

# An Analysis of the Financial Performance of Selected Savings and Credit Co-Operative Societies in Botswana

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## Abstract

The co-operative sector plays an important role in a country's socio-economic development. This paper evaluated the financial performance of 9 selected Savings and Credit Co-operative Societies (SACCOSs) in Botswana by analysing audited financial statements of a five-year period from 2008 to 2012. The analytical techniques used include descriptive statistics of financial aggregates and ratios, correlation, regression and common size analyses. The financial aggregates analysed included all items that impact income generation as well as items that represent the financial position of the selected societies. The findings underscored that the selected SACCOSs achieved good financial results and were in strong financial position. The results also indicated a significant relationship between Net Profit ratio and Capital Employed Ratio to inform that the Net Profit Ratio was the most important explainer of Return on Capital Employed. The 5 year common size analysis also revealed a growth in income and in the financial status of the selected societies. The capital structure of these societies was characterised by substantial share of internal funds. Conclusively, maintaining an optimal balance between the interest on loans and interest on members' savings, and investing extra cash in diversified portfolio to reduce the risk levels would make the SACCOSs grow and function more productively and profitably. They would also then succeed in attracting more members and thereby significantly contribute towards poverty reduction and economic diversification drives in the country.

**Keywords:** Botswana, savings and credit co-operative societies, financial performance, accounting ratios, trend analysis

## 1. Introduction

### 1.1 Cooperative Movement

International Labour Organization (ILO), Recommendation 193, defines a co-operative as "an autonomous association of persons united voluntarily to meet their common economic, social and cultural needs and aspirations through a jointly owned and democratically controlled enterprise" (Henry 2012, p. 29). By forming a Co-operative Society, people pool their resources together on a self-help basis to advance their economic, social and cultural desires, and share equally gains and losses. In a co-operative, a body of persons voluntarily join to attain a common end through the formation of a democratically controlled organisation, making equitable contributions to the capital required and accepting a fair share of the risks and benefits of the undertaking in which the members actively participate (International Labour Organization, 1966). In Botswana, the Co-operative Act of 1989 describes a co-operative society as an organization, which has its principal objective of promoting the economic interest of its members in accordance with co-operative principles (Government of Botswana, 1989). Fundamental to the concept of co-operative are the co-operative principles as stipulated by ILO to include voluntary and open membership; democratic member control; member economic participation; autonomy and independence; education, training and information; co-operation among co-operatives; and concern for community (Smith, 2004, p. 50).

In Botswana, although the history of Co-operatives goes back to 1910, the first Co-operative Society to be enacted was the Swaneng Consumers Co-operative Society in Serowe in 1964 (Endo, 1996). From this beginning, the movement has shown considerable progress due to a constant policy of controlled expansion and has provided a substantial contribution to the economy and to the general development of the local population.

The two-tier co-operative structure in Botswana consists of primary and secondary co-operatives. The primary co-operatives include Marketing, Consumer, Multipurpose, Producers and Savings and Credit Societies. In addition, there are secondary societies in Botswana. In 2011, there were 170 registered co-operative societies in Botswana made up of 124 trading primary, 42 savings and credit and 4 secondary co-operative societies (Government of Botswana, 2011).

The Savings and Credit Cooperative Societies (SACCOSs) emerged in Botswana in 1980s and soon became very popular among the salaried people in different sectors of the economy (Seleke & Lekorwe, 2010). There are two types of SACCOSs in Botswana and these are rural and institutional SACCOSs. The rural SACCOSs started in 1964 and the institutional ones started in 1979. Most rural SACCOSs faced the challenge of survival mainly due to the fact that they did not emphasise savings.

### *1.2 The Problem*

Economic development of any country is largely dependent on the level of contribution made by corporate entities and other organisations that constitute the hub of the economy. Economic development is also affected by efficient performance of enterprises in terms of management, production and financial aspects.

Wanyama, Develtere, and Pollet (2009) noted that co-operatives play an important role of uplifting living conditions of low and middle income groups of the society. Thus co-operative enterprises in Botswana are expected to play their part in economic development of the country as they are wholly owned and run by locals. The primary task of any co-operative is to serve the economic needs of its members. In order to serve the members well, a co-operative society must ensure that the business is run efficiently and this must be reflected in its financial performance.

Relative to the 1970s and 1980s, co-operative development in Botswana slackened from the mid-1990s onwards (Seleke & Lekorwe, 2010). The authors highlighted that out of a total of 166 registered co-operatives operating in Botswana in 2008, only 21 societies were categorised as good performers while 38 societies were identified as belonging to the category of average performers, implying that only 36% of the co-operatives were in business and 64% were failing in their business activity. These figures underscore the fact that co-operatives in Botswana are not performing well.

Rural and Institutional SACCOSs in Botswana are among the societies whose poor financial performance resulted in the collapse of some. Failure to emphasize on savings and lack of business acumen by management committees led to the closure of some of rural SACCOSs. Although institutional SACCOSs are considered to be better off than rural SACCOSs as they operate from offices and are run by relatively more qualified personnel, are also bedevilled by managements' inadequate business skills and poor attendance of meetings by members. According to Shimane (2010), the challenges that affected the growth of SACCOSs in Botswana included among other things, mismanagement due to lack of adequate control and good governance, members' apathy resulting in lack of commitment to attend meetings that are critical for decision making, and competition from other financial institutions. These challenges limit co-operatives' ability to contribute to country's economic development. In the above context, an evaluation of the financial performance of selected SACCOSs with a view of assessing their viability as vehicles of economic growth in Botswana proves relevant and important. While much research has been carried out in other parts of Africa on SACCOSs and their financial performance (Nyambere, 2013; Miriti, 2014; Kiaritha, 2015), very little research has been done in Botswana to evaluate the performance of these societies. This has necessitated a study on SACCOSs with a view to measure their financial performance.

