DETERMINANTS OF SUSTAINABILITY OF RURAL BANKS IN GHANA: A CASE STUDY OF SELECTED RURAL BANKS IN ASHANTI REGION

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DECLARATION

Candidate Declaration

I hereby declare that this thesis 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.

Candidate's signature……..

Date……

Name:……

Supervisor's Declaration:

I hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision of thesis laid down by the Christian Service University College.

Supervisor's Signature……Date……..

Name:……

ABSTRACT

Rural banks play enormous role in ensuring socio-economic development in Ghana. However, it is argued that rural banks have been facing some challenges that affect their sustainability. This study examined the sustainability of the Atwima Kwanwoma Rural Bank Limited, the Bosomtwe Rural Bank Limited and the Awabiagya Rural Bank Limited. The cross-sectional survey was used where questionnaires were designed to collect data. The selections of the respondents were done using the snow ball sampling procedures to locate the 150 customers of the three banks. The study revealed that the bank's profitability performance is encouraging. This is because the ROA and ROE exceed the benchmark indicting that the banks are efficient in converting its investment into profit for the years. It also implies that the banks are capable of earning adequate money on its available assets. The multiple regression analysis showed that the amount of loans significantly affect the financial sustainability of the Rural Banks. It was indicated that customers were satisfied about the loan procedures, loan interest and loan maturity provide by the Atwima Kwanwoma Rural Bank, Bosomtwe Rural Bank and the Nwabiagya Rural Bank. The multiple regression analysis showed that a unit increase in loan interest would lead to 20.5 percent reduction in the number of years customer had being with the bank thereby affecting their financial sustainability.

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DEDICATION

I dedicate this work to my parents for their caring, support and love

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CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The ultimate aim of every government is to improve the living conditions of its citizens especially, the poor and vulnerable. Improving people's livelihood is seen as one of the areas for achieving the Sustainable Development Goals (SDGs). The Ghana Statistical Service (2006) puts the poverty status of the country's population at about 29 percent. This is made up of about 39 percent in rural areas. The poor population mainly constitutes the agricultural sector (farmers) in Ghana. The living conditions of people can be improved through the provision of credit facilities. Rural banks can be utilised to improve credit accessibility to the poor. Rural Banks (RBs) are relatively small financial institutions with average share capital of GHc 136,526 (Ajai and Fissha, 2010). Rural banks constitute about half of the total banking outlets in Ghana. They are also noted to be the largest providers of financial services to the larger population, especially rural people (International Fund for Agricultural Development IFAD, 2008). For example, as at 2008, rural banks mobilised GH¢343.9 million deposits, advanced GH¢224.7 million loans, delivered GH¢63.3 million domestic money transfers, conducted GH¢9.3 million international money transfers and facilitated cheques clearance worth GHC993.7 million (Nair and Fissha, 2010). Their consolidated profit and net worth for 2008 stood at GHC15.6 million and GH¢0622.3 million respectively. This clearly shows the important role of rural banks.

Rural Banks are networks of more than 134 independent unit banks in Ghana (ARB Apex Bank, 2012). They are regulated by the Bank of Ghana and thereby form part of the regulated financial sector. These banks are the largest contributors to the development of SMEs and also represent about half of the total banking outlets in Ghana (IFAD, 2008). Rural banks therefore exists to bring financial intermediation in the rural areas to fast track the payment system and to develop the habit of savings in people (Owusu- Antwi, & Crabbe, 2014).

The enormous roles rural banks play in socio-economic development requires that they continue to provide adequate financial services to the poor and also become sustainable. This is determined by the capacity of the financial institution to constantly carry out its activities to achieve stated objectives and remain financially sound in the absence of domestic subsidies or foreign support (Filene, 2011; Woolcock, 1999; Khandker and Khalily, 1995).

Sustainability is classified into four dimensions namely mission sustainability, programme sustainability, human resource sustainability, and financial sustainability (Adongo and Stork, 2005). The sustainability of banks is affected by capital/asset ratio, operating expenses/loan portfolio and portfolio at risk. Chetan (2007) explains that when there is good delivery of products or services that meet the satisfaction of customers it affects sustainability. This makes the use of financial and programme sustainability of rural banks relevant to this study.

Rural banks are noted in the past to have been facing some challenges that affect their sustainability. The sustainability of rural banks across the world is affected by the internal

and external factors. It is reported that rural bank's earning capacity is low (Mills and Amowine, 2013). Their weaknesses are attributed to the high rate of defaulters and high cost of operation. Again, the procedures adopted by banks are those which are used by commercial banks and therefore these procedures do not favour most of the rural banks financial performance. Mills and Amowine (2013) concluded in their study that the performance of rural banks is not as expected. This study therefore sought to explore the factors that affect the financial sustainability of Rural Banks in Ghana.

1.2 Statement of the Problem

The banking sector in Ghana remains one of the most profitable sectors regardless of the increasing competition. The principal objective for the existence of banks especially, rural banks is to bring banking services to the rural people and to encourage the habit of savings. In Banks' effort to achieve their objectives, they are exposed to a number of factors which affect their sustainability (Antwi and Apau, 2015). Price Waterhouse Coopers conducted a survey in Ghana in 2010 on the financial sustainability of rural banks, and the result shows that bank's profit before tax declined from 30.4 percent in 2007 to 19.7 percent in 2009 (Mills and Amowine, 2013). They explained that the rapid declining of banks' loan portfolio has adverse negative effects on profit margins. The impairment charges for non-performing loans increased over the three year period, from GH¢ 60 million in 2007 to GH¢266 million in 2009 (Mills and Amowine, 2013, p, 507).

Most banks were not able to recover cost from their operations and they are described as the loss making group with sustainability challenges. Though rural banks constitute about 50 percent of the total banking outlets in Ghana (IFAD, 2008), their performance in

deposits mobilisation, loans and total assets is low (Afriyie, 2013). The proportion of total deposits mobilised by RCBs averaged only between four percent and seven percent for loans and six percent for total asset (Aboagye and Otieku, 2010). This performance according to Afriyie and Akotey (2013) is very low. A survey conducted by the Bank of Ghana in 2009 also showed that the financial performance of 17 out of the 133 rural and commercial banks are not encouraging. Among the 17 averaged performance rural banks in Ghana, six experience negative net worth (Nair and Fissha, 2010). In addition, Aboagye and Otieku (2010) conducted a similar study of 30 rural banks in Ghana and the result was that almost all the rural banks were either satisfactory performers (44%) or fairly performers (50%). This indicates that the sustainability of rural banks in Ghana is threatening (Owusu-Antwi et al., 2014). There is no surprise that the poor financial performance of some rural banks led to the collapse of 23 rural banks as at June, 2007 (Afriyie & Akotey, 2013).

More than half of the population living in the rural areas in Ghana remains un-served with credit facilities and the demand for financial services far exceeds the currently available supply (Asiama and Osei, 2007). This raises the question of what ought to be done to ensure the continuous provision of credits to the poor by rural banks. Effort to answer this question has resulted to several studies on financial performance of banks in Ghana (Addae-Korankye, 2014; Sebe-Yeboah and Mensah, 2014; Abdul-Baaki and Bunyaminu, 2013; Aboagye and Otieku, 2010; Afriyie and Akotey, 2013; Asante and Tengey, 2014; Donkor, 2013; Owusu-Antwi et al., 2014). These studies have not focused much on the use of statistical technique for determining the financial performance/sustainability of the banks. These studies have also not analysed the

customer views of financial sustainability of the banks. This study assesses factors influencing financial sustainability of rural banks using multiple regression, correlation and ANOVA.

1.3 Research Aim and Objectives

1.3.1 Research Aim

The main aim of this study is to assess the factors that affect the financial sustainability of rural banks in Ghana and give policy implications.

1.3.2 Specific Research Objectives

The specific research objectives include the following.

1. To examine the financial performance of rural banks from 2010 to 2016.
2. To assess factors that affect financial performance and sustainability of rural banks in Ghana.
3. To examine customers' satisfaction of the services of Rural Bank in Ghana and the effects on financial sustainability.

1.4 Research Questions/Hypothesis

This section shows the specific research questions of the study and the hypothesis.

1.4.1 Research Questions

The study seeks to answer the following research questions.

1. What is the financial performance of rural banks from 2010 to 2016?
2. What factors affect financial sustainability of rural banks in Ghana?

3. What is the customers' satisfaction of the services of Rural Banks in Ghana and the effects on financial sustainability?

1.4.2 Research Hypothesis

The study formulates hypothesis as follows.

Hypothesis 1

Null Hypothesis (H_o): There is no effect of loan amount on financial sustainability of Rural Banks.

Alternative Hypothesis (H_1): There is an effect of loan amount on financial sustainability of Rural Banks.

Hypothesis 2

Null Hypothesis (H_o): There is no effect of maturity of loans on financial sustainability of Rural Banks.

Alternative Hypothesis (H_1): There is an effect of maturity of loans on financial sustainability of Rural Banks.

Hypothesis 3

Null Hypothesis (H_o): There is no effect of interest rates on financial sustainability of Rural Banks.

Alternative Hypothesis (H_1): There is an effect of interest rates on financial sustainability of Rural Banks.

Hypothesis 4

Null Hypothesis (H_o): There is no effect of loan repayment rate on financial sustainability of Rural Banks.

Alternative Hypothesis (H_1): There is an effect of loan repayment rate on financial sustainability of Rural Banks.

Hypothesis 5

Null Hypothesis (H_o): There is no effect of coverage of customers (deposits) on financial sustainability of Rural Banks.

Alternative Hypothesis (H_1): There is an effect of coverage of customers (deposits) on financial sustainability of Rural Banks.

Hypothesis 6

Null Hypothesis (H_o): There is no effect of credit risk (Non-performing Loans) on financial sustainability of Rural Banks.

Alternative Hypothesis (H_1): There an effect of credit risk (Non-performing Loans) on financial sustainability of Rural Banks.

1.5 Scope of the Study

This study covers three Rural Banks in Ghana. They include the Atwima Kwanwoma Rural Bank, Bosomtwe Rural Bank, and Nwabiagya Rural Bank. These banks included in this study are located in the Ashanti Region of Ghana. The banks are used in this study

because they have been in the banking business for quite a longer period of time. The audited financial statements of the Rural Banks were used to assess the financial performance and sustainability. The financial performance of the Rural Banks will be assessed using the profitability ratios such as Profit Margin (PM), Return on Asset (ROA), Return on Equity (ROE). The Return on Asset (ROA) was used main dependent variable for assessing the financial performance of the Rural Banks. This is because it has been used in many studies.

1.6 Significance of the Study

Rural banks are considered as playing an important in improving the living conditions of people in Ghana. Unlike the international banks like Barclays, Ecobank, Hone Finance Corporation (HFC), Stanbic Bank and Standard Chartered, just to mention a few, which provide financial services to multinational organizations, Rural Banks contribute greatly to rural development. The sector is seen as the largest providers of financial services to the larger population, especially rural people (IFAD, 2008). They represent about half of the total banking outlets in Ghana. Looking at the enormous role Rural Banks play in Ghana, any study, especially those that focus on rural banks and their sustainability will help policy makers and academicians to track how the sector is performing in all areas in development.

This research will offer significant contribution to research and policy. In terms of its research contribution, it statistically models the multiple factors that could affect the financial sustainability of Rural Banks. In terms of its policy contribution, the research will help policy makers to objectively determine the specific factors that need to be concentrated on in formulating policies to shape the financial sustainability of Rural

Banks. For example, this study could reveal that loan size or maturity of loan payment is the statistically significant factors affecting the sustainability of Rural Banks in Ghana. This implies that policy prescriptions should aim at addressing problems in loan size and maturity.

In the course of the research, it is likely that some important areas may be observed but which cannot be emphasised in this study. This is because perhaps the areas may not directly form part of the research objective. This study is significant because it will explore areas for further research. Again, findings from this study can form a good source of data for researchers. This is because some manuscripts will be prepared from this study for publication in any of the internal journals. Researchers can therefore have access to the manuscript and depend on it for conducting their research.

1.7 Limitations of the Study

Every human endeavour is liable to factors that inhibit its progress. In the same way this study encountered some limitations which challenged its progress. The collection of data was a difficult task. Most of the banks were not willing to provide their financial statements for a period of more than five years. The Atwima Kwanwoma, Bosomtwe and the Nwabiagya Rural Banks provided their financial statements. This delayed the period estimated for the data collection. It was also difficult to select the customers of the banks to answer some questions. However, with the help of some mobile bankers the customers were identified.

1.8 Organization of the Study

The study is categorised into five chapters. Chapter one forms the introductory part of the study. It looks at the background to the study, statement of the problem, research questions, objectives of the study, scope of the study, justification of the study and organisation of the study. Chapter two is the literature review. It contains concepts of sustainability, factors affecting financial sustainability of banks and customer satisfaction of the services of rural banks. Chapter three which is the methodology looks at the research design, data requirements and sources, population and sampling techniques and data collection techniques, data analysis and reporting. The chapter four of the study is where data collected from the field is presented and analyzed. The chapter five serves as a concluding chapter to the study. The chapter outlines suggestions and recommendations from findings emanated from the study.

1.9 Summary

This chapter presents an overview of financial sustainability of banks. The chapter identified a gap of studies and research objectives were formulated to address the gap. The main research objective was to determine factors influencing financial sustainability of rural banks. The chapter also presents the research questions and the significance of the study. However, the conceptual framework that would form the basis for this study was not mentioned in this chapter. Chapter two of the study focuses on the theoretical, empirical and conceptual reviews.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter forms the theoretical framework of the study. It reviews relevant literature on rural banking in Ghana and the determinants of sustainability of banks. Customers' satisfaction dimensions are also discussed and related to sustainability of banks.

2.2 Rural Banking in Ghana

Rural banks basically provide banking services to the rural population and small scale farmers and businesses. They also support development projects.

2.2.1 Evolution of Rural Banking in Ghana

Rural banking in Ghana takes its origin from the early 1970s (Asiedu-Mante, 2011). Before the late 1970s, rural dwellers (more especially, farmers) in Ghana had less access to financial services for farm and non-farm activities. There was no security and safety in the way rural dwellers save their money. In response to this situation the Government of Ghana took several measures to increase access to credit facility in rural areas. These measures included among others, the establishment of Rural Banks (World Bank, 2010). The main operators in the rural financial market aside rural banks comprised credit unions as well as other entities in the informal sector such as money lenders, traders and "susu" collectors. Friends and relatives were also important sources of rural finance (Asiedu-Mante, 2011). The first rural bank was established in 1976 in the central region. Between 1976 and1980 the existing rural banks were twenty (20). From 1980 to 1985, rural banks in Ghana reached 106 (World Bank, 2010: Asiedu-Mante, 2011). By 1985, about 86 new rural banks were commissioned throughout the country. Between 1995 and

1998, eleven (11) more rural banks were commissioned. The rapid increase and growth of rural banks created a source and access to financial services to most rural dwellers. However, between 1999 and 2000, twenty-three (23) rural banks could not sustain the competitive environment and eventually collapsed. Likewise, between 2006 and 2009, additional three (3) rural banks were closed down (Table 2.1).

Table 2.1: Rural Banks in Ghana over the years

Year	Total established in periods	Total existing
1976-1980	+20	20
1980-1985	+86	106
1986-1990	+16	122
1991-1995	+3	125
1996-1997	+5	130
1997-1998	+3	133
1999-2000	-23	110
1999-2000	+5	115
2001-2003	+2	117
2004-2007	+8	125
2008-2009	+9	134
2008-2009	-3	131

Asiedu-Mante, 2011

However, during the 1980s, the sustainability of rural banks became a matter of concern since many of them were not sustainable. This was attributed to factors like weak governing ability, conflicts within boards of directors, and ineffective management in many rural banks. The exposure of rural banks to these challenges led to the poor performance and eventual collapse of some of the rural banks. The Bank of Ghana (BoG) intentionally closed down some rural banks that were distressed. However, the BoG took measures to ensure the sustainability of some rural banks by strengthening supervision and training for managers and boards of directors of rural banks (World Bank, 2010).

In addition to this, the government of Ghana in collaboration with the World Bank embarked on three important projects which sought to make rural banks more financially sound. These projects were the Rural Finance Project, the Rural Financial Services Project and the establishment of the Association of Rural Banks (ARB). The rural finance project and financial services helped the rural dwellers to make good use of their money. The rural people were encouraged to form a group and contribute money every month to the group. Members of the group had the opportunity to obtain loans from the group and paid later. According to the World Bank (2010), the projects contributed to an improvement in RCB performance in the country. From there, rural banks begun to make some achievements in the areas of improving deposits, expanding loans to people and increasing their profit margins (Nair and Fissha, 2010).

2.2.2 Achievement of Rural Banks in Ghana

As a network, RCBs have achieved a remarkable level of service delivery and financial performance. At the end of 2008, they had deposits of GH□ 343.9 million (US$265.1 million) from more than 2.8 million clients, and loans and advances of GH□ 224.7 million (US$173.2 million) with about 680,000 clients. They delivered 128,875 domestic money transfers worth around GH□ 63.3 million (US$48.8 million) in 2007 and 32,392 international money transfers worth GH□ 9.3 million (US$7.1 million) in 2008. They also facilitated cheque transactions worth GH□ 993.7 million (US$766.1 million) in 2008 (Nair and Fissha, 2010). RCBs made a consolidated profit of GH□ 15.6 million (US$12.0 million) in 2008 and had a consolidated net worth of GH□ 62.3 million (US$48.03 million). Several of the rural banks excelled in performance in 2008 within the financial sector (World Bank, 2010). According to Aseidu-Mante, (2011) Rural

Banks have achieved a lot since the 1970s. Some of these achievements have been highlighted below.

(a) Banking Habit

The growth in rural banks has made rural financial intermediation a reality. Rural banks are now within the reach of people in various rural communities. The rural banking scheme has succeeded in playing a major role in inculcating banking habit in rural dwellers. People have seen the need in making savings with rural banks (Aseidu-Mante, 2011).

(b) Credit to Rural Dwellers

The bulk of the mobilised funds in rural banks are given out as loans and advances to agricultural sector activities and rural industries. It is significant to note that beneficiaries of the credit facilities granted by rural banks are largely small scale borrowers operating in the rural areas. Furthermore, the flexible credit policies and lending procedures have contributed immensely to freeing the rural population from some of the harsh conditions which normally characterize credits from the informal and formal financial sectors. Some of the financial services provided by the rural banks included cash collection schemes, susu schemes, mobile banking services, school savings programme, and child endowment fund among others (Aseidu-Mante, 2011).

(c) Support to Rural Development

As development oriented institutions, rural banks have provided financial support to a number of development projects in some rural areas. Among these projects are

electrification, borehole water supply, educational institutions, markets, community centres, lorry parks, health centres etc. These efforts have facilitated speedy development and integration of the rural economy into the overall national economic process (Aseidu-Mante, 2011).

