

**FINANCIAL PERFORMANCE OF RURAL BANKS IN GHANA: A CASE STUDY OF  
NAARA RURAL BANK**

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## **Abstract**

This research is a case study of the financial performance of the Naara Rural Bank in the Upper East Region of Ghana. The Naara Rural Bank (NRB) was established on 9<sup>th</sup> July, 1981. It currently has five branches. The bank is managed under the supervision of a nine member board of directors with total permanent staff of 60. Products offered by the bank are savings and current accounts, fixed deposit account, 'susu' savings, business loans, personal loans, group loans.

We used the annual financial statements covering a period of eleven years (2000 to 2010) of the Bank for our analysis. Multiple regression was the major statistical tool used to analyze the data collected from the Naara Rural Bank.

The results of the research reveal that, liquidity and size were positive and significantly related to the performance of the Bank. Although the effect of its loans portfolio is positive, its influence on performance is statistically insignificant. In addition, non-performing loans were also negative and significantly related to the performance of the Bank.

The insignificant relationship between total loans and profitability is unusual because it deviates from the normal theoretical relationship between credit portfolio and banks' financial performance. This unusual negative relationship is due to (a) high levels of nonperforming loans (b) high levels of unearning assets in the form of branches may be underperforming.

These findings call for tightening up of the Bank's credit risk management practices and the restructuring of some of its branches.

The policy implications of this study for the rural banking industry in general and for the Naara Rural Bank in particular are far reaching. The findings are very important for the rural banking industry in the light of the new directive of the Bank of Ghana for recapitalization and consolidation in the industry. As a case study, this research also adds a lot to literature by bringing to light specific issues concerning rural banks performance which are mostly ignored in group studies.

**Key Words:** Rural Bank, Performance, Naara, Ghana

**Type of Paper:** A case study

## **1 Introduction**

The rural banking industry which began in Ghana in 1976 has grown significantly in terms of assets and its contribution to the economic growth of Ghana. It has unique characteristics in terms of ownership structure, management structure and operations features. Unlike the large commercial banks, RCBs are community-owned and community-run unit banks. This gives them geographical advantages which facilitate the proper management of moral hazards and adverse selection. The main roles of (Bank of Ghana, 2006) RCBs are:

1. To mobilize savings in the rural communities and channel them into the provision of credit to rural microenterprises, agro-based firms and cottage industries.
2. Monetize the rural communities by way of inculcating in rural folks the culture of formal banking.
3. Serve as tools for the growth and development of microenterprises in the rural communities to facilitate rapid rural industrialization for the overall enhancement of the national economy.

This paper attempts to delve into the financial performance of rural and community banks against the backdrop of their mandate as stated above through a case study approach.

A review of the financial performance of Rural and Community Banks indicate a mixed outcome. As at June 2007, 23 out of the 145 RCBs have been closed down (Aboagye and Otioku, 2010) due to reasons identified by the Bank of Ghana(2001) as management incompetence, embezzlement and fraud, negligence and ineffective board of directors, ineffective accounting procedures, non-compliance with regulations in granting credits, persistent operational losses, poor loan recovery and corruption, low deposits mobilization, use of unqualified staff, non-submission of prudential returns, high unearning assets and high non-performing credit portfolios.

Others have performed creditability and have thus been admitted into the Ghana Club 100. Naara Rural Bank established in 1981 is one of the few rural banks in the Upper East Region of Ghana which have performed quite remarkably despite the global financial crisis. It has a vision of being the most efficient rural bank and leading poverty reduction agent in Ghana. It aims to accomplish its vision through the provision of innovative products, the usage of modern technology, well-trained and motivated staff who are proactive to customers' needs. It currently operates through 4 branches/agencies with its headquarters at Navrongo.

A review of its annual reports from 2000 to 2010 indicates that the net profit recorded an average yearly growth of 34 percent. The return on shareholders' investment also showed a steady growth of 29 percent on average. In addition, the bank recorded 81 percent growth in its loans portfolio. Much of its loans portfolio is advanced to microenterprises for rural industrialization – a pre-requisite for the economic growth and development of the rural areas.