### *1.3 Objectives*

The broad objective of this study is to provide empirical evidence on the financial performance of selected SACCOSs through ratio analysis and other analytical methods. The specific objectives include:

- 1) To analyse the calculated activity, financial leverage, liquidity and members' investment ratios over a 5 year period, to reflect on the trend of these ratios and assess the financial performance of the selected societies.
- 2) To measure and interpret the degree of relationships between these ratios.
- 3) To determine the sign of growth trend in profit, assets and liabilities of the selected Co-operatives over a 5 year period and reflect on the trend.

### *1.4 Literature Review*

#### *1.4.1 Theoretical Review*

The theoretical framework is the structure that can support or hold a theory of a research study and exhibits an

understanding of the concepts and theories that are pertinent to the topic of the research. This study focused on two important theories namely Life Cycle Theory of Savings and the Modern Portfolio Theory.

#### 1.4.1.1 Life Cycle Theory of Savings

According to Life Cycle Theory of Savings, people save when they are young in order to finance consumption when they retire. The model envisages that individuals should smooth consumption, in the sense of holding marginal utility constant, across stages of life. The model predicts borrowing prior to labor market entry, wealth accumulation during the working life, and dissaving in retirement (Browning & Crossley, 2001). The life-cycle theory is one in which the wealth of the nation gets passed around; the very young have little wealth, middle aged people have more, and peak wealth is reached just before people retire (Deaton, 2005). Mason (1988) pointed out that in a rapidly growing population, households must support many children and would result in more consumption and therefore savings will be low. It is, therefore, observed that in general national savings rates are high when the dependency rates are low and that lead to rapid economic development. The theory also emphasizes on people's choice to save excess funds for future use and these funds can then be put together by financial institutions to assist low income people. It is in this context that SACCOSs play an important part in solving the problems of poorer strata of the population (Kiaritha, 2015). SACCOSs provide savings accounts that are appropriate for low income savers. These societies, through registration and payment of membership fees allow members to make periodic savings with the Societies and give them loans at reasonable interest rates.

#### 1.4.1.2 Modern Portfolio Theory

Modern Portfolio Theory is an important theory for investment decisions. It is about finding a good balance between return maximization and risk minimization. Formulated mathematically, the theory highlights the principle of diversifying investments to lower the risk, without reducing the expected return. According to Omisore, Yusuf and Christopher (2012), diversification lowers risk even if assets' returns are not negatively or positively correlated. Business Enterprises recognize how credit concentrations can adversely impact financial performance. As a result, a number of institutions, including SACCOSs, are actively pursuing quantitative approaches to credit risk measurement and are also using credit derivatives to transfer risk efficiently while preserving customer relationships (Nyambere, 2013). SACCOSs are expected to invest the capital and other funds in lucrative ventures in order to grow the wealth of its members.

#### 1.4.2 Financial Ratios as Measurers of Performance

For many years financial statements were regarded as a "proof" of the work of the book-keeper. Financial statements were also used as the basis to form an opinion about investment activities. Altman (1968) felt that assessing a firm's present condition was a very important task of corporate management. In doing so, the management could determine the financial strength and its weakness and with that knowledge, the management could adopt new policies to deal with the problems. He developed his Z score model using financial ratios and multiple discriminant analysis to predict business failure. Krishnan and Moyer (1994) also supported Altman Z-scores, as a measure of bankruptcy potential. A good number of models have been developed in the past to measure the efficiency and financial health of corporate enterprises. Goyal (2013), highlighted a model based on financial ratios to indicate the health of individual corporate enterprises. According to Kalogeris, Baourakis, Zopounidis and Dijk (2005), financial ratios can convert mass of data into meaningful information. The authors concluded that ratio analysis is a solid tool that is widely used for evaluation of financial performance of enterprises.

Dongre and Narayana Swamy (1999) developed a model to evaluate the financial performance of co-operatives that took into consideration variables that indicate liquidity, profitability and long-term solvency of the business. This model measured performance by grouping co-operatives into good, satisfactory and poor grades, an information that is very useful to the management to take remedial actions to improve performance.

According to Delen, Kuzey, and Uyar (2013), the evaluation of performance of a firm with the use of financial ratios is a traditional activity. They further observed that it is a tool that is used by creditors of the business, investors and other stakeholders. Ratio analysis can assist in measuring financial health of a business as well as help across company comparisons. They emphasized that financial accounting ratios that are calculated using variables in the financial statements of a business can measure the performance of managers for fixing rewards, measuring performance of departments within an organization, projecting the future of the business as well as providing information to stakeholders such as creditors and suppliers. Babalola and Abiola (2013), found financial analysis as a special accounting technique that aimed at formulating a diagnosis and prognosis relative to the situation and financial performance of an organization.

### 1.4.3 Empirical Literature Review

Financial Performance of a business enterprise has to be evaluated on a regular basis. Lakew, Meniga, and Gebru (2014) described performance measurement as the process of quantifying efficiency and effectiveness. Effectiveness is compliance with customer requirements, and efficiency is how the organization's resources are used to achieve customer satisfaction levels. Financial performance deals with measuring the results of the firm's policies and operations in monetary terms. These results are reflected in the firm's return on investment, return on assets and value added, to mention a few.

Tehrani, Mehragan, and Golkani (2012) asserted that the evaluation of firms' performance can be a guide that would greatly assist and provide directions for future decisions regarding development, investment, management and control. The authors observed that financial evaluations/analysis is the oldest and important approaches used to measure performance of organizations using financial statements. Such an analysis can provide valuable information on corporate strength, its weakness and the quality of the firm's financial position.