(d) Job Creation

Rural banks have provided employment for a sizeable number of people, both professionals and clerical; People have been employed as bank managers, accountants, project officers, clerks, cashiers, Susu collectors, security personnel, messengers, cleaners. Also through the activities of rural banks, many people have been employed in small and medium enterprises (Aseidu-Mante, 2011).

(e) Funds Mobilization

Huge sum of money in the form of deposits have been mobilised by rural banks over the years. Similarly, huge sums of money have been mobilised as share capital by rural banks. Without the establishment of rural banks, these funds would have been in the custody of individuals and/or perhaps could have been misallocated or unutilized (Aseidu-Mante, 2011).

(f) Credit to Central Government

About 33 percent of the deposits of rural banks are invested in government securities in compliance with the Central Bank's directives. Although, the amount invested in securities is meant to create a reserve which can be fallen on through redemption to meet customer's withdrawals in the case of liquidity problems, it is also a modest way of

helping government to bridge the gap between its income and expenditure (Aseidu-Mante, 2011)..3

(g) Support to Women

Many rural banks have realised the need to help address the needs of women, particularly those in the rural areas. Many of these women are engaged in small business and micro-business activities. Some of the banks have adopted special schemes for women. These have contributed, to a large extent, the reduction of poverty in some of the catchment areas of rural banks as women constitute a high proportion of people engaged in agriculture (Ghana Statistical Service, 2014) and micro-enterprises (Aseidu-Mante, 2011).

(h) Support to Cocoa Farmers

Rural banks provide support to cocoa farmers through the bank's involvement in the purchase of cocoa. Rural banks provide Akuafo cheques to cocoa farmers to solve their domestic marketing problems. Aseidu-Mante (2011) posit that over the years, about 66 percent of the entire crop size of cocoa purchased every year since the introduction of the Akuafo cheque scheme is done by rural banks.

2.2.3 Coverage, Target Group and Credit Product

RCB network reached about 2.8 million depositors and 680,000 borrowers in 2008. This made them the largest group of licensed financial service providers in rural areas. RCBs have a market share of 67 percent of depositors and 48 percent of borrowers in rural areas (World Bank, 2010). Clients of RCBs consist mostly of farmers, government employees,

and Medium, Small and Micro entrepreneurs (MSMEs). RCBs' increasing coverage to underserved areas has significantly contributed to addressing the credit constraint in rural areas. Between 2000 and 2008, the number of depositors grew at an average annual rate of 14 percent, and the number of borrowers grew at an average annual rate of 27 percent (World Bank, 2010).

The credit products offered by RCBs include microfinance loans, personal loans, salary loans, Susuloans, and overdraft facilities. According to a study conducted by the World Bank (2010) in 2009, among 12 rural banks, salary loans accounted for about 33 percent of total advances. This was followed by personal loans (24%) and microfinance loans (20%). Again, rural banks accounted for 31 percent of total borrowers. RCB loans are used for agriculture, cottage industries, and trading (World Bank, 2010).

2.2.4 Legal and Regulatory Framework

RCBs are incorporated as limited liability companies and licensed by the Bank of Ghana within the framework of the Banking Act. The minimum level of capital required by RCBs is GH□ 150,000 (US$116,135). RCBs whose capital falls below this minimum capital are not allowed to pay dividends or open new branches or agencies until they attain the minimum level of capitalization (World Bank, 2010: Nair and Fissha, 2010)

In sum to the above discussion, the support to rural banks started in the early 1980s when they begun to experience shortfalls in their performance. Due to enormous roles played by the RCBs in the local economic development of the country, their sustainability is very crucial to governments in Ghana. Several projects by previous governments testify

to the fact that the roles of rural banks cannot be downplayed and therefore they need to be sustainable to continue providing credit to the rural areas (Adongo and Stork, 2005).

2.2.5 The Banking Act in Ghana

The Ghanaian Financial sector in retrospect has gone through a series of changes in its legislative instruments, giving the sophisticated and innovative nature of contemporary banking. The modern practice further requires a high level of checks and balances to mitigate unforeseen risks in the banking sector (Mensah, 2015).

Coupled with the series of financial stability and instability of the economy since attaining independence1957, the first Bank of Ghana ordinance was passed in 1957. This Act has undergone series of amendments (Lartey, 2012). As the banking industry witnessed development, the Bank of Ghana Act of 1957 was replaced with the Bank of Ghana Act of 1963. Further series of amendments were carried out culminating into the Bank of Ghana Act of 2000, Bank of Ghana Act, 2002, Bank of Ghana Act of 2007. The Bank of Ghana Act of 2007 was passed to amend the Bank of Ghana Act of 2004 to consolidate the law relating to the Bank of Ghana and facilitate the creation of an International Financial Services Centre (IFSC) (Mensah, 2015).

Significantly, the legislative instrument that sought to govern the authorization and regulation of the banking sector is the Bank of Ghana Act of 2007 which aims at regulating and supervising the banking and credit system to ensure prudent financial operations in the banking and non-banking sector.

2.3 Profitability Theory

This part presents profitability theory and how it relates to the concept of financial sustainability. The concept of profit from both economists and accountants views are mentioned.

2.3.1 Economic Concept of Profit

From John Hicks view of income (Hicks, 1946), economists view income (also known as profit or earnings) as what a firm could spend or distribute during the period, and still have the same amount it started with at the beginning (Bodie et al, 2009). This definition calls for recognition of unrealised gains or losses in the market value of assets and liabilities.

2.3.2 Accounting Concept of Profit

Contrary to economists view of income, accountants view of income ignores unrealised gains or losses in the market value of assets and liabilities (Bodie et al, 2009). Thus, in accounting only the book values (not the market values) are considered when determining income. Moreover, while economists view income, earnings, and profit to be the same (Bodie et al, 2009), the accountants make a distinction between income and profit or earnings. Stickney and Weil (2000) for example, define profit as the excess of revenue over expenses for a transaction. That is, profit is considered as a residual calculated as an excess of income over expenditure. Profits are what remain after costs of production have been paid for (Marriott et al, 2004). This is sometimes referred to as profit as a residual theory (Marriott et al, 2004). McCullers and Schroeder (1982) define profit as a residual from matching revenue (income) realised against costs (expenditure) consumed. Furthermore, the accountants make the difference between income and profit clearer by

defining profit as a net income (Nikolai et al, 2009). All withstanding however, when the capital maintenance concept and profit as a residual theory are considered, the only difference between the economic and accounting profit is how the unrealised gains or losses in the market value of assets and liabilities are being taken care of. While the economists would consider the unrealised gains or losses immediately, it often takes time for the accountants to recognise the changes, and when they do, they do it through revaluation of assets or liabilities, or accounting for price changes.

2.4 Some Definitions of Sustainability

Sustainability is defined within the context of two key words "permanence" (Navajas et al, (2000) and "performance appraisal" (Schreiner, 2000). Permanence means that, rural banks should be capable or have the ability to remain in business for a longer period of time. Performance appraisal on the other hand means that rural banks must have the ability to perform its functions on a continuous or sustainable basis).These two words are interrelated. One is depended on the other. Hence, rural banks can be described as sustainable if they are permanent and continuously provide services to the public for a long period of time.

Khandker and Khalily (1995) defined sustainability as the capacity of an institution to constantly carry out its activities to achieve stated objectives. Woller et al., (1999) also defined sustainability as the capacity of an institution to produce outputs that meets the public (customers') satisfaction and that the institution receives enough resources and inputs to continue production. Woolcock, (1999) sees sustainability as a program's capacity to remain financially sound in the absence of subsidies or foreign support.

Woolcock's definition of sustainability explains the financial self-sufficiency of an institution to remain in a business. It looks at a financial institution's own effort of raising adequate financial resources to cover its expenditure and make profit to keep business moving. The definitions given by Woller et al (1999) and Woolcock (1999) reinforce the one given by Navajas et al (2000) and Schreiner (2000).

The two words permanence and performance appraisal run through the definitions. Rural banks will become permanence when it is financially sound without depending much on external funding. The financial status of rural banks will make them stay in business and perform very well. However, their performance, to an extent, is determined by the public or their customers. The ability of rural banks to remain in business may depend on the level of satisfaction given to their clients.

2.5 Dimensions of Sustainability

Sustainability is classified into four main groupings which determine the performance of banks. These are financial sustainability, mission sustainability, human resource sustainability and programme sustainability (Adongo and Stork, 2005; Nyamsogoro, 2010).These are discussed below. However, in the light of this study, the financial sustainability and programme sustainability answers the research questions.

2.5.1 Mission Sustainability

Every financial institution has a mission to achieve. The achievement of the mission implies that the institution is performing very well in the competitive business environment. However, the achievement of these missions may depend on the strategies the institution will use. This mission goes with institutional policies and plans to guide in

achieving the mission. The mission sustainability refers to Sustainability of financial institutions in its mission. This will keep the organisation in its chosen path in the long-term (Mahajan and Nagasri 1999).

2.5.2 Programme Sustainability of Rural Banks

The programme sustainability explains customer demand and satisfaction as the foundation for determining the sustainability of banks (see Nyamsogoro, 2010; Navajas, Schreiner, Meyer, Gonzalez–Vega, and Rodriguez–Meza, 2000). Mahajan and Nagasri (1999) added that the financial sustainability of financial institutions occurs when customers or clients perceive that the services that they receive are of sufficient importance and valuable and are willing to assume responsibility and ownership of them (Mahajan and Nagasri 1999).

In discussing the programme sustainability of banks, more ideas would be borrowed from the marketing researchers. Kotler and Armstrong, 2012) defined customer satisfaction as the degree to which customers expected satisfaction is achieved. Spreng and Machoy, (1996) added that service quality is an important indicator of customer satisfaction and sustainability of the service providers. Empirical data shows that there is a relationship between customer satisfaction and sustainability of banks.

Nelson, Rust, Zahorik, Rose, Batalden, and Siemanski (1992) used the profitability ratios (earnings, net revenues, and return on assets) and reported that these ratios correlate with profitability of banks. Anderson, Fornel& Lehmann (1994) also studied the effects of customer satisfaction on sustainability (financial performance) in Swiss companies and found that there is a positive relationship. Ittner,&Larcker(1998) discovered that

customer satisfaction and future financial sustainability of banks are positively correlated. Parasuraman et al. (1988) identified five (5) dimensions to measure or evaluate the satisfaction of customers which was borrowed in this study to examine the degree of satisfaction customers' have towards the products and services of Offinso Rural Banks in Ghana. These dimensions are referred to as SERVQUAL which include the following;

1. Reliability (The ability to perform the promised service dependably and accurately)
2. Responsiveness (Willingness to help customers and to provide prompt services)
3. Tangibles (Physical facilities, equipment, and appearance of personnel)
4. Assurance (Knowledge and courtesy of employees and their ability to convey trust and confidence
5. Empathy (Caring, individualized attention the firm provides its customer)

2.5.3 Human Resource Sustainability

A good demand driven product design will make the programme sustainable. The products and services of banks should be supported by well qualified personnel who are capable of delivering the services (products) as required to meet the organisation mission. This is known as human resource sustainability (Mahajan and Nagasri 1999). However, before customers would be satisfied with the products of a particular microfinance institution, it [products] needs to be a good demand driven product. This requires a well and qualified human resource that are capable of delivering the products as required to meet their missions (Mahajan and Nagasri, 1999) and at the same time establishing a good interpersonal relationship with its customers or clients. This is what is referred to as

the human resources sustainability-a tool for achieving institutional objectives (mission sustainability).

2.6 Financial Sustainability of Rural Banks

Rural banks are required to raise much revenue to support its expenditure and have more to keep the business moving. The ability of rural banks to achieve this objective may imply that the institution is achieving financial sustainability. The capacity of rural banks to remain in business is very much depended on the financial performance of the institution. Thus, Thapa et al, (1992) cited in Nyamsogoro (2010) mentioned that the key dimension of sustainability is the financial performance of banks. It is the capability of a bank to raise sufficient financial resource to cover all its costs (cost incurred to support operations and growth of the institution) without depending much on subsidies (Thapa et al, 1992). Dunford (2003) also defines financial sustainability as the ability of an institution to achieve its objectives without depending on donor support. The objectives here focus on the financial achievements or performance. That is the institution's ability to meet its expected or estimated revenue for a given year.

Financial sustainability, from the discussion above can be looked at in two levels namely Operational Self Sufficiency (OSS) and Financial Self Sufficiency (FSS) (Ledgerwood, 1999). The former indicates whether enough revenue has been earned to cover the direct costs, excluding the cost of capital but including actual financing costs. The latter portrays the actual financial position of banks. Thus, for rural banks to be financially sustainable, Adongo and Stork (2005) argue that they must separate the cost of providing for non-financial services from the cost of providing for financial services. They argued

that the cost of providing for non-financial services should therefore be managed effectively with an experienced human resource capacity.

Nyamsogoro (2010) argued that financial institutions with poor financial performance are not classified as being financially sustainable. He further stated that financial institutions who are subsidy-driven, that is, whose profitability is determined after covering some of the operating costs by subsidized resources or funds are not considered financially sustainable. In contrast to this, Von Pischke (2007) argued that the level of subsidy depends on the stage or nature of the financial institutions. Young growing banks or microfinance institutions for example needs subsidy to remain sustainable. Hence, without subsidy, such financial institutions would be largely unknown that is, fallout from the system in no time (Von Pischke, 2007).

2.6.1 Measuring Financial Performance of Banks

The definition of performance varies and it depends on the context in which it is defined. According to Ying-ying (2012), performance is the approach for adopting and managing the existing resource to achieve specified goals and objectives. That is, it is the capacity to adopt measures that could overcome challenges in order to achieve a goal within a planned period. Within the context of organisations, performance is defined as the ability of an entity to perform well by achieving its stated objectives successfully. That is the approach taken by organisations to implement a strategy in an effective manner (Ying-ying, 2012).

Financial performance according to Keller and Bayraksan (2012) is the comparison of the worth produced by an organisation with the worth owners expected to generate from the

organisation. The use of simple outcome-based financial indicators is used to measure the achievement of financial goals of the organisation. According to Boxall *et al.,* (2007) financial performance is measured using indicators such as sales growth for one and three years, profit growth for one and three years, net margin, and return on equity.

According to Sebe-Yeboah and Mensah (2014), financial performance analysis is aimed at keeping the banks in checks by highlighting low and high performance areas with the understanding that it will bring about improvement in performance". Nimalathasan (2008) cited in Sebe-Yeboah& Mensah (2014) added that the ability to increase financial performance analysis of banks ensure their improvement in the operations and performance, making them financially sustainable. Measuring the financial performance of banks has been integrated into research and well advanced in the finance and management field. Financial analysis is vital in projecting the outcome of any institutional restructuring (Sebe-Yeboah& Mensah, 2014). Due to the mammoth roles played by rural banks in an economy, Aarma et al., (2003) posit assessing the banks performance analysis is significant in the conditions of evolutional economies.

The financial performance of banks can be measured using different indicators. For example, Sebe-Yeboah& Mensah (2014) used PELARI (Profitability, Efficiency, Liquidity, Asset Quality, Risk Measures and Investor analyses) in addition to financial ratios to study the financial performance of Agricultural Development Bank (ADB) in Ghana. The result was that the bank's liquidity showed a downward trend and slipped further down in 2010 meaning that the bank is illiquid. Other studies (for example, Asantey, and Tengey, 2014) use statistical techniques like Pearson's correlation test and ordinary least squares regression to assess the financial performance of banks. Avkiran

(1995) cited in Sebe-Yeboah and Mensah (2014) used the DuPont financial ratios to assess the financial performance of banks.

Financial Markets Department (2000) stated that the use of financial ratio analysis to assess the financial performance of banks indicates the true state of affairs of their performance. The concept of prudent banking is normally built around these indicators (Sebe-Yeboah& Mensah, 2014). Boxall *et al.*, (2007) mention accounting- based performance using two indicators: Return on Assets (ROA) and Return on Equity (ROE). Various studies have used ROE and ROA in assessing the performance of financial institutions (Gizaw et al., 2015; Rufai, 2013; Nyamsogoro, 2010; Armendáriz and Morduch, 2007; Soyemi et al., 2014; Soyemi et al., 2014; Adeusi et al., 2013; Poudel, 2012; Addae-Korankye, 2014). According to Flamini et al., (2009) cited in Gizaw et al., (2015), a 2 percent rate of ROA signify higher performance of the financial institution in terms of profitability.

2.7 Conceptual Framework

As indicated in Figure 2.1 the factors that affect the financial sustainability of Rural Banks in Ghana have been explained. In this study, sustainability is defined as the capacity and capability of an institution to become financially viable (ability to raise more income to cover its expenditure) by recruiting and deploying qualified personnel, and encouraging them through motivation to achieve the institutional objectives and at the same time win customers' loyalty by meeting their satisfaction.

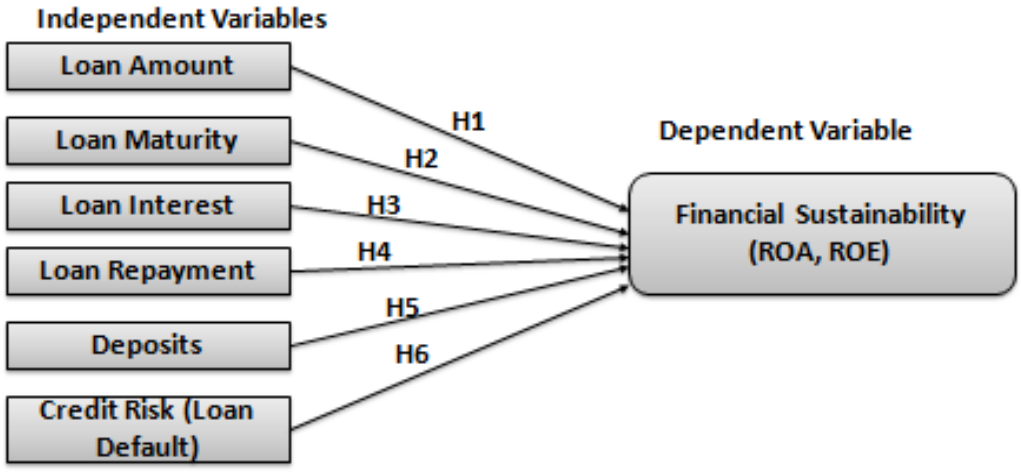


Figure 2.1: Conceptual Framework on Factors Affecting Financial Sustainability of Banks
Source: Author's Construct

The factors include loan amount, loan maturity, loan interest, loan repayment rate, coverage of customers and credit risks (Littlefield et al., 2003; Honohan, 2004). These factors form the independent variables for the study. The financial sustainability or performance is measured using the two most popular financial ratios namely Return on Assets (ROA) and Return on Equity (ROE). These ratios formed the dependent variable for the study. The multiple regression analysis will be used to assess the effects of the independent variables on the dependent variable.

