

A Study on The Perception and Performance of Select Credit Unions in Belize

Tessa Wells, Somanadevi Thiagarajan

Abstract: *The credit union sector is a striving industry. With the increase in membership, the institution will see an increase in deposits, loans and the use of other products and services. As the credit union continue to grow, management need to be aware of inadequacies and how members perceive the institution's performance. The purpose of this study was to analyze the perception of credit union members on the performance of credit unions and to evaluate the financial performance of the three selected credit unions over an eight year period (2008-2015) using the CAMEL framework. A total of 300 questionnaires consist of Likert scale statements were issued to credit union members to collect data on the perceptions of performance of credit unions and the data were analyzed using descriptive statistics. Secondary data was collected from the audited financial statements retrieved from the credit unions' official websites to analyses the financial soundness of credit unions using CAMEL framework..Results indicate that 96.3% of the respondents prefer to save at a credit union than at a commercial bank. Also, 50.3% indicates that credit unions foster economic development and 47.3% agree that they meet their financial needs. The results form CAMEL analysis shows that the credit unions in Belize are financially sound and safe.*

Keywords: *Credit Unions, Perception, Performance, CAMEL, Microfinance*

I. INTRODUCTION

Credit unions (CU) are non-profit, cooperative organizations composed of individuals with a common bond who borrow from and lend to each other (Pearce, 1984). Branch (2015) stated that CUs play a pivotal role, as they are the second largest group of domestic deposit taking and loan granting institutions offering a wide range of financial products and services to members. These institutions try to boost the economy of a country by offering banking services to less fortunate individuals. The concept of CUs as well as microfinance institutions (MFI) is changing from serving the poor to a self-sustaining financial institutions acting as competent market participants. The growth of credit union's membership can enable them to solely operate without the government subsidies. Credit Unions are treated as microfinance institution that provide micro financial services to members, including the ones that are unbanked and may have irregular or low income (Railing & Sineviciene, 2015).

According to Branch (2015), CUs operate by using the pooled saving of its members to raise funds that can be passed off to members at low interest rate loans. Schenk (2012) reported that CUs generally offer higher yields on savings account and low interest rates on loans compared to banking institutions.

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As a result, the credit union sector has seen tremendous growth in its membership that assist with the overall expansion of the institution. As the credit union continues to witness desirable growth, active supervision and monitoring, in order to maintain adequate financial stability, is needed. Credit unions must continue to assess operations and development to immediately spot any unwanted vulnerabilities. Effective supervision consists of dynamic assessments of the operations of the institutions to ensure they continue to operate in a safe and sound manner (Branch, 2015).

The purpose of this study was to analyze the perception of credit union members on the performance of credit unions and to evaluate the financial performance of three (3) of Belize's credit unions over an eight (8) year period (2008-2015) using CAMEL approach. Central Bank of Belize has been assessing and analyzing the quarterly financial statements of credit unions using the PEARLS monitoring system.

II. REVIEW OF LITERATURE

According to Mendoza (1992), the movement of the credit union industry was introduced by Father Gainey in 1943. Credit Unions were created to promote thrift; simply to assist individuals to set aside funds for future use. From that time of the inception of the sector, credit unions memberships were much smaller than that of commercial banks which indicate that the number of deposits is also smaller than that of commercial banks. Therefore, the rotation of credit unions funds was originally the key operation of the credit union. The concepts for credit unions to raise funds came from members borrowing against their savings rather than withdrawing it. This method was a guaranteed way of income for credit unions as interest and principals of loans is a definite source of funding that assist with the operations of the institution.

Even in the growth stages of the sector, Belize's credit union industry had experienced failures. Several of the failures were based on liquidity issues due to high loan delinquencies. Other reasons for failures would derive from members' distrust of management of credit unions to have control of their finance and would lose confidence, as a result, turn to commercial banks. At that time, performance evaluation methodologies were not developed and credit unions were prone to mismanagement of funds and embezzlement, hence members harboured distrust. At the start of the industry in Belize, credit unions were under the administration of the Department of Credit Unions and Cooperatives.



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The department was responsible for the regulation and supervision of credit unions and cooperative. It was also tasked with the promotion of the cooperative movement to attract the attention of the public. On-site inspections were conducted under the Credit Union Act. The Credit Union Act would inspect the operations of the credit union annually or when directed by the director of the Registrar. In addition, the sector was also under the administration of the Belize Credit Union League who acted as an agent of the Credit Union National Association (CUNA) in Belize. Furthermore, the league was also in affiliation with the Caribbean Confederation of Credit Unions who is also affiliated with the World Council of Credit Unions (WOCCU).

The vision of the 2005 amendment was to integrate ways that financial systems in Belize were supervised, upgrading credit union supervisory standards so that they were in accordance with World Council of Credit Unions as well as to introduce administrative penalties for non-compliance to the set standards. The growth of credit unions has also played a vital role in Belize's Gross Domestic Product (GDP). The increase in savings and loans to GDP had grown up to 6.0% back in 1991. In 2007 credit unions total assets were estimated at approximately \$410 million which was 16.1% of GDP compared to \$106 million which was 8.3% in 1996 (Garcia, Novelo & Vellos, 2005). This increase in asset over the years have shown tremendous growth in the sector by an annual average of 26.5%. The need for performance evaluation of credit unions has become a necessity in Belize using one of the most used methodologies, CAMELS framework. Christine-Veitch (2014) stated that the CAMELS rating system is used by the majority of Financial Institution Regulators in the Caribbean. The continued success of the sector is beneficial for credit union members, the country and the institution.

According to Rostami (2015), CAMELS rating is a common phenomenon for all banking systems all over the world. In recent years one of the most used model for the estimation of a bank performance and soundness is represented by the CAMELS framework (Roman & Sargu, 2013). The model was implemented to evaluate the financial performance of both banks and credit unions to analyse the institution's soundness. It takes into consideration financial, managerial and compliance factors common to all financial institutions (Christine-Veitch, 2014). According to Branch (2015), CAMELS is a supervisory tool that rely on on-site examinations and examiner's qualitative opinion for assessing the health and soundness of financial institutions. The on-site examinations are conducted by a supervisory regulator who access the institution by observing procedures and taking into account the operations and finance to accurately evaluate performance.

III. METHODOLOGY

The study aimed to evaluate the financial performance of credit unions in Belize and perception of credit union members. The primary data for the study were collected using questionnaire. The secondary data were collected from the credit union's audited financial statements that are published on each credit union official website for an eight

year period from 2008-2015. There are seven (7) credit unions whose financial information are submitted to the Central Bank of Belize to be published on their website. From this, three (3) credit unions were selected as the sample. To keep the credit unions identity anonymous the three credit unions selected were labeled as Credit union A, Credit union B and Credit Union C.

The primary data were collected by distributing questionnaires to credit union members. The population size of three credit unions selected for the study is of 83,019 at the end of 2015 according to Central Bank of Belize website. A sample size of 316 members were selected from the population for the study.

Table 1 Membership and Sample size for the Credit Unions.

Name of Credit Union	Total Member (N)
Credit Union A	50,564
Credit Union B	24,069
Credit Union C	8,386
TOTAL	83,019

The financial performance of the credit unions were assessed using CAMEL framework. The components of the CAMEL framework used for the assessment of credit unions are described in detail below.

Capital Adequacy (C): This component is one of the most important to an institution. It determines how well a financial institution can manage shocks to their balance sheets (Branch, 2015 & Nicholls, 2014). It focuses on capital position of institution to support loan portfolio growth and potential deterioration in assets (Nicholls, 2014). In addition, the component determines how well an institution can manage unexpected shocks that derives from foreign exchange risk, market risk and even credit risk, highlighting the ability to absorb any losses from these risks. Capital adequacy protects the interest of depositors (Ahsan, 2016).

Asset Quality (A): Asset quality seeks to monitor the strength of an institution against the loss of an asset. Poor management of asset, whether an increase in non-performing loans and risky investments, affects the earnings of the institution as well as capital. Since assets are written off against capital, it reduces capital, therefore, reducing the ability to withstand shocks of unexpected risks. Asset quality is assessed with respect to level and severity of non-performing assets, adequacy of provisions and distribution of asset (Ghasempour & Salami, 2016).

Management Quality (M): Management quality examines soundness and effectiveness of management by evaluating and assessing the governance and management oversight (Branch, 2015). The management or the board of directors is solely responsible for the smooth operation of the institution to ensure that operations are in accordance with certain laws and regulations. Ahsan (2016) stated that management quality is also known as skilful management and excellent management whenever it controls its cost and increase productivity,



ultimately achieving higher profits. In essence, the role of management is to oversee the operations of the institution in a decent manner in order to increase profits. A management that fails to achieve the organization’s objectives will in turn have an effect on the organization’s ability to earn profits, therefore, causing a negative effect on the following component.

Earnings and Profitability (E): This component mainly measures the profitability and productivity of an institution (Ahsan, 2016). CAMEL looks at credit unions adequacy of earnings and profitability, focusing on their ability to absorb losses by amassing a satisfactory capital base, finance expansion and pay dividends (Branch, 2015). This component simply evaluates an organization ability to generate revenue from assets and the profitability of capital.

