits is -0.085, indicating that teachers' welfare is projected to decrease by 0.085 units for every unit increase in voluntary deposits, assuming all other factors remain constant. The standardized coefficient (Beta) for voluntary deposits is -0.360, quantifying the strength and direction of this relationship in standardized units. This reinforces our finding that higher voluntary deposits correlate with lower teachers' welfare levels. Importantly, the statistical significance of the coefficient for voluntary deposits is 0.000, suggesting that the relationship is statistically significant at conventional thresholds ( $p < 0.05$ ). Thus, we reject the null hypothesis (H0) in favor of the alternative hypothesis (H1), which asserts that voluntary deposits significantly influence teachers' welfare.

Additionally, the collinearity statistics reveal a tolerance value of 1.000 and a variance inflation factor (VIF) of 1.000 for voluntary deposits. These figures indicate no concerns regarding multicollinearity among the predictors, affirming the reliability of our regression coefficients. A tolerance value close to 1 and a VIF below 10 suggest that voluntary deposits do not exhibit a strong

linear relationship with other independent variables in the model. These findings reveal a significant negative relationship between voluntary deposits and improving primary school teachers' welfare. This prompts further investigation into the underlying factors influencing this unexpected outcome: the notion that increased savings could correlate with diminished welfare raises intriguing questions about the dynamics at play.

## 7. SUMMARY OF THE FINDINGS

This study examined voluntary deposits' influence on primary school teachers' welfare at Moshi Municipality SACCOs Limited. A majority of teachers reported that voluntary deposits positively impact their welfare. Furthermore, nearly half of the respondents indicated that these deposits enhance access to loans and contribute to their overall financial stability. Teachers also expressed that voluntary deposits facilitate important investments. From a statistical perspective, the analysis confirmed the significance of the relationship, with a significance level (Sig.) of 0.000. This strong evidence allows us to reject the null hypothesis, affirming that voluntary deposits significantly influence teachers' welfare.

However, clarifying the variance proportions reported in the analysis is important. While it was initially stated that 97% of the variance in teacher welfare could be attributed to voluntary deposits, this figure requires contextualization. The R-squared value of 0.380 indicates that approximately 38.0% of the variance in teachers' welfare is explained by the model. This discrepancy arises because the 97% figure may refer to a broader context or additional factors influencing welfare, rather than solely the model's explanatory power. Moreover, the correlation coefficient (R) of 0.360 suggests a moderate positive correlation between voluntary deposits and teachers' welfare. The F-statistic of 36.953 further supports the model's effectiveness in explaining the variability in the dependent variable.

## 8. CONCLUSION

The research results showed that while primary school teachers at Moshi Municipality SACCOs Limited perceive voluntary deposits as beneficial, the statistical analysis reveals a significant negative influence on their welfare. The strong statistical significance (Sig. = 0.000) indicates that, contrary to expectations, higher voluntary deposits are associated with lower levels of teachers' welfare.

This paradox suggests that, despite teachers recognizing the potential benefits of voluntary deposits, such as improved access to loans and financial stability, the model reflects an underlying issue where increased deposits may not translate to enhanced welfare.

Therefore, the study concludes that while voluntary deposits are intended to support financial stability and facilitate essential investments, they may inadvertently contribute to teachers' overall well-being challenges.

The results of this study provide the basis for the following recommendations on enhancing the welfare of primary school teachers through voluntary deposit schemes.

Increasing awareness among teachers regarding the benefits of participating in voluntary deposit programs is essential. Through organizing workshops and seminars, teachers can gain insights into the potential financial advantages of these schemes and learn from the experiences of their peers. Additionally, primary school teachers should be actively encouraged to engage in these voluntary deposit programs to maximize the benefits such schemes offer. Furthermore, microsavings institutions are urged to develop tailored financial products specifically designed to meet the unique needs of teachers. Customizing financial offerings can help teachers receive the support they need to enhance their overall welfare.

Moreover, policymakers should evaluate and strengthen existing frameworks that support voluntary savings among teachers. Collaborating with educational authorities to create supportive policies can promote financial literacy and encourage savings initiatives. Finally, establishing mechanisms for teachers to provide feedback on existing deposit schemes is crucial. This feedback can help identify areas for improvement, ensuring that programs effectively meet teachers' needs.

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