(a) Loan Amount and Portfolio

The amount of loan a bank can give to its clients and the ability to collect it determines its capacity to make profit. It is therefore advisable for banks to increase its loan amount to its clients so that much profit (in the form of interest) can be accrued to make them financially sustainable. Nyamsogoro (2010) suggested that financial institutions can

increase the size of loans or increase the number of customers for the loans or combine the two strategies.

(b) Maturity of Loans

For a bank to increase the loan size Schreiner (2001) suggested the following; term to maturity, dollars per instalment, time between instalments and number of instalments, and average balance. These are the areas by which a bank should consider before increasing the size of loans. Maturity of loans is the difference in time of loan allocated to customers' and the date for repayment of the loan. Nyamsogoro (2010) see it as the remaining time for the loan to meet deadline. It is argued that the time allocated for loan payment determines the financial sustainability of banks (Brake, 2000 and Schreiner, 2001).

According to Brake (2000), the risk associated with longer maturity of loan is very critical to affect the financial performance of banks. In contrast, Schreiner (2001) argued that longer maturity of loans indicates greater profitability of banks but lead to less coverage. What the two researchers are portraying is that banks need to be careful in determining loan maturity. If the bank want to increase the number of borrowers' then it is better to decrease the loan maturity. On the other hand, if the bank wish to reduce the number of borrowers' and increase more profit then it is better to increase the loan maturity. The two approaches determine the financial sustainability of banks. However, this depends on the interest rates.

The loan size can also be explained as the dollars per instalment which affects the profitability of banks. The larger the loan size means more interest profit would be accrued. It also means the maximum possible loss due to default (Nyamsogoro, 2010).

The large loan size lower average cost of loan disbursement, as their costs are mostly fixed. Thus, longer loan maturity would imply higher per-dollar variable costs because lenders take care due to greater risk exposure (Schreiner, 2001). The average balance also measures the level of resources held in terms of loan, without consideration for length of the term to maturity.

It is argued that loans with large average balances are more profitable (Schreiner, 2001). Again, time between instalments may affect the profitability of banks. The more the loan payment instalment increases the more the bank stands at risk since the borrower can default (Schreiner, 2001). However, Armendáriz and Morduch (2007) argued that frequent loan instalment can lead to profitability of banks. If this is done, then high repayment rates can be achieved which will in turn, reduce default.

(c) Interest Rate/Amount

The charge banks put on loans given to their clients may determine the amount of income they get. It is one of the main sources of income to the banking institutions. The bank's ability to grant more loans to its clients and charge interest on them implies that they stand a chance of getting back more profit (loan interest). Thus, according to Armendáriz and Morduch (2007), the financial sustainability of banks depends on the capacity of the institution to grant more loans to people at an interest rate to cover all its costs (Shankar, 2007). It is argued that high interest rates on loans positively correlate with the profitability of the bank which can sustain them in the business environment.

However, from the economic point of view, the larger the interest rate, the less clients will develop the interest in obtaining such loans unless under a critical condition. Thus, when clients fail to obtain loans because of the high interest rates, it will negatively affect

the profit of the bank (Nyamsogoro, 2010).To reconcile this, Armendáriz and Morduch (2007) suggested that interest rate on loans must be incentive in itself. Being incentive means that the interest should be less than what the borrower will get from investing the borrowed loans from the banks. What the borrower will get from the investing loan may be financial or non-financial benefits. This will encourage the borrower to go in for loan from the banks. The way to determine the levels of interest on loans to make it incentive-packaged depends on the type of technique that would be used by the banks.

(d) Loan Repayment Rate

The financial sustainability or profitability of banks is also depended on the degree of loan repayment rate (Schreiner, 2001). Nyamsogoro (2010) argued that higher interest rate and loan amount are not sufficient to have determined the financial sustainability of banks if the loan repayment rate is very low. Thus, the financial performance of banks can be determined by combining the interest rates, and the loan amount together with high repayment rate. High repayment rate depends on the capacity of the bank to collect the loans from its clients (Schreiner, 2000).

This implies that a less efficient bank in collecting its loans from customers will stand at risk of default thereby affecting its financial performance. The inefficiency of banks to collect loans led to bad loans, meaning that the client cannot fully pay the loan in addition to the interest (Awunyo-Vitor, 2013). When this happens, it means, instead of profit, financial loss is encountered leading to adverse effects on the profitability of banks. Another effect of bad loans on banks can be seen in their lending capacity. Studies (for example, Awunyo-Vitor, 2012 and Chelagat, 2012) shows that bad loans reduce bank's capacity to lend.

(e) Coverage of Customers (Deposits)

The sustainability of any financial institution depends on the coverage (number of customers) or amount of deposits from customers. Coverage is simply defined as the number of customers served by a particular financial institution (Rai, 2011) or the number of people served but who were not served previously (Meyer, 2002). It is assumed that the capacity of banks to win more customers to enjoy their services, the better the coverage or outreach (Nyamsogoro, 2010). It is argued that the larger the number of clients or borrowers, the more the bank becomes sustainable (LOGOTRI, 2006). This is because of the fact that the customers will eventually make deposits into the accounts of the banks.

The sustainability of banks is determined by many factors which have been stated above (Adongo and Stork, 2005). Navajas, et al., (2000) in their study established a link between the number of clients a bank may have and its sustainability. They explained that coverage may bring about sustainability while the sustainability may enhance coverage. Nyamsogoro (2010) added that factors such as the size and structure of a particular bank and their products or services may influence customers or help to win more clients and expand coverage and invariably affect profitability. Thus, a larger customer base of any financial institution (coverage) becomes a useful tool in determining its financial sustainability.

(e) Credit Risks Factors (Loan Default)

Rufai (2013) conducted a study to assess the effectiveness of credit risk management on the performance of financial institutions in Nigeria. The study revealed that credit risk affect the financial performance of Credit Unions in Nigeria. This therefore requires

financial institutions to maintain high interest income and give attention to credit risk mitigation measures. Soyemi et al., (2014) assessed the risk management practices of banks in Nigeria using financial statements to calculate ROA, and ROE. The study used multiple regression analysis and the result showed that credit risk and credit risk management affect profitability. They showed that credit risk management practices such as credit, liquidity, operating and capital risk practices affected profitability of the bank.

Adeusi et al. (2013) examined the relationship between credit risks and profitability of financial institutions in Nigeria. Data was collected from the financial institutions. The multiple regression analysis was used and the result showed that credit risks reduce the profitability of financial institutions. They also found that credit risk management reduced the occurrence of credit risk and improved financial performance. That is the higher the managed funds by banks the higher the performance. The study concludes a significant relationship between banks performance and risk management. Poudel (2012) assessed the effects of credit risks and credit risk management on profitability of 31 financial institutions in Nepal from 2001 to 2011. The study compared the profitability ratio to default rate, cost of per loan assets and capital adequacy ratio where descriptive, correlation and regression was used to analyze the data. The study revealed that all these parameters have an inverse impact on banks' financial performance; however, the default rate is the most predictor of bank financial performance.

Addae-Korankye (2014) conducted a study on loan default and financial performance of financial institutions in Ghana. The study found the causes of loan default to include; high interest rate, inadequate loan sizes, poor appraisal, lack of monitoring, and improper client selection. Measures to control default were found to include training before and

after disbursement, reasonable interest rate, monitoring of clients, and proper loan appraisal. The study also found that loan default affects the profitability of financial institutions.

2.8 Distress in rural banks in Ghana

Asiedu-Mante (2011) grouped the problems rural banks in Ghana face into four broad headings. They are as follows; institutional factors, economic and political factors, regulatory and supervisory factors and fraudulent factors. The institutional factors include liquidity problems, non-recovery of loans, profitability, poor staffing, weak management, poor service delivery, and internal control lapses. The political factors include the political regimes of governments. The regulatory factors include reserve requirements, project officers, restriction or the subscription of shares, transfer of profits to reserve funds and capital adequacy ratio. The fraudulent factors include connected ending, insider dealings and collusion among staff and customers. The institutional factors carries majority of the discussion of this study and therefore will be well emphasised (Asiedu-Mante, 2011).

(a) Uncontrolled credit expansion

Most liquidity problems in rural banks can be traced to rapid and uncontrolled credit expansion. The over lending tendencies and practices of rural banks were fuelled by negative real interest rates which created a strong demand for credit. Ghana experienced negative real interest rates between 1994 and 1996.This was also the period where rapid growth in the number of rural banks posed supervisory challenges to the central bank. Another institutional problem is the non-recovery of loans (Asiedu-Mante, 2011).

(b) Non-recovery of loans

Many rural banks were good at disbursing loans but weak in the collection of the loans. The capacity for these institutions to follow up on loans and collect them was not given much attention. The rural banks believed that borrowers will willingly come to pay the loans at the due time. Thus, loan recovery was treated as subsidiary issues in their plans. This turned out to be wrong and expensive. The non-collection of due loans adversely affected the capital and profits of these banks (see also Brake, 2000 and Schreiner, 2001). Most loans granted to customers were not backed with collateral security. And even those loans with collateral securities, most of them could not be foreclosed because there were no enforceable documents. The lack of capacity on the part of staff of rural banks to appraise credit applications was also one of the problems that led to non-performing loans (Asiedu-Mante, 2011).

(c) Profitability

On profitability, Asiedu-Mante (2011) explained that lots of income has been lost by rural banks by allowing what could be described as income leakages to take place. Income leakages in rural banks come in many forms. A rural bank might either deliberately undercharge a customer for services rendered either because the customer is a relative or a friend. Income leakages also occur when funds are made to lie idle. This occurrence takes place when there is either a total misunderstanding of the Central Bank's reserve requirements or a deliberate disregard for it. It was uncommon to see rural banks maintain fat spread over and above the cash reserve ratio prescribed by the Central Bank. The cash reserve ratio enables rural banks, among other things, to meet transactional needs. Since it does not earn any income, any excess over the prescribed

minimum ratio is a waste of resources. Another source of income leakages occurs when long outstanding loans are recovered without charging interest on the amount recovered. These occurrences have the tendency of adversely affecting profitability of rural banks.

(d) Poor staffing

Another area which is a problem to most rural banks in Ghana is poor staffing. Rural banks did not attract good quality staff in the initial stages of the scheme. Two main reasons accounted for the poor staffing of rural banks. These included the location of the bank, remunerations and lack of training. The former is that, rural banks were cited in the rural areas. As such most of the staffs did not want to work at the villages because of lack of some basic social amenities like good water, and electricity. Another reason is that the remuneration of an average rural bank was far below that of its counterpart in a universal bank. This was because rural banks were and are still relatively young and community based institutions compared to the universal banks. In addition, they have limited resources base and this constraints the volume of business and, therefore, profit they can generate (Asiedu-Mante, 2011).

The third reason was that rural banks had no training schools where staff could be trained on various aspects of banking operations. All these factors created a situation where rural banks were, broadly speaking, able to attract only sub-standard staff from the banking industry. Training of staff and directors of rural banks has and continuous to engage the attention of the Association of Rural Banks (ARBs) and the. Several capacity building programmes have been instituted for staff and directors of rural banks with the sole aim of enhancing knowledge, equipping staff with banking skills and re-orienting attitude to work (Asiedu-Mante, 2011).

(e) Weak management

Another challenge was weak management of the rural banks. Rural banks had problems in planning, organising, directing, and monitoring or supervision of its operations. Poor service deliver is also characterised with rural banks in Ghana (Asiedu-Mante, 2011).

(f) Poor service delivery

Banking is a service industry and it is also dynamic. Practices and procedures are constantly changing. Technological platforms on which banking operations revolve are constantly undergoing rapid transformations. The environment in which banks operate is becoming increasingly competitive. What this means is that staff of rural banks must be professional in the way they serve their customers. According to Asiedu-Mante (2011), two things prevented this from happening. The first was the low literacy levels in rural Ghana which meant that most customers did not know their rights let alone demand quality service from staff of rural banks. Secondly, rural banks found their catchment areas as captive markets where they could get away with mediocre service and still retain their customers.

2.9 Summary of Chapter Two

This chapter forms the theoretical, empirical and conceptual review of relevant concepts of financial sustainability. The review identified four types of sustainability that include financial, programme, mission and human resource sustainability. This study focused on the financial and programme sustainability to determine the sustainability of rural banks in Ghana. This chapter has presented the conceptual framework of the study which explains the dependent and independent variables. The dependent variable used in this study was ROE. The independent variables include loan amount, loan maturity, interest

rate, loan repayment, credit risk and deposits. This chapter has presented comprehensive review of sustainability of banks but the empirical evidence to support the conceptual framework is not mentioned in this chapter. Chapter three highlights on the methods and approaches for collecting and analyzing data.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the approach and methods used to conduct the research to achieve the research objectives stated in chapter one. The research design, population of the study, sampling and sampling procedures has been described in this chapter. Also, the reliability and validity of data, research ethics, source of data, data collection methods and procedures and data analysis.

3.2 Research Design

Research design according to Churchill and Iacobucci (2005) is the structure used in research to collect and analyse data. The study used the survey research as the research design. Researchers use two main types of survey research namely the cross-sectional survey and the longitudinal survey. The cross-sectional survey design was used in this study because it does not involve much time. It also involves data collection at one point in time to assess customer satisfaction about the services provided by the Rural Banks in Ghana. The cross-sectional survey was selected as the research design in this study since according to Hair et al (2006) it is an important tool used to perform statistical analysis such as multiple regression and Analysis of Variance (ANOVA). Cross-sectional survey also allows researchers to collect large amount of data from a given population (Creswell, 2011).

3.3 Population of the Study

The population of the study was the customers of the three Rural Banks in Ghana. It also comprise of the number of workers in the Rural Banks. Customers to the institutions comprise of those who save there and make other transactions in the name of the bank. Hence group loan clients, individual and SME loan clients made up the population. The population of customers for the three banks was about 20,000 in Kumasi while the workers constituted about 200 staffs. The staff is composed of the credit officer, the branch manager, the loan manager and cashiers among others.

3.4 Sampling Methods and Procedures

Sampling is defined as the process of selecting among a larger population. A sample was used in this study to generalise findings from the larger population because the time allocated to complete this research is not adequate to cover all Rural Banks in Ghana and all customers and staff of Rural Banks in Ghana. Lists of customers who have conducted business with the three Rural Banks for more than five years were obtained. This was done because it is argued that the more the number of years of transacting business with the bank, the more they become known of most of the bank's policy. Consequently, valid information could be obtained from such customers concerning their satisfaction of the services of the Rural Banks. The study used both the probability and non-probability sampling to select respondents. The probability sampling used for the study is the simple random sampling. The non-probability sampling is the purposive sampling.

From the list, the random sampling method was used to select 50 customers from each of the lists provided by the Rural Banks. In all, 150 customers were selected from the three

Rural Banks. The purposive sampling method was used in this study to select the branch managers' of the three Rural Banks and credit officers for interview. The study considered these respondents because the researcher believed they have the knowledge concerning the subject matter and that they can provide relevant information.

3.5 Source of Data

The study used two sources of data namely primary and secondary sources. While the secondary data formed the basis of the literature for the study, the primary data contributed to the researcher's ability to address and analyse the research objectives. Secondary data was sourced from the internet. Journals and books on the internet as well as other publication materials were searched and downloaded. According to Ghauri and Gronhaugh, (2002) secondary source of data provides comparative and contextual data and leads to discovery of new information (Ghauri and Gronhaugh, 2002).

Primary data is the data which is collected from the field and forms the basis for addressing the research problem (Malhotra & Birks, 2007). Primary data was collected from customers and key management staff of the three Rural Banks. Data on financial performance of the Credit Unions was taken from audited financial statements for a period of ten years.

3.6 Reliability and Validity of Data

It is important in any study to examine how reliable the data is for analysis. With a reliable data, generalizations can be made (Joppe, 2000). According to Joppe (2000), reliability measures the accuracy of data collected. It is the degree to which responses from a survey are consistent and accurate representation of the sample frame or the

population. Pilot study was done where 15 questionnaires were administered to some of the customers of the three Rural Banks. The selection of the customers for the pilot study was done using the convenient sampling procedures. That is, customers that visited the bank to transact business were approached and asked if he/she could spend some time to respond to the questions. The pre-test was intended to examine the correctness and completeness of the interview schedules. Validity of the instruments was also achieved in this study by matching the research questions with the questions that were in the questionnaires administered to the respondents.

3.7 Study Variables

Table 3.1 shows the variables that were used in the study. The variables were obtained from literature review from the conceptual framework. The dependent variable is financial sustainability which includes the Return on asset (ROA) and Return on Equity (ROE). The independent variables include loan amount, loan maturity, loan interest, loan repayment, deposits and loan default. As shown in Table 3.1 the working definitions of the variables in relation to the research objectives have been mentioned.

Table 3.1: Study Variables

Variables	Description	Type of scale	Type of variable
ROA	It is defined as the indicator of how profitable a company is relative to its total assets	Continuous data	Dependent
Loan Amount	It is defined as the amount of loans granted to customers for a period of time	Continuous Data	Independent
Loan Maturity	It is defined as the time given to the borrower to pay back the loans	Continuous Data	Independent
Loan Interest	It is defined as the charge on the loans given to the borrower for a period of time	Continuous Data	Independent
Loan Repayment	It is defined as the ability of the	Continuous	Independent

	borrower to pay back the loans	Data	
Deposits	It is defined as the amount of money deposited into the accounts of customers	Continuous Data	Independent
Loan Default	It is defined as the amount of money that are not paid by borrowers as loans and interest	Continuous Data	Independent

Source: Author's construct, 2017

3.8 Data Collection Tools and Procedures

According to Neumann (2014) primary data is collected to response to specific research problem through the use of questionnaires, interviews and observations. This study used the questionnaires and interview as data collection techniques.

(a) Interview Guide

Interview guide was prepared to collect data on loan procedures and measures management has put in place to make them financially sustained. Interviews were conducted with the participants at their office as agreed to collect the data. The interview took a not more than 60 minutes for a participants and two weeks were used to collect the data.

(b) Questionnaires

Questionnaires were used to collect primary data from the 75 customers of the Rural Banks. The questionnaires were mostly close-ended. Some of the questions contain the five point Likert scale (1=strongly disagree and 5= strongly agree). The questionnaires were administered by the researcher with the help of some Field Research Assistants (FRAs). The FRAs were taken through the research objectives and each of the questions and how the questions should be asked. The "Twi" dialect was used as the

communication tool to collect data. The questions were asked and the responses were indicated on the questionnaires by ticking. Open ended questions were written as said by the respondents.