Earnings component details the growth and the future sustainability of earnings for a credit union. Also, the earnings of credit unions are being used to issue dividends to members, finance future investments and venturing into new activities to maintain growth and stability.

Liquidity (L): Roman and Sargu(2013) stated that liquidity is the most important for an institution and has a significant impact on its financial soundness. This component evaluates an organization’s ability to meet its short-term obligations as well as to meet the needs of depositors when withdrawing funds and increase demands for loans. A financial institution has adequate liquidity when it can easily convert assets into cash and to raise funds by having liabilities where the benefits outweigh the cost.

Table 2. CAMEL Parameters

Components	Ratios	
Capital Adequacy (C)	Net Institutional Asset/ Total Assets	Total Capital/ Total Deposit
Asset Quality (A)	Total Non-Performing Loans(Net of specified reserves)/ Total Loans	Loan Loss Reserves/ Total Loan
Management Quality (M)	Non-Interest Expense/ (Net Interest Income + Non Interest Income)	Total Operating Profit/ Total Asset
Earnings & Profitability (E)	Net Income/ Total Asset (ROA)	Net Income/ Total Equity (ROE)
Liquidity (L)	Liquid Asset Total Asset	Liquid Asset to Total Deposit

IV. RESULTS AND DISCUSSIONS

Table 3 indicates that 65.7% of the respondents were male and 34.3% were females. It also indicates that 71% of the respondents were within the age range of 18-35 years. The results also shows that 44.3% of the participants highest level of education were junior college and that 84.3% of the respondents earn less than \$30,000 per annum.

Table3: Demographic Data of the Survey Participants

Gender	Frequency	Percent
Male	197	65.7
Female	103	34.3
Total	300	100
Age		
18-25 years	104	34.7
26-35 years	109	36.3
36-45 years	50	16.7
45 years and above	37	12.3
Total	300	100
Level of Education		
Primary	9	3.0
High School	45	15.0
Junior College	133	44.3
University	100	33.3



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Vocational/Technical	13	4.3
Total	126	100
Annual Income		
Less than \$30,000	253	84.3
\$40,000-39,999	35	11.7
\$40,000- \$49,999	12	4.0
\$50,000- \$59,999	0	0
More than \$60,000	0	0

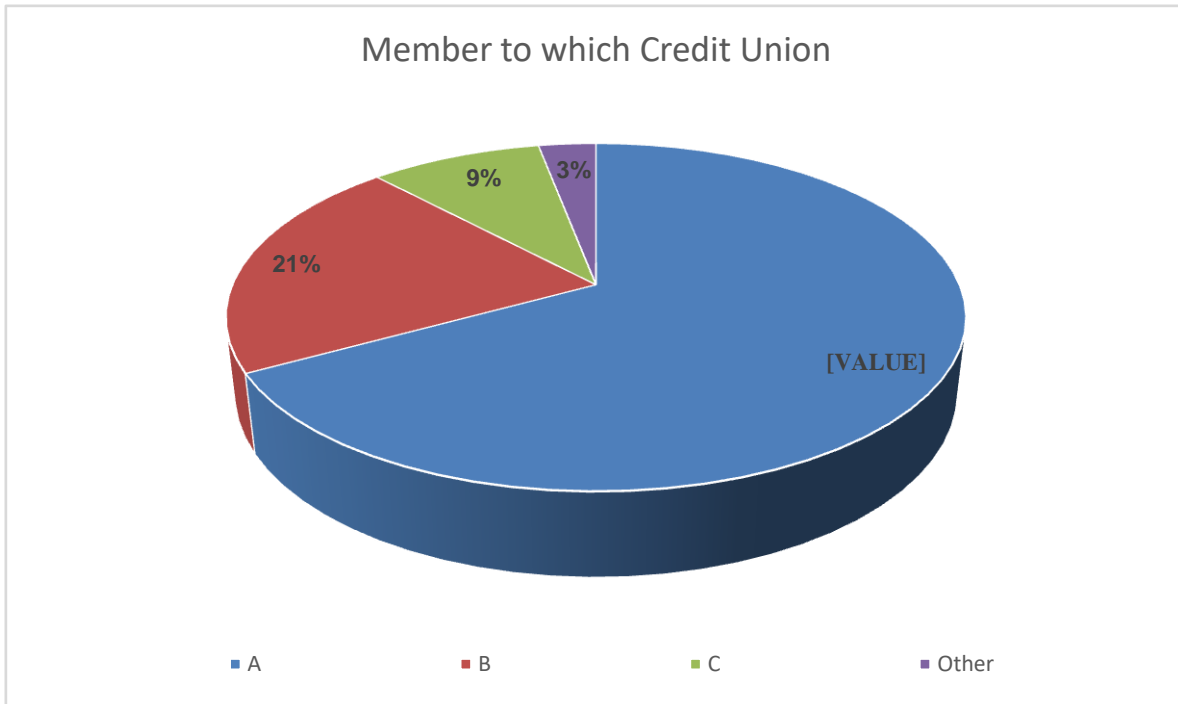


Figure: 1: Distribution of Credit union membership

According to Figure 1 67% of the respondents were members of Credit Union A, 21% were members of Credit Union B and 9% were members of Union C. The remaining 3% were members of other credit union across the country.

Table 4. Level of Education and Member to which Credit Union

		Member to which Credit Union				Total
		A	B	C	Other	
Level of Education	Primary	56%	33%	11%	0	100%
	High School	62%	29%	9%	0	100%
	Junior College	68%	22%	8%	2%	100%
	University	73%	11%	10%	6%	100%
	Vocational/Technical	38%	46%	16%	0	100%

Table 4 results showed that 68% of the junior college degree respondents and 73% of the university degree respondents were members of Credit Union A.

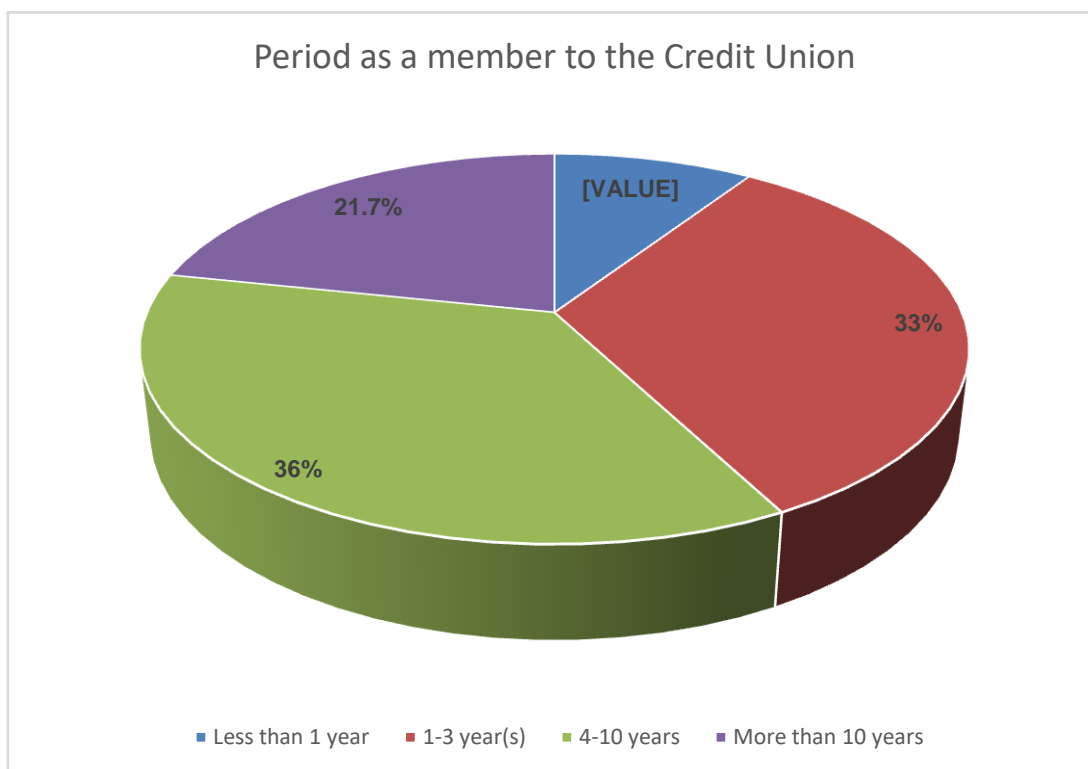


Figure 2: Length of Membership in the credit union

According to figure2, 36% of the participants have been a member of their credit union for a time period ranging between 4-10 years, 33% of these participants were members for a time period between 1-3 year(s), 21.7% were members for more than 10 years and the remaining 9.3% were fairly new members at their credit union.