Kassali, Adejobi, and Okparaocha (2013) stated that one of the most important indications of a successful Co-operative Society is the existence of a comprehensive accounting system similar to that of profit type firms. Also, the use of financial ratios constitutes an important tool to measure the strengths and weakness of co-operative societies. They concluded that co-operatives should watch their loan policy and old co-operatives require close supervision to improve financial performance. Their suggestions to improve performance included affordable interest rates, use of loans for productive purposes, regular training for management staff, recruitment of young members and a comprehensive audit of accounts.

A study conducted by Bhatt and Bhatt (2013) on the financial performance and efficiency of co-operative banks in Jammu and Kashmir (India), revealed that the efficiency of co-operative banks was not very high due to certain reasons like poor recovery of loans and lack of skilled staff. They further suggested that mismanagement and poor recovery performance should be addressed through more fiscal jurisprudence. Magali and Pastory (2013) in their study that evaluated the technical efficiency of rural SACCOSs in Tanzania found that low technical efficiency of rural SACCOSs was caused by higher costs of operations. They recommended effective utilisation of savings, deposits and expenses as measures to improve efficiency.

Pashkova, Niklis, Alexakis, and Papandreou (2009) in the analysis of financial assessment of food marketing co-operatives of Crete, concluded that factors that affect the financial performance of the food co-operatives include, problems of ineffective resource allocation in their use resulting from weak management, high loan burdening and low liquidity levels, underdeveloped marketing management, including the absence of certain market niches and non-recognizable brand names; and lack of knowledge concerning rural society. Also, the absence of competitive market strategies such as product differentiation, market segmentation, specialization and diversification, prevents increases in profit margin and expansion of demand. To overcome these problems, changes not only within organizations, but also government and co-operative organizational support are required. Lakew et al. (2014) carried out a trend analysis of Income statement and statement of financial position to reflect on the changes in Income, expenditure, assets and liabilities of multi-purpose societies. The analysis indicated that there were fluctuations in almost all items that constituted Income statement and Statement of Financial Position.

Miriti (2014) highlighted that the financial performance of SACCOS could be measured through its ability to meet the monetary demands of its members, taking into account the economic status of the members. Sebhatu (2011) was of the view that lack of continuity of savings by members is a major problem for the development of SACCOSs and because of lack of awareness and poor savings culture, members do not often honour their savings and loan commitment with the SACCOS. This is a major challenge for SACCOSs to become viable financial institutions. Furthermore, Mvula (2013) identified a number of challenges generally faced by SACCOSs. They included inadequate capital, poor asset quality, poor governance and management, poor profitability, poor liquidity and non-compliance.

## 2. Methodology

For the purpose of this study, secondary data was used. The study covered a period of 5 years (2008-2012) and the data were obtained from the audited financial statements of selected savings and credit societies in Botswana. The sample was selected on the basis of the availability of audited accounts of a Society for a continuous period of 5 years from 2008 to 2012. Of the financial statements obtained from the Department of Co-operative Development for SACCOSs operating in Botswana, only 9 SACCOSs had audited financial statements for 5 consecutive years. The study therefore focused on these 9 societies.

The collected data were analysed using the techniques of financial ratios, common size, correlation, and regression analyses. Mean and standard deviations of average ratios were also computed. The following accounting ratios were used for data analysis:

**Profitability Ratios:** Profitability ratios relate to a set of ratios that are used to assess the ability of a business enterprise to generate income as compared to their expenses and other related costs that are incurred during a given period of time. Profitability is important to the concept of solvency and going concern. The study considered Interest Expense Percentage, Net Profit Ratio and Return on Capital Employed ratios for measuring profitability of selected co-operatives.

**Activity Ratios:** Activity ratios, also called Efficiency ratios measure how well the business enterprise utilizes their assets to generate income. These ratios assist the management to improve on their performance. The two ratios used in the study are Total Assets Turnover and Sales to Capital Employed. It may be noted that Efficiency ratios go hand in hand with profitability ratios as effective utilization of resources lead to increased generation of profits.

**Financial Leverage Ratios:** These ratios are also known as Equity or Debt ratio, measure the overall debt load of the business and compare the load with the assets or equity of the business enterprise. The study has chosen two important ratios, Fixed Interest Cover and Interest on Loans to Interest on Savings. It is important for any business, and more so for a SACCOS to have adequate earnings to pay off the interest expense. Earnings have a tendency to fluctuate due to changes in market conditions and this underscores the need to have earnings that is safer and preferably much higher than the interest expense every year. What will be a safe amount depends to a very large extent on the stability of earnings and the cyclical nature of the business sector.

**Liquidity Ratios:** Liquidity ratios indicate the capability of a business to discharge its current liabilities. The ratios also show the cash levels of a business enterprise and its ability to turn other current assets into cash to pay off its liabilities and other current obligations. Generally, the higher are the liquidity ratios, the higher are the margin of safety in terms of firm's ability to meet its current liabilities. However, too high a ratio is an indication of poor asset management. The study has chosen current ratio to measure the liquidity of the selected societies.

**Market Prospect Ratios:** These ratios, also known as Members' Investment Ratios provide the investors what they could expect to receive from their investment. Earnings per share and Net Book Value per share are important market prospect ratios. The study focuses on these two key ratios.

### 3. Findings and Discussions

#### 3.1 Ratio Analysis

Table 1 shows the annual averages of 11 financial ratios and standard deviations for 9 selected co-operatives over a five year period. The annual average of each ratio is the average of a particular ratio for 9 SACCOSs in a year under observation. It is realized from Table 1 that the sampled co-operatives had a good profitability potential. The co-operatives recorded a net profit ratio averaging between 25% and 37% with moderate fluctuations. The maximum fluctuations (SDV = 40%) were recorded in 2009, a year with the lowest net profit ratio of 25%, and the minimum changes (SDV=19%) were found in 2012.