(b) Review of Financial Statements and Reports

This study focused on audited financial statements of the three Rural Banks. Reviews of the financial statements were done on their profit trend for the various years and loan portfolio.

3.9 Research Ethics

A formal permission was sought from the Christian Service University College (CSUC) for the conduct of this study and data collection. The letters were given to the three Rural Banks for permission to use their institutions as study areas and to obtain their financial statements. The study sought the consent of the key informants before the interviews were administered. The purpose and benefits of this study were clearly explained to the participants. As part of the ethics of this study, the respondents were assured of the confidentiality of the information they give out.

Ethical consideration forms an important integral part of research. The participant has the right to decide whether to respond to the questionnaires or not. This right should be respected during the data collection stage. The following were taken into consideration during the data collection stage for customers of the banks.

1. The name of the participant was not asked. This was done so that participants' would have confidence in the researcher. This made them to avail themselves in responding to the questions.
2. I showed my introductory letter from my department to the participants. My Identification Card was also shown to the participants.
3. The questionnaires were simplified in tables to make it easy to answer. This was done to take less time from the participants' so that they may not feel reluctant. The researcher perceived that participants have other things to do and therefore the questionnaires should not take more of their time.

3.10 Data Analysis and Reporting

The data was presented in tables and charts with the aid of statistical software like the Statistical Package for Social Sciences (SPSS), version 20. The primary data (questionnaires) were entered into the SPSS after they were edited. The questionnaires were given codes to make it easy for reference.

3.10.1 Analysis of Research Objective One: Trend Analysis and Profitability Ratios

Research objective one that examines the financial performance of the Rural Banks achieved using two methods namely; trend analysis and profitability ratios. A diagrammatic representation of the profit made by the three banks was shown to show trend of their financial performance. The One-Way ANOVA was used to examine the significant mean difference between the profitability of the three Rural Banks to decide on the ones that are performing well. The magnitude of the effect size was calculated using the Eta Squared formula; Sum of squares between groups/Total sums of squares.

The guidelines provided by Cohen (1988:284) for interpreting the Eta Squared value was used (.01=small effect; .06=moderate effect; .14=large effect).

Again, the profitability ratios such as Return on Equity (ROE), Return on Asset (ROA) and Profit Margin (PM) were used to assess the financial strength of the Rural Banks. The formula for calculating ROE is presented as follows;

(a) ROE = (Net income/outstanding equity) x 100%……. eqn (1).

In case, the ROE is low, it means that management of the Rural Banks is not investing its earnings efficiently. This could hinder the company's future growth prospects, making its shares less attractive and pushing down their price. In theory therefore, the higher a company's ROE, the better investment opportunity its shares represent.

(b) Return on Asset (ROA) = (Net income/total assets) x 100%…….eqn (2).

3.10.2 Analysis of Research Objective Two: Multiple Regression Analysis

The multiple regression analysis was conducted to assess the factors that affect financial performance. The dependent variable used in this study was the ROA. The independent variables include the credit risk factors (loan default/NPLS), loan amount, moan maturity, loan interest, loan repayment and coverage (number of customers). The general theoretical model for the regression analysis is presented as

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \ldots + \beta_n X_n + u \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots (4)$$

Where:

Y is the dependent variable

X is the independent variables

β_1 to β_n are the coefficients of the independent variables.

β_0 is the intercept

u is other factors

The descriptive statistics like mean, standard deviation and percentages were used to analyse the response on customer satisfaction of the services of the Rural Banks. The mean scores of response on the five-point Likert scale for each of the Likert item was calculated. The standard deviation was also calculated to show the deviation of the responses on the Likert items. The value of the mean score determines the Likert Scale (Strongly Disagree, Disagree, Slightly Agree, Agree and Strongly Agree).

The mean shows the average response from the respondents while the standard deviation shows the level of disparity of the response from the mean. The wider the difference of the mean and the standard deviation, it implies there was much variation in the responses. The reverse is true when the difference is minimal or insignificant. The correlation analysis was also performed to assess customer satisfaction on the sustainability of the rural banks. The dependent variable was customer intention to continue business with the bank. The independent variables include the five dimensions of customer satisfaction.

3.11 Summary of Chapter Three

This chapter has presented the method and approach used in collecting and analyzing data. This study used the mixed method approach where data was numeric and narrative data were collected to answer the research questions. The study used statistical techniques such as multiple regression analysis, correlation and paired-sample t-test to test hypothesis. The results of using these methods and approaches are discussed in chapter four.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSIONS

4.1 Introduction

This chapter presents the data collected from the field. The data has been anaylsed and discussed. This chapter focuses on the analysis of three important areas. An analysis has been done on the financial performance of the Atwima Kwanwoma Rural Bank, Bosomtwe Rural Bank and Nwabiagya Rural Bank. Also, analysis has been done on the effects of loan amount, loan maturity, loan interest, loan repayment, coverage (deposit) and loan overdue (credit risk) on financial performance of the banks. Again, analysis has been done on customer satisfaction of the services of rural banks and the effects on financial sustainability. The primary data was collected from 50 customers of each of the rural banks making a total of 150customers.

4.2 Demographic Characteristics of Customers of the Rural Banks

Table 4.1 shows the demographic characteristics of customers of the three selected rural banks. The number of customers selected from each bank was 50 which makes total of 150 customers. There were more females (63.2%) than males (36.8%) that constitute customers of the banks. Out of the 95 females, the Bosomtwe Rural has constitutes two-thirds of the female customers. A larger number of males (58) were between the ages 40-50 years followed thirty-two (32) between the ages 51-60. Among the females greater number of them (110) were also between 40-50 years followed by fifty (50) of them within the ages 29-30 years. The study indicates more than half (53.3%) of the

respondent were between the ages 40-50 years. Very few of them representing about two percent were more than 60 years.

Table 4.1: Demographic Characteristics of Respondents

Characteristics	Frequency	Percent
Gender		
Male	55	36.8
Female	95	63.23
Total	150	
Age (in years)		
18-28	15	9.8
29-39	33	22.2
40-50	80	53.3
51-60	19	12.4
60 and above	3	2.2
Total	150	100.0
Education		
Tertiary	34	22.9
Professional	11	7.6
SHS/Voc./Tech	51	34.0
Basic	27	18.1
No Forman Education	26	17.5
Total	150	100.0
Household Size		
1	23	15.2
2	15	9.8
3	12	8.3
4	13	8.6
5	18	11.7
6 and More	69	46.3
Total	150	100.0

Source: Survey Data, 2017

As shown in Table 4.1 considerable number of respondents (34%) had attained senior high school and vocational or technical level of education. Aside this, about 23 percent had attained tertiary level of education. Also, about 18 percent had attained basic level of education. The study argues that the educational level of respondents is rated low. This is due to the fact that majority of them representing about 70 percent had not gone beyond

the senior high school level of education. Out of this, about 18 percent have not had any formal education. This has implications on the service provisions of the three Rural Banks depend on certain services like electronic banking to make profit. It is argued that educational level is one of the contributing factors to people's adoption of these services. Thus, there is the need for the bank to sensitize customers on their services and policies to encourage them to participate fully in such services.

It can also be seen in Table 4.1 about 46 percent of respondents had household size to be more than five. About 15 percent of them had one household size and about 12 percent a household size of five. The average household size is 4.31. The household size can have an influence on a persons' decision to obtain assistance from the Rural Banks. The assistance can take various forms such as loans, financial advice, overdraft etc. All other things being equal the larger the household size the greater the tendency of a person requesting for loans to settle issues like payment of fees and bills.

The Rural Banks deal with different kinds of people who engage in various economic activities such as farming, commerce, those in manufacturing and service sector. About two-thirds (62.5%) of the respondents were in the service sector while 22 percent were in commerce sector (Figure 4.1). The majority of customers in the service sector (especially, those employed by the government) may be seen as a potential to be utilised by the bank. This is so because their pay slips can serve as collateral for the bank to give them loans. The bank can take advantage of the people in the commerce sector and involve them in Susu savings.

Figure 4.1: Sector of employment

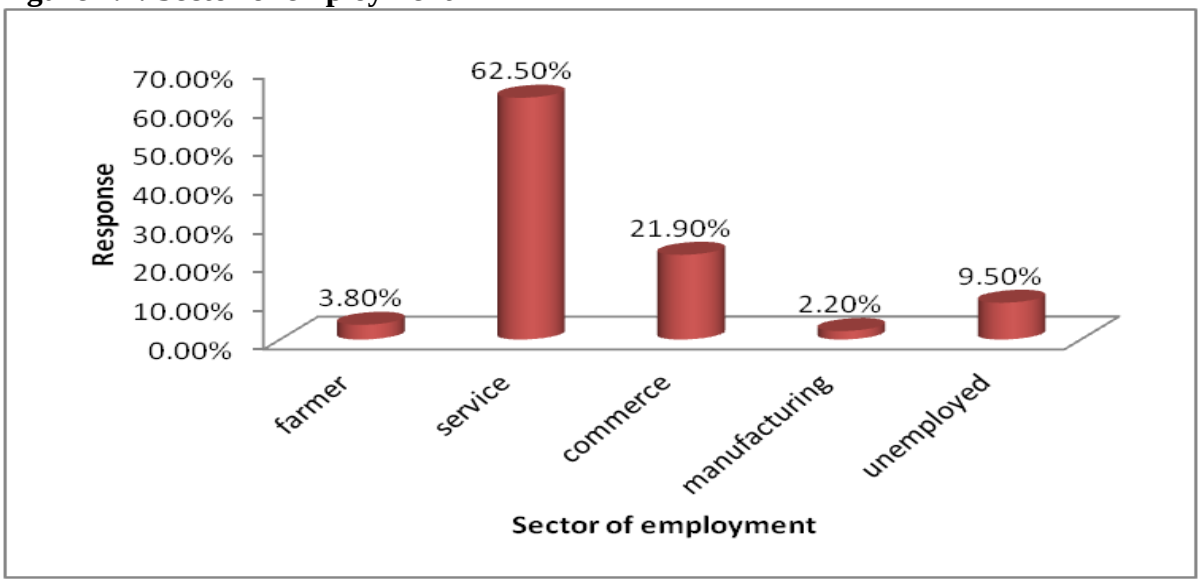


Figure 4.1: Sector of employment
Source: Survey Data, 2017

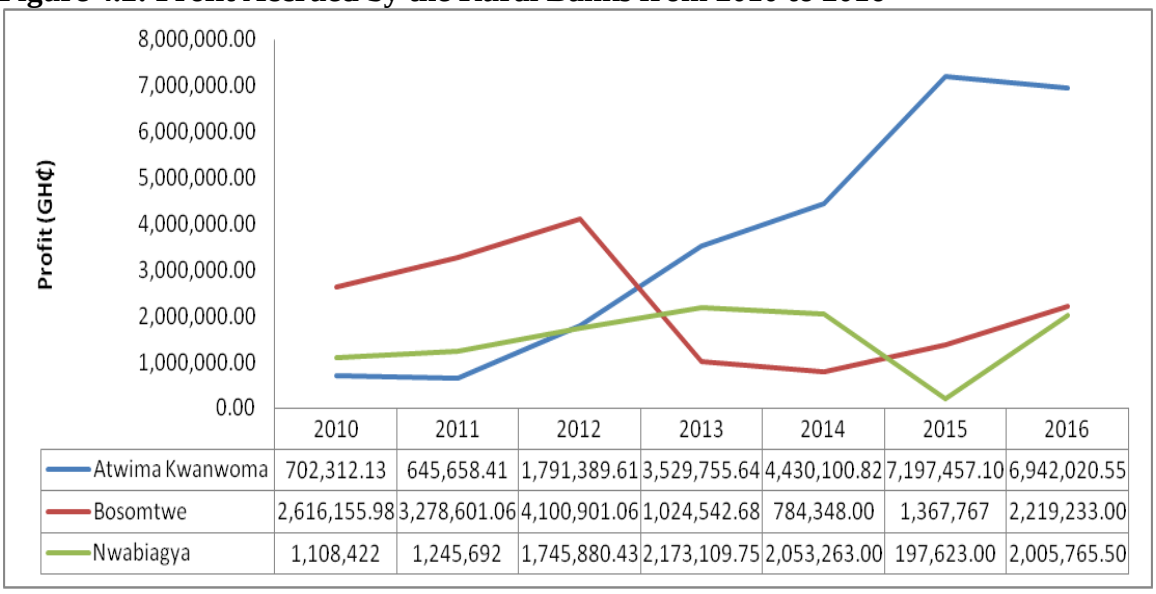
About 10 percent of respondents were unemployed whilst about four percent were farmers. Rural banks as the name suggest is established to provide assistance to people more especially, those in rural areas where agricultural activities are dominant. Looking at the smallest number of respondents' who were engaged in farming, the bank can utilize this and promote the agricultural sector by giving financial assistance and other services to farmers as part of their corporate social responsibility. The identified groups of people in this study transact business with the bank, request for loans, and pay interest on the loans thus contributing to financial sustainability of the institution.

4.3 Financial Analysis of the Rural Banks

4.3.1 Trend Analysis of the Profitability of the Rural Bank

The Trend Analysis was used to assess the trend performance of the Rural Banks in terms of their profits for a period of seven years. An increased in the trend of profitability for the various years determines the financial performance and sustainability of the Rural Banks. It can be deduced from Figure 4.2 that the Rural Banks made profit of GH□51,159,998.72 during the period under review.

Figure 4.2: Profit Accrued by the Rural Banks from 2010 to 2016



	2010	2011	2012	2013	2014	2015	2016
Atwima Kwanwoma	702,312.13	645,658.41	1,791,389.61	3,529,755.64	4,430,100.82	7,197,457.10	6,942,020.55
Bosomtwe	2,616,155.98	3,278,601.06	4,100,901.06	1,024,542.68	784,348.00	1,367,767	2,219,233.00
Nwabiagya	1,108,422	1,245,692	1,745,880.43	2,173,109.75	2,053,263.00	197,623.00	2,005,765.50

Source: Field Data, 2017

Out of this amount (GH₵51,159,998.72), the Atwima Kwanwoma Rural Bank made profit of GH₵25,238,694.26 which represent 49.3 percent from 2010-2016. The Bosomtwe Rural Bank made profit of GH₵15,391,548.78 from 2010 to 2016 which represents 30.1 percent. Also, the Nwabiagya Rural Bank made profit amounting to GH₵10,529,755.68 which represents 20.6 percent. It can be argued from the data that the

Atwima Kwanwoma Rural Bank made the largest profit from 2010 to 2016. This was attributed to the fact that the bank received the highest deposits from customers. Also, the bank was able to receive more interest on loans granted to its customers at a relatively small credit risk occurrences. It can be seen from Figure 4.1 that the profitability of the Atwima Kwanwoma Rural Bank reduced by 8.1 percent in 2011. However, the profit of the bank increased consistently from 2012 to 2015 and reduced again by 3.5 percent in 2016. This figure (3.5 percent) is considered as insignificant compared with the increased in the bank's profit. For instance, the largest profit to the Atwima Kwanwoma Rural Bank was made in 2015 with a margin of 62.5 percent.

The Bosomtwe Rural Bank was the second largest regarding the amount of profit it received from 2010 to 2016. The profit of the bank increased consistently from 2010 to 2012 but dropped from 2013 to 2014 with a margin of 23.4 percent. The largest profit to the Bosomtwe Rural Bank was made in 2016 with a margin of 62.3 percent. The Nwabiagya Rural Bank was the third largest regarding the profit it made from 2010 to 2016. The profit of the bank increased consistently from 2010 to2014. However, the profit dropped from 2014 to 2015 and increased in 2016.

The study performed a one-way repeated ANOVA to ascertain the significant mean differences among the three banks regarding the amount of profit they made from 2010 to 2016. The results indicated a significant value of 0.140 which is more than the alpha value of 0.05 (Table 4.2). It can therefore be concluded that there was no significant difference in profit made by the three banks. This means that the profit made by the effort of one bank was not different from the other.

Table 4.2: ANOVA of Income Earned by the Banks

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	1978057.250	3	659352.417	75.387	.140
Within Groups	104954.500	12	8746.208		
Total	2083011.750	15			

Source: Author's Construct, 2017

4.3.2 Profitability Ratios of the Rural Banks

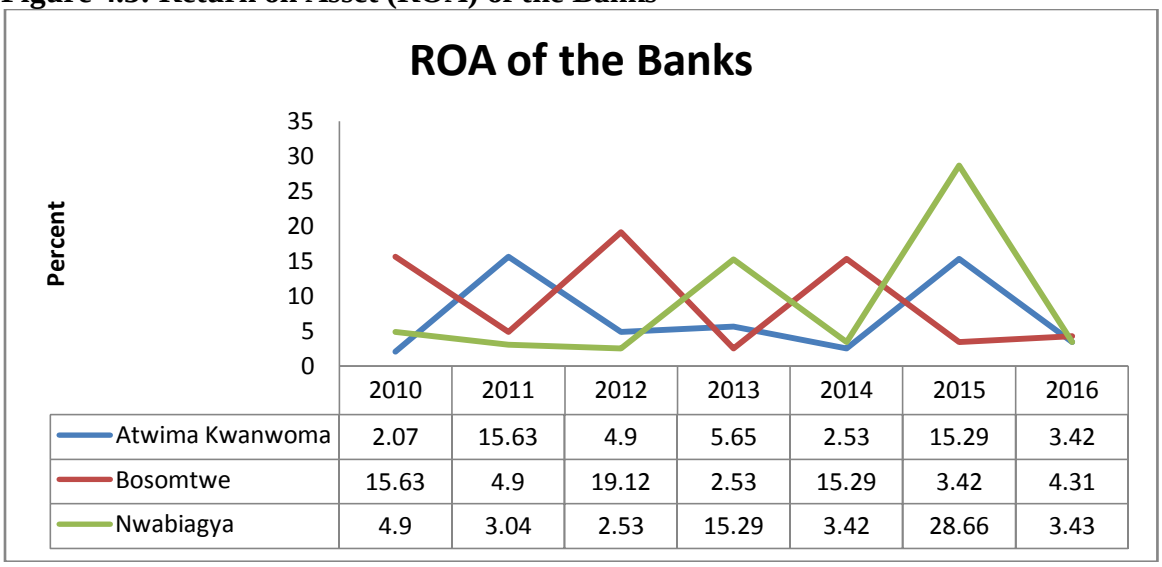
The Return on Asset (ROA) and Return on Equity (ROE) were the two profitability ratios used in this study to assess the financial performance of the Rural Banks. This is because the ROA and ROE been used extensively in the literature (Gizaw et al., 2015; Rufai, 2013; Nyamsogoro, 2010; Armendáriz and Morduch, 2007; Soyemi et al., 2014; Soyemi et al., 2014; Adeusi et al., 2013; Poudel, 2012; Addae-Korankye, 2014). These ratios assess whether a business is making profits and at an acceptable rate. Profitability Ratios measure management's ability to control expenses and to earn a return on the resources committed to manage the business.