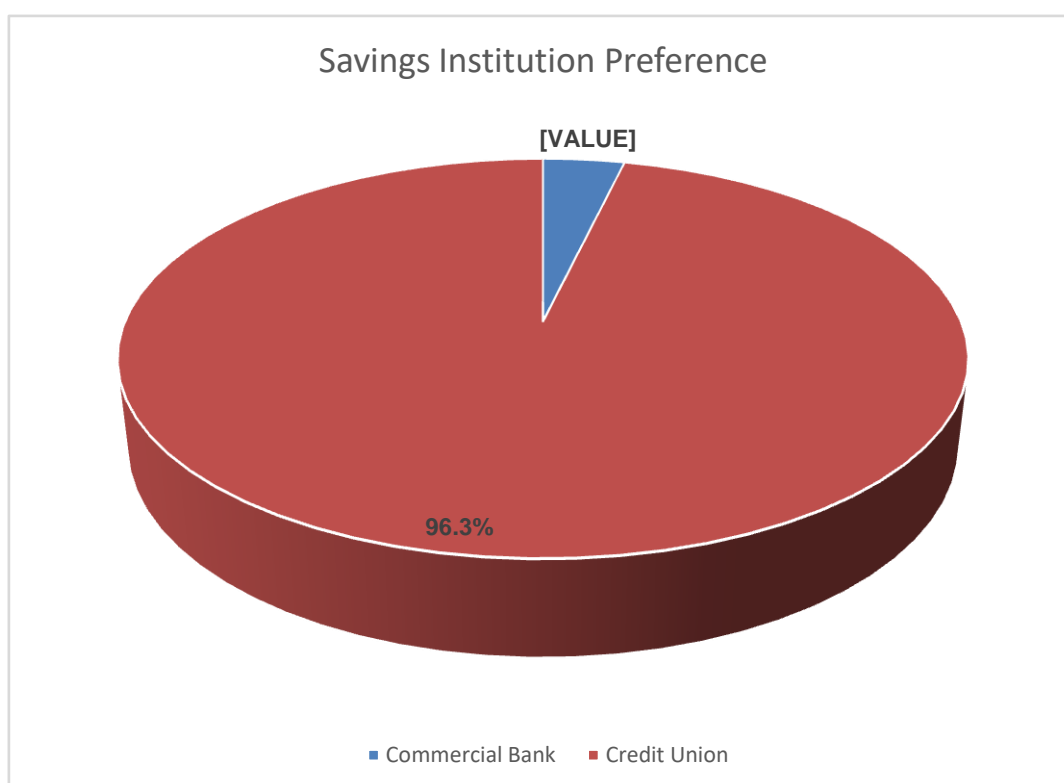


Figure 3: Preference of Savings Institution

The figure 3 above reveals that 96.3% of the participants prefers to save at a credit unions than at a commercial banks.

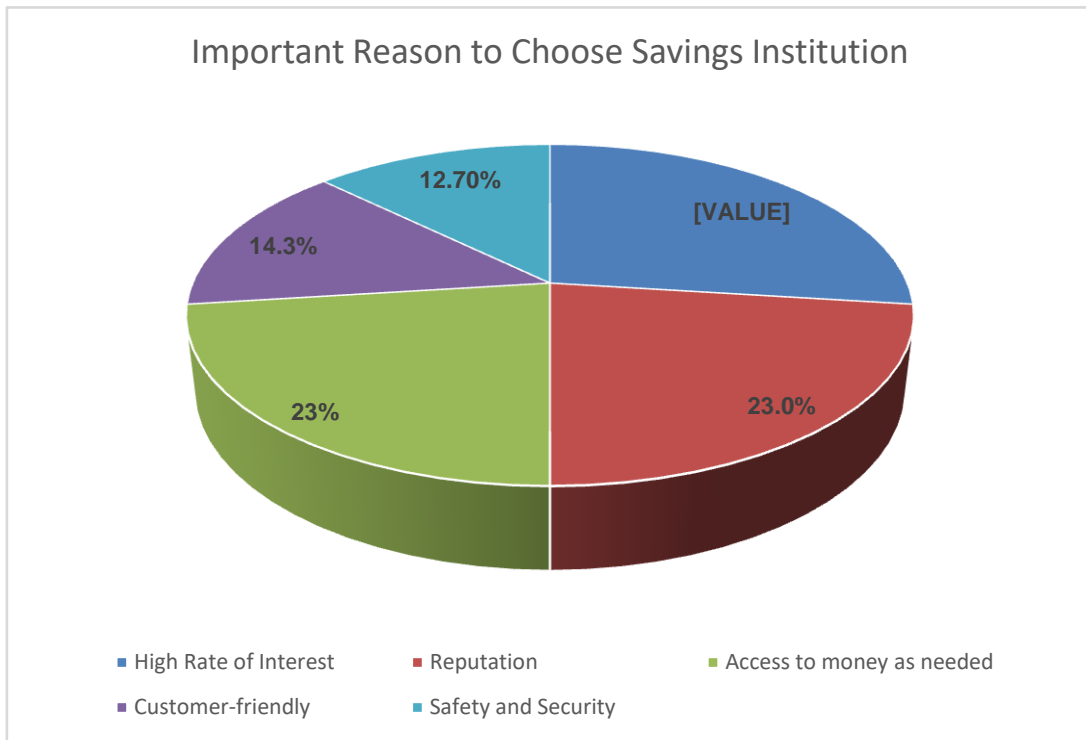


Figure 4: Reasons to choose a credit union over the banks

According to the Figure 4 above, 27% of the respondents choose to save at their institution because of high interest rates, 23% stated that they prefer the institution because of their reputation and the ease of access to their money as needed. Furthermore, 14.3% stated they chose the institution because they are customer-friendly and 12.7% stated that they saved at the institution because of safety and security reasons.

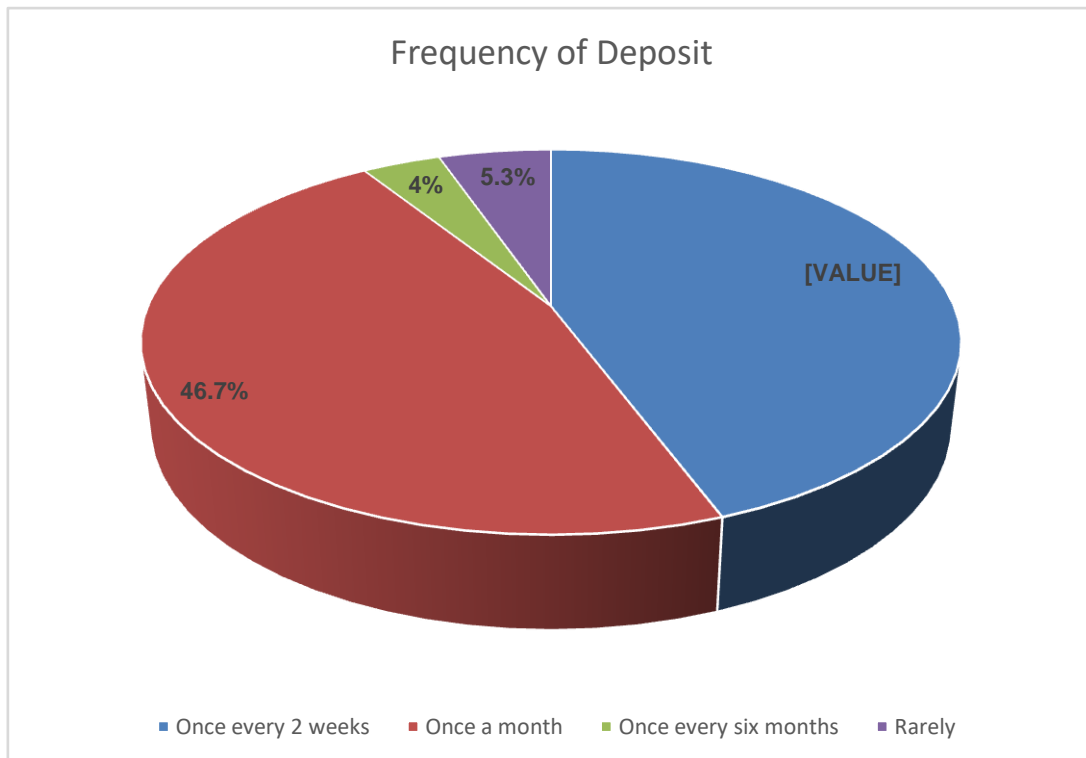


Figure 5: Frequency of money deposits made at credit union

As demonstrated in figure 5, 46.7% of the respondents deposit money at credit union once every two weeks, 44.3% deposit once a month, 5.3% stated that they rarely deposit into their savings and 4% stated that they deposit into their savings once every six months.