The net profit ratio is normally influenced by volume of revenue generated, margins put on those revenues and efficiency in managing expenses. The main source of revenue for the SACCOSs is interest on loans to members. A strong net profit ratio could mean that co-operatives are charging high interest rates on the loan they lend out. It could also mean that management is effectively utilising cash at their disposal by investing it in other short term investment ventures which generate more interest for the co-operative. Low rate of "other expenses" than interest on savings, which was exhibited in most selected co-operatives, could also be another reason for good profitability performance.

Table 1. Annual averages of 10 financial ratios and standard deviation of selected co-operatives over five year period

YEAR		Profitability Ratios				Activity Ratios		Financial Leverage Ratios		Liquidity Ratios	Members' Investment Ratios	
		Interest Expenses (%)	Net profit ratio	Return on capital employed	Return on Total Assets	Total Assets Turnover	Sales to capital employed	Fixed interest Cover	Interest on loans /interest on savings	Current Ratio	Net book value per share	EPS
2008	AVG	60.67	28.11	15.11	3.73	0.10	0.54	2.13	1.60	1.35	48.62	7.91
	SDV	21.32	30.26	11.17	4.20	0.06	0.33	1.52	1.59	0.31	134.59	21.23
2009	AVG	63.06	25.25	19.07	3.74	0.11	0.78	2.06	1.98	1.28	62.14	20.67
	SDV	19.23	40.26	30.20	4.47	0.05	0.33	1.34	1.49	0.34	172.89	59.15
2010	AVG	66.37	37.72	26.38	5.22	0.12	0.86	2.42	2.74	1.34	98.56	30.73
	SDV	24.92	31.96	38.46	4.53	0.03	0.53	1.29	1.45	0.38	276.65	86.75
2011	AVG	66.04	37.43	28.81	4.65	0.12	0.80	2.12	2.42	1.35	112.36	32.15
	SDV	21.42	20.48	17.98	2.97	0.02	0.56	0.87	1.17	0.38	314.96	92.03
2012	AVG	55.69	35.80	27.47	5.53	0.14	0.83	2.35	2.82	1.37	148.41	35.15
	SDV	23.19	19.96	18.74	4.40	0.05	0.56	1.29	1.56	0.37	414.84	100.28

Furthermore, Table 1 shows that examined co-operatives achieved a good return on capital employed. Overall, this ratio grew from 15% in 2008 to 29% in 2011 before slightly dropping to 27% in 2012. The highest fluctuations from the mean were recorded in 2010 (SDV = 38%) and the lowest (SDV = 11%) in the year 2008; a year that also had the lowest return on capital employed (15%). In all the five years under study, the return on capital employed remained above 10.86 % which was the average interest rate in Botswana between 2006 and 2015 (Trading Economics, 2016). This means that co-operatives yielded more return on members' investment than what members could have gained if they had invested their cash in commercial banks. Return on capital employed is the function of profit margin and asset turnover. In this case, the return on capital employed would be influenced by differences between interest charged on loans and interest paid on members' savings and how efficiently the management employed the assets at its disposal. It is noted that the main asset of the SACCOSs is cash and based on the level of return on capital employed achieved, it can be safely argued that the co-operatives under study utilised their cash balances efficiently.

Looking at profitability from another angle, Table 1 presents a return on total assets (ROTA) expressed as a percentage of net profit over the total assets. ROTA measures the effectiveness of the entity's management in using the assets under its disposal to generate profits. Results on Table 1 shows a growing trend of ROTA as it increased from 3.73% in 2008 to 5.53% in 2012, at an average rate of 4.6%. A positive ROTA means that co-operatives' management is deploying current assets and non-current assets in a more effective manner. More specifically, it would mean that loans issued were collected on time to allow frequent roll over of cash and that defaults were minimized through robust credit control mechanisms.

Table 1 also reflects that interest paid on savings by selected co-operatives over the five year period accounted for between 56% and 66% of the total expenses or an average rate of 62%. This tells us that almost two-thirds of co-operatives' expenses are interest on savings, signifying the key function of SACCOSs being lending to members. From another perspective, the low percentage of other expenses to total expenses could mean that SACCOSs have low wage bills and other fixed overhead costs which normally make a significant portion of corporate expenses. This can be used as a marketing tool to attract more members since it shows that the major expenditure of a co-operative is on its members themselves.

The management efficiency ratios of selected co-operatives reflect a moderate financial performance. Total assets turnover was modest and on the rising trend. It averaged almost 12 thebe of revenue per every pula (P) invested in total assets over a five year period. It rose from 10 thebe per pula in 2008 to 14 thebe per pula in 2012. This ratio also reflected reasonable fluctuations, with standard deviations ranging between 2 thebe and 6 thebe. Utilisation of assets to generate revenue for the business entity is critical in measuring management's judgment capability as it requires a great deal of balancing between the desire to generate high volume of revenues and to maintain optimum level of assets. The two material assets of co-operatives are loans to members and cash and cash equivalents. Therefore, the effective management of assets in these co-operatives would depend on how the management applies the Modern Portfolio Theory of finding a good balance between return maximization and risk minimization in investing the cash under their control.

The capital employed turnover followed the same trend of the assets turnover although the former was vividly higher than the latter. The capital employed turnover ratio showed that the revenue generated by co-operatives under study was good and on the increase. The ratio averaged 76 thebe of revenue per every pula of capital employed. It rose from the lowest level of 54 thebe in 2008 to highest level of 86 thebe in 2010.

Furthermore, the selected co-operatives did very well in generating adequate profits to cover their main expense item, the interest on member's savings. On average, the fixed interest cover ratio was above 2 times over the five year period. The lowest average interest cover of 2.06 times was registered in 2015 and the highest cover of 2.46 times in 2010. Table 1 shows that there were considerable fluctuations in this ratio among different co-operatives. This ratio may be influenced by various factors such as level of revenues, interest paid, other expenses and the number of members. Depending on the magnitude of each of these items and how each co-operative's management decides to rewards its members, different interest covers will emerge. However, over the period of five years, average interest cover spread around 2 times implying the best fit of industry interest cover.

