UNIVERSITY OF CAPE COAST

FINANCIAL PERFORMANCE OF CREDIT UNIONS IN GHANA: A STUDY OF SIX SELECTED CREDIT UNIONS IN THE WESTERN AND CENTRAL REGIONS

BROBBEY JUDITH

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BY

BROBBEY JUDITH

DISSERTATION SUBMITTED TO THE DEPARTMENT OF ACCOUNTING AND FINANCE OF THE SCHOOL OF BUSINESS, UNIVERSITY OF CAPE COAST, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR AWARD OF MASTER OF BUSINESS ADMINISTRATION IN FINANCE

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DECLARATION

Candidate's Declaration

I hereby declare that this dissertation is the result of my own original research and that no part of it has been presented for another degree in this University or elsewhere.

Name: Judith Brobbey

Candidate Signature……. Date …….

Supervisor's Declaration

I hereby declare that the preparation and presentation of the dissertation was supervised in accordance with the guidelines on supervision of thesis laid down by the University of Cape Coast.

Name: Dr. James Preprah

Supervisor's Signature: ……..Date: ……

ABSTRACT

The general objective of this study is to evaluate the financial performance of Credit Unions in the Western and Central Regions of Ghana. This study was prompted by the inability of some credit unions to effectively analyse their financial performance. The survey design was adopted while the study covered 12 credit unions over the period 2007-2012. The analysis and discussion of the data point to three key findings. First the study revealed that the average values for the performance variables were impressive because the indicators of the credit unions for the six year period are more than a single digit.

The analysis showed that there is a significant difference between the return on asset of the credit unions from the Central and Western Regions of Ghana, again there is a significant difference between the return on equity of the credit unions from the Central and Western Regions of Ghana. Finally in relation to the determinants, loan quantity, repayment, solvency and operating expense were the major determinants of the financial performance of the credit unions. It was recommended that Credit unions can diversify their operations by having similar bodies in other Regions and managers of the credit unions should engage researchers to study their operations and examine more factors that may influence their financial performance since it could improve their performance.

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I also owe sincere thanks to my husband for his encouragement. I also acknowledge the authors whose names appear in the references and from whose work I have quoted. I am also grateful to my siblings and my lectures for their moral support throughout my period of study.

DEDICATION

To my lovely husband Brandford Bervell.

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ABBREVIATIONS

ANOVA	Analysis of Variance
CFF	Central Finance Facility
CUA	Credit Union Association
EU	European Union
LP	Loan Price
LQ	Liquidity Ratio
LQ	Loan Quantity
NBFI	Non-Bank Financial Institutions
OE	Operating Expense
RCB	Regional Credit Bank
ROA	Return on Asset
ROE	Return on Equity
RP	Repayment Capacity
SOL	Solvency
WCCU	World Council of Credit Unions

CHAPTER ONE

INTRODUCTION

Background to the Study

In all economies, various avenues exist for dealing with the financial desires or challenges of citizens and family units. This is why banks were established with specific aims and objectives, but ultimately to satisfy the expectations and aspirations of their clients as well as the general public. However, in view of the risks associated with bank finance, most banks are unable to satisfy the needs of citizens and family units in their respective countries.

Turner (2000) defines a credit union as, "a financial self-help co-operative which encourages members to save money together and pooled resources are then used to provide low-cost loans to members." He again stated that, "credit union operates within a clearly defined area of location and a mutual link must exist between all members. This link is known as the common bond of the credit union. The common bond may be based on all members living in the same locality or all members working for the same employer".

Berthoud and Hinton (1989) also define credit unions as being co-operative societies that offer loans to their members out of the pool of savings that are built up by the members themselves. This is a descriptive definition that does not refer to the purpose of credit unions. However, it does describe them as being co-operatives; therefore co-operative principles could be inferred as being the purpose of credit unions. The unique ownership status implicit in this

definition (member run, owned and used) led to them being described by Croteau (1963) as being the purest form of co-operative.

Mckillop, Glass and Ferguson (2010), posit that credit unions are co-operative financial institutions that have successfully established themselves throughout the world. In excess of 600 million people in 90 nations now belong to a credit union and, in aggregate terms, the assets of credit unions world-wide are calculated at $718.5 billion (World Council of Credit Unions, 2013). As self-help, democratic institutions, credit unions have demonstrated the efficacy of co-operative principles to the management of their financial affairs for millions of people.

Taylor as cited in Mckillop, Grass and Ferguson (2010), postulates that credit unions may be viewed as unique financial institutions in that they are consumer co-operatives and are limited to serving the market for consumer credit and saving. A credit union can be thought of as a 'purchasing' co-operative from the standpoint of its borrowing members, and a ‘marketing’ co-operative to its saving members. The real bottom line for credit unions is a measure of how well they are serving their members, not how well they are performing for stockholders. However, credit unions must still generate a positive financial bottom line to build capital in order to serve their members in the long run. Some of the challenges getting in the way of positive financial results include shrinking interest margins, health of the over-all economy and the resultant impact on their members’ financial health.

Obeng (2008), also posits in his work that credit unions are thrift societies which offer savings and loan facilities exclusively to members. In 1968 when they were brought under legislation, the Credit Union Association (CUA) was

formed as an apex body. There were 254 CUs (64 of them rural) with some 60,000 members (Quainoo 1997). The number of CUs continued to grow to nearly 500 by the mid-1970s, but their financial performance was not particularly strong. High inflation in the late 1970s eroded their capital, and by the early 1990's, the number of CUs had fallen by half.

Table 1: Type of Credit Unions in Ghana and their Percentage Holdings

Regions	Total Number	Work Based		Community Based		Parish Based	
		No	%	No	%	No	%
Accra	118	37	31.36	17	14.40	64	54.24
Ashanti	72	14	19.44	20	27.78	38	52.78
Brong-Ahafo	28	07	25.00	20	71.43	01	03.57
Central	36	22	61.11	09	25.00	05	13.89
Eastern	35	16	45.71	16	45.71	03	08.58
Tema	33	12	36.36	09	27.28	12	36.36
Northern	21	03	14.29	14	66.67	04	19.04
Upper East	10	08	80.00	01	10.00	01	10.00
Upper West	12	02	16.67	07	58.33	03	25.00
Volta	20	16	80.00	04	20.00	-	-
Western	24	09	37.50	13	54.17	02	08.33
Total	409	146	35.70	130	31.78	133	32.52

Source: Compiled from CUA Records (Data on credit unions for June 2011)

By way of explanations, Gordon (2010) posit that a community based credit union is the type of credit union which is geared towards occupants of a particular area, usually on a small scale. Membership is granted to those who reside within the designated area; there may be other stipulations to join but residency is the main requirement. On the other hand a work based credit union is meant to serve a particular occupation, trade or business. This often includes professions with established employee unions, such as postal workers, educators,

members of the press, and law enforcement. Finally, parish based credit union are those formed by the church to cater for the needs of their congregations.

CUA as at 2003 had 250 affiliates with 132,000 members. Credit unions averaged about 400 - 500 members and their average loan size of US$153 was well above that for African Micro Finance Institution's (MFIs). CUA has attempted to establish a financial reporting system for its members, but the quality data remains poor. "Over 70% of all Ghanaian credit unions were in an 'unsatisfactory' situation as of April 1996, and 42% of them were placed in the worst category" (Camara, 1996). By the end of 2001, these ratings had improved to 60% and 15%, respectively, and the share given the top rating for financial soundness had improved significantly to 29% (CUA, 2002).

According to CUA report for June 2011, the CUA has total affiliated members of 409 and a total membership of 368,136. As presented in Table 1. This shows that out of the 409 credit unions in Ghana, 146 are work based constituting 35.70%; 130 community based also constituting 31.78% and 133 parish based, which also constitute 32.52%. From the table it is seen that work based credit unions dominate the types of credit unions in Ghana. From Table 1, it is seen that the trend has changed. This is because when credit unions started in Ghana, they were all parish and community based that spread throughout the Northern Regions of Ghana. The membership over the years has increased. In June 2010 the membership was 314,810. This has increased to 368,136 showing a 16.94% increases can be seen in Table 2

Table 2: Credit Union Membership by Gender

Name of Region	Membership			
	Females	**Males**	**Groups**	**Total**
Accra	24,673	28,916	901	54,490
Ashanti	39,137	41,070	3,478	83,685
Brong-Ahafo	21,823	28,471	1,968	52,262
Central	12,328	17,698	547	30,573
Eastern	6,737	9,409	187	16,333
Tema	11,289	12,941	797	25,027
Northern	5,442	7,306	1,357	14,105
Upper East	2,182	3,470	30	5,682
Upper West	7,708	11,449	2,596	21,753
Volta	6,284	8,499	48	14,831
Western	23,998	24,297	1,100	49,395
Total	**161,601**	**193,526**	**13,009**	**368,136**

Source: Compiled from CUA Records (data on credit unions for June 2011)

Gordon (2010), defines performance as a challenge inherent in life, being applicable to learning (driving, typing, computer skills), testing (at school, work, or for a driver's license), sports (team or personal best), presentations (classroom, clubhouse, sales), and social events (weddings, ceremonies, church events, any event at which you wish to make a good impression). Components of performance are designated time and place, demonstration of skills, and degree of fallout from success or failure. Performance in this context is measuring financial performance of credit unions in the Western and Central Regions of Ghana.

Financial Performance is defined as a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. Butt, Hunjra and Rehman (2010), posit that the financial performance assessment is viewed as an important factor in reviewing performance of a company. The results of these assessments can be useful in evaluating the efficiency of a company.

There are many different ways to measure the financial performance of an organisation. This research limits the measures of credit union performance at the following**:** Profitability, Liquidity, Solvency, Financial efficiency and Repayment capacity. This limitation is necessary to narrow the scope of the study and is also suitable for financial management practices for credit unions in the Western and Central Regions of Ghana. Credit unions' ability to meet clients' needs and to continue to be in existence is believed to be largely influenced by its financial performance. This is what motivates the researcher to probe into this area to be able to confirm that credit union sustainability is determined by its financial performance.

Statement of the Problem

Financial performance is one of the pillars of credit unions' sustainability (Butt, Hunjra & Rehman, 2010). Sustainability can be looked at from two angles; financial sustainability and operational sustainability. Credit unions are thrift societies who mobilize the resources of their clients, repackage it and sell it back to them as loans. This necessitates them to be good stewards.