PERFORMANCE PERCEPTION OF CREDIT UNION

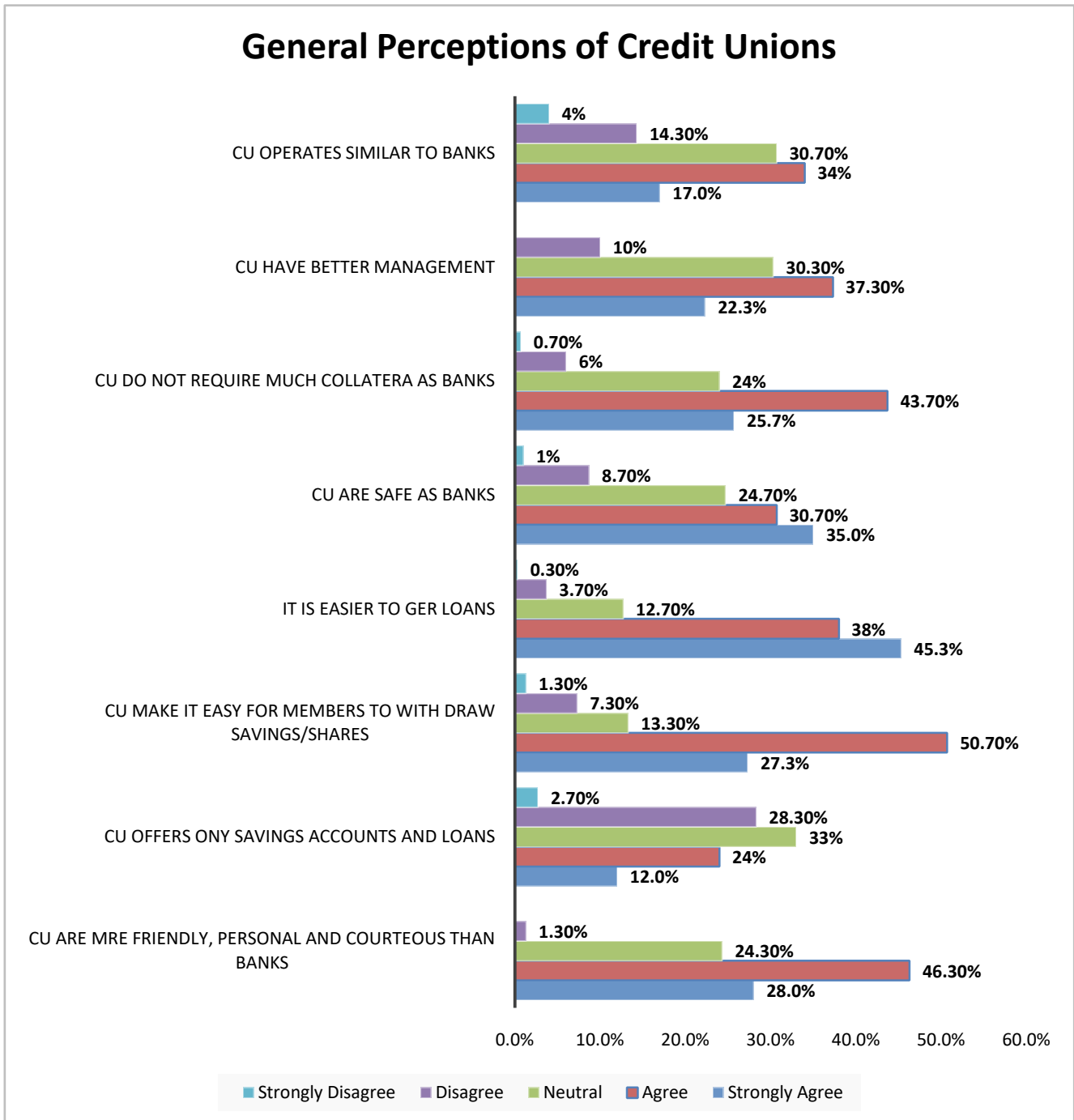


Figure 6: Perception of membership on the credit union over the commercial banks

The figure 6 illustrates a series of likert scale statements that help to attain a general perception of credit unions from members. Statement one, credit unions are more friendly, personal, courteous than banks, 46.3% of the respondents agree while 24.3% of them are neutral. The other statement, credit unions only offer savings accounts and loans, 33% are neutral and 28% of the respondents disagree to the statement. Credit unions make it easy for members to withdraw their shares/ savings, 50.7% agree, 27.3% strongly agree and 33% remain neutral. The other statement, credit

unions makes it easier to get loans than banks, 45.3% strongly agree and 38% agree with that statement. Credit unions are as safe as banks, 35% of the participants strongly agree, 30.7% agree and 24.7% are neutral. In regards to the other statement, credit unions do not require much collateral as banks, 43.7% agree, 25.7% strongly agree. Credit union have better management than banks, 37.3% agree while 30.3% are neutral to the statement. The final statement stated that credit unions operate similar to banks and the survey reveals that 34% agree and 30.7% are neutral.



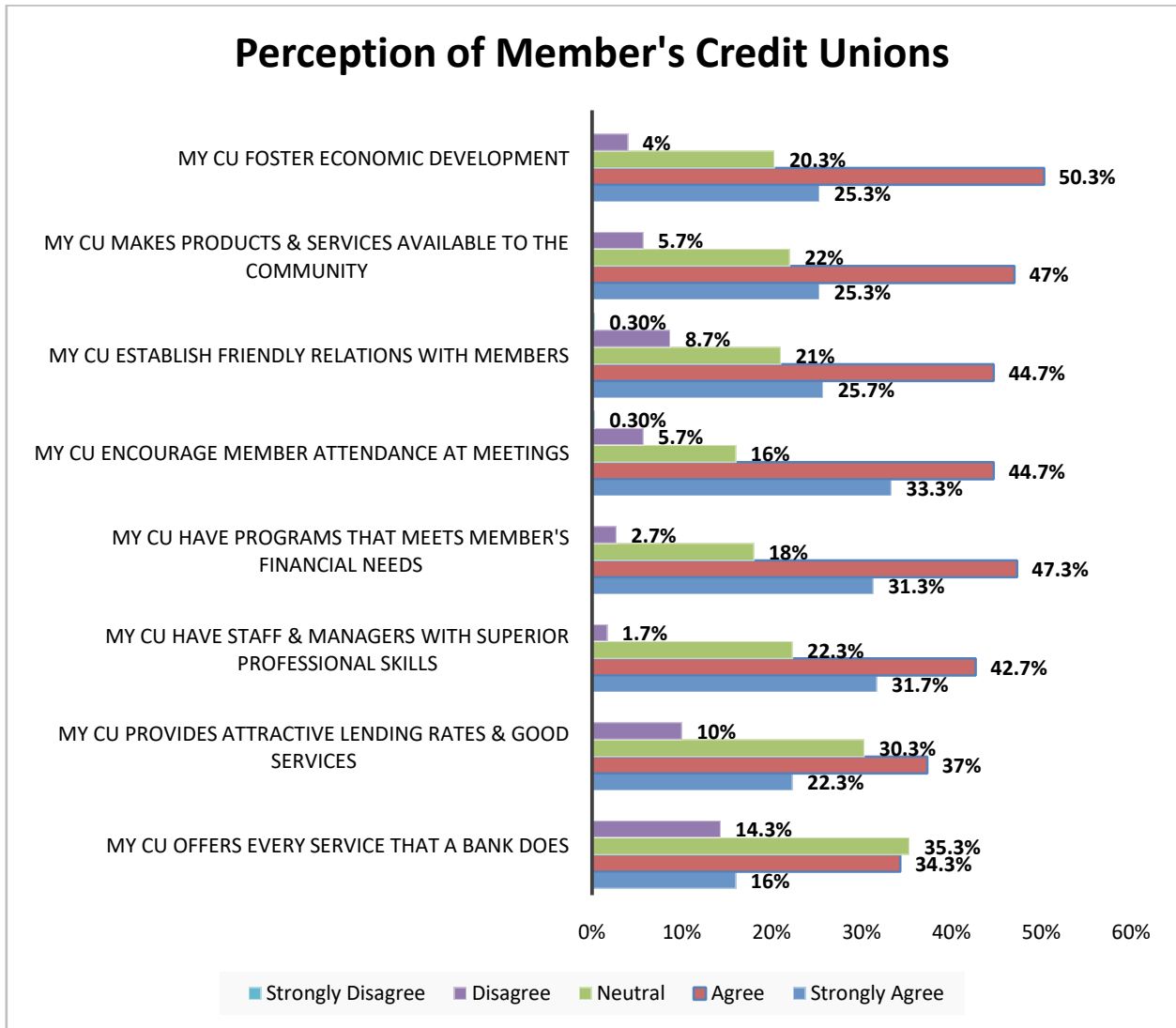


Figure 7: Perception of Membership on the services offered by Credit Unions

Figure 7 contains another series of likert scale statements that aim to get members' perceptions of the credit union they belong to. Statement one, my credit union offers every service that a bank does, 35.3% remain neutral and 34.3% agree. Statement two, my credit union provides attractive lending rates and good services 37.3% agree while 30.3% are neutral. The survey also reveal that 42.7% of the participants perceived that their credit union have staff and managers with superior professional skills and 31.7% strongly agree. From the other statement, 47.3% agree that their credit union has programs that meets their financial

needs and to confirm, 31.3% strongly agree to the statement. In the survey, 44.7% perceive that their credit union encourages members' attendance at meetings and 33.3% concur with the statement. The statement, my credit union establish friendly relations with members shows that 44.7% agree and 25.7% strongly agree. My credit union makes products and services available to the community, 47% agree while 25.3% strongly agree. For the final statement, 50% of the respondents perceive that their credit union foster economic development.