Again, the co-operatives' interest on loans well covered the interest on savings with an average cover of above 2 times. This ratio showed an increasing trend over the period under study. It increased year by year and grew from 1.60 times in 2008 to 2.82 times in 2012. This ratio showed that SACCOSs were in business and were performing well. In addition, this ratio exhibited the spirit of co-operation with a fair balance between interest rates on loans and savings. The fluctuations of this ratio among the co-operatives examined appeared to be on the high side but moderately stable over the years. The standard deviations ranged between 1.17 and 1.59.

Additionally, the financial leverage of selected co-operatives was in good shape mainly because the capital structure of these co-operatives was heavily dominated by internally generated funds rather than external funds. In most of the selected societies, long-term debts were non-existent.

The ability to meet co-operatives' obligations in the short term was measured using the current ratio. The current ratios of the selected co-operatives were fairly stable and strong at an average of 1.3 times during the period. Because SACCOSs do not have inventories, a current ratio of above 1 which is close to acid-tests ratio is a good indication that the co-operatives were well positioned to meet their short term maturing obligations. Another good indicator of satisfactory performance in this regard was a low and constant standard deviation. Over the five year period, the average current ratio fluctuated in the margin of below 0.4.

Moreover, members' investment ratios measured using Net book value per share and Earnings per share reflected an improving performance over the period of study. The average net book value per share rose from P49 per share in 2008 to P148 per share in 2012 while the average earnings per share rose from P8 per share in 2008 to P35 in 2012. This implies that the selected co-operatives had the ability to attract more investors (members) making the SACCOSs to remain a strong business venture with enormous growth potential. However, vast deviations were noticed among selected co-operatives regarding net book value per share and earnings per share mainly because one co-operative had exceptionally high nominal value of P250 per share as compared to other co-operatives whose nominal values were P1 per share.

All in all, the 11 financial ratios computed to measure the strength of savings and credit societies in Botswana, indicate that these co-operatives are achieving good financial results and are in strong financial position. Maintaining optimal balance between the interest on loans and interest on members' savings, and investing their excess cash in diversified portfolio to reduce the risk exposure will make the SACCOSs grow stronger and stronger. Co-operatives will then be able to attract more members and become one of the significant contributors to poverty reduction drive.

### 3.2 Correlation Analysis

Table 2 presents the correlations between various financial ratios over the five year period.

Table 2. Correlation between annual average ratios of selected co-operatives over five year period

	<i>IEP</i>	<i>NPR</i>	<i>ROTA</i>	<i>ROCE</i>	<i>TAT</i>	<i>SACE</i>	<i>FIC</i>	<i>IOL /IOS</i>	<i>CR</i>	<i>NBVPS</i>
<i>NPR</i>	0.28*									
<i>ROTA</i>	-0.05	0.46**								
<i>ROCE</i>	0.38**	0.78**	0.30*							
<i>TAT</i>	-0.18	0.49**	0.37*	0.39**						
<i>SACE</i>	0.21	-0.12	-0.34*	0.23	0.01					
<i>FIC</i>	-0.08	0.79**	0.52**	0.46**	0.46**	-0.28				
<i>IOL /IOS</i>	-0.34*	0.57**	0.54**	0.35*	0.54**	-0.19	0.75**			

CR	-0.46**	0.18	0.52**	-0.21	0.19	-0.63**	0.45**	0.48**		
NBVPs	-0.03	0.12	-0.26	0.05	0.09	-0.08	0.01	0.11	-0.04	
EPS	-0.02	0.14	-0.27	0.08	0.11	-0.08	0.03	0.11	-0.05	0.97**

\*. Correlation is significant at the 0.05 level; \*\*. Correlation is significant at the 0.01 level.

About 35% of correlations were significant at 1% level and 11% of them were significant at 5% level while the rest were insignificant. A single strong positive correlation ( $x \geq 0.90$ ) was found between net book value per share and earnings per share. In addition, moderate positive relationships ( $0.90 > x \geq 0.65$ ) were found between net profit ratio and return on capital employed and between net profit ratio and fixed interest cover. Again, interest on loans over interest on savings ratio appeared to be in moderate positive correlation with interest cover ratio. Weak positive correlation ( $0.35 > x < 0.65$ ) was found between return on capital employed and interest expense percentage. Likewise, total asset turnover, interest on loans to interest on savings and return on total assets exhibited a weak positive association with net profit ratio. Fixed interest cover also displayed a weak positive correlation with return on capital employed and total asset turnover. Return on total assets showed a weak positive correlation with net profit ratio, fixed interest cover, interest on loans to interest on savings and current ratio. Interestingly, most of the weak positive associations were statistically significant at 1% level. Current ratio reflected a weak negative relationship with interest expense percentage, and sales to capital employed.

It is worth noting here that interest expense percentage recorded the highest number (7) of negative relationships. The total asset turnover also displayed almost the same number, but positive associations, although most of the correlations in each group were weak and insignificant. This implies that the increase in interest expenses would normally affect most of the ratios negatively and management efficiency in utilising organisation assets would most likely result in improving many ratios. Therefore co-operatives' management should focus on maintaining good balance between the interest paid to members (expense) and interest charged to members (revenue).

### 3.3 Regression Analysis

Return on capital employed is considered by many analysts as the key indicator of profitability potential of a business enterprise. To further our analysis on the profitability performance, we looked at predictive capability of other ratios in relation to the key ratio among the profitability ratios; Return on Capital employed and run the Ordinary Least Square (OLS) regression.