That is, they have to strive to perform well by rendering good account to their clients to win their trust and confidence in them. Again the competitive nature of the financial institutions also requires credit unions to perform better than they might be doing now.

Ajai and Azeb (2010) posit that, currently almost all financial institutions are doing all the things that were hitherto done by only the informal sector or the non-bank financial institutions like susu collection and many more. Financial performance of credit unions is important because it will enable them to meet their clients' needs and hence win their confidence. It will also help them to be able to compete with other financial institutions performing similar functions. According to the Central Finance Facility (CFF) Department of CUA, the following have been some of the challenges the CFF faces: Irregular savings and remittances of Statutory Reserve Deposit by affiliated credit unions; downward interest rates of investments and overdependence of the CFF funds by the Credit Unions Training Centre for its major infrastructures.

To be able to sustain credit unions for now and in the future, CUA encourages credit unions to be prudent in managing the following areas: the need to increase Capital base- Shares and Reserves; the call to increase the membership base through marketing, improved service delivery and opening of common bonds; the necessity to introduce new products and services based on members' needs; the request to improve savings mobilisation methods; the demand to be profitable and pay competitive rates on deposits and build its reserves; the prerequisite to manage the loan portfolio effectively by reducing loan delinquency; and the responsibility to be efficient in managing liquidity.

The absence or mismanagement of all these can damage credit unions' performance. Credit unions may fail as a result of inadequate financial performance. Also, under capitalisation and uncertainty of the business environment may cause credit unions to rely excessively on equity and maintain high liquidity and these may affect credit unions performance (Vuong, 1998).

The problems that credit unions face appear to be that inefficient management of liquidity, loan portfolio, and competitive rates on deposits among others (Agyekum, 2011). These have adverse effect on their financial performance and their sustainability. Therefore, the problem to be addressed in this research is to investigate the effect of financial performance on credit union sustainability and then, to determine the best measures for improving credit union performance in the Western and Central Regions of Ghana.

Objectives of the Study

The general objective of the study is to evaluate the financial performance of credit unions in the Western and Central Regions of Ghana. Specifically, the study seeks to:

1. Determine the Regional differences in the financial performance of credit unions.
2. Examine the factors that influence the performance of credit unions.

Research Hypotheses The following hypotheses guided the study.

1. H_o: There are no difference in the performance of credit unions in Western and Central Regions of Ghana

   H_1: There are difference in the performance of credit unions in Western and Central Regions of Ghana

2. H_o: Firm specific variables has no effect on the performance of credit unions

   H_1: Firm specific variables has an effect on the performance of credit unions

Scope of the Study

The span of this study will be based on the operations of six (6) credit unions, (one of each type , making it three from each of the Regions) from the Western and Central Regions of Ghana over a period of five years from 2007-2012, with regards to their financial performance. In this study, financial performance is measured by Profitability, Liquidity, Solvency, Financial efficiency and repayment capacity.

Significance of the Study

Completing this study sought to bring together aspects of theory and practice. For theory, this study is the platform for the expansion of previous studies on financial performance of credit unions by focusing on examining the impacts of financial performance on credit union sustainability. In practice, this study is significant for the growth and sustainability of credit unions in the two Regions. The results from this study will indicate the relationships between financial performance and credit union sustainability and will assist financial managers to improve the performance of their businesses by managing financial matters efficiently and effectively.

Organisation of the Rest of the Study

The study has been organized into five chapters. The first chapter highlights the background of the research, the statement of the problem, the objectives of the study, the research questions, and significance of the study, scope of the study and organization of the study. Review of related literature to the study is reviewed in the second chapter. The review considers empirical studies, surveys and views of other authors. The descriptive methodology and the exploratory research design adopted in carrying out the study are discussed in Chapter Three.

Chapter four presents the findings and discussion of the data. The secondary data are presented, discussed and analysed. The Final chapter recapitulates the results and draw conclusions. Recommendations are made for efficient and effective performance management system decision. Further research is also recommended in the final Chapter.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The review of literature is in three main parts: the theoretical review, empirical review and conceptual framework. The theoretical review presents perspectives on propositions and ideas of some earlier researchers, authors and educators on the theories of financial performance measures. The research methodology, findings and recommendations of some researchers in relation to financial performance of credit unions are reviewed under the empirical review. Apart from these two main sections, the chapter also deals with a conceptual perspective of the researcher. This is where the researcher tries to narrow down the theories reviewed and develops a framework of which it is intended to be met after the research.

This research examines the financial performance of credit unions in the Western and Central Regions of Ghana. As have already been indicated, this chapter presents an in-depth review of literature about credit unions, their aims, roles, indicators of financial performance of credit unions, effects of efficient financial performance on credit union sustainability and competitiveness.

Review of Ghana's Financial Sector

Ghana's financial sector is composed of banks and nonbank financial institutions (NBFIs). The country has about 23 major banks—including 3 development banks, 4 commercial banks, and 16 universal banks—representing about 90 percent of the total assets of the banking and nonbanking sector. The NBFI subsector includes 36 institutions accounting for 5 percent of the total

assets of the financial sector (Ajai & Azeb, 2010). The NBFIs include 17 savings companies, 13 saving and loans companies, 4 leasing companies, 1 discount house, and 1 mortgage company. Many of these institutions provide services in urban and peri-urban areas. Their service outlets are largely concentrated around the major urban centres' of the Greater Accra, Ashanti, and Eastern Regions, with little outreach to rural and remote areas.

In addition to formal financial institutions, informal and semiformal institutions—including 380 credit unions, 80 financial non-governmental organizations, and 4,000 susu collectors (individuals)—are important financial service providers in Ghana. Rural and Community Banks (RCB) and their agencies represent about 5 percent of the total banking assets and account for about half of the total banking outlets in the country, and they are especially significant in rural areas (Ajai & Azeb, 2010). Formal financial service providers such as commercial banks represent about 40 percent of the money supply in the overall financial sector. The remaining amount is believed to be outside the formal system (IFAD, 2008) and mainly in rural areas. Thus, institutions such as RCBs and informal and semiformal service providers play an important role in addressing the lack of access in these areas.

Definition of Credit Unions

Credit unions are small, cooperative, not-for-profit institutions, which distinguishes them from other financial intermediaries (Eeckaut, Lovell & Fried, 1993). They further opined that, Credit unions accept savings from members, and so have some features of a producer cooperative. They also provide loans to members, and so have some features of a consumer cooperative. Since credit

unions are owned and operated by members, the objective of credit unions can be thought of as maximizing services provided to members. The definition provided by Eeckaut, Lovell & Fried (1993), did not trace the origin of credit unions therefore when the concept is introduce to a first timer, it will be difficult for the person to comprehend the meaning.

In view of the deficiencies in the definition provided by, Eeckaut, Lovell & Fried (1993), Credit Unions are thrift societies offering savings and loan facilities exclusively to members (Steel & Andah, 2004). Ofie (2001), also indicated that the first credit union in Africa was established at Jirapa in the Northern Region in 1955 by Canadian Catholic missionaries, By 1968, when they were brought under legislation and the Credit Union Association (CUA) was formed as an apex body, there were 254 Credit Unions (64 of them rural) with some 60,000 members (Quainoo 1997). The number of CUs continued to grow to nearly 500 by the mid-1970s, but their financial performance was not particularly strong.

Turner (2000) defines a credit union as, "a financial self-help co-operative which encourages members to save money together and pooled resources are then used to provide low-cost loans to members." The author further added that, "credit union operates within a clearly defined area of location and a mutual link must exist between all members. This link is known as the common bond of the credit union. The common bond may be based on all members living in the same locality or all members working for the same employer". The new dimension taken by the writer in this definition is the ability to add the proximity of credit union institutions to their working environment to the understanding of the term.

Berthoud and Hinton (1989) also define credit unions as being co-operative societies that offer loans to their members out of the pool of savings that are built up by the members themselves. This is a descriptive definition that does not refer to the purpose of credit unions. However, it does describe them as being co-operatives; therefore co-operative principles could be inferred as being the purpose of credit unions. The unique ownership status implicit in this definition led to them being described by Croteau (1963) as being the purest form of twenty co-operative. Not only are trading transactions restricted to members, restrictions are also placed on the membership by requiring that members belong to a common bond. This common bond or interest is usually multiple, associational, occupational or residential. The requirement to belong to a common bond is seen as a cornerstone in the success of these usually high-risk credit co-operatives, as the social pressure that is created by the members knowing each other, lessens the risk of default.

Again, the World Council of Credit Unions (1995) defines credit unions as non-bank financial institutions owned and controlled by members. It is also a democratic, member-owned financial co-operative. Each member, regardless of account size in the credit union, may run for the board and cast a vote in elections. As financial intermediaries, credit unions finance their loan portfolios by mobilizing member savings and shares rather than using outside capital, thus providing opportunities for generations of members. Credit unions exist to serve their members and communities.

As not-for-profit cooperative institutions, credit unions use excess earnings to offer members more affordable loans, a higher return on savings, lower fees or new products and services. They serve members from all walks of

life, including the poor and disenfranchised (WOCCU/ACCOSCA, 1995). Credit unions provide members the opportunity to own their own financial institution and help them create opportunities such as starting small businesses, building family homes and educating their children. In some countries, members encounter their first taste of democratic decision making through their credit unions.

Upon the review of the above definitions provided, the researcher would define a Credit Union as a profit sharing**,** democratically run financial co-operative which offers convenient savings and low interest loans to its members. The members own and manage their credit union themselves. Broadly speaking, a credit union is a volunteer run, member-owned organization where people save and lend to each other at affordable rates of interest. They typically have a not-for-profit status and a strong community-based ethos. A common bond, based on factors like living or working within a particular area, determines who can join each credit union. All members have an equal input into the running of their credit union regardless of the level of savings they hold.

Developments of Credit Unions

The observations on co-operative development show how market conditions have led to changes in the development of co-operatives. In Credit Unions, in particular, similar development trends and problems can be observed. These include: Credit co-operatives start as local institutions operating in a given community or radius. At this stage the organizational principle is based on the common bond between members. This common bond is based on parish, community, occupation and ethnic membership. Business at this stage is strictly membership trading. At this stage the Credit Union is highly competitive,

because members offer voluntary services and are highly motivated (May, 1983).