Table 6: Reliability Analysis of Instrument

Factor/Reliability	Perception General (GS)	Perception Specific (PS)	AVE (<0.5)
GS	.650		.423
PS	.312	.763	.528
The bold figures that are diagonal represent the square roots of the average variance extracted.			
Composite Reliability (<0.7)	.785	.847	
Cronbachs Alpha (<0.7)	.742	.866	



To test the reliability of the questionnaire that was used in the study, a total of four reliability tests were conducted to ensure that the instruments are indeed reliable. Firstly, the cronbachs alpha was calculated and a score of .785 for construct 1 and .847 for construct 2 are reported. Secondly, a composite reliability of .785 for construct 1 and .847 for construct 2 were calculated. Thirdly, a factor/ reliability showed that both constructs are .65 and .763 respectively. The last reliability test that was done was the AVE. For this CAMEL Analysis

test construct 1 have a score of .423 and construct 2 a score of .528. For the cronbachs alpha, composite reliability and factor/reliability tests, a score of .7 and over is considered favorable. For the AVE, a score of .5 and over is deem favorable. Of the four tests, three of them show that the instrument used in this study is reliable. The AVE test showed that construct one was below the required score but does not affect the reliability of the instrument.

Capital Adequacy Ratio -Net Institutional Capital to Total Asset

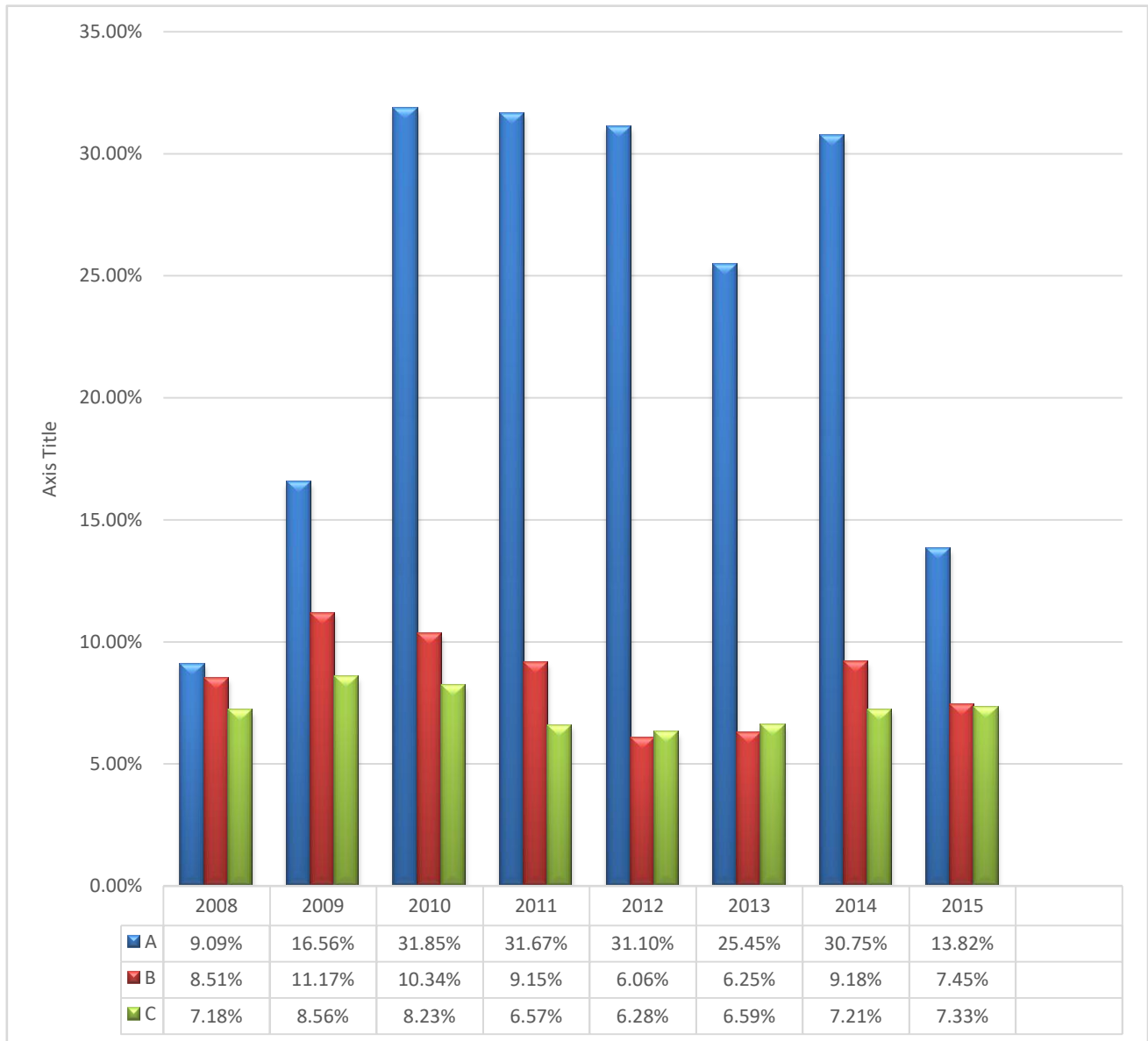


Figure 8: Capital Adequacy Ratio of Credit Unions

Figure 8 shows the institutional capital to total asset of the credit unions. This ratio helps with demonstrating the overall capital position of the institution. Net institutional capital to total assets ratio is used to keep the credit union aware of their capital since it is a building block for development, and it shows how protected the institution is against any possible losses and to ensure that the credit

union's going concern is not threatened. The stronger the overall capital position the easier it is for the credit union to deal with future uncertainties (WOCCU, 2002). The chart indicates that credit union A capital position is strong with a percentage of 13.28% followed by credit union B with 7.45% and credit union C with 7.33% at the end of 2015.

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Total Capital to Total Deposit

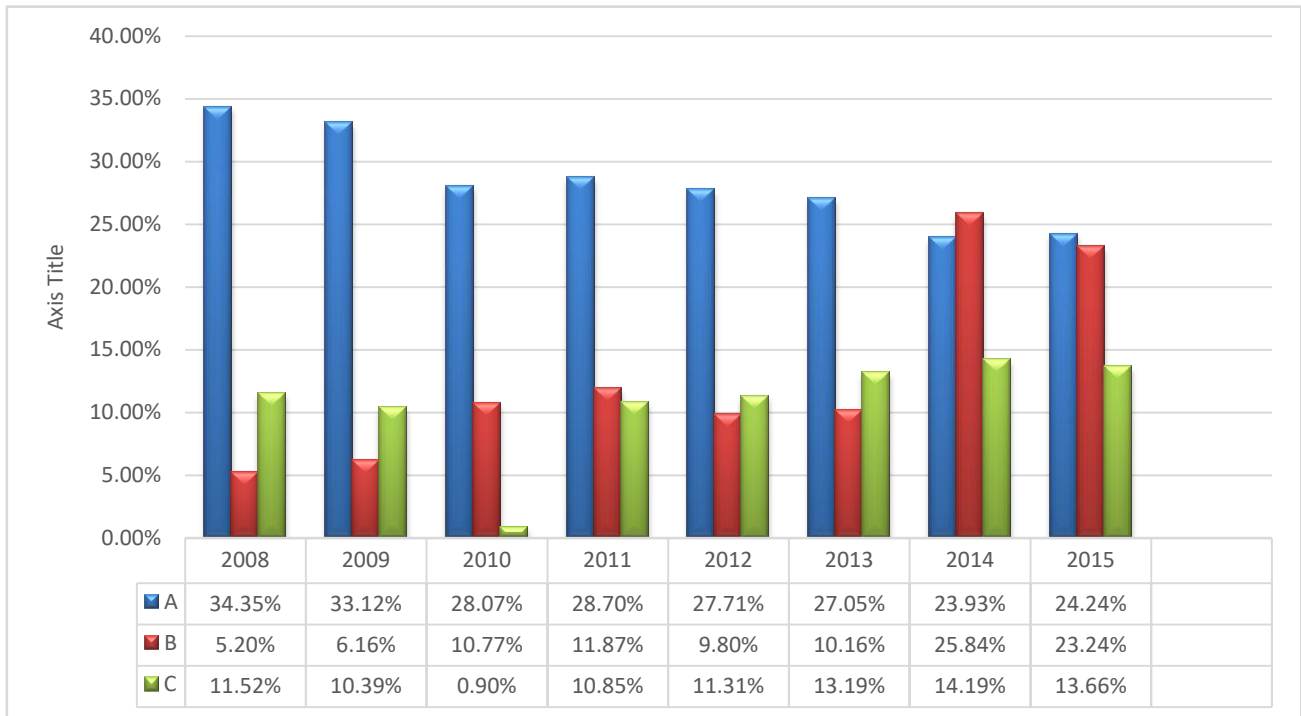


Figure 9: Capital to Total Deposit Ratio of the Credit Unions

This ratio is a capital structure ratio whereby the cash deposit helps the credit union to facilitate lending as well as to sustain a balance growth. Deposits are the main source of a credit union income that increase the shareholders capital. Credit unions desire a high ratio as it indicates the increase

of capital due to members deposits. Figure 9 reveals that credit union A has the high ratio of 34.35% in 2008, credit union B with 25.84% in 2014 and credit union C with 13.66% in 2015.