(a) Return on Asset (ROA)

The ROA was calculated to indicate the percentage profitability of the Rural Banks in relation to its available total assets of resources. The ROA was also used to measure the amount of profit made by the Rural Banks per Ghana Cedi or dollar of its assets. In other words, the ROA was used to portray the idea of how the Rural Banks use their assets to make profit and remain financially sustainable. Flamini et al., (2009) stated that a ROA of 2 percent in an indication that the bank is performing well in terms of the profitability. Figure 4.3 show that the Atwima Kwanwoma Rural Bank achieved ROA of more than 2

percent throughout the years (from 2010 to 2016). The largest ROA was recorded in 2011 while the least was in 2010.

Figure 4.3: Return on Asset (ROA) of the Banks



	2010	2011	2012	2013	2014	2015	2016
Atwima Kwanwoma	2.07	15.63	4.9	5.65	2.53	15.29	3.42
Bosomtwe	15.63	4.9	19.12	2.53	15.29	3.42	4.31
Nwabiagya	4.9	3.04	2.53	15.29	3.42	28.66	3.43

Source: Author's Construct, 2017

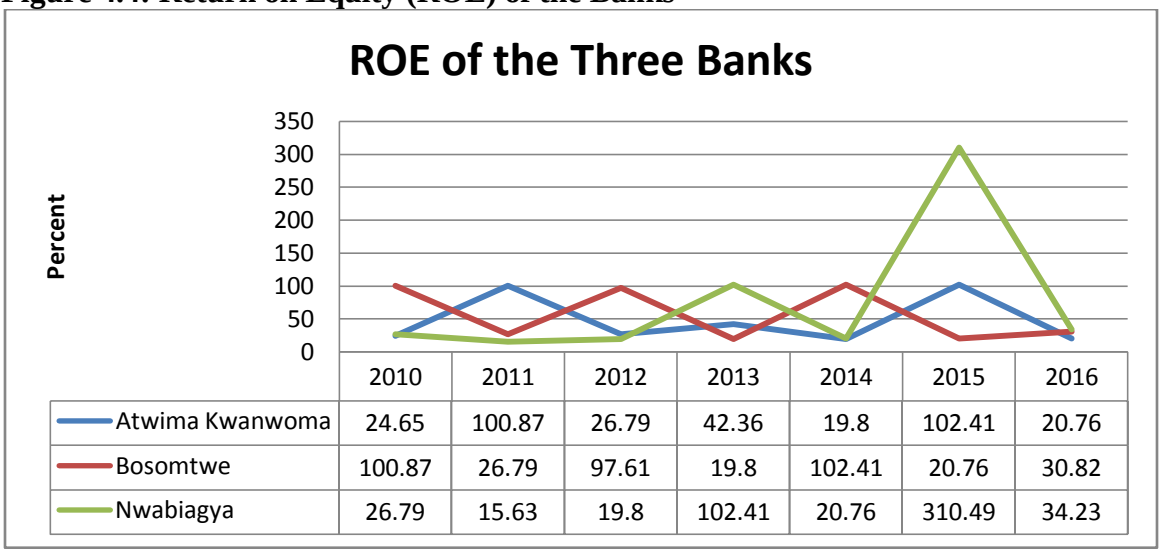
The Bosomtwe Rural Bank showed a highest ROA of 19.12 percent in 2012 while the least was in 2013. The ROA for the bank exceeded the benchmark of 2 percent suggested by Flamini et al., (2009). The Nwabiagya Rural Bank showed the highest ROA of 28.66 percent in 2015 while the least was in 2.53. Among the rural banks the Nwabiagya Rural Bank recorded the highest ROA between 2015 and 2016 (See Figure 4.3). The calculated figures for the profitability ratios which are expressed in percentages shows that there is improvement in the profitability of the three Rural Banks from 2010 to 2016 because they are higher than the 2 percent benchmark. It can therefore imply that banks were efficient in converting its investment into profit for the years and more especially in 2013 and 2014 compared to the other years. That is, the banks are capable of earning adequate money on its available assets. It can be concluded in this study that the Atwima

Kwanwoma, Rural Bank, Bosomtwe Rural and the Nwabiagya Rural Bank are financially sustainable.

(b) Return on Equity (ROE) of the Banks

The ROE was estimated in this study to measure how much shareholders earn for their investments in the bank. It has been mentioned in several studies (For example, Gizaw et al., 2015; Soyemi et al., 2014; Soyemi et al., 2014; Adeusi et al., 2013; Poudel, 2012; Addae-Korankye, 2014) that ROE that fall within 15 and 20 percent is an attractive level of investment to the banks. From Figure 4.4 the recorded ROE for the Atwima Nwabiagya fall between the benchmark of 15 and 20 percent.

Figure 4.4: Return on Equity (ROE) of the Banks



	2010	2011	2012	2013	2014	2015	2016
Atwima Kwanwoma	24.65	100.87	26.79	42.36	19.8	102.41	20.76
Bosomtwe	100.87	26.79	97.61	19.8	102.41	20.76	30.82
Nwabiagya	26.79	15.63	19.8	102.41	20.76	310.49	34.23

Source: Author's Construct, 2017

The highest ROE was recorded in 2015 with a figure of 102.41 percent. The second highest ROE was recorded in 2011 with a figure of 100.87 percent. The lowest ROE for Atwima Nwabiagya Bank was recorded in 2016 with a figure of 20.76 percent. The Bosomtwe Rural Bank showed a highest ROE of 102.41 percent in 2014 and the lowest in 2013 (19.8 percent). The Nwabiagya Rural Bank showed the highest ROE in 2015

with 310.49 percent while the least was recorded in 2012 (19.8 percent). Among the rural banks, the Nwabiagya recorded the highest ROE from 2015 to 2016 (See Figure 4.4). The ROE for the three banks exceeded the 20 percent recommended stated above. The average ROE for the three banks from 2010 to 2016 was 42.76 percent. It is therefore concluded in this study that the Rural Banks are more profitable by comparing their net profit/income to their shareholder's equity.

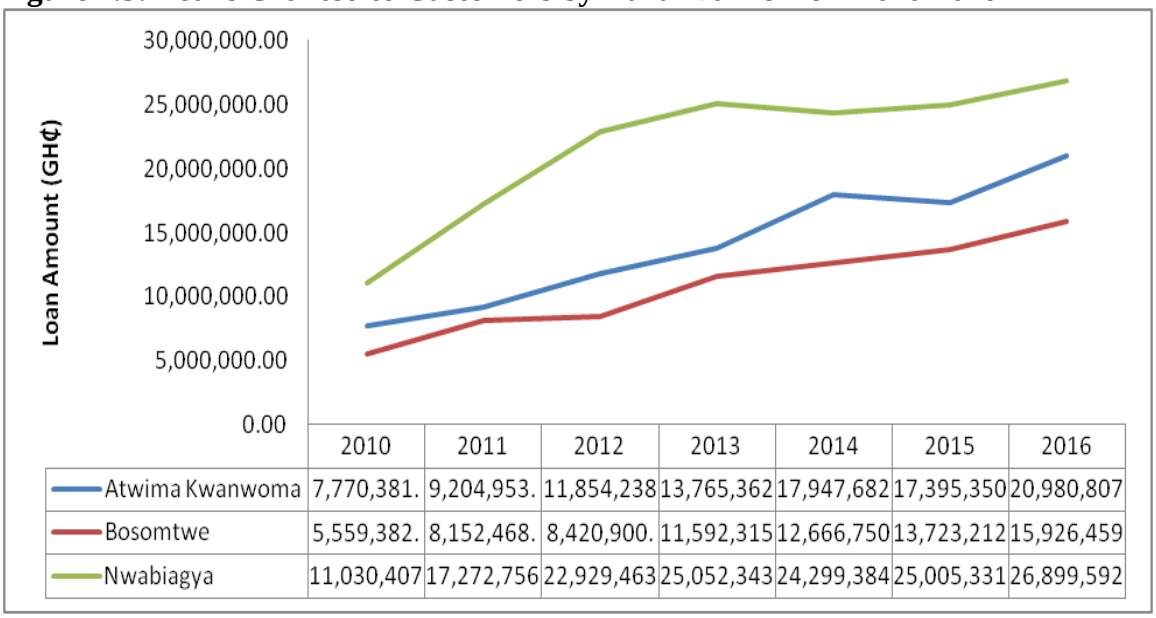
4.4 Factors Affecting Financial Sustainability of Rural Banks

Figure 4.5 shows the financial analysis of the Atwima Kwanwoma Rural Bank, the Bosomtwe Rural Bank, and the Nwabiagya Rural Bank in the Ashanti Region of Ghana. The amount of loans granted to customers from 2010 to 2016 has been shown in Table 4.2. Also, the loan maturity, interest amount on loans received by the banks, the loan repayment amount received by the bank, customer deposits and loan payment overdue (credit risk) figure 4.5.

4.4.1 Amount of Loans Disbursed to Customers by the Rural Banks (2010-2016)

Figure 4.4 shows the total amount of loans granted to customers by the three Rural Banks from 2010 to 2016. The total amount of loans disbursed from 2010 to 2016 amounted to GH¢327,449,600.86. Out of this amount the Atwima Kwanwoma Rural Bank granted loans amounting to GH□98,918,777.49 from 2010-2016.

Figure 4.5: Loans Granted to Customers by Rural Banks from 2010-2016



	2010	2011	2012	2013	2014	2015	2016
Atwima Kwanwoma	7,770,381.	9,204,953.	11,854,238	13,765,362	17,947,682	17,395,350	20,980,807
Bosomtwe	5,559,382.	8,152,468.	8,420,900.	11,592,315	12,666,750	13,723,212	15,926,459
Nwabiagya	11,030,407	17,272,756	22,929,463	25,052,343	24,299,384	25,005,331	26,899,592

Source: Field Data, 2017

Also the Bosomtwe Rural Bank granted loans amounting to GH□76,041,487.47 from 2010-2016 and the Nwabiagya Rural Bank granted loans amounted to GH□ 152,489,278.48 from 2010 to 2016 (Figure 4.5). Out of the three banks Nwabiagya Rural Bank made the largest disbursement of loans from 2010 to 2016. Thus Nwabiagya Rural Bank contributed 46.6 percent to loan amount from 2010 to 2016. The Atwima Kwanwoma Rural Bank made the second largest (30.2 percent) contribution to loans disbursement while Bosomtwe Rural Bank made the third largest (23.3 percent) contribution to loan amount from 2010 to 2016.

This notwithstanding, it can be deciphered from Figure 4.4 that all the Rural Banks increased their loan amount from 2010 to 2016 with the exception of the Nwabiagya Rural Bank. The Nwabiagya Rural Bank experienced a fall in loans disbursement by 3 percent from 2013 to 2014. An interview with the loan Officer revealed that though the

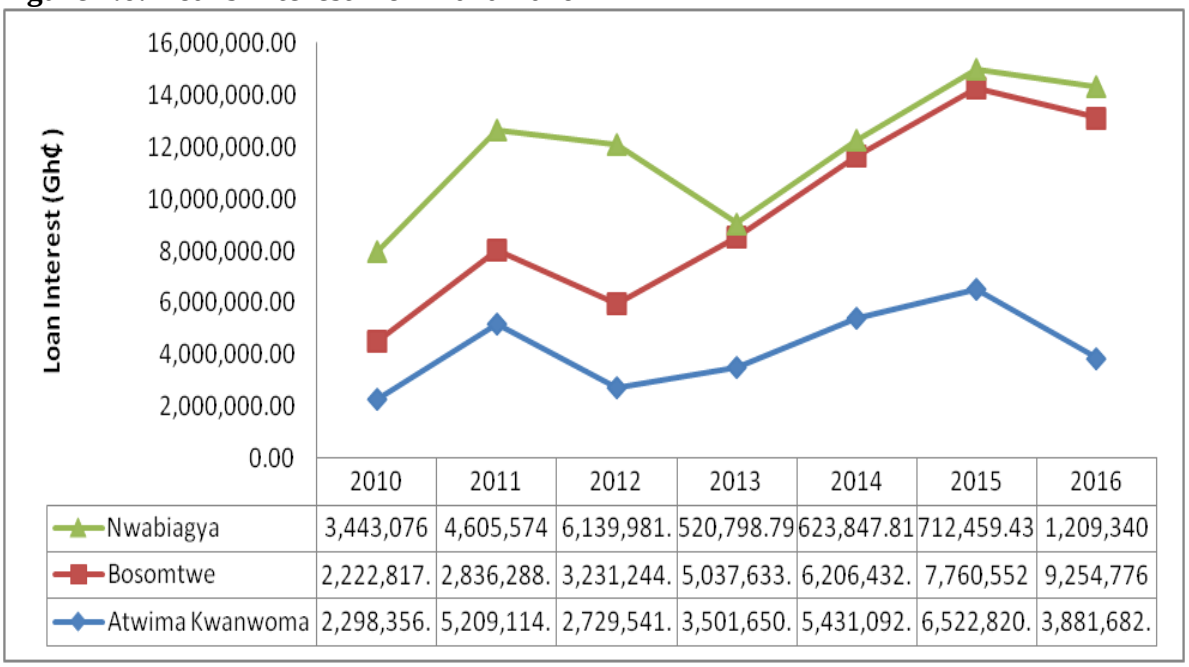
number of customers that requested for loans within the period was not few the loan they requested was not large. This contributed to the fall in loan amount from 2013 to 2014.

However, the loan amount increased from 2014 to 2016. It is argued in this study that the potentials for the Rural Banks to continue increasing their loan amount to customers are high. In other words, the banks are capable of increasing their loans to customers in the subsequent years. The Rural Banks therefore have the potentials for remaining in the banking business environment for longer period of time. That is, they are capable of becoming financially sustainable. This is confirmed by Armendáriz and Morduch (2007) and Nyamsogoro (2010) who claim that the financial sustainability of banks depends on the capacity to grant more loans. In other words, the more customers' demand loans, the more the lender become profitable and financially sustainable. However, this may depend on the interest on the loans and the ability of management of the banks to ensure that the loans are paid and on time.

4.4.2 Loan Interest received by the Banks from 2010 to 2016

The financial profitability of banks may also be dependent on the amount of loan interest charged for a period of time. Figure 4.6 shows the trend of loans interest charged by the Rural Banks from 2010 to 2016. The total amount of loan interest received by the Rural Banks was GH□83,379,079.39. Out of this amount, the Bosomtwe Rural Bank received loan interest amount of GH□36,549,744.2 which indicates 43.8 percent of the total loan interest received by the bank. The Atwima Kwanwoma Rural Bank received loan interest amount of GH□29,574,257.39 which represents 35.5 percent. Also, the Nwabiagya Rural Bank received loan interest amount of GH□17,255,077.8 from 2010 to 2016 (Figure 4.4).

Figure 4.6: Loans Interest from 2010-2016



	2010	2011	2012	2013	2014	2015	2016
Nwabiagya	3,443,076	4,605,574	6,139,981.	520,798.79	623,847.81	712,459.43	1,209,340
Bosomtwe	2,222,817.	2,836,288.	3,231,244.	5,037,633.	6,206,432.	7,760,552	9,254,776
Atwima Kwanwoma	2,298,356.	5,209,114.	2,729,541.	3,501,650.	5,431,092.	6,522,820.	3,881,682.

Source: Field Data, 2017

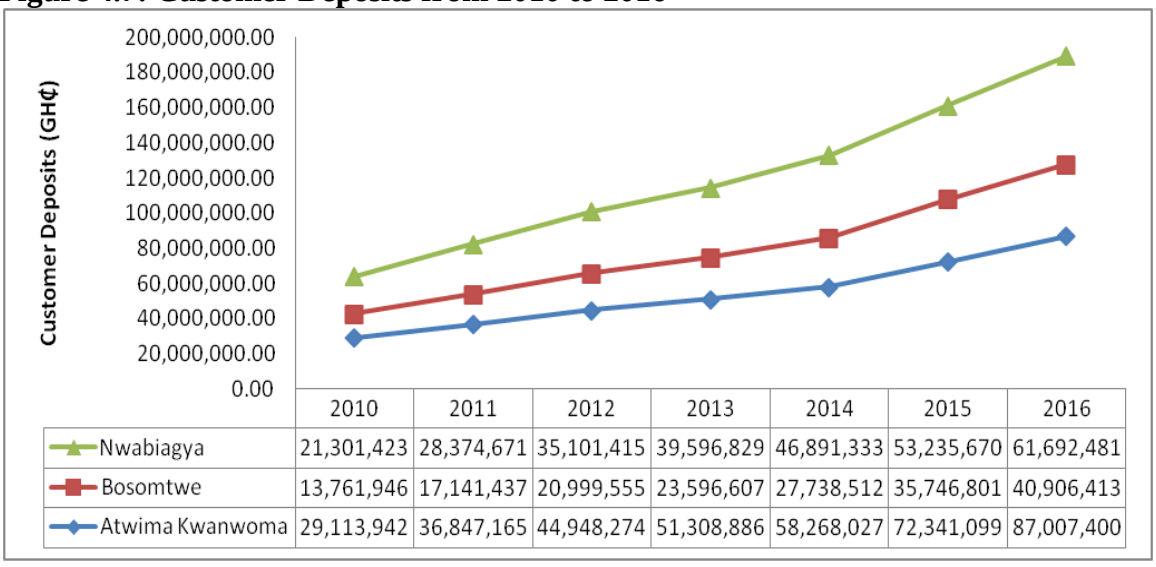
The Bosomtwe Rural Bank received the largest contributions regarding interest on loans. This was followed by the Atwima Kwanwoma Rural Bank and the Nwabiagya Rural Bank. Interview with the loan Officers in the Rural Banks showed that the Banks profit is largely dependent on the interest on loans given to customers for the planned period. Though, the Nwabiagya Rural Bank the highest amount of loans disbursed to its customers from 2010 to 2016, it made the least regarding the amount of interest received from the loans. Bosomtwe Rural Bank was the least contributor in terms of loan amount to its customers however it received the largest interest amount on the loans. This indicates that the bank was able to charge high interest on the loans granted to its customers.

From the data the Bosomtwe Rural Bank is capable of improving on its profit and thus its financial sustainability is robust. This is emphasized by Shankar (2007) who argued that parge profit returns determines the sustainability of a firm. However, as mentioned by Nyamsogoro (2010), since human beings are rationale in taking decisions, high interest on loans can reduce the amount of loans they may request for a period of time. They may also shift their attention to other banks or Savings and Loans Companies to request for loans. Yet, the Rural Banks were able to increase their loan amount and loan interest consistently from 2010 to 2016. This shows that their loan interest comparatively is satisfactory to its customers.