A further stage in the development of the Credit Unions is the interaction between primary Credit Unions. This is the basis for developing secondary or tertiary Credit Union organizations. Through this a central fund is set up and cooperation with other institutions is further developed (Kirsch & Goricke, 1977). Another growth pressure is the decision as to the type of business in which to engage. In Canada for instance, the credit co-operatives had to decide to stay as savings and loans institutions with only membership trading and limited services or as financial institutions providing full financial services. This was because of strong competition from other financial institutions (Jordan 1980).

Goddard, McKillop and Wilson (2008), have also chronicled a three-stage Credit Union industry development. According to them, Credit Unions move through three industry stages of development "nascent" through "transitional" and finally to a "mature" stage of development. The nascent industry represents a stage of development in which Credit Unions are seen as self-help organizations. Hence, they are not just financial oriented but organizations with a strong social purpose. Key attributes of this stage include small asset size, tight common bond between members and emphasis on voluntarism.

Transition Credit Union industries mark the stage in which the seeds of change within Credit Unions are sown. The characteristics of the industry show a relaxation of cooperative philosophy and ideals. This is caused by the need to achieve cost efficiencies and scale economies owing to asset growth and competition in the market. The mature stage brings to an end the development

path of Credit Unions. According to Goddard, McKillop and Wilson (2008), the key attributes of this stage indicate a Credit Union with large asset size and a less restrictive interpretation of the common bond requirement for members. There is a trend toward a well-organized central services and diversification of products, professionalism of management instead of voluntarism. Though membership continues to grow, there are fewer Credit Unions due to mergers. There is tendency for Credit Unions to adopt the features of the main stream financial institutions.

The discussions above illustrate the dynamics of change within Credit Unions. Key changes in the Credit Unions have basically involved transformation of their ideological and institutional nature. For instance, Credit Unions have become more business oriented and common bond restrictions of members have been relaxed. Furthermore, the voluntary principle has been given up and professionals have been employed to manage the Credit Unions. There has also been a change in their operational strategies. The diversification of products and services as well as the establishment of central services shows this. In their attempts to compete more effectively in their environments, it has become obligatory for Credit Unions to take on the features of mainstream financial institutions.

These changes have posed certain problems for Credit Unions. For instance, increases in the size of members mean greater financial strength; however, there is a corresponding increase in expenses through administrative costs and transaction costs. Growth into other services leads to professionalization of the employees and management.

This becomes necessary because financial institutions require the application of scientific methods for decision-making. The development from primary Credit Unions to the formation of tertiary or national associations can also have implications on the democratic character of Credit Unions. For instance, Furstenburg (1983) has pointed out that increases in the size leads to a greater division of labor and role specialization. Furthermore, it brings about structural problems in self-managed and democratic organizations. This is because a greater division of labor will lead to new forms of authority systems and the creation of status differences. This will eventually affect the level of membership participation and democratic management.

The observations made above suggest key factors for the study of Credit Unions in Ghana. It is argued that for the Credit Unions in Ghana to be competitive and continue serving the low-income members, they need to develop operational strategies and adopt structural forms to meet the challenges of their environment. These changes in turn will promote the sustainability of individual Credit Unions.

Present Status of the Credit Union Movement in Ghana

The first Credit Union in Ghana was established in 1955 at Jirapa in the north western part of Ghana in 1955. This Credit Union was founded in a parish community and promoted by missionaries (Kirsch & Goricke, 1977). Eventually, teachers and trade unionists took on the role of promoters and spread the Credit Unions to other communities and work places in the southern regions of Ghana. As the Credit Unions expanded from the north towards the south, the membership structure changed from parish members to wage earners.

By 1974, the Credit Unions in Ghana numbered 417 with more than 53,000 members. The different types of Credit Unions were divided up as follows: Community type: 32 per cent; Workplace: 60 per cent; Parish type 6.6 per cent. From statistics available at CUA (CUA, 1999), the total number of Credit Union societies by 1999 was 149 with a total membership of 63,379.

A greater percentage of the Workplace Credit Unions are found in the southern and coastal regions of Ghana, mainly Greater Accra, Eastern, Western and the Central Regions. This distribution shows that the growth pattern of Credit Unions in Ghana has not changed very much. The workplace type still dominates the number of Credit Unions in the country. Whilst the number of Credit Unions has reduced by 62 percent in the last 25 years, membership has gone up by 20 percent. In general, it can be observed that there has been an increase in the average number of members per Credit Union, from 235 in 2000 to 725 in 2013. This shows that Credit Unions in Ghana have grown in membership.

The Traditional Credit Union Model

The traditional model discouraged savings, encouraged borrowings and forced those who saved to subsidize those who borrowed. Members who deposited shares in their Credit Unions often could not withdraw the shares until they terminated their membership and they received no yield on their shares. The amount of a loan that could be obtained was dependent on the number of shares, which was held in savings. The result of these policies and practices, was a chronic shortage of loadable funds (Richardson et. al., 1993)

The New Credit Union Model

The cornerstone of the new model was the gradual reduction of the traditional reliance on member shares for capital and member deposits. This new market –oriented model represents a radical departure from the policies of the past. In general, the new model necessitated the following changes in the traditional model (Richardson, Lennon & Branch., 1993): A shift from deposit savings to share savings; shift to market rates on loans; shift to capitalization of earnings; shift to repayment-based credit analysis; shift to market-based, results-oriented business planning and a shift to improved financial information reporting control and evaluation.

A number of key policies were attached to the new Credit Union model. They included (Almeyda & Branch, 1998), competitive pricing for savings and loans; intensive mobilization of savings; maintenance of adequate liquidity to satisfy unanticipated withdrawals of savings; application of new lending criteria centered on capacity-to-pay analyses; credit history and available collateral; creation of loan/loss reserves in relation to delinquency; reduction of non-productive assets; capitalization of all net earnings and the use of marketing programs to improve public image.

However, in Latin America where this new model was first implemented Credit Unions began to pay market rates of interest on deposits. They also raised interest rates on loans to cover the costs of the savings mobilization programs. The Credit Unions also decided to pay dividends on share capital much like the interest paid on savings deposits (Almeyda & Branch, 1997). But in Ghana, the new model required Credit Unions to adopt new institutional policies, financial management discipline, and credit administration

In Ghana, This included the introduction of financial management disciplines such as capital accumulation, loan delinquency control, loan loss provision and liquidity management (WOCCU/ACCOSCA 1995). The role of the Credit Union Association of Ghana (CUA) was to serve as a financial intermediary of affiliated Credit Unions. It was also to bring about economic and administrative strengthening of affiliated unions.

Features of Credit Unions

Turner (2000) again identifies the following about credit unions. The credit union does not seek a profit. The credit union is equally not a charity. Members have to demonstrate their ability to save regularly before being considered for loan. Credit unions aim at providing service to their members; Credit unions offer low interest loans with a repayment schedule designed to suit the member's ability to repay and Credit unions offer the opportunity to establish a regular savings pattern.

Turner (2000) further added that, Credit unions operate at times and locations which are convenient to the members, including evenings and week-ends; Credit unions seek to make members feel a part of the union or society and treat all members with respect and consideration and although, a credit union is very different from a bank, the two types of organizations are potentially in competition in the areas of savings and loans.

The Organization and Objectives of Credit Unions

Credit unions accept savings from members, and so have some features of a producer cooperative. They also provide loans to members, and so have

some features of a consumer cooperative. Since credit unions are owned and operated by members, the objective of credit unions can be thought of as maximizing services provided to members. This immediately suggests that profit maximization is not an appropriate objective, since there are no non-member suppliers or customers to exploit.

It also suggests that the interests of saver/members (high interest rates) are in conflict with those of borrower/ members (low interest rates), and this lack of unanimity renders producer cooperative models and consumer cooperative models, both of which assume unanimity in member objectives and a group of non-members to exploit in an effort to meet those objectives, inappropriate models of credit union behaviour.

Finally, since the interests of saving members are neither more nor less important than those of borrowing members, it is desirable to avoid attaching a priori weights to the saving services and the borrowing services a credit union offers its members. These and other features of credit unions call for care in the specification of a behavioural model with which to evaluate performance. It is not appropriate, for example, to treat credit unions like commercial banks, and evaluate their performance on the basis of their ability to maximize profit (Fixler & Zieschang ,1992; Berger, 1993).

On the other hand, it is not appropriate to ignore the services offered by other financial intermediaries when developing a behavioural model for credit unions, since they compete in many of the same markets. In light of these features, we evaluate the performance of credit unions on the basis of a model that is in part much more general than conventional models of producer behaviour, and in part very idiosyncratic, tailored to their special characteristics.

The researcher treats credit unions as seeking to maximize benefits of membership in a credit union. Maximum benefit is expressed as maximum service provision, subject to resource availability and in a given operating environment (Berthoud & Hinton, 1989).

Since this framework involves only the 'production' aspect of credit union operation, it is more basic than, and hence more general than, any behavioural model of the credit union. What remains is to specify the services credit unions provide, the resources they employ, and the environment in which they operate (Almeyda & Branch, 1997). Credit unions use three types of resource: human resources, other variable operating expenditures, and volunteer labour and sponsor-donated resources, the first two are paid for, and are relatively easy to measure with some degree of accuracy. The third is almost impossible to measure accurately. The services credit unions provide their members can be classified as saving services provided to depositors and loan services provided to borrowers.

Within each classification there are three types of service. They include the number of savings and loan accounts, the interest rates paid on saving accounts and charged on loan accounts, and the variety or convenience features offered to lenders and borrowers. The number of accounts captures the quantity dimension of service provision. Interest rates are not interpreted as prices with which to aggregate type of accounts, but rather as another dimension of the services a credit union provides its members, since depositors seek high saving rates and lenders desire low loan rates. The variety indicators measure the range of loan and saving services a credit union offers, and are intended to capture the conveniences dimension of service provision (Almeyda & Branch, 1997).

The environment in which a credit union operates is characterized by a long list of features, many of which are subject to managerial influence at one level or another. Among the more prominent environmental variables are the size of the credit union, the nature of its common bond, the type of character, and the branching structure of the credit union.