Asset Quality Ratio

Total Non-Performing Loans to Total Loans

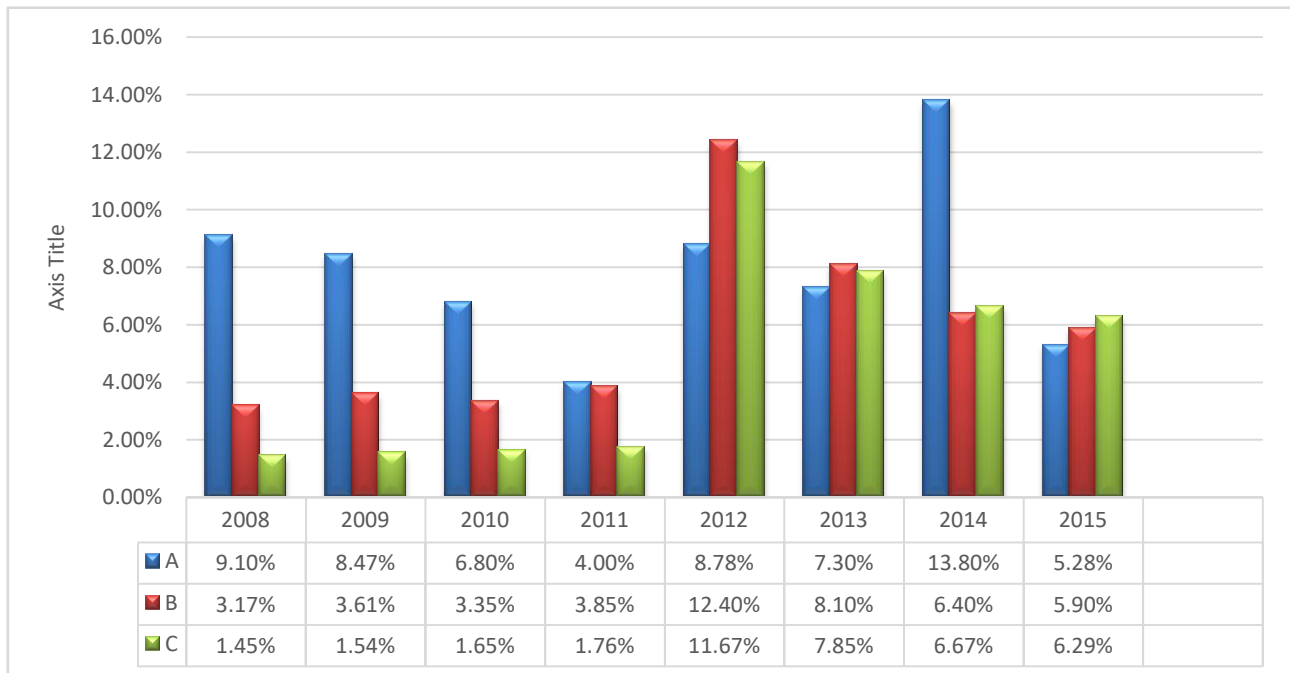


Figure10: Credit Risk at the Credit Unions

This ratio measures the credit union’s credit risk that is in accordance with their loan portfolio. It foreshadows the anticipated losses that will in turn negatively impact future earnings. The amount of non-performing loans that a credit union can absorb is dependent on their ability to manage loan losses, the income amount that derives from loans and the management of credit risk (Callahan & Associates). Therefore, this ratio should be evaluated alongside the loan loss ratio and ROA. The ratio of delinquent loans will inform management of the amount that should be set aside as reserves to cover any possible losses that they may incur

due to loans. When a loan is classified as non-performing, it negatively affect ROA in that it will be reported at a lower rate. As a result, a loss will be reported causing an increase in loan loss reserves that will increase non-interest expense, lowering the efficiency ratio. A low delinquency ratio is an ideal ratio to each credit union. The figure 10 shows that credit union A lowest delinquency was in 2011 with a percentage of 4.00%. For credit union B and credit union C their lowest delinquency ratios were 3.17% and 1.45% respectively in 2008.

Loan Loss Reserves to Total Loan

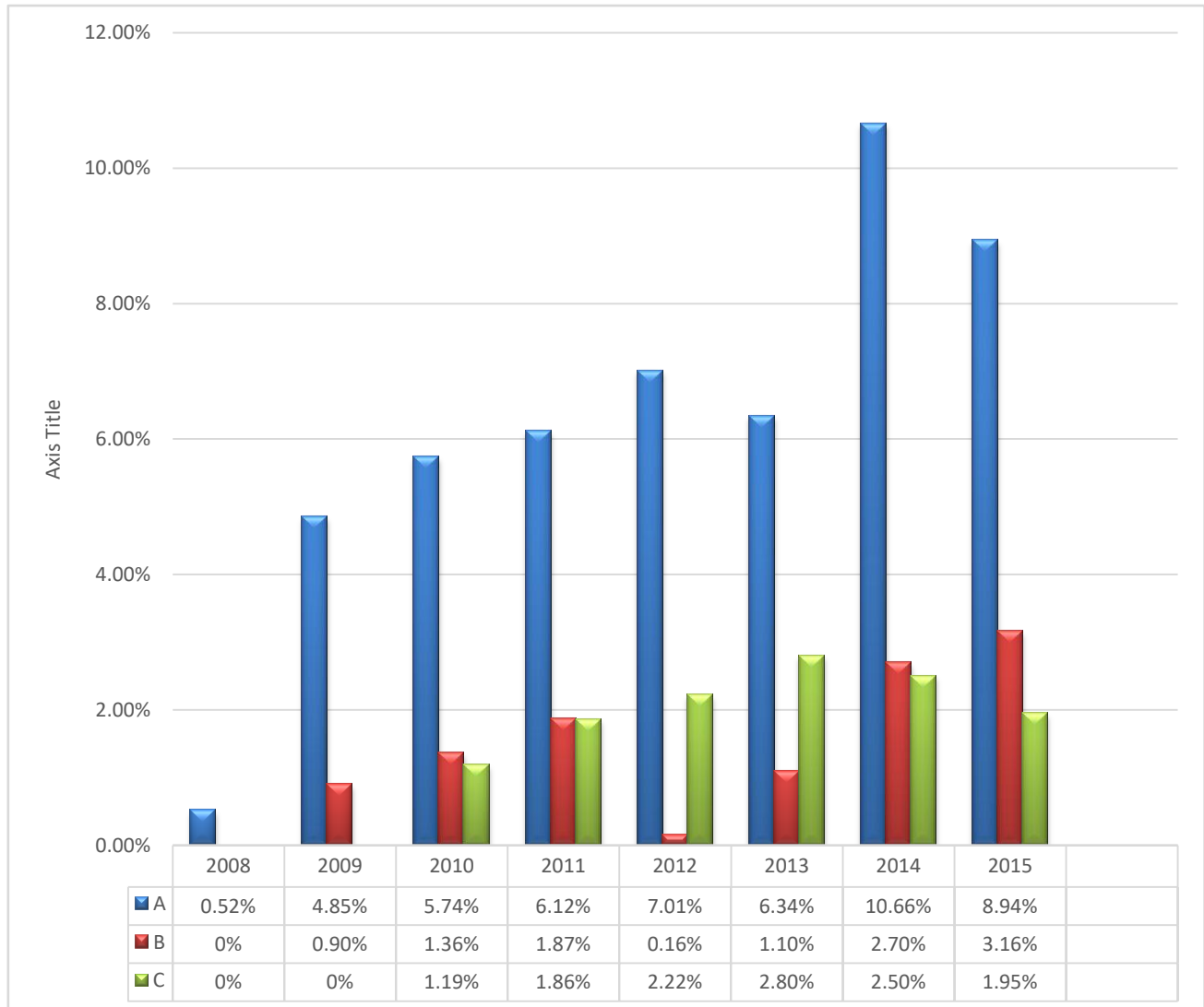


Figure 11. Loan loss Reserve to Total Loans of the Credit Unions

This ratio measures the ability to cover the losses from loans. It is an allowance that is set aside specifically to cover losses on non-performing loans. This allowance is an expense taken from earnings, therefore, once the ratio is decreasing due to an increase in loans, the credit union will have to increase the allowance to be able to sustain any losses from non-performing loans. The aim is to have a low

loan loss reserves which illustrates that the institution has less non-performing loans to cover. The bar chart above shows that in 2008, credit union B and credit union C had a ratio of 0% as none of these credit unions had an existing loan loss reserves for their loan portfolio while credit union A had a very small ratio of 0.52%. As of 2015, credit union C was the credit union with the smallest ratio of 1.95%.