The regression model was as follows:

$$ROCE = \alpha + \beta_1 IEP + \beta_2 NP + \beta_3 ROTA + \beta_4 TAT + \beta_5 SCE + \beta_6 FIC + \beta_7 IOLIOS + \beta_8 CR + \beta_9 NBVPs + \beta_{10} EP + \varepsilon$$

Where,

$\alpha$  = a constant term representing percentage change in ROCE regardless of independent variables

ROCE = Return on capital employed

IEP = Interest expense percentage

NP = Net profit ratio

ROTA = Return on Total Assets

TAT = Total assets turnover

SCE = Sales to capital employed

FIC = Fixed interest cover

IOLIOS = Interest on loans to interest on savings

CR = Current ratio

NBVPs = Net book value per share

EP = Earnings per share

$\varepsilon$  = error term

Table 3 shows the results of a multiple OLS regression of 10 independent financial ratios and Return on Capital Employed as dependent ratio. The regression yielded a high adjusted R-squared of 72% and a statistically significant F-factor of 12.33 which imply that the model of ten independent ratios is a good predictor of return on capital employed.

Table 3. Regression coefficients for 10 ratios determining the return on capital employed

	Unstandardized Coefficients	Standardised Coefficients	t	Sig.
	B	Beta		
(Constant)	27.992		1.408	.168
Interest Expense Percentage	-0.049	-0.042	-.351	.728
Net Profit Ratio**	0.813	0.943	5.444	.000
Return on Total Assets	0.950	0.155	1.283	.208
Total Asset Turnover	26.781	0.070	.704	.486
Sales to Capital Employed	6.736	0.127	1.164	.252
Fixed Interest Cover	-5.820	-0.290	-1.593	.120
Interest on Loans/Interest on Savings	1.359	0.081	0.526	.603
Current Ratio*	-23.280	-0.323	-2.417	.021
Net Book Value per Share	-0.026	-0.281	-.568	.574
Earnings per Share	0.083	0.250	.503	.618

Note. \*\* significant at the 0.01 level; \* significant at the 0.05 level; Adjusted  $R^2 = 0.72$ ; ( $F = 12.327$ ,  $P = 0.000$ );  $N = 44$ .

However, only two independent ratios appear to have a statistically significant relationship with Return on capital employed. These are net profit ratio and current ratio. The results reflect a positive and strong statistically significant relationship between the Net Profit ratio and return on capital employed ratio ( $\beta = 94\%$ ;  $P = 0.001$ ). This makes the net profit ratio to be the most important explainer of return on capital employed.

The current ratio is also shown as an important ratio in predicting the return on capital employed with a negative but weak statistical relationship with return on capital employed ( $\beta = -32\%$ ;  $P = 0.021$ ). Overall, these results suggest that the proper management of revenues, expenses and current liabilities has the potential of keeping the co-operatives on the sustainable profitability growth path.

We decided to use the standardized coefficients in our analysis of results because financial ratios involved are measured differently. Some are expressed in percentages while others are in unit of currency and more others are in multiples. Therefore, instead of examining the difference in dependent variables per unit of change in independent variables, we looked at the difference in dependent variables in standard deviations per standard deviation difference in independent variables with the intension of showing which independent variable is an important predictor of the dependent variable.

### 3.4 Common Size Analysis

In addition to financial ratio analysis, a common size analysis was done on the financial statements of the selected corporative societies. The aggregate results of the selected societies were used for the analysis. The year 2007/2008 was used as the base year.

Table 4 presents the results of common size analysis for both the income statement and the statement of financial position. Table 4 reveals that most of the income statement items had increased significantly over time with a percentage increase reaching as far as 6525% for Net Income, as an example. The increase in observed performance measured over time could be attributed to the fact that members had increased in numbers over time. The societies generate revenues through various means such as joining fees, interest from banks and members' loan interest. The largest contributor to income was members' loan interest which averaged 75% of total income. The increase in interest income over time could be due to the fact that the increase in membership created a larger market for societies to advance loanable funds to maximise on their income. Furthermore, the rise in interest income might have been the result of household debt rate in Botswana which was on the rise for a considerable number of years including the period under study and was considered to be among the highest in Africa (Bifm Botswana Limited, 2012). Other income items had also increased over time for the period under study although it contributed on an average only 25% to the total income of societies. Other income items for SACCOSs include Bank deposit fees, joining fees, insurance fees etc., which varied from one society to another. There was a significant increase in "other income" between 2010/2011 and 2011/2012 periods where the percentage was 375% in 2010/2011 and it grew significantly to 1503% in 2011/2012 financial year. This was attributable to huge in-house insurance income which grew from as low as P2, 013 to P164, 613 for one of the societies under investigation. It is unclear in the audit report for that particular society as to what could have been the reason for such huge increase in insurance income. Two other incomes that showed increase were the joining fees for one of the societies whose membership almost doubled in one year and the sundry incomes that went up from zero to P11, 165 between 2010/2011 and 2011/2012 for the same society.

Table 4. Common size analysis of selected co-operatives for 5 years

Horizontal Common size Analysis												
Years	Income Statement					Statement of Financial Position						
	Interest on Loans	Other Income	Total Income	Interest on Savings	Admin & other Exp.	Net Income	Non-current Assets	Current Assets	Total Assets	Capital Employed	Non-current Liabilities	Current Liabilities
2008	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
2009	342%	255%	350%	500%	1027%	36%	42%	225%	225%	148%	41%	254%
2010	1040%	253%	987%	1232%	1882%	2168%	47%	399%	399%	355%	55%	455%
2011	2131%	375%	1808%	2209%	2363%	2070%	52%	654%	655%	616%	62%	762%
2012	3787%	1503%	4023%	3857%	6321%	6552%	194%	1030%	1037%	1196%	182%	1184%
STDV	15.12	5.71	15.81	15.05	23.87	26.48	0.64	3.7	3.73	4.48	0.57	4.32
Vertical Common Size Analysis												
Years	Interest on Loans	Other Income	Total Income	Interest on Savings	Admin & other Exp.	Net Income	Non-current Assets	Current Assets	Total Assets	Capital Employed	Non-current Liabilities	Current Liabilities
2008	57%	43%	100%	43%	29%	28%	1%	99%	100%	24%	0%	76%
2009	66%	34%	100%	46%	29%	25%	1%	99%	100%	19%	0%	81%
2010	84%	16%	100%	38%	24%	38%	1%	99%	100%	21%	0%	78%
2011	84%	16%	100%	39%	23%	37%	1%	99%	100%	22%	0%	78%
2012	82%	18%	100%	35%	29%	36%	1%	99%	100%	24%	0%	76%
Average	75	25	100	40	27	33	1	99	100	22	0	78