Role of Credit Unions in Ghana

Ghana Co-operative Credit Union Association (CUA) is the umbrella body of all Co-operative Credit Unions in Ghana. It provides an enabling environment for financial and other technical services to its members and also ensure that the Credit Union concept is promoted properly to become a household word. CUA is to regulate and supervise all the Credit Unions in the country on behalf of the Bank of Ghana and other interested groups for sanity to prevail in the market. CUA provides services to all the Credit Unions in Ghana that is examining premises and equipment for provision of licensed to commence business

Also, they are required to provide materials to all the Credit Unions for administrative purposes. CUE is responsible for auditing accounts of the credit unions in accordance to the law of auditing just to ensure that there is fairness and justice in the administration of funds in the credit unions in Ghana. Similarly, all the credit unions are requested to deposit some percentage of funds into statutory reserves and deposit guarantee schemes so that in times of difficulties, CUA provides all the financial assistance to the credit union in trouble and CUA also meets with stakeholders in the formulation of rules and regulations of the credit unions in the country. They also make all travelling arrangements for members to ACCOSCA and WOCCU for international conferences.

Determinants of Financial Performance

Head and Watson (2010) suggested two broad measures of financial performance- absolute measure and relative measure. The absolute measure assesses performance based on the absolute quantum of profit. Profit- equivalent means varied forms of profit before tax, profit after tax, Residual income and economic value added. But absolute measure of performance has a weakness which is its inability to relate the profit to the resources used to generate profit. Absolute measure may not provide quality information for performance comparison decisions.

Relative performance measures are much useful for inter and intra firm comparisons because they relate profit with resources used in generating such profits. Esho, Koffman and Sharpe (2005), Laeven and Levine (2007) and several researchers used relative performance measures. Pervasive in literature is profitability, liquidity, solvency and repayment capacity. The appropriateness of each of the measures, according to Laeven and Levine (2007), depends on the focus of the research in question. Profitability ratio has featured in most credit union performance research. This can be explained by the fact that most of the researchers conduct the study by concentrating on statement of financial position items rather than on income statement item. DeYoung and Rice (2004), chose liquidity and solvency as performance measure over efficiency and repayment capacity because the latter does not capture the entirety of performance.

Watson and head (2010) also indicated that, liquidity ratios attempt to measure a company's ability to pay off its short-term debt obligations. This is done by comparing a company's most liquid assets to its short-term liabilities. In general, the greater the coverage of liquid assets to short-term liabilities the

better as it is a clear signal that a company can pay its debts that are coming due in the near future and still fund its ongoing operations. On the other hand, a company with a low coverage rate should raise a red flag for investors as it may be a sign that the company will have difficulty meeting running its operations, as well as meeting its obligations.

It is important to discuss the relationship between profitability and solvency and liquidity as well as how credit unions performance is likely to affect this relationship from a theoretical perspective. All things being equal, high profit should translate into high return on asset. This proposition is valid if increased profit is as a result of increase in efficiency level. Put differently, return on asset will only improve if the rate increase in profit is more than the rate of increase in capital structure used in generating profit.

It becomes imperative to juxtapose profitability, liquidity, solvency and repayment to the performance of credit unions with DeYoung and Rice (2004) observation in that in contemporary times, management compensation is tied to effective use of the policies and regulations laid down to manage the activities of credit unions. Hence for the purpose of the study, financial performances of the credit unions are measured in terms of profitability, liquidity, solvency and repayment capacity.

Empirical Evidence on the Financial Performance of Credit Unions

The researcher begins the empirical review with the study conducted by Eeckaut, Lovell and Fried (1993), where the researchers indicated that, the purpose of their study was to evaluate the performance of credit unions. To that

end their study assumed that credit unions have as their objective of the provision of maximum benefits to their memberships. Eeckaut, Lovell and Fried (1993), then defined the benefits credit unions provide as having a quantity dimension, a price dimension, and a variety or convenience dimension. Given the resources at their disposal, they measured their performance in terms of their ability to provide maximum amounts of service of each type. Performance is evaluated in terms of dominance relationships and productive efficiency.

Eeckaut, Lovell and Fried (1993), found a lot of dominance, which implies the existence of lots of potential role models for each inefficient credit union. The study also found about 20% productive inefficiency on average, which implies lots of room for improvement. Finally, Eeckaut, et al (1993), found considerably more room for improvement in the quality dimension than in the price and variety dimensions. This according to the researchers implies that credit unions can improve their performance by getting more members from their pool of potential members, and by getting more accounts per member.

Eeckaut, Lovell and Fried (1993), then explained that a small but statistically significant portion of performance variation. Among the important explanatory variables are some that should be informative to individual credit union managers and the national leadership alike. The study of Eeckaut, Lovell and Fried (1993), was quite elaborate but failed to consider the wide considered performance ratios used in the measurement of performance and it is in this vain that the current study will use the financial performance ratios to review the performance of credit unions of the selected scope of study.

In another study conducted by Goddard, McKillop and Wilson (2008), on the diversification and financial performance of US credit unions, they

indicated that, For US credit unions, the share of non-interest income in total income increased significantly between 1993 and 2004. Between 1993 and 2000, the pace of growth was steady but slow, with the share of non-interest income in total income increasing by about 3%. Between 2001 and 2004, the pace of growth quickened, with the non-interest income share increasing by a further 7%. Over this period, the dichotomy between large and small credit unions widened.

The researchers highlighted that, by the end of 2004, the share of non-interest income for credit unions with assets of more than $100 million was about three times that of credit unions with assets below $2 million. The growth of non-interest income has been made possible by technological progress and deregulation, and the opportunities have been more readily open to exploitation by the larger institutions. Lines of business that have been the subject of diversification activity include stock and bond brokerage, mutual funds, financial planning, business checking and auto leasing.

Smaller credit unions have, in the main, shied away from these opportunities. For all US credit unions, however, growth in non-interest income has been centred primarily upon new product developments around their existing member-focused savings and loans portfolios. Though the study of Goddard, McKillop and Wilson (2008), was more elaborate such that it considered how diversification could impact on the financial performance of credit unions, their study was not able to access the performance of the credit unions of the United State economy as a whole. In the candid opinion of the researcher, the performance of a single sector should be considered before the impact of

diversification should be considered on it hence the reason of the current study by the researcher.

In general, empirical evidence related to the performance and regional considerations of financial institutions suggests that expansion into less traditional financial activities is associated with more volatile revenue streams that can offset the risk-spreading benefits of how regionally spread the activities of the financial institutions are (DeYoung & Rice, 2004). Demsetz and Strahan (1997) came to the realisation that while large banks were more diversified than small banks, they also held less capital and granted riskier loans. DeYoung and Roland (2001) find that relationship-based income streams, including interest on loans and securities and service charges on bank deposits, were more stable than non-interest income for large US banks.

A shift towards fee-based activities was associated with increased income volatility and higher leverage, both of which imply greater earnings volatility. Stiroh (2004) finds some gains to diversification within broad activities of credit unions (such as lending and noninterest activities), but no benefit from diversification across broad activities, for US community banks. An increased focus on non-interest income was associated with a decline in risk-adjusted profitability. Stiroh (2004) also finds that the volatility of the net operating income of US banks declined over the period 1984–2001. However, the noninterest income component became more volatile, and increasingly correlated with interest income, over time.

In a related article by DeYoung and Rice (2004) on the performance of financial institutions they found that an increase in the share of non-interest income was accompanied by a decline in the profitability of US credit unions.

Non-interest income may increase the volatility of total income for three reasons. First, most credit unions loans are relationship-based and have high switching costs, while most fee-paying services are not relationship-based. Accordingly, interest income from loans may be less volatile than income from fee-paying services.

DeYoung and Rice (2004) also asserted that, the main input to produce loans is interest expense, which is variable, while the main input to produce fee-paying services is labour, which is quasi-fixed. Consequently fee-paying services may require greater operating leverage than lending, making earnings more vulnerable to a decline in revenue. The researchers also indicated that, most fee-paying services require little or no regulatory capital. Therefore fee-paying services tend to employ greater financial leverage than lending.

Narrowing the concept of financial performance to retail banking, Hirtle and Stiroh (2007) find that the increased focus of US credit unions on retail banking over the period 1997–2004 was associated with significantly lower equity and accounting returns for all banks, but with lower volatility for large credit unions only. In a related study conducted by Stiroh and Rumble (2006) it was found that diversification benefits exist between US financial holding companies. However, these gains are outweighed by increased exposure to non-interest activities, which are more volatile but not necessarily more profitable. Within financial holding companies, increased diversification does not improve profitability

A less uniform picture emerges from studies for countries other than the US. Smith, Staikouras and Wood (2003) find that non-interest income is less stable than interest income for a sample of banks from 15 European Union (EU)

countries. However, there is negative correlation between interest and non-interest income. DeYoung and Rice (2004) suggests that the difference between US and European banks may be due to the inexperience of many US banks (small community banks in particular) in fee-paying services.

In contrast, universal banking is the historical norm in many EU countries. Carbo-Valverde and Fernandez (2007) show that in European banking, market power tends to increase as banks diversify into non-traditional activities. However, Lepetit, Nys, Rous and Tarazi (2007) show that banks performance into non-interest activities are at higher risk of insolvency than banks focused on traditional retail activities. Mercieca, Schaeck and Wolfe (2007) analyze the benefits from diversification for a sample of small European banks, which lack the scale to adopt the universal banking model. As in the US, there are no direct diversification benefits within and across business lines, and there is an inverse relationship between non-interest income and profitability. Laeven and Levine (2007) examine the effects of diversification on the market value of large banks from 42 countries.

In another related study by, Esho, Koffman and Sharpe (2005), Australian study represents the first and only empirical investigation of the impact of diversification on the financial performance of credit unions. Over the period 1993–2001 an increased reliance on fee income generating activities was associated with increased risk. Credit unions with more highly concentrated income streams tended to have higher risk and returns.

Those with a higher proportion of total income from interest on residential loans, and a lower proportion of income from interest on personal loans, had significantly lower risk and returns. Credit unions that diversified by

increasing the share in income of transaction fees on loans and deposits, matched by a reduction in the income share of interest on personal loans, experienced higher risk and lower return.