Management Quality Ratio

Non-Interest Expense to (Net Interest Income + Non-Interest Income)



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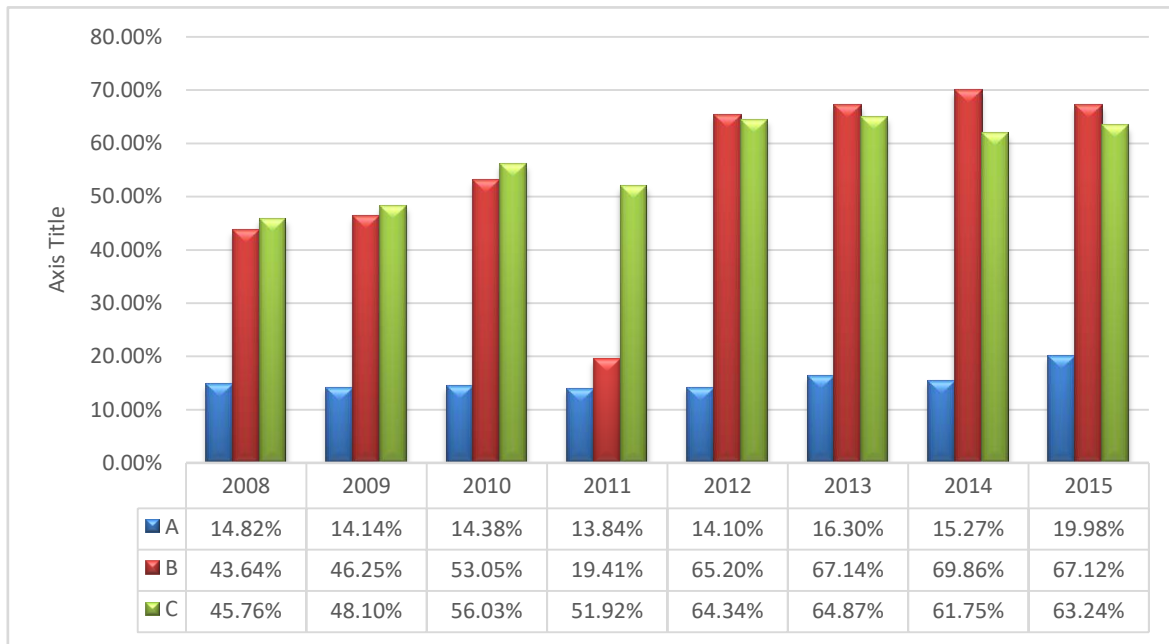


Figure 12. Management Quality of the Credit Unions

Management of a credit union seeks to have a lower efficiency ratio. A low efficiency ratio is favorable since a high efficiency ratio indicates that a credit union's expenses are larger than its income, therefore, accruing losses. This ratio can simply be interpreted as the cost a credit union will take to generate income. As it relates to the table, all three Total Operating Profit to Total Asset

credit union's ratios have fluctuated over the eight years period. In 2011, the three institutions had the lowest ratios i.e. 13.84% for credit union A, 19.41% for credit union B and 51.92% for credit union C, indicating that cost is a small portion of income.

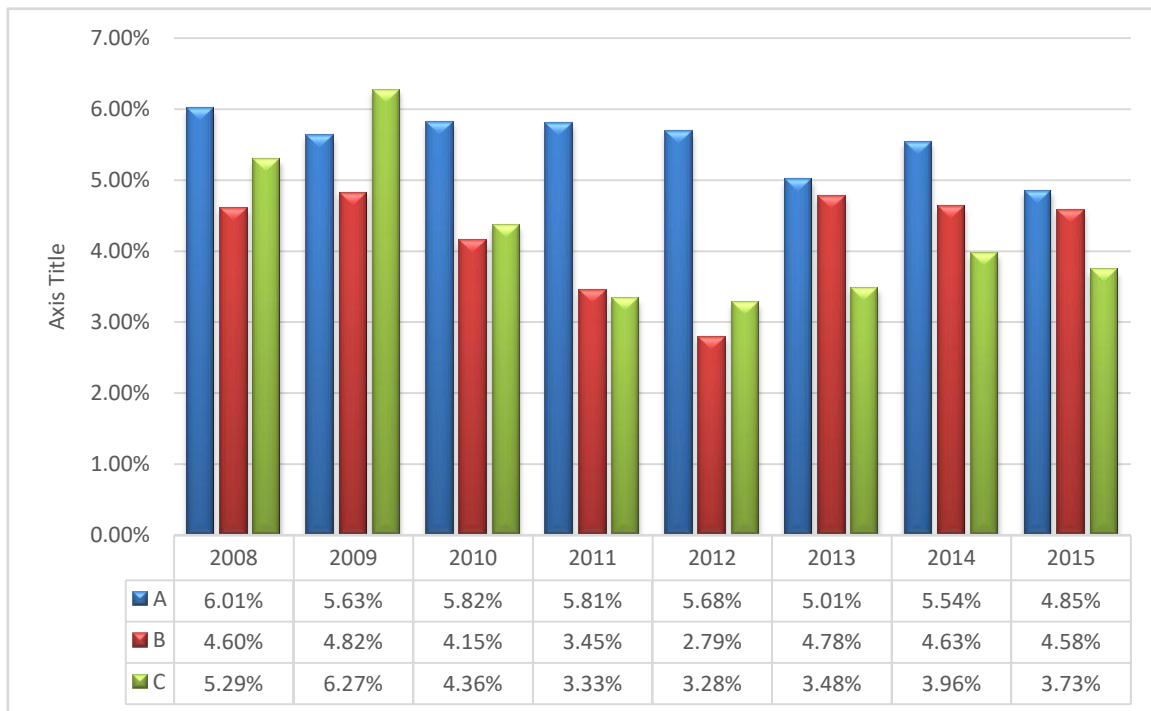


Figure 13. Operating Profit to Total Asset Ratio of Credit Unions

This ratio reflects how much an institution can earn profits for every dollar invested in its total asset. A high ratio is favorable as it denotes that the institution is profitable. In figure 14, credit union A and credit union C profits were at its peak at 6.01% and 5.29% respectively in 2008. In 2009, credit union B had the most profit with a percentage of 4.82%.

Earnings & Profitability Ratio
Return on Asset

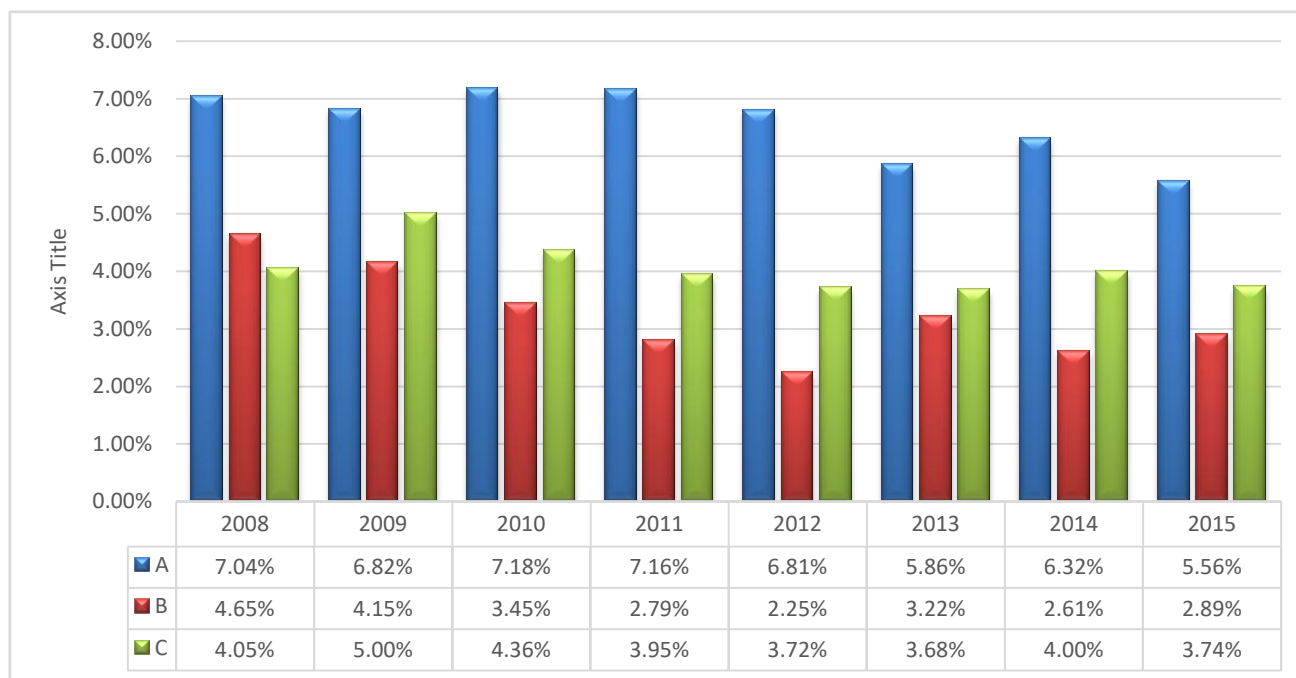


Figure 14. Return on Assets of the Credit Unions

Return on assets is an important factor when measuring a credit union earnings and profitability. This ratio shows how efficiently management is at operating their credit union. Each ratio shows how much income is earned for each dollar of asset used. A high ROA ratio represents management's success at utilizing assets to generate income

(Callahan & Associates). According to the above table, three credit unions have all seen a decrease in the ratios from 2008 versus 2015. Profoundly, credit union A has recognized the highest ratio at 5.56 followed by credit union C with 3.74 and credit union B with 2.61 as at year end 2015.