There had been an observed increase in interest expense over time which almost doubled each year. The interest expense is the expenditure incurred by societies on members' deposits with the society. One possible reason for the increase in interest expenditure could be that, coupled with increased membership and deposits from members, SOCCOSs were addressing their mandate to improve the welfare of members by paying higher interest. Another possible reason could be that the interest rate on savings was a little bit higher, more competitive and attractive than the interest rates of alternative financiers like micro-lender, commercial banks and other lending institutions. The above developments could also have contributed for the noted increase in administrative and other expenses that were incurred to improve the management and support services of the selected societies. Net income increased significantly over time except a slump that occurred in the year 2008/2009. The slump coincided with the 2008/2009 world economic down turn which was a major contributor to poor profitability of many companies around the world and Botswana co-operatives were not an exemption. Further scanning of the financial statements and other specifics with regard to net income showed that one of the societies investigated experienced dramatic decline in its net income between the years 2008/2009 and 2009/10 and this was largely due to the high interest expense which was more than 5 times higher than the normal interest income, thereby dragging the society's bottom line into a loss.

The study further revealed that non-currents assets of all the selected societies declined by more than 50% on an average over the five year period, except in the year 2011/12 where there was an increase of 94% that resulted from the increase of non-current assets of two of the selected societies. Further analysis indicated that one society acquired some shares as long term investment and the other society revalued its land and building.

Current assets constituted 99% of the total assets that suggested that all the selected SACCOSs kept their assets in liquid form (accounts receivable and cash and cash equivalents). This approach was driven by the fact that members could terminate their membership anytime they wish and be paid back their savings along with accrued interest. In addition, co-operatives needed cash to advance loans to their members as and when they apply for loans.

On the liabilities side, Table 4 revealed that current liabilities represented about 78% of total assets with no long term liabilities. This indicated that the selected co-operative societies financed their assets largely using short term liabilities. As stated above, these assets which were financed were largely current assets (accounts receivable and cash and cash equivalents). The remaining 22% of assets were financed with equity in the form of capital employed. It was also revealed that the current liabilities of the selected societies were members' savings and this represented about 98% of the total current liabilities. The main reason for treating members' savings as current liabilities was because members had the option to terminate membership any time within a particular year.

It was also noted that both current liabilities and capital employed increased uniformly over the period; they doubled each year and this increase could be attributed to the growth in membership size over the years. This also suggested that the rate at which members joined the society exceeded the rate at which existing members terminated their membership.

In brief, the common size analysis of the financial statements disclosed that the incomes, expenses, assets and liabilities of the selected societies increased over the study period. It was also observed that assets were kept liquid in order to meet immediate obligations. Finally, the main items that constituted the revenues and expenditure of the selected societies were Interest on member's loan and interest on deposits respectively as they constituted a larger proportion of the society's income and expenditure.

### *3.5 Summary of Findings*

The study revealed that the selected co-operatives had an appreciable profitability potential. The net profit ratio ranged between 25% and 37%. This could be due to effective utilization of resources and controlled spending on administrative and financial expenses. High interest rate charged on loans given to members and rising membership could also be contributory factors for increased revenue for these societies.

The selected co-operatives also managed to achieve a good return on capital employed that grew from 15% in 2008 to 29% in 2011, with an average of 23% that far exceeded the average interest rate of 10.86% in Botswana for the period 2006-2015. This again underscored the fact that selected SACCOSs, which obviously had large cash on account of their nature of business, utilised the funds efficiently.

The Return on Assets of the selected societies also showed an increase from 3.73% in 2008 to 5.53% in 2012. In the context of SACCOSs, this should be read as effective control over credit that resulted in minimal defaults on loan repayment by customers and effective use of its assets which was dominated by cash balances.

The major expense of SACCOSs was interest paid to the investors that constituted on an average, two-third of the total expenditure of the selected societies. This also suggested efficient control over other expenses that eventually lead to encouraging profit margin for these societies.

The Total Assets Turnover showed a modest but rising trend of 10 thebe per Pula in 2008 to 14 thebe per Pula in 2012. The Sales to Capital Employed also exhibited a similar trend but was more modest than Total Asset Turnover. The ratio averaged 76 thebe of revenue per every pula of capital employed and rose from the lowest level of 54 thebe in 2008 to highest level of 86 thebe in 2010.

One important contributory factor for the successful functioning of SACCOS is its ability to generate adequate revenue to cover the interest expense and comfortably meet members' monetary demands. The study revealed that the fixed interest cover ratio was above 2 times over a five year period. It also identified significant fluctuations among selected societies and this could be attributed to revenue levels, interest paid and changes in membership. The coverage of interest payable on savings with the interest received from loans advanced was quite high with the cover ranging from 1.6 times in 2008 to 2.82 in 2012. This is quite promising and assures continuity for the societies. It may, however, be pointed out that this ratio was subjected to significant fluctuations over the years. The capital structure of these societies was characterised by substantial share of internal funds. In most cases, societies had no long-term debts.