Conceptual Framework

This section of the literature review explains the expectation of the researcher after the study

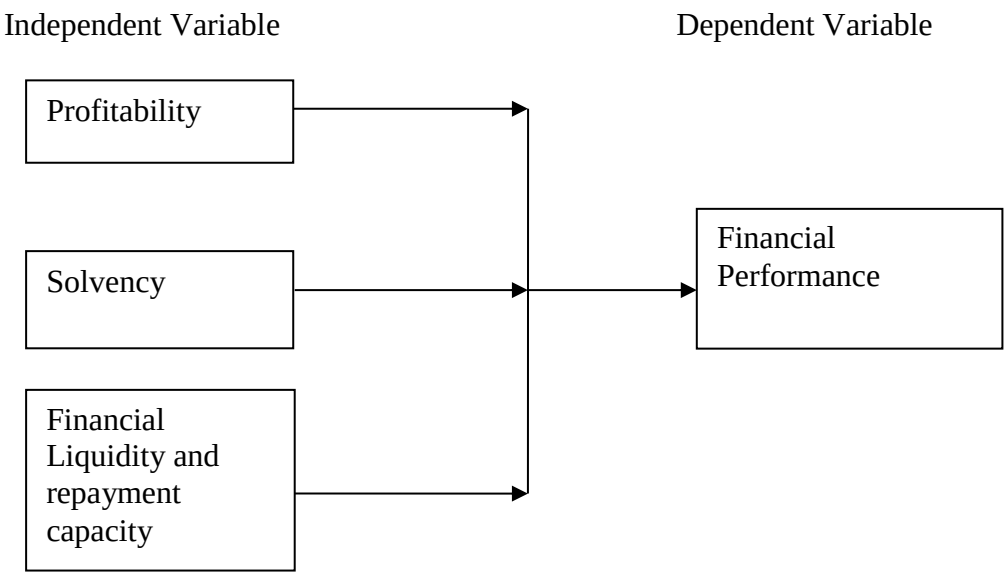

Figure 1: Conceptual framework

Source: Authors Construct, 2013

In view of this, narrowing the generational origin of credit unions in Ghana as reviewed in the theoretical framework and juxtaposing it with the empirical performance of credit unions globally and especially in the United State in the empirical review, the researcher expect the performance of the six selected credit unions in the Western and Central Region to be higher or on the average attain an above average performance as depicted in the diagram above.

CHAPTER THREE

METHODOLOGY

Introduction

This chapter focuses on the research design as well as the population, sample size and sampling procedure, the instrument for data collection procedure, data analysis plan and the study area.

Research Design

The study design adopted is survey design. It is aimed at obtaining relevant information related to the financial performance of credit unions in the Western and Central Regions of Ghana. Survey design as postulated by Glass and Hopkins (1984), is primarily concerned with finding "what is" or "how" which might be used in investigating a programme, organisation and many more. This study is associated with these characteristics and hence the choice of this design.

Population

The population for this research is the credit unions in the Western and Central Regions of Ghana. The Western Region has twenty four (24) credit unions. This is made up of nine (9) work based, thirteen (13) community based and two (2) parish based. The Central Region on the other hand can also boast of thirty six (36) credit unions. It is also made up of twenty two (22) work based, nine (9) community based, and five (5) parish based.

Sample and Sampling Procedure

The sample for the study was twelve credit unions, comprising six credit unions from each Region. The six selected credit unions were made up of two

work based, two community based, and two parish based credit union. The basis for selecting the twelve credit unions was based on the number of credit unions which were willing to make their data available for the study. From that backdrop, only six was obtained in the central region hence six was obtained from the western region to have a fair representation. Suhttleworth (2009), posit that sampling can actually be more accurate than studying an entire population, because it affords the researchers a lot more control over the subjects. Stratified sampling procedure was used for this research.

According to Harding (2006), stratified sampling is a method of sampling designed to ensure that the sample has certain characteristics; usually that it is representative of the population on key variables. As with all sampling methods, stratified sampling is used when there is insufficient time or resources to conduct a census which collects information from every member of a population. Kumar (2005), also posit that in stratified sampling the researcher attempts to stratify the population in such a way that the population within a stratum is homogenous with respect to their characteristics on the basis of which it is being stratified. Because credit unions are of three types, the stratified sampling technique is appropriate to enable the researcher put the credit unions in the two selected regions into homogeneous groups work based, community based and parish based so as to enable the selection. Once the sampling population has been separated into non-overlapping groups, the researcher selected the required number of elements from each stratum using the lottery method of the simple random technique.

Data Collection Type

Data for this study was collected from respondents and desk research technique was used. This is because secondary data is relevant for this finding of the research. Secondary data is most appropriate if the data required for the study cannot be accessed through primary source because either the data is not available or the holders of the data are not willing to release the data for the study (Leedy & Ormrod, 2010). Secondary data was used to derive the financial performance measuring: Profitability, Liquidity, Solvency and Repayment capacity of Credit unions.

Data was sourced from financial statements of the credit unions like cash flow statements, balance sheets income statements. Data was collected from the twelve credit unions identified over a period of five years, from 2007-2011. With respect to the factors that influence the performance of the credit unions, the researcher prepared an interview schedule which included opened ended questions to obtain the factors from 72 respondents.

Data Collection Method

The secondary data required for the study spans over five years and the study sample spreads across the twelve credit union identified. The researcher obtained an introductory letter from the School of Business, University of Cape Coast. This enabled the researcher obtained to have access to the data from the twelve selected credit unions. On the day of data collection, the researcher personally specified the kind of data from the institutions to make sure that the right secondary data are provided by the credit unions. The credit unions involved assisted the researcher with their financial statements: income

statements, balance sheets and cash flow statements, over the five year time frame ranging from 2007-2011.

The final stage of the data collection was the checking of validity of the data. The credit unions were checked for their consistency in relation to the reporting guidelines specified by regulatory bodies. The regulatory framework requires credit unions to present a comparative financial statement together with the current year financial statements. The researcher cross checked the accuracy or otherwise of the financial figures by comparing them to the ensuing years comparative financial statements. The researcher then followed up in the notes to the accounts to ensure any variation has accurately been accounted for.

Data Preparation

This aspect dealt with how the data was prepared before its analysis, after the data was obtained from the credit unions, the researcher then went through the financial statements to identify the variables to be used for the computation of the financial performance as specified in the financial performance section of this chapter. With respect to the factors that determine performance of the credit unions, the researcher went through the suggestions provided by the respondents of the credit unions and codes them under five key determinants before being transferred into the statistical analysis tool for the analysis to be under taken.

Measurement of Variables

Descriptive studies seek to give a precise and objective report about a phenomenon; and as such the need to measure the attributes of the phenomenon in quantitative studies (Bui 2009). As described in the study design, this study is descriptive and for that matter, it is important to specify how both the financial performance has been measured. Measurement of each of the variables is discussed below.

Financial Performance Measurement

Two variables namely, return on asset (ROA) and return on equity (ROE) were used to measure the financial performance of the credit unions in this study. These ratios according to Watson and Head (2010) are measures used to determine the extent to which a particular institution is performing in relation to the ability of that institution to generate revenue from its operational activities. For the purpose of the study this ratio is categorized into net profit margin, return on equity and return on asset. The usage of these ratios in the analysis is described as follows;

Return on Asset

Return on asset (ROA) will be estimated as the ratio of net income that is after tax profit to total asset. This ratio measures after tax profit per cedi of assets. It is also called return on investment (ROI).

This is stated below: $\frac{Earning\ after\ tax}{Total\ Assets}$ x 100

Return on Equity

The return on equity (ROE) is calculated as the ratio of net Income to total stock of equity. That is, it is also defined as the ratio of pre-tax profit to total equity capital. That is ROE = $\frac{Earning\ after\ tax}{Total\ Equity}$ x 100

The use of ROE as a profitability measure is appropriate due to the fact that ROE represents the return that goes to the owners of a business. This will assist the researcher to distinguish the returns specifically to the owners as against returns to the whole firm. The use of ROA even though embedded in ROE (Saunders et al. 2004), is necessary to determine the profitability of the firm in terms of their investments and thus measure the profitability linked to the asset size of the firm.

Measurement of Determinants of Performance of Credit Unions

The determinants of the performance of credit unions measure the variables which causes changes in the financial performance of the credit unions. These variables and its measurement were adopted from the work of Eeckaut, Lovell and Fried (1993) whose study was on the evaluation of the performance of credit unions in USA. Based on their study the determinants are;

Operating expense: This is defined as total operating expense, less employee compensation and benefits, and less provision for loan losses, provision for investment losses, and member insurance.

***Loan quantity*:** This index is constructed as the total number of outstanding loans of all types, excluding loans to other credit unions because they provide no direct service to the borrower-members of the credit union making the loan.

Loan price: This index is constructed as the reciprocal of net interest on loans divided by the value of all outstanding loans. This construction implies that a lower interest rate on loans is associated with better performance.

Liquidity ratio: This ratio explains how fast a given institution quickly turns its assets into cash to settle it given debts at a particular point in time. Literature suggest that its is a mean of measuring the performance of a given institution for that matter it is measured as Current Assets / Current liabilities

Solvency: Solvency ratios are of interest to long-term creditors and shareholders. These groups are interested in the long-term health and survival of business firms. In other words, solvency ratios have to prove that business firms can service their debt or pay the interest on their debt as well as pay the principal when the debt matures (Watson & Head, 2010). One ratio in particular serves as both a debt ratio and a solvency ratio. That ratio is the Total Debt/Total Assets ratio. This ratio measures how much of the firm's asset base is financed using debt.

Repayment capacity: This program is designed to calculate the income needs of a credit union operation not including operating costs. Furthermore, the program will help the user choose which credit facility arrangement is preferred for both the credit unions. The first tool in the program analyzes the repayment capacity and income needs of the credit union. Projections are based on the cash needed to support term debt payments, family living expenses, income and Social Security taxes, planned investments, and carryover debt. It is estimated as; Interest payable / retain earning.

Theoretical Model

It is clear from the literature reviewed above that performance may be explained by some features of the credit unions. In this study the researcher employed the reduced form of the econometric model similar to that of DeYoung and Rice (2004) to ascertain the factors that influence the performance of the credit unions in Ghana. This model has been used by other researchers like Stiroh (2004), Goddard, Mckillop and Wilson (2008), and Ajai and Azeb (2010), in studies in other jurisdictions but not in the Ghanaian context. It is a simple linear regression function that connects the ratio of performance to key credit union variables. The general regression equation is of the form shown on page 42 to find out the effect of some variables on the performance of banks.