Return on Equity

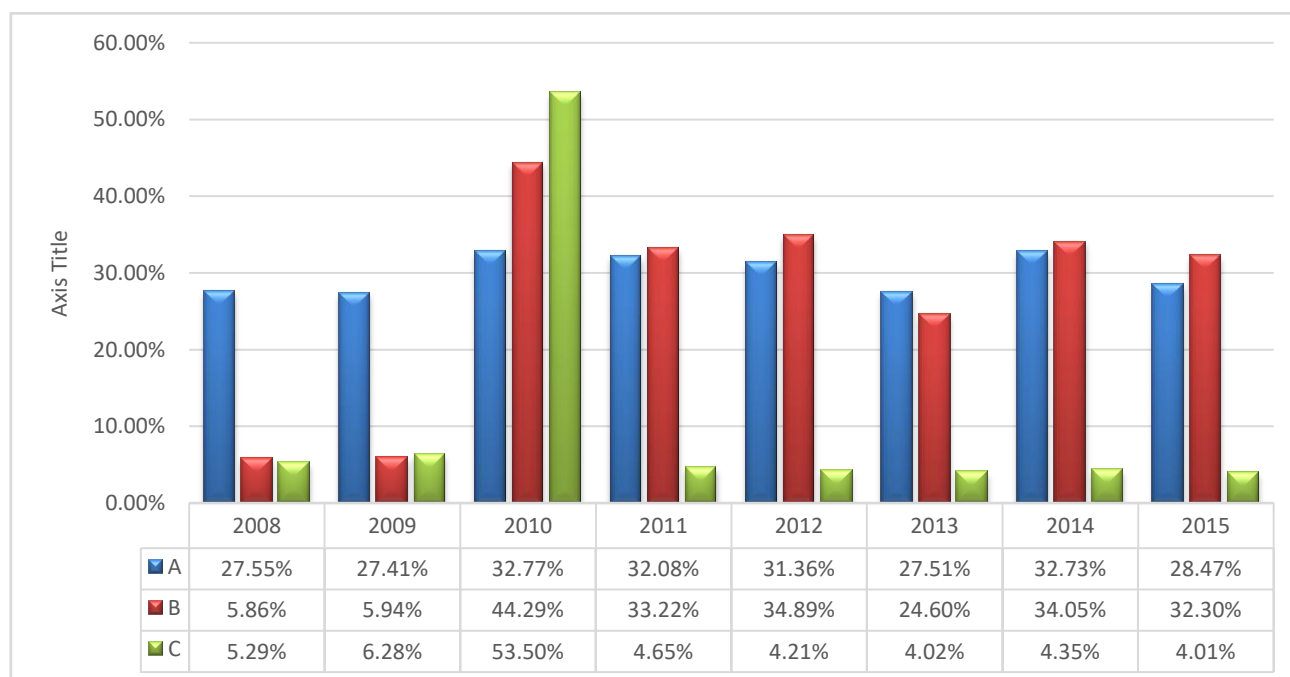


Figure 15. Return on equity of Credit Unions



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Return on equity is a profitability ratio that measures how much income are generated from the shareholder's equity. A high ratio demonstrates that management is capable of

bringing in funds into the institution for the benefit of the shareholder. According to the above chart, all three credit unions generated the most income from their equity in 2010.

Liquidity Ratio
Liquid Asset to Total Asset

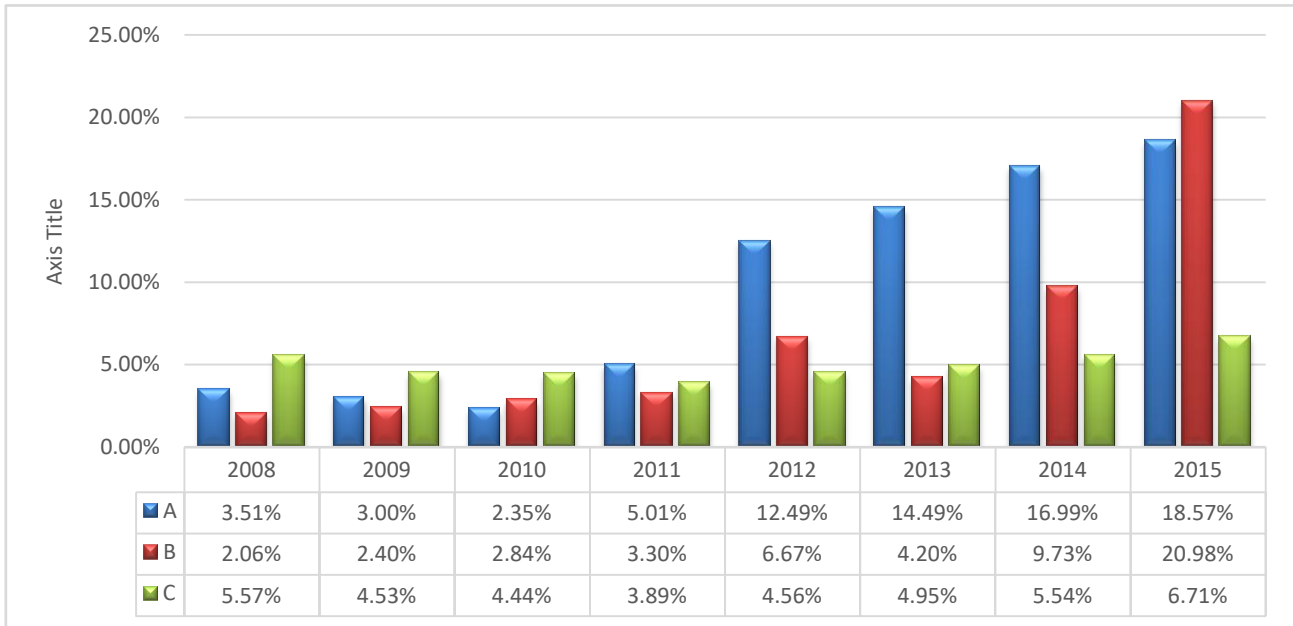


Figure 16. Liquid Asset to Total Assets of the Credit Unions

A liquid asset to total asset ratio indicates how much balance sheet shrinkage the sector could absorb before forced to sell illiquid assets (Financial Soundness Indicators: Compilation Guide, 2004). It also shows how much assets an institution has that can easily be converted to cash to sustain expected and unexpected demands. Each credit

union would want a higher ratio since the institution would be consider to be more liquid. In 2015, all three credit unions liquid ratio was at their peak. Credit union A had a ratio of 18.57%, credit union B had a 20.98% and Credit Union C had 6.71%.

Liquid Asset to Total Deposit

Table 10

Credit Union	2008	2009	2010	2011	2012	2013	2014	2015	Average
A	4.72%	4.07%	3.00%	6.45%	0.16%	0.19%	0.21%	0.23%	2.38%
B	0.15%	0.18%	0.18%	0.13%	0.26%	0.14%	0.27%	0.23%	0.19%
C	0.84%	0.59%	0.49%	0.50%	0.58%	0.68%	0.79%	0.99%	0.68%

For this ratio, the ratios shows to what extent a bank is able to meet unexpected deposit withdrawals with the liquid assets from its balance sheet (Angora & Roulette, 2011). The higher the ratio, the more a financial institution is able to meet unexpected deposit withdrawals. In table 10, after the eight year period, credit union A had an average of 2.38%, credit union C had a ratio of 0.68% and credit union B with 0.19%.

V. CONCLUSIONS

The findings of this study has shown that credit unions are more favored than a bank. Credit union encourages members to be more involved and informed of every financial and managerial decisions that occurs. One key feature that sets credit union apart from other financial institutions is members' participation in the affairs of the organization. Hence the reason why, member must attain knowledge of their credit union to be able to have a strong

and convincing opinion of the entity. Furthermore, the institution encourages members to save regularly and to borrow wisely as a means to accommodate their financial position. The aim of credit unions is to have their members feel valued and not cheated.

The perception of credit unions in general is that they are the elite savings institution that operates to foster economic development and having programs that meets member's financial needs. Members perceive that credit unions are safer than a bank, offers everything that banks doesand have products and services available to the community. With these in mind, individuals will always prefer a credit union over a commercial bank. As a means to strengthen the credit union sector in Belize, the continued monitoring and supervision is mandatory.



Due to the growing demand within the sector, there is a need to maintain the efficiency with regards to the operations of the institution. In this study, the CAMELS model is being used to analyze the financial performance of the selected credit unions. This model helps to identify areas with deficiencies that needs management's attention. They are several factors that may affect the components of the framework but despite them all, the financial performance of the selected credit unions is strong.

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