The selected societies' short term solvency position was sound with a ratio of 1.3 times of current assets to cover the current liabilities. It is also encouraging to note that this coverage was quite stable over the years.

The Market Prospects ratios of Net Book Value per Share and Earnings per Share showed growth over the 5 year period. This is a positive indication of the ability of the selected Societies to attract more members to the society that lead to business growth. However, material fluctuations were noticed on account of one of the selected societies having a share value of P250 as compared to the rest of the Societies with a value of P1 per share.

A correlation analysis between various ratios indicated a strong positive correlation between Net Book Value per share and Earnings per share; a moderate positive relationship between Net Profit and Return on Capital Employed ratios and between Interest on savings and interest cover ratios. A weak positive relationship was recorded between Return on Capital Employed and Interest Expense Percentage and between Total Assets Turnover, Interest on Loans to Interest on Savings and Return on Total Assets with Net Profit Ratio. Return on Assets also showed a weak positive relationship with Fixed Interest Cover and Current Ratio.

The results of a multiple OLS regression of 10 independent ratios and Return on Capital Employed as dependent ratio showed that only two independent ratios appeared to have a statistically significant relationship with Return on capital employed. These were net profit ratio and current ratio. The results reflected a positive and strong

statistically significant relationship between the Net Profit ratio and capital employed ratio ( $\beta = 94\%$ ;  $P = 0.001$ ). This made the net profit ratio to be the most important explainer of return on capital employed.

The results of a common size analysis indicated that there was substantial increase in Net Income over the period. This could be attributed to increased memberships resulting in increased inflow of members' loan interest. Other incomes such as bank deposit fees, joining fees and insurance fees also had their contributions in various proportions. It was also observed that there was marked increase in interest expense, possibly resulting from the society's mandate to care for the well-being of its members. Also, societies were under pressure to offer competitive interest rates to members to retain them. The above trend also led to the noted increase in administrative expenses. The increasing trend in net income was observed for all except for the year 2008/09 which coincided with the world economic meltdown.

The analysis of the financial position indicated that there was significant decline in non-current assets (more than 50% on an average) across all selected societies during the selected period, with some variation in the year 2011/12. The current assets of the selected societies constituted 99% of the total assets, which suggested that almost all SACCOSs in Botswana keep their assets in liquid form. These current assets were in the form of receivables and cash and cash equivalents. The societies were forced to keep current assets in cash and cash equivalents to meet demands such as the membership refunds and advance loans to members.

An analysis of liabilities revealed that current liabilities represented about 78% of the total assets with no long term liabilities. This suggested that SACCOSs finance their assets largely using short term liabilities. The remaining 22% of assets were financed with equity in the form of capital employed. In terms of trend, both the current liabilities and capital employed had increased uniformly over time, almost doubling each year and this increase could be attributable to growth in membership size over years. This may also suggest that the rate at which members join the society was far more than the rate at which existing members terminated their membership.

#### 4. Conclusion

This study was set out to measure the financial performance of selected SACCOSs through ratio, correlation, regression and common size analyses with a view of determining whether these societies could still be recognised as going concern entities amidst the cloud of underperformance hovering over the co-operative movement worldwide. The study revealed that the selected co-operatives yielded impressive operating results and were in strong financial position over the period of five years. All five categories of financial ratios examined exhibited a rising trend. The study revealed that the selected SACCOSs had appreciable profitability potential which could be associated with effective utilization of resources, controlled spending on administrative and financial expenses and effective control over credit. The findings of this study further revealed that the selected SACCOSs had a sound short term and long term solvency positions supported by huge cash and cash equivalent balances and very low external funds.

The study indicated that the selected SACCOSs have achieved good financial results. To ensure sustainability of this trend, it is suggested that the societies should continue growing their membership, maintain an optimal balance between the interest on loans and interest on members' savings, and invest their excess cash in diversified portfolio to reduce the risk. This would enable the SACCOSs to grow further. Since it was observed that the increase in interest expenses would normally affect most of the ratios negatively and management efficiency in utilising organisation assets would most likely result in improving many ratios, co-operative management should focus on keeping a balance between the interest paid to members and interest charged to members. As observed above, the sound financial performance of SACCOSs in Botswana might have been the result of the rising household borrowing rate. Now that this rate is declining, from 27% in 2012 to 9.4% in 2014 (Dzimiri, 2015), there might be a need for SACCOSs to consider different ways of increasing their sources of revenue other than interest on loans. It is therefore, suggested that these societies should construct their investment portfolios in line with the Modern Portfolio Theory in order to optimize or maximize expected return on investment based on a given level of market risk, keeping in mind that risk is an inherent part of higher return.

Since this research is based on secondary source only, the accuracy of research depends solely on the correctness of the secondary data used. In addition, use of secondary data excluded interviews of the personnel from the selected societies which might have limited the understanding of the extent of real challenges facing the SACCOSs. Although there are 42 SACCOSs in Botswana, the sample size had to be limited to 9 co-operatives on account of non-availability of audited financial statements for other societies for a continuous period of 5 years. Moreover, the 5 year period covered dates back to 2007/08 to 2011/12 which may appear to be out-dated. Again, lack of industrial average ratios restricted the scope of the analysis of ratios from selected co-operatives.

Despite the aforementioned limitations, this study provided an in depth understanding of the financial performance of SACCOSs in Botswana which proved that these entities are still viable enterprises that need to be nurtured to achieve their full potential.

A much larger sample size with data from more recent years will improve the validity and relevance of the research. A comparative study of the performance of urban and rural based societies including interviews with key personnel of the selected societies to obtain a better appreciation of the financial performance as well as the challenges they encounter could be carried out. Also, a study with new variables (other performance indicators) that may have major impact on the performance of the savings and credit societies could be done.

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