Model Estimation

Descriptive statistics was employed to describe each of the variables used in the study; the relevance is to estimate the central tendency, dispersion and the normality of the data. While the determinants of financial performance of the credit unions are estimated using inferential statistical techniques of regression analysis of the form.

$Y_{i,t} = \beta_0 + \beta_1 OE_{i,t} + \beta_2 LQ_{i,t} + \beta_3 LP_{it} + \beta_4 LR_{i,t} + \beta_5 SOL_{i,t} + \beta_6 RP_{i,t} + e$

Where: Y = Financial performance variables (ROA and ROE)

β_0 = intercept parameter (where the regression surface crosses the y-axis)

β = Slope parameter which measures the degree of responsiveness of dependent variables to independent variable. The independent variables are operating expense (OE), loan quantity (LQ), loan price (LP), liquidity ratio (LR), solvency (SOL) and repayment capacity (RP) of the credit unions.

The panel estimation method was used in the analysis due to the time series and the cross sectional nature of the data used. Park (2009) opined that estimation of panel data models using pooled ordinary least squares yields inconsistent estimators and heteroskedasticity errors. The researcher further stated that if the parameters to be estimated vary across firms the pooled regression is not appropriate because of the heterogeneity in the parameter as an estimate is not well dealt with. From a theoretically perspective, Baltagi (2005), explained that overlooking such stricture heterogeneity among cross –sectional and time series could lead to inconsistency estimates of interesting parameters.

The independent t-test was employed to estimate the regional difference between the financial performance measures of the credit unions. All these were obtained in the E-views. Decision rule at any level of significance is that the null hypothesis is rejected if the obtained significant value or p-value is greater less or equal to the critical value of 5 percent, otherwise the null hypothesis is not rejected. The researcher used the two tailed test at 5 percent level of significance.

Apriori Expectations

Based on the reviewed literature, it is expected that operating expense will indicate a negative (-) relationship with the financial performance of the credit unions because a high operating expense is likely to reduce the retained earnings by the credit unions. With respect to loan quantity, either a positive (+) or negative (-) relationship is expected because with the positive relationship, when the credit unions give out more loans it is likely to receive more revenue from the interest income which will increase the financial performance of the

credit unions while a negative (-) relationship can be as a result of the nonpayment of both the interest and the principal components of the loans.

Again, loan price is expected to have a negative (-) relationship because a high interest on loans will deter investors from obtaining loans hence the credit unions interest income will reduce which will reflect in the financial performance of the company. In relation to liquidity ratio, a positive (+) relationship is expected because any credit union which is liquid means that they must have accumulated enough funds from retained earnings which is helping them to be liquid. Solvency is expected to have a positive (+) relationship with the performance of the credit unions because a credit union which is solvent has enough reserves generated from retained earnings and finally repayment capacity of the credit unions is expected to have a positive (+) relationship with the financial performance of the credit unions.

Data Analysis

Descriptive statistics and regression analysis were used to analyse the data. The following statistical techniques were used as tools of descriptive analysis: profitability, operating expense, loan quantity, loan price, liquidity, solvency and repayment capacity will be used as a form of summarising data, and tabulation will be used as the orderly arrangement of data in a table or summary format. These calculations will be used to measure financial performance. After the various variables have been computed with the excel spread sheet, they are fed into E-views for the descriptive analysis and other information to be derived.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This chapter presents the discussion of findings of the study. The chapter is divided into three main sections. The first section deals with the descriptive statistics of the dependent and independent variables used in the study as shown in Table 1, Table 2 presents the correlation matrix of the data used in the analysis after which Table 3, 4 and 5 discusses the regression output of the study and finally the sections satisfies the hypothesis developed for the study.

Descriptive Statistics

The descriptive analysis of the determinants of financial performance and the financial performance of the credit unions used in the study are illustrated below. From this backdrop, the descriptive statistics provides the central tendency and the measures of dispersion as well as the normality of the distribution for all the variables. Also the standard deviation was measured using the percentage. For the purpose of the study, performance of the credit unions was measured using return on asset (ROA) and return on equity (ROE) while the independent variables were Operating expense (OE), loan quantity (LQ), loan price (LP), liquidity ratio (LR), solvency (SOL) and repayment capacity (RP).

The sampled credit unions central tendency was measured by the mean and median along with the minimum and maximum for the respective variable while the standard deviation reflects the inter credit unions variation of the variables value within the respective variables. The normality of the data is also

described by the skewness, kurtosis and the corresponding Jarque-Bera probability.

Table 3: Descriptive Statistics of the Variables

	LR%	RP%	ROA%	ROE%	OE%	SOL%	LQ%	LP%
Mean	1.39	24.92	27.25	25.28	35.52	65.91	21.12	27.98
Median	1.69	21.21	21.17	33.54	23.77	55.60	12.32	23.89
Maximum	2.89	47.01	64.26	53.35	43.33	78.24	23.22	56.21
Minimum	0.89	6.67	-16.25	-37.15	18.24	34.15	9.78	3.23
Std. Dev.	9.58	4.44	22.36	39.12	15.82	31.22	2.15	0.23
Skewness	-0.31	0.32	0.27	-0.38	0.31	0.616	0.26	0.16
Kurtosis	3.89	3.81	2.15	2.76	3.10	2.94	1.97	2.39
Jarque-Bera	3.52	2.91	4.75	1.86	5.283	3.80	5.23	5.82
Probability	0.000	0.000	0.000	0.000	0.000	0.000	0.00	0.40
Observations	72	72	72	72	72	72	72	72

Source: Financial Statement of the Credit Unions

From Table 3, is shown that the average values for the performance variables from the mean was 27.25 percent and 25.28 percent respectively for ROA, and ROE. The accuracy of the mean as a good measure of their central tendency than the median is justified with the skewness which was positive. The implication of these averages is that, the performance indicators of the credit unions for the six year period are more than a single digit. This shows that the performance of the credit unions is relatively better than other financial institutions in the industry since the banking and insurance sectors recorded an average of 15 percent and 23 percent respectively for their six year period according to the Bank of Ghana (BOG) and the National insurance commission

reports for 2012. The standard deviation which measures how dispersed the data is from the average recorded for all the performance variables were 22.36 and 39.12 respectively. These values are high so it implies that the recorded averages are wide from the respective values recorded for each period hence there are no existence of extreme values which may suggest that the data used have a problem.

Regarding the liquidity ratios, according to Bond and Cummins (2004), when the liquidity ratio is greater than one, then the current assets of the entity exceeds the current liabilities. This implies that the current assets of the entity are sufficient to offset the current liabilities hence the entity can be described as highly liquid. A higher liquidity ratio values encourage companies to invest more in capital because they have sufficient revenue to cater for their liabilities. From this backdrop, both the mean and median of the liquidity which are 1.39and 1.69 respectively meaning that the credit unions should invest more in capital expansion because they are worth more and can settle their current liabilities with ease.

The values for the independent variables operating expense (OE), loan quantity (LQ), loan price (LP), solvency (SOL) and repayment capacity (RP) showed that the variables make economic meaning and also indicates that the going concern of the credit unions are secured. The average values for the operating expenses ratio indicates that on the average the selected credit unions spends about 35.52 percent as cost for rendering services to their clients. This presupposes that the credit unions make about 64.48 percent net interest hence with the ROA and ROE been more than 20 percent, one can deduce that the chuck of the cost is from administrative cost as well as the finance cost of the

credit unions. The reported standard deviation of 15.82 shows that the data are not dispersed.

The solvency ratio (SOL) of the credit unions is something to write home about because from Table 3, the average of 65.91 clearly shows that the credit unions are highly geared in that the average component of their debt over their total asset. With a maximum of 78.24 and a minimum of 34.15, it implies that the debt component of their asset is more than their equity component. Though this phenomenon may relieve the credit unions from high cost of capital due to the tax shield component of debt, it is relevant to understand that, it will increase their financial risk due to the overwhelming interest payment obligations on the credit unions' activities.

The loan quantity of the credit unions which is more direct to the ability of the credit unions to remain in operational existence into the future indicates an average of 21.12 meaning that the average number of outstanding loans for customers to settle is above twenty times. This implies that, the credit unions are more not focused on the stability in the future because if the outstanding loans excluding those offered to the members of the credit union is more than 20 then including those of the credit unions may worsen the situation for the credit unions. From this backdrop, any potential credit union member willing to invest in the activities of the credit unions should be critical of the going concern stability of the credit unions.

With an average of 27.98, the loan price of the credit unions can be said to be large in the sense that comparing this to the activities of the commercial banks, they offer an interest or loan price ranging from 23 to 35 percent per annum. From the literature reviewed, Esho, Koffman and Sharpe (2005) and

Laeven and Levine (2007) suggest that for a credit unions to be classified as affordable in terms of the price of loan, that credit unions interest on loans must not exceed 20 percent. The implication of this that, the loan price of the credit unions has deviated from the findings of other researchers, the reason is that this study is in a developing economy where most of the determinants of the loan prices keep being on the adverse side. In all these averages recorded by the firm specific determinants of the performance of the credit unions, their respective standard deviations clearly indicates that they are not dispersed because out of the four variables, the highest standard deviation was around 30 percent which is not more than 50 percent.

The descriptive statistics for the repayment capacity of the credit unions suggest that, the repayment capacity of the clients of the credit unions of the Central Region and the Western Region for the past year has been on the high side with an average of 24.92 percent and 21.21 percent for the mean and median distributions respectively. The standard deviation of 4.44 indicates that it is not dispersed. This implies that the operations of the credit unions in Ghana are largely affected by the inability to retrieve funds from their creditors and this could be the reason for the highly geared nature that was discovered from the solvency of the credit unions. The reason is that because the loan repayment capacities of the clients of the credit unions are low, they borrow to be able to fund their operational activities.

The normality of the data is explained by skewness and kurtosis. The skewness measures whether the sample distribution is symmetrical or not. The kurtosis gives an indication on the peakness of the sample distribution; it aids together with the skewness to determine whether the data is normally, negatively

or positively distributed. From Table 3, majority of the coefficient of skewness of the data are positively skewed. This implies that most of the distribution of the data has a long tail to the right meaning that most of the distributions are of positive values which can be validated from the values of the minimum and the maximum values.