4.4.3 Customer Deposit (Coverage) Received by the Banks

The number of customers or customer deposits received by the banks can determine its financial sustainability. Figure 4.7 shows the amount of money received by the Rural Banks as deposit from customers for a period of seven years (2010-2016).

Figure 4.7: Customer Deposits from 2010 to 2016



	2010	2011	2012	2013	2014	2015	2016
Nwabiagya	21,301,423	28,374,671	35,101,415	39,596,829	46,891,333	53,235,670	61,692,481
Bosomtwe	13,761,946	17,141,437	20,999,555	23,596,607	27,738,512	35,746,801	40,906,413
Atwima Kwanwoma	29,113,942	36,847,165	44,948,274	51,308,886	58,268,027	72,341,099	87,007,400

Source: Field Data, 2017

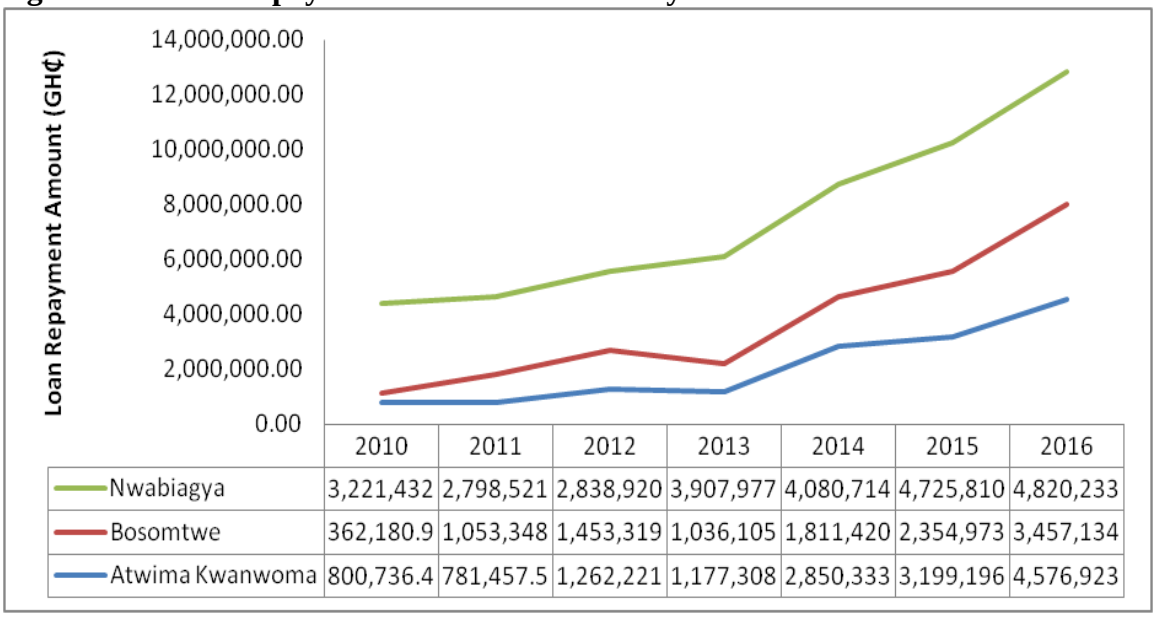
It was found that a total amount of GH□845,919,893.89 was mobilised from customers as deposits from 2010 to 2016. The Atwima Kwanwoma Rural Bank received deposits amounting to GH□379,834,796.61 from its customers from 2010 to 2016. The Bosomtwe Rural Bank received a deposit amount of GH□179,891,273.15. The Nwabiagya Rural Bank also received deposit amount of GH□286,193,824.13from its customers from 2010 to 2016. It can be argued from the data that though the Atwima Kwanwoma did not receive large amount of loans and interest amounts on loans, it received the highest customer deposits from 2010 to 2016 which constitute 44.9 percent of the total deposit of the three rural banks. This may be attributed to the caliber of people who make transactions with the banks. The Nwabiagya Rural Bank received the second highest which constitute about 33.8 percent. The Bosomtwe Rural Bank received the third highest amount which constitutes 21.3 percent. Interviews with the loan Officers revealed that amount of deposits from customers was attributable to promotions embarked by the Rural Banks.

It is clear from Figure 4.7 that customer deposits of the banks increased throughout the years. It can be argued that the deposits made by customers have important role in making the banks financially sustainable. Interviews with the Loan Officers and Branch Managers of the Banks showed that the banks use customer deposits to grant loans and invest in other profitable ventures for more profit. This clearly indicates that the larger the customer the more the bank improves its profits as mentioned by Rai (2011) and Adongo and Stork (2005).

4.4.4 Loan Repayment Amount Collected by the Banks

Figure 4.9 shows the amount that was collected by the Rural Banks from loans they gave to the customers. The total amount of loans paid by the customers from 2010 to 2016 was GH¢52,353,318.98. Out of this amount the Nwabiagya Rural Bank was able to receive GH¢26,176,659.49 repayment of loans by the customers which represent 50 percent of the total repayment amount received by the three banks. The Atwima Kwanwoma Rural Bank was able to collect GH¢14,648,176.8 as loans paid by the customers which represent 28 percent. Also, the Bosomtwe Rural Bank was able to mobilised GH□11,528,482.69 as repayment loans of its customers which represent 22 percent. It can be seen from Figure 4.9 that the Nwabiagya Rural Bank was able to collect the highest amount of repayment of loans from its customers during the period under review (2010-2016).

Figure 4.8: Loan Repayment Amount Received by the Banks from 2010-2016



	2010	2011	2012	2013	2014	2015	2016
Nwabiagya	3,221,432	2,798,521	2,838,920	3,907,977	4,080,714	4,725,810	4,820,233
Bosomtwe	362,180.9	1,053,348	1,453,319	1,036,105	1,811,420	2,354,973	3,457,134
Atwima Kwanwoma	800,736.4	781,457.5	1,262,221	1,177,308	2,850,333	3,199,196	4,576,923

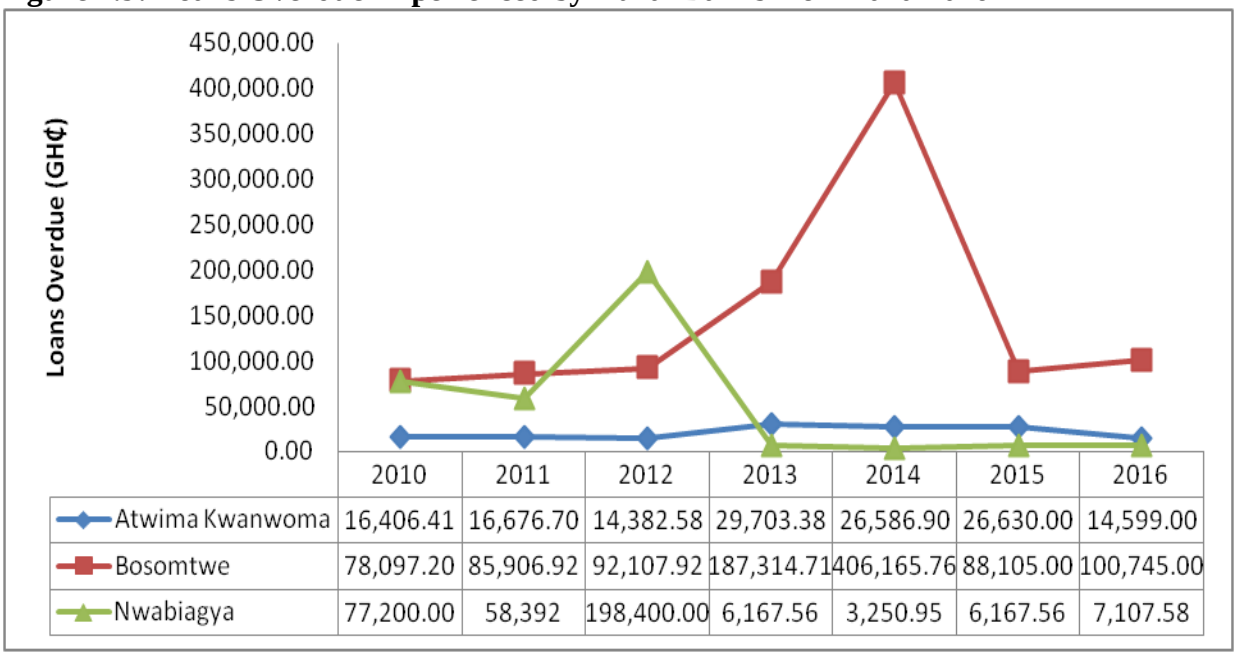
Source: Field Data, 2017

As indicated in Figure 4.8, the capacity of the Atwima Kwanwoma Rural Bank to collect repayment loans from its customers decreased in 2013. Similarly, repayment of loans received by the Bosomtwe Rural Bank dropped in 2013. Also, repayment of loans for the Nwabiagya Rural Bank dropped in 2011 but increased from 2012 to 2016. It can be argued that the Rural Banks are financially sustainable because they were able to increase the amount of repayment loans from their customers (See also, Nyamsogoro, 2010; Schreiner, 2000; Schreiner, 2001). As argued by Schreiner (2000), High repayment rate depends on the capacity of the bank to collect the loans from its clients (Schreiner, 2000).

4.4.5 Loans Overdue (Credit Risks)

Figure 4.9 shows the loans that were overdue from 2010 to 2016. These are loans that had not been paid by their customers for a period of seven years. It was found that an amount of GH¢1,540,113.13 were loans that had not been paid by customers from 2010 to 2016. Out of this amount, the Bosomtwe Rural Bank had loan overdue to the tune of GH¢1,038,442.51 representing 67.4 percent of the total amount of loans overdue. The Nwabiagya Rural Bank had loan overdue of GH¢356,685.65 which represents 25.2 percent. The Atwima Kwanwoma Rural Bank also had loan overdue of GH¢144,984.97 representing 9.4 percent. It can be seen from the data that Bosomtwe Rural Bank to experienced high credit risks or loan defaults during the period under review. This is due to the inability of the bank to collect large amount of loans from its customers from 2010 to 2016.

Figure 4.9: Loans Overdue Experienced by Rural Banks from 2010-2016



	2010	2011	2012	2013	2014	2015	2016
Atwima Kwanwoma	16,406.41	16,676.70	14,382.58	29,703.38	26,586.90	26,630.00	14,599.00
Bosomtwe	78,097.20	85,906.92	92,107.92	187,314.71	406,165.76	88,105.00	100,745.00
Nwabiagya	77,200.00	58,392	198,400.00	6,167.56	3,250.95	6,167.56	7,107.58

Source: Field Data, 2017

The results from this study agrees with other studies which argue that credit risk occurs as a result result of the inability of loan borrowers to pay back the loan or the inability of the bank to collect loans from its customers (Addae-Korankye, 2014; Soyemi et al., 2014; Adeusi et al., 2013; Poudel, 2012).

4.4.6 Multiple Regression Analysis of Factors Affecting Financial Sustainability of Rural Banks

The multiple regression analysis was performed to assess the impact of the independent variables (loans, loan interest, loan maturity, customer deposits, loan overdue and loan repayment amount) on the dependent variable (Return on Asset). In the model summary results (Table 4.3), the R-Square (.527) and Adjusted R-Square (.325) imply that the independent variables explain 52.7 percent and 32.5 percent of variations in the profitability (ROA) of the banks taking other factors into consideration. The Adjusted R-

Square value of 0.325 showed that 32.5 percent of the variations in ROA of the banks are by the amount of loans given to customers.

Table 4.3: Model Summary Explaining Variation of the Independent Variables and ROA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	0.726	0.527	0.325	1572748.6253193

a. Predictors: (Constant), Loan Maturity, Loan Interest, Customer Deposit, Loan Overdue (Loan Default), Loans , Repayment Amount
b. Dependent Variable: ROA

The R-Square value is moderate using the rule of thumb that the $AdjR^2 \leq 0.20$ is classified as very weak; $0.20 < AdjR^2 \leq 0.40$ is classified as weak; $0.40 < AdjR^2 \leq 0.60$ is classified as reasonable or moderate; $0.60 < AdjR^2 \leq 0.80$ is classified as strong; and $AdjR^2 > 0.80$ is classified as very strong. As indicated in Table 4.4, the probability of the F-statistic value of 21.603means that the regression model result is significantly better prediction of ROA than using the mean value of ROA.

Table 4.4: Analysis of Variance (ANOVA) from the Multiple Regression Analysis

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	38634615235826.570	6	6439102539304.429	21.603	0.045[b]
	Residual	34629535338214.100	14	2473538238443.864		
	Total	73264150574040.670	20			

a. Dependent Variable: ROA

b. Predictors: (Constant), Loan Maturity, Loan Interest, Customer Deposit, Loan Overdue (Loan Default), Loans , Repayment Amount

The F-statistic for the overall regression relationship was significant at 0.045. This probability value of 0.000 is less than the alpha value of 0.05. This suggests that null hypothesis that there is no relationship ROE and loans, loan interest, loan maturity, customer deposits, loan overdue and loan repayment amount was rejected. From Table 4.5, the regression coefficient shows that it was loan amount and loan default which showed significant impact on profitability of the banks. The beta coefficient of 0.521implies that loan disbursement by the banks made the strongest unique contribution to explaining profitability when all other variables in the model are controlled for.

Table 4.5: Regression Coefficient of Variables from the Regression Results that Explain Profit (ROA)

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2318015.319	2129999.949		1.088	0.295
Loans	-0.153	0.077	0.521	-1.982	0.038
Loan Interest	-0.065	0.202	-0.081	-.321	0.753
Customer Deposit	0.065	0.042	0.642	1.566	0.140
Repayment Amount	0.575	0.644	0.344	0.892	0.387
Loan Overdue (Loan Default)	-0.715	5.022	-0.035	-0.142	0.049
Loan Maturity	-2235.794	4246.212	-0.098	-0.527	0.607

The remaining independent variables such as loan maturity, loan interest, loan repayment amount and customer deposits were not statistically significant to profit (ROA) of the banks. That is, the significant values exceeded the alpha value of 0.005. This implies that there was not much evidence to prove that those variables have significant impact on the bank's profitability. As indicated in Table 4.5, the standardised beta coefficient value of 0.521shows that, holding all other variables constant, a one unit increase in the amount of loans the banks will be willing to grant to their customers is the amount of profit is likely

to increase income by 51 percent. Also, the standardised beta coefficient value of -.035 shows that, holding all other variables constant, a one unit increase in loan default by the customers of the banks will lead to 3.8 percent reduction in profitability.

The results from the multiple regression analysis in this study challenges the claims made by Nyamsogoro (2010), Brake (2000), Schreiner (2001), Brake (2000), Armendáriz and Morduch (2007), Sankar (2007) and Rai (2011) who argue that the financial sustainability of banks depends on loan maturity, loan interest, loan repayment amount and customer deposits. Nevertheless, the results in this study confirm findings by Nyamsogoro (2010), Soyemi et al., (2014), Adeusi et al. (2013) who report that the amounts of loans Rural Banks grant to their customers make them more financially sustainable.

4.5 Customer Satisfaction of the Services from the Rural Banks

Table 4.6 shows the number of years the customers had been with the banks and their intentions to continue savings with them. It can be observed from Table 4.6 that more than half (51.1%) of respondents have been with the banks for a period of 1-3 years.

Table 4.6: Cross Tabulation of Years with the Bank And Intention To Continue

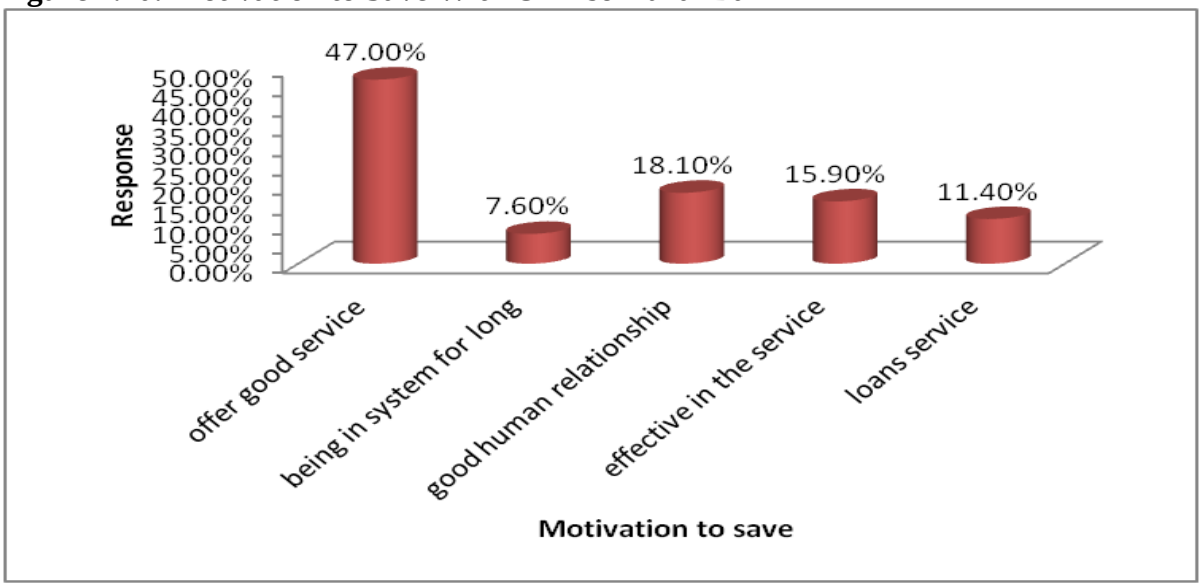
Years	intent to continue business			Total
	yes	not sure	no	
1-3	54	12	11	77 (51.1%)
4-5	45	9	7	61 (41%)
6-8	5	3	4	12 (7.9%)
Total	104	24	23	150

Source: Survey Data, 2017

That is followed by 41 percent who had been with the bank for 4-5 years. The study argues that greater number of respondents had spent more years with the bank and this has effects on the financial sustainability of the Rural Banks. The ability of the bank to maintain or retain the services of its customers for a number of years, stand the chance of remaining financially sustainable. Table 4.6 indicates that greater number of customers who had spent 1-3 years with the bank said that they would continue enjoying their services. Also, out of those who had spent 4-5 years with the bank, considerable number of them had the intention of continuing business. This implies that customers are satisfied with the services of the Rural Banks and this contributes to financial sustainability of the banks. This is in line with various studies (Nyamsogoro, 2010; Navajas, Schreiner, Meyer, Gonzalez–Vega, and Rodriguez–Meza, 2000). The ability of the Rural Banks to retain the services of the customers implies two things. First, it is obvious that the customers will deposit their money into the bank account. Second it is also obvious that the customers would request for loans from the Rural Banks.