But for the data to be considered as symmetrical the coefficients should be equal to zero or nearer to zero and as can be deduced from the table most of the coefficient of the variables are closer to zero with the exception of the solvency and the loan price. For the data to be normal the kurtosis should be equal to 3. Based on this most of the data are not too remote from 3 therefore can be said to be normal. The Jarque-Bera compares the kurtosis and the skewness to know how normal the final output by generating a probability value which is used for the final decision. It has a null hypothesis that the data is normally distributed and this is rejected if its p-value is less than 0.05. From Table 3 all the firms have their probability values more than 0.05 therefore the null hypothesis is rejected except for that of loan price.

Regional Difference in the Credit Unions Financial Performance

To effectively describe the Regional difference in the financial performance of the credit unions, the credit unions were categorized into two based on those from Central Region and those from the Western Region. After the categorization, a trend analysis of the two financial performance variables adopted for the study was undertaken thereafter, the independent t-test was applied to effectively determine the differences in the variables. The analysis started with trend analysis for the return on asset.

Table 4: Return on Asset Average for the Credit Unions from 2007 – 2012

Years	Regional Classification of the Credit Unions	
	Central Region	Western Region
2007	53.43	56.26
2008	40.21	41.46
2009	37.89	36.33
2010	32.36	35.21
2011	25.67	28.13
2012	24.24	26.12

Source: Financial Statements of Credit Unions

The trend of the return on asset is described for all the credit unions. From Table 4, returns on assets according to the classification of the credit unions were relatively high for all the two Regions. The credit unions from the Central Region had recorded a lower overall return on asset than those from the Western Region. The inclination of the return on assets which is a significant measure of the contribution of the credit unions asset to the total revenue generated from operations persistently decreased for both Regions from 2007 to 2012. From the table, the credit unions from the Central Region had its ROA more than 20 percent for all the periods but those from the Western Region were more than 25 percent. This means that, the credit unions from the Western Region are performing better than those from the Central Region.

From the analysis by Eackaut, Lovell & Fried (1993) and McKillop and Wilson (2008), the possible reason that can be assign to this difference is when

credit unions in one region were established ahead of the credit unions in the other Regions. From this backdrop, based on the annual report of the National Credit Unions of Ghana the credit unions from the Western Region were established before those from the Central Region. Therefore all things being equal their financial performance are expected to be better than those from the Central Region.

The trend of the return on asset from Table 4 shows that the performance of the credit unions from the Central Region exceeded those from the Western Regions for the 2009 period. The import is that the aftermath of the global financial crisis in 2008 affected the credit unions in the Western Region more than those from the Central Region. The rationale for this can be credited to the managers of the credit unions in the Central Region for those periods.

From Table 5, there is change in the performance of the credit unions from both Regions, the averages for the year's shows that the ROE for the Central Region is better than those from the Western Region. This can be deduced from the downward trend in the return on equity of the Credit unions in the Western Region from Table 5 where the average ROE of the Region fell below 30 percent for all the years except for only two years thus 2008 and 2010 where the Region recorded slightly more than 20 percent.

Table 5: Return on Equity Average for the Credit Unions from 2007 – 2012

Years	Regional Classification of the Credit Unions	
	Central Region	Western Region
2007	16.00	10.44
2008	36.81	20.70
2009	28.38	18.65
2010	23.32	20.26
2011	21.21	18.17
2012	16.66	14.24

Source: Financial Statements of Credit Unions

This implies that in terms of the earnings on the equity of the credit unions from the Western Region it is low, the possible reason is that the equity size of the credit unions are larger than those credit unions in the Central Region. Because studies such as DeYoung and Rice (2004); Demsetz and Strahan (1997) have found that, the size of the total equity determines the ROE such that firms with higher equity are likely to record a lower ROE than those with a smaller equity. Observably, the ROE of the credit unions are different. It is however, statistically wrong to conclude that ROE of the credit unions and the Western Unions are the same.

Independent T-Test for Regional Differences

To test the difference among the financial performance of the credit unions in the Central Region and the Western Region, the independent T-test result is presented in Table 6 with its corresponding analysis.

Table 6: Testing Regional Difference with ROE as Dependent Variable

			Equal variance assumed	Equal variances not assumed
Levene's Test for Equality of variance	F		.318	
	Sig		.638	
T-test for Equality of means	T		2.425	2.431
	Df		38	32.87
	Sig. (2-tailed)		0.022	.0236
	Mean Difference		.2630	.2630
	Std. Error Diff		.1658	.1658
	95% Confidence interval of the difference	Lower	.0581	.05727
		Upper	.6419	.6427

From the performance measured as ROE there is a significantly different because the value of sig (2 tailed) is less than 0.05. From this backdrop that, it means that the return on equity by the credit unions in the central region is different from those in the Western region hence the hypothesis that there is no difference in the performance of the credit unions in the central region and the western region is rejected the recorded significant value is less than 5 percent.

Factors that Influence the Performance of Credit Unions

The correlation matrix in Table 7 examines the possibility of multi-collinearity among the regressors as well as examine whether there is a positive relationship between dependent variables and the independent variables.

Correlation results only show association between variables. The results does not estimate a causal relationship between the variables.

Table 7: Correlations Between the Variables

	ROE	ROA	LQ	LR	SOL	CR	OE	LP
ROE	1							
ROA	.124**	1						
	.001							
LQ	.154	.615**	1					
	.016	.000						
LR	-.313*	.286**	.518**	1				
	.021	.000	.000					
SOL	.561*	.185**	.549**	.221**	1			
	.021	.000	.000	.000				
CR	.130*	-.461**	.627**	.497**	.293**	1		
	.011	.000	.000	.000	.000			
OE	.630**	-.124**	.572**	.177**	.447**	.456**	1	
	.007	.000	.000	.000	.000	.003		
LP	-.130*	.434**	.332**	.237**	.107**	.056	.023*	1
	.027	.000	.000	.000	.000	.122	.012	

Source: Financial Statements of the Credit Unions

To advance the arguement further, this study runs a regression. Before proceeding with the regression models, there is the need to test for multicollinearity among the regressors. This test is necessary so as to avoid the situation of using independent variables that have high correlations between each other. If some of the regressors are highly correlated, they cannot be included in the model at the same time. For the purpose of this study, the benchmark correlation matrix is 0.80. Correlation matrix of 0.80 and above is considered as high and are indicative of the presence of multicollinearity.

From Table 7, there is no multicollinearity between the regressors though some relationships were established between them. It must be emphasied

that ROE has a negative relationship with liquidity ratios (LR) and the loan price (LP) meaning that whenever the liquidity ratios and the loan prices increases there is a corresponding decrease in the rteurn on equity of the credit unions. Because both relationships are significant, managers of the credit unions should reduce the price of their loans so that performance measured by ROE can increase. On the other hand, ROE established a positive or direct relationship with liquidity (LQ), solvency (SOL), repayment capacity (CR) and operating expense (OE) ratio implying that whenever these variables increase, the return on equity of the credit unions also increases. Therefore if the credit unions are to increase return on equity then they should increase solvency , repayment capacity of thier client through the reduction the the loan price offered to them.

In relation to return on asset (ROA), it established a negative relationship with repayment capacity (CR) , operating expense (OE) and the loan price (LP) meaning that whenever the repayment capacity, operating expenses and the loan prices increases there is a corresponding decrease in the reteurn on asset of the credit unions. Because both relationships are significant, managers of the credit unions should reduce the price of their loans so that performance measured by ROA can increase. The reason for this relationship beteen repayment capacity and loan price, is that inability to collect loans leads to an increament in the bad debt of the credit uinos and this translate into a reduction in the net profit of the credit unions.

On the part of operating expense, since it is deducted from net interest income before arriving at net profit, a bulk or increase operating expense more often than not reduces the net profit of the credit unions which in turn reduces return on asset. On the other hand, ROA established a positive or direct

relationship with loan quantity (LQ), solvency (SOL), and liquidity ratios (LR) implying that whenever these variables increase, the return on asset of the credit unions also increases. Therefore if the credit unions are to increase return on equity then they should increase solvency , liquidity and loan quantity of thier clientshould be reduced.

The determinantes of the performance of the credit unions was done through regression analysis using the OLS model. The OLS model treats the longitudinal data as if it were a cross sectional data. It serves as the basis for explaining regressional relationships. Table 8 provides results for the regressional model with the ROA as the dependent variable. Before delving into the core regression results, it is important to discuss the level at which the determinants explain ROA and this is done by the R- squared.

Table 8: Regression with ROA as Dependent Variable

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.521	4.233	0.652	0.5169
LR	0.283	0.178	1.589	0.1167
CR	-2.454	0.156	-5.679	0.0000
LQ	0.507	0.097	5.239	0.0000
OE	-0.002	0.001	-2.102	0.0395
SOL	3.392	0.377	8.986	0.0000
LP	-0.521	0.798	-0.652	0.5166
R-squared	0.8778	Mean dependent var		47.25209
Adjusted R-squared	0.7705	S.D. dependent var		222.4666
F-statistic	70.538	Durbin-Watson stat		2.175662
Prob(F-statistic)	0.0000			

The R-squared for the model is 0.8778. This means that the explanatory variables collectively, explain 87.78 percent of the variations in the ROA. This

is significant (p value= 0.000). On individual variable basis, all, except three, of the predictors recorded a negative relationship with the dependent variable. The variables, in order of importance are repayment capacity (CR), operating expense (OE) and loan price (LP).

The result from Table 8 shows that there was a significantly negative relationship between ROA and the repayment capacity (t-stat= -5.679, p = 0.000 < p = 0.05; Table 8) such that a unit change in the repayment capacity would cause the ROA of the credit unions to change by -2.454. From this result, repayment capacity can be considered as a major determinant of the performance of the credit unions used in the study. This result confirms the study by Mercieca, Schaeck & Wolfe (2007) whose work analyzed the influence of repayment capacity of banks. The reason for this is due to the fact that both studies were made in financial institutions.