It was found that a considerable number of factors motivated customers to save with Rural Banks (Figure 4.10). These include their good services, their capacity to work in the competitive environment for long, staff good human relationship, and their effective services and lastly, their loan services, their services and it is a caution for management of the bank.

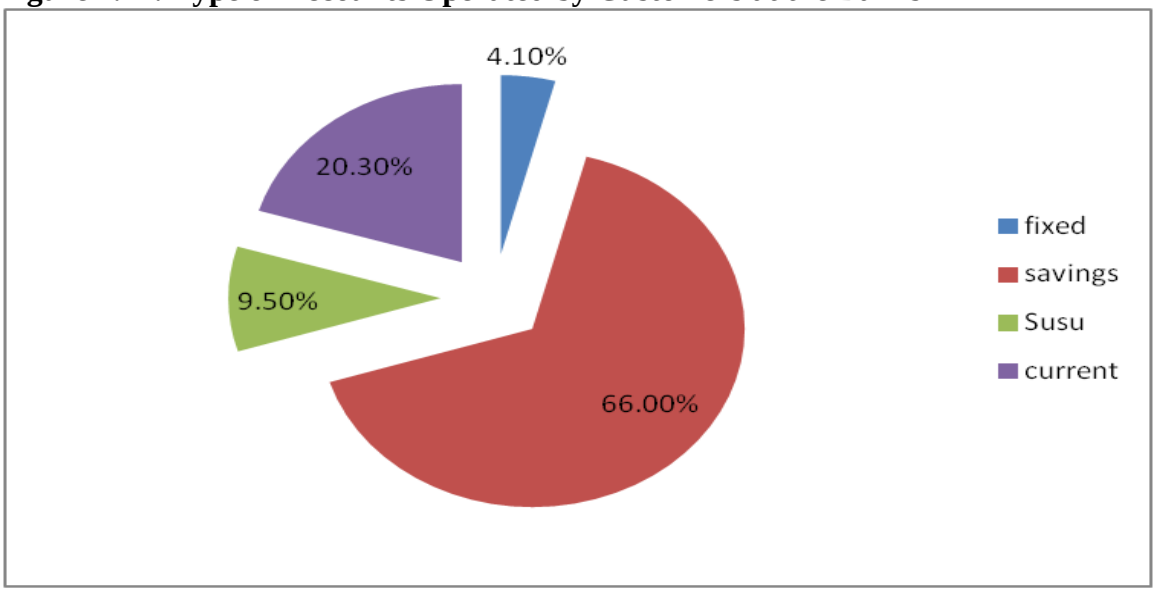
Figure 4.10: Motivation to Save With Offinso Rural Bank



Source: Survey Data, 2017

The study found out that 47 percent of customers were motivated to save with the bank by the bank's good service. About 18 percent were motivated by their good human relation whilst about 16 percent were motivated by their effective service delivery. Other customers representing about 11 percent were motivated by their loan services. The other side effect is that, a negative change in any of these factors would de-motivate workers to withdraw their services from the banks. The customers operate fixed, savings and current account with the Rural Banks. It was found that customers operate fixed, savings and current account with the Rural Banks. The study revealed that two-thirds (66%) operate savings account with the banks. About 20 percent operate current account with the banks while the four percent operate fixed accounts. Again, about 10 percent operate the Susu account (Figure 4.11).

Figure 4.11: Type of Accounts Operated by Customers at the Banks



Source: Survey Data, 2017

As indicated in Figure 4.12, majority of the customers (about 84%) had obtained loans from the Rural Banks before. The remaining 16 percent had not obtained loan from the bank before.

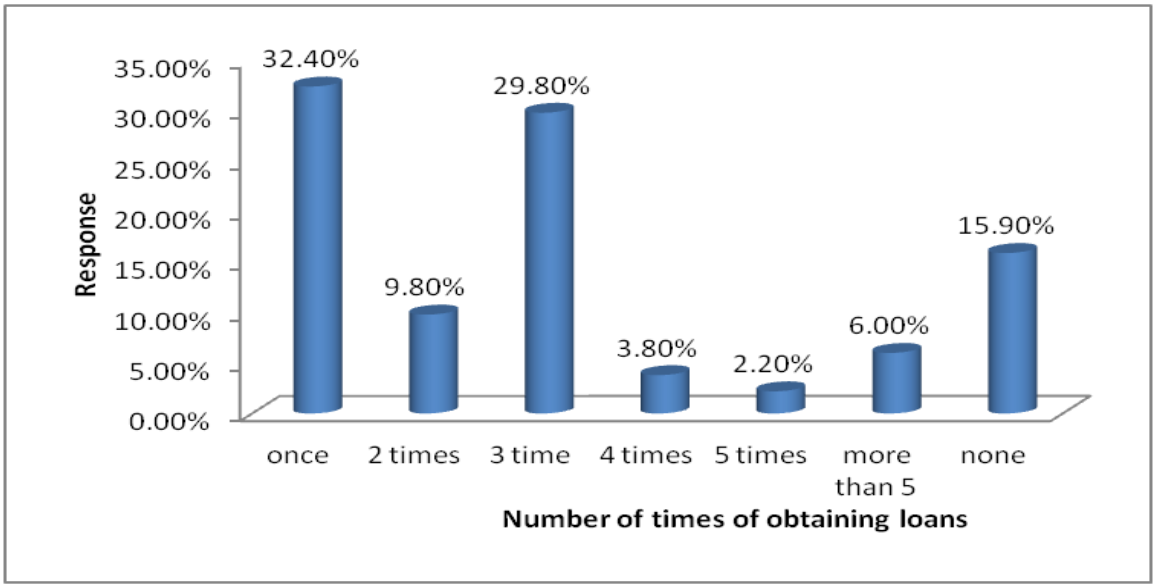


Figure 4.11: Number of Times for Obtaining Loans from the Banks
Source: Survey Data, 2017

These people may constitute those who have spent few years with the bank or they were just not satisfied with the loan requirements. Out of those who had obtained loans about 32 percent of them obtained only once. Also, about 30 percent had loans thrice. Only few of them (2.2%) had obtained loans which were more than four times. However, it is not the number of times loan is obtained that matters, but the quantum of the loans given. A customer may obtain loan once from the banks but the amount would be sufficient for the person which can influence his/her decisions to obtain another loan in the future. Table 4.7 shows that one-third (33.6%) of respondents had obtained average loan amount of GH¢4000.00 and more. Aside this, about 17 percent had obtained loan amount ranging from GH¢ 3001-¢3500. Few of them (2.6%) had obtained loan amount ranging from GH¢ 2501-¢3000.

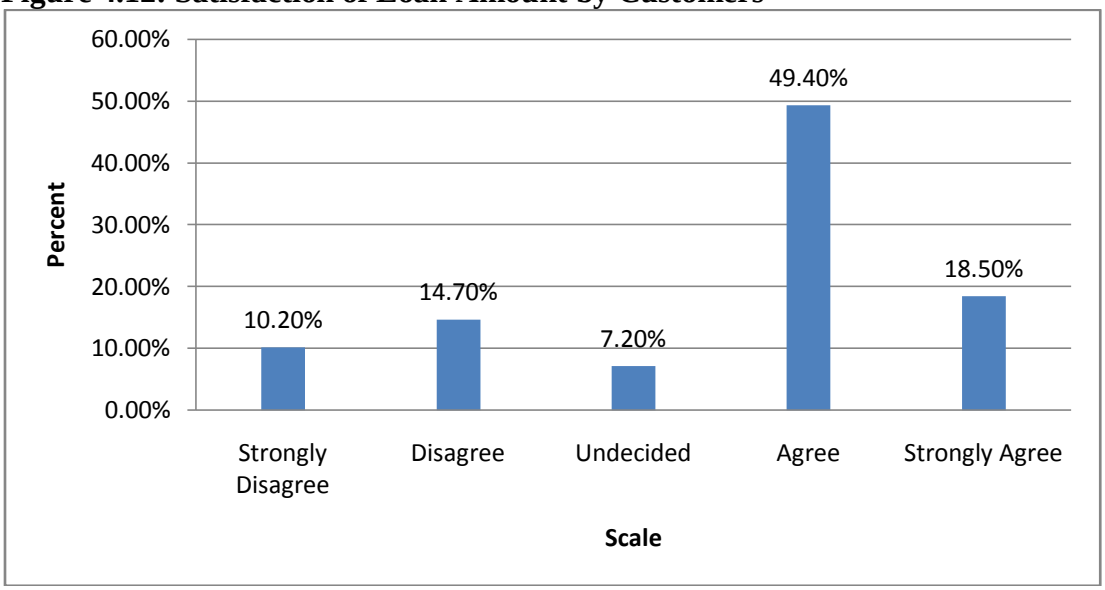
Table 4.7: Amount of Loans Obtained By Customers

	Frequency	Percent
501-1000	7	4.8
1001-1500	32	21.0
2001-2500	22	14.4
2501-3000	4	2.6
3001-3500	25	16.6
3501-4000	10	7.0
4001 and more	50	33.6
Total	150	100.0

Source: Survey Data, 2017

The customers were asked if they agree to the satisfaction of the amount of loans they receive from the Atwima Kwanwoma Rural Bank, Bosomtwe Rural Bank and the Nwabiagya Rural Bank and the results are shown in Figure 4.12.

Figure 4.12: Satisfaction of Loan Amount by Customers



Source: Survey Data, 2017

A greater number of customers (67.9%) were satisfied with the amount of loan obtained from the Rural Banks (Figure 4.9). This implies that customers get the amount of loan they request from the bank. Thus, their needs are met by the bank. It has been observed that argued that banks' ability to grant more loans to its customers anytime they request improves its financial sustainability (Shankar, 2007). However, about one-fourth (24.9%) of them were not satisfied with the loan amount. The study argues that the amount of loan may be determined by the type or sector of employment one belongs. It may also be determined by the type of accounts one operates and frequency or amount of savings.

The respondents were asked if the procedures for loans applications from the Atwima Kwanwoma Rural Bank, Bosomtwe Rural Bank and the Nwabiagya Rural Bank are satisfactory and the results are shown in Table 4.8. As shown in Table 4.8 a mean of (3.09) indicates that greater proportion of respondents mentioned that the loan interest charged by the banks is less expensive. Customers might have compared the interest with

other bank's interest before obtaining loans from the Rural Banks. This may be one of the numerous reasons why loan amount had increased from the 2010 to 2016 by the three Rural Banks selected in this study.

Table 4.8: Descriptive Statistics on Customer Complains on Loan Requirements

	N	Min	Max	Mean	Std. Deviation
Cumbersome loan procedure	150	1	5	2.91	1.428
Less expensive loan interest	150	1	5	3.09	1.337
Long loan maturity	150	1	5	3.15	1.143
Flexible loan maturity	150	1	5	3.32	1.076

Source: Survey Data, 2017

The Atwima Kwanwoma Rural Bank, Bosomtwe Rural Bank and the Nwabiagya Rural Bank grant more loans, according to their customers and the interest is comparatively less expensive. It is likely that the banks would not make sufficient profit from the loans they grant to their customers because of the relatively less interest as mentioned by the customers. However, this may depend on the ability of the bank to generate other sources of revenue. This may explain why the there was no significant effects of loan interests on profitability of the Rural Banks. It can be concluded in this study that customers obtained more loans from the banks because they are satisfied about the interest rate (Morduch, 2007). A mean score of (3.15) implies that customers are given enough time to pay their loans. Again, a mean score of (3.32) implies that there is flexible loan maturity. All these have implications on the banks financial sustainability.

4.5.1 Relationship between customer satisfactions and Financial sustainability of the Banks

As discussed earlier, it is argued that customer satisfaction is a tool for promoting financial sustainability of banks. The sustainability of the banking institution is largely dependent on their customers. The decisions of customers to withdraw their services from the banks can lead to their collapse. Table 4.9 shows the five dimensions of customer satisfaction to the services of the Banks.

Table 4.9: Descriptive Statistics of the Dimensions 0f Customer Satisfaction

	N	Minimum	Maximum	Mean	Std. Deviation	Variance
Reliability	150	1	5	3.48	1.203	1.448
Responsiveness	150	2	5	3.78	.916	0.839
Tangibles	150	2	5	3.83	.858	0.737
Assurance	150	1	5	3.60	.954	0.910
Empathy	150	1	5	3.70	1.151	1.325

Source: Survey Data, 2017

A mean score of (3.48) implies that reliability is not to expectation. Considerable numbers of customers were indecisive as to whether the banks are reliable or not. The study cannot conclude that the bank is able to perform the promised service accurately, it correctly performs the services right the very first time to customers. Furthermore, a mean score of (3.78) implies that the bank is willing to help customers and provides prompt services. It also implies that employees are always willing to help and they quickly respond to requests from customers. Also, a mean score of (3.83) implies that the Banks have adequate physical facilities that accommodate customers, available equipments and good appearance of workers. A mean score of (3.60) implies that customers had developed full assurance in the service provision from the bank. It also

means that customers had knowledge and courtesy of employees and their ability to convey trust and confidence in them. Moreover, a mean score of (3.70) implies that staff of the bank demonstrates care, attention to customers.

(a) Correlation Analysis of Customer Satisfaction and Financial Sustainability of the Banks

The Spearman correlation coefficient (rho) was performed to assess the relationship between the financial sustainability of the banks and the customer satisfaction (Table 4.10).

Table 4.10: Correlations between Customer Satisfaction and Financial Sustainability of the Banks

		Sustainability	reliability	responsiveness	tangibles	assurance	empathy
Sustainability	Correlation Coefficient	-	-0.304**	-0.451**	-0.503**	-0.522**	-0.418**
	Sig. (2-tailed)	.-	.000	.000	.000	.000	.000
reliability	Correlation Coefficient	-0.304**	-	0.380**	0.372**	0.175**	0.453**
	Sig. (2-tailed)	.000	-	0.000	0.000	0.002	0.000
responsiveness	Correlation Coefficient	-0.451**	0.380**	-	0.531**	0.444**	0.532**
	Sig. (2-tailed)	0.000	0.000	-.	0.000	0.000	0.000
tangibles	Correlation Coefficient	-0.503**	0.372**	0.531**	1.000	0.443**	0.582**
	Sig. (2-tailed)	0.000	0.000	0.000	-	0.000	0.000
assurance	Correlation Coefficient	-0.522**	0.175**	0.444**	0.443**	--	0.443**
	Sig. (2-tailed)	0.000	0.002	0.000	0.000	.--	0.000
empathy	Correlation Coefficient	-0.418**	0.453**	0.532**	0.582**	0.443**	1.000
	Sig. (2-tailed)	0000	0.000	00.000	0.000	0.000	.-

**. Correlation is significant at the 0.01 level (2-tailed).

The customer intentions to continue business with the bank was taken as the measure of financial sustainability of the banks (dependent variable). The five dimensions of customer satisfaction of the services of the banks were considered as the independent

variables. The Spearman correlation results indicated in Table 4.10 gives the correlation coefficients between each pair of the variables listed, the significance level and the number of cases. The result shows a strong relationship between sustainability (customer intention to continue business with the bank) and the five dimensions of customer satisfaction. The strongest correlation sustainability is assurance with a correlation coefficient of (-0.522**) and a significant value of (0.000) which is far less than the alpha value (.05). Again, there is strong correlation between sustainability and tangibility of the bank (-0.503**, p=.000), responsiveness (-0.451** p=.000), empathy (-0.418**, p=006) and reliability (-0.304**p=0.002).

Following Cohen's (1988, p.79-81) guidelines for determining the strength of the relationships (small, r=0.10-0.29; medium, r=0.30-0.49; large, r=0.50-1.0), the study concludes that there is a very strong relationship between sustainability and customer satisfaction. Thus, programme sustainability of the Rural Bank is effective in some years to come which conform to other studies (Nyamsogoro, 2010; Navajas, Schreiner, Meyer, Gonzalez–Vega, and Rodriguez–Meza, 2000). To determine the contribution of each of the dimensions of customer satisfaction to financial sustainability of the banks, the coefficient of determination was calculated. The correlation r= (-.522) when squared and multiplied by 100 is 27.2. This means that assurance helps to explain 27.2 percent of the variance in financial sustainability of the banks. Also, a correlation r=.503 and .418 means that tangibility helps to explain 25.3 percent and 17.5 percent of the variances in the bank's sustainability (Table 4.10).

(b) Multiple regressions Analysis of Financial Sustainability of the Banks

The multiple regression analysis was performed to assess the relationship between the financial sustainability of the Atwima Kwanwoma Rural Bank, Bosomtwe Rural Bank and the Nwabiagya Rural Bank and loan amount, number of times loans are given and the interest rates. Here, the number of years customers' had been with the bank was used as the dependent variable while the loan amount, number of times loans are given and the interest rates were used as the independent variables. As show in Table 4.11 the R square explains the amount of contribution the independent variables make to the dependent variable.

Table 4.11: Model Summary explaining the Dependent and Independent Variables

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.224	0.050	0.039	0.643	2.158

The R square value (.050) means that the independent variables explains only 5 percent of the variances in the bank's sustainability (number of years customer had being with the bank). The Durbin-Watson value is closer to 2 shows that there is no serial correlation which makes our result more reasonable (Table 4.11). The significance value (0.004) indicated in Table 4.12 shows that the model reaches statistical significance ($p<.0005$).

Table 4.12 Analysis of Variance (ANOVA) of the Dependent and Independent Variables

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.706	3	1.902	4.601	0.004[b]
	Residual	107.894	261	0.413		
	Total	113.600	264			

As indicated in Table 4.13 the largest Beta coefficient is (.205) followed by (.097) and (.052). This means that the less expensive loans make the strongest unique contribution to explaining the dependent variable (sustainability), followed by amount of loan and number of time loans is requested.

Table 4.13: Regression Coefficient of Variables from the Regression Results that Explain Financial Sustainability of the Banks

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Correlations		
		B	Std. Error	Beta			Zero-order	Partial	Part
1	(Constant)	2.107	.159		13.223	.000			
	amount of loan	-0.026	.017	-0.097	-1.529	0.127	-0.090	-0.094	-0.092
	times requested for loans	0.023	.029	0.052	0.811	0.418	-0.003	0.050	0.049
	Loan interest	-0.269	.080	-0.205	-3.378	0.001	-0.203	-0.205	-0.204

However, a significant value of (0.127) and (0.418) means that it is not statistically significant. Less expensive is the only variable which is significant ($p<0.05$). In this case, the study explains that a one unit increase in loan interest would lead to (0.205) reduction in the number of year's customer had been with the bank thereby affecting sustainability.