Again, Table 8 shows that there was a significantly negative relationship between ROA and the operating expense (t-stat= -2.102, sig. value of 0.0395 is less than 0.05) such that a unit change in the operating expense would cause the ROA of the credit unions to change by -0.002. From this result, operating expense can be considered as a major determinant of the performance of the credit unions. This result confirms the study by Esho, Koffman and Sharpe (2005), whose study was based on the impact of diversification on the financial performance of credit unions. For the negative relationship between ROA and loan price (LP) is not statistically significant because from Table 8, the t-stat= -0.652 and p = 0.5166 > p = 0.05 hence loan price is not a determinant of the performance of credit unions in Ghana.

The coefficient of the proportion of loan quantity is positive and significant with a significant value of 0.000 is less than 0.05. This connotes that the influence of proportion of loan quantity on the performance of credit unions is significant. From this backdrop, loan quantity is a major determinant of the performance of the credit unions in Ghana. The reason for this positive relationship is that when the loan quantity increases, the interest component increases the interest income of the credit unions which in turn translate into the net profit of the credit unions.

The results also indicate that solvency (SOL) is positively associated with performance (ROA). From Table 8, this causal relationship for solvency is significant with a significant value of 0.000 is less than 0.05. The findings support the traditional credit union model argument on the matter. According to Richardson, Lennon and Branch (1993), the traditional union model discourages savings, encouraged borrowings and forced those who saved to subsidize those who borrowed. Members who purchased shares in their Credit Unions often could not withdraw the shares until they terminated their membership and they received no yield on their shares they buy by sustaining the solvency of the credit unions. Finally, the positive relationship between ROA and liquidity ratio is not statistically significant because from Table 8, the t-stat= 1.589 and sig. value of 0.1167 is greater than the bench mark 0.05 hence liquidity is not a determinant of the performance of credit unions in Ghana.

From the return on equity (ROE) performance perspective in Table 9, the model explains 77.84 percent of the variations in ROE. The overall significance of the model is 0.000. This is lower than the 87.78 percent recorded under the ROA model. This connotes that the explanatory variables are able to explain

variations in both ROA and ROE. Similar to the findings in the ROA model, all the variables, except liquidity and loan price, have positive association with the return on equity (ROE). The associations are significant for all the variables, except for repayment capacity and solvency.

Table 9: Regression with ROE as Dependent Variable

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11.3602	1728.361	0.099146	0.9213
LR	-0.417869	0.188032	-2.222327	0.0297
RC	0.344493	0.365062	0.943656	0.3488
LQ	0.003481	0.000882	3.945667	0.0002
OE	0.585222	0.111693	5.239569	0.0000
SOL	0.349686	0.605417	0.577595	0.5655
LP	-0.085264	0.859971	-0.099147	0.9213

R-squared	0.7784	Mean dependent var	45.28204
Adjusted R-squared	0.6059	S.D. dependent var	239.1061
F-statistic	41.189	Durbin-Watson stat	2.711923
Prob(F-statistic)	0.0000		

Source: Financial Statement of Credit Unions

The result from Table 9 shows that there is a significantly positive relationship between ROE and the loan quantity (t-stat= 3.946, sig. value of 0.002 is greater than 0.05) such that a unit change in the loan quantity would cause the ROE of the credit unions to change by 0.0035 (0.3 %). From this result, loan quantity can be considered as a major determinant of the performance

of the credit unions used in the study. This result confirms the study by Esho, Koffman and Sharpe (2005) and Laeven and Levine (2007) whose work analyzed the influence of loan quantity of financial institutions.

The coefficient of the proportion of operating expense is positive with a significant value of 0.0000. This connotes that the influence proportion of operating expense ratio on the performance of credit unions is significant. From this backdrop, operating expense is a major determinant of the performance of the credit unions in Ghana. The reason for this positive relationship is that when the operating expense increase, all things being equal, the income from other investments by the credit unions offset the expense incurred. This finding corresponds to the studies of DeYoung and Rice (2004); Hirtle and Stiroh (2007) whose study found a direct influence on the performance of institutions. The reason for this is because the measurement of the operating expense id similar to those adopted in the study by those authors.

The result from Table 9 shows that there was a significantly negative relationship between ROE and the liquidity ratio (t-stat= -2.222, sig. value of 0.0297 is greater than 0.05; Table 9) such that a unit change in the liquidity would cause the ROE of the credit unions to change by -0.4178. From this result, liquidity ratio can be considered as a major determinant of the performance of the credit unions used in the study. This result confirms the study by Carbo-Valverde and Fernandez (2007) whose study show that in European banking, liquidity tends to decrease profitability of banks. However, Lepetit et al. (2007) show that banks performance into non-interest activities are at higher risk of liquidity than banks because it reduces their performance.

Finally Table 9 shows that there was a significantly negative relationship between ROA and the loan price (t-stat= -0.085, sig. value of 0.9213 is greater than 0.05; Table 8) because the relationship is not significant loan price is not a factor for determining the financial performance of credit unions.

The final estimation model is

$ROA = 5.521 + 0.507LQ_{i,t} + 3.392SOL_{i,t} + 2.454CR_{i,t} + e$

Liquidity rate, solvency and loan price is not in the equation because they were not significant.

$ROE = 11.360 + 0.5852OE_{i,t} + 0.00348LQ_{i,t} - 0.4179LR_{i,t} + e$

Here too the loan price, solvency and repayment capacity was not there because its value was not significant.

Summary

The chapter four presented the results and these results were then analyzed. The descriptive statistics were presented, followed by the discussion on the correlation between the determinants of the financial performance of credit unions in Ghana. The regression model was then presented.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

The role that credit unions play in the economic development cannot be overemphasized especially its contribution to financial Deepening and financial literacy. Primarily, credit unions serve as agents of economic development through their overall contribution to savings and investment and the taxation generated for economic development. One principal decision managers of credit unions usually undertake for the survival of their financial institution is the loan quantity, the interest on those loans and the components of operating cost which will propel the firm into making profit. This option is indispensable for the determination of the financial performance of the credit unions.

Summary

This current study evaluated the financial performance of credit unions in the Western and Central Regions of Ghana. To effectively do this, the regional differences in the financial performance of credit unions and the factors that influence the performance of credit unions were determined and examined appropriately and finally to make policy recommendations on the actions to be taken for each variable in other to increase the performance of the credit unions. The study covered 12 credit unions over the period 2007-2012. The survey design was adopted and the major findings of the study are summarized below:

The study revealed that the average values for the performance variables using the mean are 27.25 percent and 25.28 percent respectively for ROA and

ROE. The implication of these averages is that, the performance indicators of the credit unions for the six year period are more than a single digit. The average value for the operating expenses ratio indicated that on the average the selected credit unions spends about 35.52 percent as cost for rendering services to their clients. This presupposes that the credit unions make about 64.48 percent net interest. In relation to solvency, the average solvency was 65.91 which clearly indicated that the credit unions are highly geared.

The loan quantity of the credit unions which is more direct to the ability of the credit unions to remain in operational existence into the future indicates an average of 21.12 meaning that the average number of outstanding loans for customers to settle is above twenty times while the interest of the loan price recorded 27.98 percent. Finally the repayment capacity of the credit unions were not encouraging because, the result indicated that the, the repayment capacity of the clients of the credit unions of the Central Region and the Western Regions for the past year has been on the high side with an average of 24.92 percent and 21.21 percent for the mean and median distributions respectively

In relation to the Regional differences, the trend analysis indicated that, return on assets according to the classification of the credit unions were relatively high for all the two regions, the credit unions from the Central Region had recorded a lower overall return on asset than those from the Western Region. On the other hand, there was a change in the performance of the credit unions from both regions, the averages for the year's shows that the ROE for the Central Region is better than those from the Western Region. This can be deducing from the downward trend in the return on equity of the Credit unions in the Western. The ANOVA results illustrated that, the p-value of 0.000 (<0.05 alpha) indicates

that there is a significant difference among the ROE of the various credit unions in the Central Region and the Western Region while the p-value of 0.519 (>0.05 alpha) indicates that there is no significant difference among the ROA of the various credit unions in the Central Region and the Western Region.

It was also found that there is no multicollinearity between the regressors though some relationships were established between them. The outcome of the regession analysis indicated that, loan quantity and repayment capacity can be considered as a major determinant of the performance of the credit unions used in the study because it is statistically significant. It was finally estimated that, liquidity ratio influence the financial performance of the credit unions.

Conclusions

The financial performance indicators of the credit unions is impressive since it is better than other sectors in the banking industry, The determinants of the financial performance credit unions was above the expected mark meaning that the credit unions in Ghana are actually performing well in improving their features which will eventually cumulate to the assurance of the going concern nature of these credit unions. The analysis showed that there is no significant difference between the return on asset of the credit unions from the Central and Western Region of Ghana, while there is a significant difference between the return on equity of the credit unions from the Central and Western Region of Ghana.

In relation to the regression analysis, the results indicated that loan quantity and repayment capacity can be considered as a major determinant of the performance of the credit unions used in the study because it is statistically

significant. The reason for this is due to the fact that both studies were made in financial institutions. Again, solvency and operating expense can be considered as a major determinant of the performance of the credit unions. It was finally estimated that, liquidity ratio influence the financial performance of the credit unions.

Recommendations

The conclusions made from this research show that there is a significant difference between the financial performance measured by return on equity between the Central and Western Region of Ghana.

1. It is therefore recommended that credit unions cannot diversified their operations by having similar bodies in other Regions so that whenever one Region is faced with a specific risk the other branch can help the company to avoid that risk. Because there is a difference in the performance measured with return on asset.
2. It is recommended that credit unions can learn from other Regions and better improve their performance. Better still they can engage in exchange programs to help their staff to upgrade their knowledge base for improved performance for those credit unions.

In terms of the academia, this study had added to the plethora of empirical evidence on those determinants of the performance of credit unions. The major recommendation for academicians is that much attention should be given to the factors that influence the performance of credit unions and research to improve literature on the study.

For practitioners, this study strongly recommends that credit unions should strive towards improving factors which positively affect their performance such as liquidity and solvency.

Suggestion for Further Research

Finally, for researchers who are enthused to study more into the issue of Regional difference in the credit unions should expand the Regions, it is recommended that future studies be enhanced and prolonged in the following ways: It is recommended that financial data ranging over a decade would be spectacular. Also the number of credit unions and the determinants their performance should be increased to widen the scope and quality of the study.

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