4.6 Summary

The study investigated into the financial sustainability of the Atwima Kwanwoma Rural Bank, Bosomtwe Rural Bank and the Nwabiagya Rural Bank. The study assessed factors influencing the financial sustainability of the banks and customer's views on the financial performance of the banks. The study collected data from 50 customers of each bank

making a total of 150 customers. Data from the audited financial statements of the three banks were used to analyse their financial performance from 2010 to 2016. The study revealed that the bank's profitability performance is encouraging. This is because the ROA and ROE exceeded the benchmark score for measuring financial performance. This shows that banks were efficient in converting their investment into profit for the years. The banks are also capable of earning adequate money on its available assets. The multiple regression analysis showed that the amount of loans given by the banks to their customers significantly affect their financial sustainability. It was indicated that customers were satisfied about the loan procedures, loan interest and loan maturity provided by the banks.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of findings discussed in the previous chapter. It summarizes the findings in line with the research objectives posed in chapter one of the study. The chapter again gives conclusion and recommendations for the entire study.

5.2 Summary of Major Findings

The key findings discussed under chapter four are presented as follows.

5.2.1 Financial Sustainability of the Rural Banks

This study argued that the financial performance of the Atwima Kwanwoma Rural Bank, Bosomtwe Rural Bank and the Nwabiagya Rural Bank were good. Management of the bank generates internal revenue from loans and other profitable ventures to support their operations. The main sources of funds for the banks include the interest from loans, shareholders funds and loans from the ARB-APEX Bank Limited. The study showed that the ROA and ROE for the Atwima Kwanwoma Rural Bank exceeded the performance benchmark. The ROA and ROE for Bosomtwe Rural Bank also exceeded the performance benchmark. Likewise, the ROA and ROE of the Nwabiagya Rural Bank exceeded the performance benchmark. The ROE for the three banks exceed the 20 percent threshold from 2010 to 2016. The average ROE for the three banks from 2010 to 2016 was 42.76 percent. It is therefore concluded in this study that the Rural Banks are more profitable by comparing their net profit/income to their shareholders' equity. The

study argues that the banks were efficient in converting their investment into profit for the years (2010-2016). That is, the banks are capable of earning adequate money on their available assets. This is because as confirmed by Armendáriz and Morduch (2007) and Nyamsogoro (2010), the financial sustainability of banks depends on their capacity to grant more loans of which the Rural Banks in this study have demonstrated.

5.2.2 Factors Affecting the Financial Sustainability of the Rural Banks

The total amount of loans disbursed from 2010 to 2016 amounted to GH¢327,449,600.86. Out of this amount the Atwima Kwanwoma Rural Bank granted loans amounting to GH¢98,918,777.49 from 2010-2016. The Bosomtwe Rural Bank granted loans worth GH¢76,041,487.47 from 2010-2016 and the Nwabiagya Rural Bank granted loans to the tune of GH¢152,489,278.48 from 2010 to 2016. Among the Rural Banks, it can be argued that the Nwabiagya Rural Bank made the largest disbursement of loans from 2010 to 2016. The study shows that the loan amount granted by the banks increased from 2010 to 2016. The implication is that the banks have the potentials for remaining in the banking business environment for longer period of time. That is, they are capable of becoming financially sustainable. This is confirmed by Armendáriz and Morduch (2007) and Nyamsogoro (2010) who claim that the financial sustainability of banks depends on their capacity to grant more loans.

The total amount of loan interest received by the Rural Banks was GH□83,379,079.39. Out of this amount, the Bosomtwe Rural Bank received loan interest amount of GH¢36,549,744.2 which represents 43.8 percent of the total loan interest. The Atwima Kwanwoma Rural Bank received loan interest amount of GH¢29,574,257.39 which represents 35.5 percent. Also, the Nwabiagya Rural Bank received loan interest amount

of GH¢17,255,077.8 from 2010 to 2016. The study revealed that the loan interest of the banks increased over the years. The implication is that the banks capable of improving on their profit and for that matter their financial sustainability is robust (Shankar, 2007).

A total amount of GH¢845,919,893.89 was mobilised from customers as deposits from 2010 to 2016. The Atwima Kwanwoma Rural Bank received deposits amounted to GH¢379,834,796.61 from their customers from 2010 to 2016. The Bosomtwe Rural Bank received a deposit amount of GH¢179,891,273.15. Also, the Nwabiagya Rural Bank received deposit amount of GH¢286,193,824.13from its customers from 2010 to 2016. The study revealed that the banks were able to increase its customer deposits over the years. The implication is that the larger the customer deposits or numbers of customers the more the bank can improve the profitability of the banks thereby making them financially sustainable (Rai, 201; Adongo and Stork, 2005). The regression coefficient shows that it was loan amount and loan default which showed significant impact on profitability of the banks. The beta coefficient of 0.521implies that loan disbursement by the banks made the strongest unique contribution to explaining profitability when all other variables in the model are controlled for.

5.2.3 Customer Satisfaction of the Services of the Rural Banks and the Effects on Financial Sustainability

A greater number of customers had being with the bank for more than three years. This implies that customers are satisfied with the services of the Atwima Kwanwoma, Rural Bank, Bosomtwe Rural and the Nwabiagya Rural Bank and this contributed to their financial sustainability. This is in agreement with various studies (Nyamsogoro, 2010;

Navajas, Schreiner, Meyer, Gonzalez–Vega, and Rodriguez–Meza, 2000) that customers' satisfaction determines financial performance and sustainability of banks. Customers were motivated by the following factors to save with the bank; their good services, the number of years been in operation, their good human relationship and their good services. Considerable number of customers had obtained loans from the bank. Majority of them percent showed satisfied about the amount of loan. Loan interest was mentioned by majority of customers as less expensive. From the economic point of view, it is expected that the less interest rate as perceived by the customers will make them request for more loans therefore improving the financial performance of the banks.

Customers were satisfied on four out of the five service quality dimensions. Except reliability which showed the least mean vale of 3.48, responsiveness, tangibility, assurance and empathy showed the highest mean scores. The multiple regression result shows that the largest Beta coefficient is (.205) followed by (.097) and (.052). This means that the less expensive loans make the strongest unique contribution to explaining the dependent variable (sustainability), followed by amount of loan and number of time loans is requested. A one unit increase in loan interest would lead to 0.205 reduction in the number of year's customer had been with the bank thereby affecting their financial sustainability.

5.3 Conclusion

This chapter presents the analysis and discussions of the data collected from the field. The analysis covered the financial performance of the Atwima Kwanwoma, Bosomtwe and the Nwabiagya Rural Banks. Customer's views on the financial performance and sustainability of the rural banks were covered. Again factors that affect financial

sustainability of the banks were covered in this chapter. The study revealed that the bank's ROA and ROE fell within the benchmark performance indicating good financial performance. The multiple regression analysis was done to assess the factors affecting the financial sustainability of the banks. The ROE was used as the dependent variable while customer deposits, loan amount, interest, repayment amount, loan overdue and loan maturity were independent variables. The result was that loan amount and loan overdue were significant factors. This means that loan amount and loan overdue significantly determined the financial sustainability (ROE) of the banks. The more the banks grant loans to their customers, the less their profit is reduced. This was because of the inability of the banks to collect large loan repayment for the period. The number of years the customers had been with the banks was determined by the services provided by the bans. The correlation analysis indicated a strong relationship between the bank's services such as reliability, assurance and their quick response to customers and their number of years of been with the banks.

5.4 Recommendations

Based on the findings from this study the following recommendations are made for possible implementation by management of Rural Banks in Ghana.

Quality of Advances (Loans and Overdraft)

It was obvious from the study that loans and advances were not in the best of quality. The study recommends two approaches for the improvement of loan quality. The first approach has to do with the loan granting process where the study recommends that the credit appraisal team must take the necessary pains at selecting beneficiaries for loans. Only clients who have a proving ability to manage their businesses profitably should be

considered for facilities from the bank. The second approach has to do with a rigorous programme to boost recoveries. The study indicates that loan interest of the bank was decreasing in some of the years. This may be attributed to default of loans from some of the customers. The study recommends that management should employ fresh team on contract basis purposely for loan recoveries and the team should be given targets and achievements of which would earn them a renewal of their employment contracts. The study further recommends that top management should be thickly involved in loan appraisal and loan recovery.

Customer Deposit Mobilisation

The study discovered that in some instance, advances were growing faster than deposit. This if not checked has an adverse impact on financial sustainability. Management must at all times be conscious that they are not under any obligation to grant loans to customers but they are always under obligation to pay back customer's deposit. To this end, management is encouraged to resist undue pressure from customers for loans which tend to affect their liquidity. Illiquidity is a threat to the sustainability of any financial institution. Management must always be guided by the fact that it is far easier to grant loans than to recover them. Performance contract should be signed by every staff especially with regards to deposits mobilization and earnings or bonuses to staff should be based on performance. Star performance should be copiously rewarded to encourage them to perform more and also for others to emulate.

Staff Attitude

The study revealed that there is dishonesty among staff. Customers' trust for the bank is questionable. This if not checked can derail sustainability effort of the bank. To this end, the study strongly recommends frequent meetings to discuss these daunting attitudinal issues. Staff should be made to understand that they have earned their jobs until they do the right thing. They should also be made to understand that even in the develop world where unemployment is a single digit, employees cherish their jobs and do not flout laws. The study further recommends that the recruitment process should at all times be based on merit and not on the basis that prospective employees are related to senior members of the bank. The study also recommends that rules covering employee attitude must always be applied in a fair and transparent manner and any disciplinary action taken against the staff should be made known to the entire staff to serve as a deterrent. Staff should be undertaken series of training to build their capacity.

5.5 Area for Further Studies

The study collected adequate data to achieve the research objectives. The following areas are recommended for further studies.

1. A study should be done to investigate the causes of loan delinquency among Rural Banks in Ghana.
2. A study should be done to investigate credit risk management of Rural Banks in Ghana.

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Appendix I: Research instrument

SURVEY INSTRUMENT
QUESTIONNAIRE FOR CUSTOMERS

DEMOGRAPHIC CHARACTERISTICS

1. What is your gender?

[ ] Male
[ ] Female

2. What is your age?

[ ] 15-20

[ ] 21-25

[ ] 26-30

[ ] 31-40

[ ] 41-50

[ ] 51-55

[ ] 56-60

[ ] 60 and above

3. What is your highest educational attainment?

[ ] Basic education

[ ] Secondary/technical/vocational level of education

[ ] Tertiary level of education

[ ] Professional

[ ] No education

[ ] Others (please specify)……

4. What is your household size?

[ ] 1

[ ] 2

[ ] 3

[ ] 4

[ ] 5

[ ] more than 5

5. What work do you do?

[ ] Farmer

[ ] Service sector

[ ] Commerce sector

[ ] Manufacturing sector

[ ] Unemployed

[ ] Others (please specify)……

EVALUATING THE BANK'S PERFORMANCE

6. What motivated you to save with the Bank?

[ ] I think they offer good service

[ ] I think they have been in the system for long

[ ] I think their staff have good human relationship

[ ] I think they are the only and effective rural bank here

[ ] others (Please specify) …….

7. How many years have you being doing business with the Institution?

[ ] 1-3 years

[ ] 4-5 years

[ ] 6-8 years

[ ] 8 years and above

8. What form of transaction do you have with the bank?

[ ] savings only

[ ] loans and savings

[ ] loans only

9. If you save with the bank, what type of accounts do you operate?

[ ] fixed deposit

[ ] savings account

[ ] Others (please specify)…….

10. If the person request loans from the bank, how many times have you request for loans?

[ ] Once
[ ] 2 times
[ ] 3 times
[ ] 4 times
[ ] 5 times
[ ] More than 5 times

11. On the average, how much loans have you received from the bank?

[ ] Less than GH□ 500
[ ] GH□ 501-1000
[ ] GH□ 1001-1500
[ ] GH□ 1501-2000
[ ] GH□ 2001-2500
[ ] GH□ 2501-3000
[ ] GH□ 3001-3500
[ ] GH□ 3501-4000
[ ] GH□ 4001 and more

12. What can you say about the following? (Please tick (√) where appropriate)

1= Strongly Disagree
2= Disagree
3= Undecided
4= Agree

5= Strongly Agree

S/N	*Statement*	*1*	*2*	*3*	*4*	*5*	
12a	The loan amount is adequate or sufficient						
12b	Loan procedures are not cumbersome						
12c	Loan interest is less expensive						
12d	Loan maturity is quite long						
12e	Loan maturity is flexible						

13. How would you assess the service quality of the bank based on the following benchmarks? **(Please tick √ where appropriate)**

1= Very dissatisfied
2= Dissatisfied
3= fairly satisfied
4= Satisfied
5= highly satisfied

No	**SERVICE QUALITY DIMENSIONS**					
	LIKERT SCALE MEASURE	*1*	*2*	*3*	*4*	*5*
13a	**Reliability**					
Criteria for scoring: ability to perform the promised service dependably and accurately Bank correctly performs the service right the very first time. Bank provides its service right the first time.						
13b	**Responsiveness**					
Criteria for scoring: Willingness to help customers and to provide prompt services Bank employees are always willing to help Bank employees quickly respond to my requests.						
13c	**Tangibles**					
Criteria for scoring: Physical facilities, equipment, and appearance personnel						
13d	**Assurance**					
Criteria for scoring: Knowledge and courtesy of employees and their ability to convey trust and confidence						
13e	**Empathy**					
Criteria for scoring: Caring, individualized attention the firm provides its customer						

14. Do you intent to continue business with the Institution?

[ ] Yes
[ ] Not sure
[ ] No

15. What is your general perception on customer service from the Dormaa Area Teachers Credit Union?

[ ] Very inefficient
[ ] Inefficient
[ ] Efficient
[ ] Very inefficient

16. Give reasons……
.

THANK YOU FOR YOUR TIME

INTERVIEW GUIDE:

1. What are the major sources of capital to the Institution?
2. What was the average rate of interest (%) on loans for the following years?

2010:……..
2011:……..
2012:……..
2013:……...
2014…….
2015…….
2016…….

3. Please provide me with the following information.

Year	Customer Deposits	Loan maturity	Loan interest amount	Loan Amount
2010				
2011				
2012				
2013				
2014				
20152016				

4. How many customers has your bank maintained since the last five years?

5. What strategies have been adopted to improve upon your coverage or customer count?

6. What is the staff strength?

7. What is the qualification of the staff?

8. Are the staff adequate?

9. If no what are doing about it?

10. How often does the bank organise training for the staff?

11. What problems does the bank face in their operation?

12. How does each of the problems affect the banks' performance?

13. What measures do you have in place to address the problem?

14. Do you receive any subsidy?

15. If yes, how does it improve the banks' performance?

16. Please provide any comment.

THANK YOU

Rural Bank	Loan Amount	Loan Maturity	Interest on Loans Amount	Loan Repayment Amount	Coverage of Customers (Deposits)	Credit Risk (Loans Overdue)	Net Income	Outstanding Equity	Total Assets
				2010					
Atwima Kwanwoma	7,770,381.49	360	2,298,356.16	800,736.42	29,113,942.90	16,406.41	702,312.13	2,849,481.17	33,849,733.35
Bosomtwe	5,559,382.02	420	2,222,817.33	362,180.90	13,761,946.29	78,097.20	2,616,155.98	2,593,665.30	16,743,243.27
Nwabiagya	11,030,407	480	3,443,076	3,221,432.21	21,301,423	77,200.00	1,108,422.00	4,138,148	22,631,874
				2011					
Atwima Kwanwoma	9,204,953.98	240	5,209,114.12	781,457.55	36,847,16ssss5.15	16,676.70	645,658.41	3,260,290.07	25,517,019
Bosomtwe	8,152,468.13	480	2,836,288.17	1,053,348.61	17,141,437.10	85,906.92	3,278,601.06	3,201,567.00	21,446,986.28
Nwabiagya	17,272,756	480	4,605,574	2,798,521.98	28,374,671	58,392.00	1,245,692	6,001,781	36,414,513
				2012					**,**
Atwima Kwanwoma	11,854,238.99	300	2,729,541.32	1,262,221.10	44,948,274.09	14,382.58	1,791,389.61	5,233,477.45	52,195,550.05
Bosomtwe	8,420,900.13	480	3,231,244.17	1,453,319.61	20,999,555.10	92,107.92	4,100,901.06	4,201,336.00	25,312,421.28
Nwabiagya	22,929,463.67	300	6,139,981.77	2,838,920.33	35,101,415.26	198,400.00	1,745,880.43	7,090,143.07	45,830,907.86
				2013					
Atwima Kwanwoma	13,765,362.21	360	3,501,650.39	1,177,308. 9	51,308,886.58	29,703.38	3,529,755.64	8,332,384.19	62,521,170.98
Bosomtwe	11,592,315.25	300	5,037,633.55	1,036,105.79	23,596,607.85	187,314.71	1,024,542.68	5,031,014.67	31,274,044.27
Nwabiagya	25,052,343.06	360	520,798.79	3,907,977.71	39,596,829.71	6,167.56	2,173,109.75	368,261.63	3,650,059.13
				2014					
Atwima Kwanwoma	17,947,682,58	300	5,431,092.42	2,850,333.15	58,268,027.88	26,586.90	4,430,100.82	12,858,619.84	74,396,816.58
Bosomtwe	12,666,750.94	360	6,206,432.98	1,811,420.78	27,738,512.81	406,165.76	784,348.00	5,419,699.74	36,299,227.11
Nwabiagya	24,299,384.51	420	623,847.81	4,080,714.10	46,891,333.60	3,250.95	2,053,263.00	536,646.00	3,960,384.05
				2015					

Atwima Kwanwoma	17,395,350.54	360	6,522,820.18	3,199,196.46	72,341,099.81	26,630.00	7,197,457.10	19,502,358.02	95,604,041.35
Bosomtwe	13,723,212	420	7,760,552	2,354,973	35,746,801	88,105.00	1,367,767.00	6,602,239	45,626,209
Nwabiagya	25,005,331.34	360	712,459.43	4,725,810.45	53,235,670.21	6,167.56	2,005,765.50	645,997.00	6,998,364.05
					2016				
Atwima Kwanwoma	20,980,807.70	240	3,881,682.80	4,576,923.22	87,007,400.20	14,599.00	6,942,020.55	25,857,272.75	118,020,418.98
Bosomtwe	15,926,459	480	9,254,776	3,457,134	40,906,413	100,745.00	2,219,233.00	7,200,119	51,445,901
Nwabiagya	26,899,592.90	520	1,209,340	4, 820, 233.0	61,692,481.35	7,107.58	345,560.37	1,257,975.00	10,235,900.05

Source: Audited Financial Statements of the Rural Banks (2010-2016)