Despite the steady growth in its financial performance, it had serious challenges such as high non-performing loans, low levels of profits and deposits as well as competition from large commercial banks.

This study seeks to analyze vigorously the financial performance of Ghanaian RCBs through a case study methodology and to determine whether RCBs have facilitated the growth of rural microenterprises. In particular, the research is aimed at establishing empirically the relationship

that exists between Naara Rural Bank's financial performance on one hand and its credit portfolio, non-performing loans, liquidity and size (total asset).

## 2 Literature Review

Harker and Zenios (1998) define the performance of financial institutions as an economic performance which is measured in both short and long-term by a number of financial indicators such as price-to-earnings ratios, the firm's stock beta and alpha, and Tobin's q-ratios.

The financial performance of RCBs is influenced by internal factors or bank-specific factors and external or macroeconomic factors. Zaman (2004) and Yaron *et al.* (1998) have studied the factors underlying improved financial performance of RCBs. Yaron *et al.* delved into three active Asian RCBs which have achieved leadership in the provision of financial services at unprecedented levels to millions of rural households and microenterprises. Zaman on the other hand conducted an in-depth study into how four RCBs in Bangladesh have made great strides in financial intermediation. Both Zaman (2004) and Yaron *et al.* (1998) summarized the factors underpinning effective financial performance as visionary leadership, management autonomy in formulating operational policies, efficient staff recruitment and remuneration systems, innovative and technology-driven products; flexible low-cost delivery system keen supervision of loan portfolio; effective management information system that promotes proper planning and enhances management ability to control operational expenses and ensures adequate internal control systems. The crucial influence of microeconomic stability and a conducive regulatory environment was also alluded to.

Aboagye and Otioku (2010) contended that for RCBs to continue in business, they must make enough money through lending and fiduciary activities or services to cover their operational and financing costs, plough back retained earnings to finance future operations. This will enhance not only the survival of RCBs but their growth and profitability.

Historically, profitability from lending activities has been cyclic and dependent on the needs and strengths of the loan customers (Annor, 1998). Bank loans are expected to be the source of income and are expected to have a positive impact on profitability. All other things being equal, the higher the amount of loans given out, the higher the profitability level. For example, Naceur (2003) claims that, loans have a significant positive relationship with profitability.

With respect to the relationship between liquidity and banks profitability, Buyinza (2010) posited that, liquidity has a significant relationship with profitability. However, this relationship is a negative one.

According to Achou and Tenguh (2008), non-performing loans (NPL) has an inverse relationship with banks' profitability. Another variable which previous empirical studies have identified as having an impact on banks' profitability is size as represented by total assets. However, the available evidence indicates that, the relationship between total assets (size) and banks' profitability is an inconclusive one. For instance, Berger *et al.*, (1987), argued that a bank can achieve cost savings as its size increases. The findings of Berger *et al.*, (1987) lend support to that of Shaffer (1985), specifically, Shaffer showed that as a bank's size increases, significant economics of scales are achieved which enhances financial performance. However, other studies

have found a negative relationship between size and bank's financial performance, for example Naceur (2003) revealed that, large banks tend to have lower levels of profit as a result of inefficiencies associated with diseconomies of scale. Buyinza (2010) has confirmed the findings of Naceur (2003) by indicating that bank size is negative and significantly correlated with profitability.

Wong *et al.* (2007) posited that bank consolidation, cost efficiency, and the ability of a bank to take on more risk as the key determinants of banks' profitability, whereas market structure, as measured by market concentration, and size were found to have a negative association with profitability. On the other hand, Okazaki (2006) has a slightly different opinion as his findings show that policy-oriented consolidation has a positive impact on deposits, though it may have a declining effect on bank's profitability. Clair (2004) established that proper management of lending activities, credit quality and expense control enhance bank's financial performance. The study also found that interest rates may place significant downward pressure on capital and liquidity, and that non-performing loans erode profits.

Delis and Papanikolous (2009) adopted a semi-parametric model to evaluate the impact of bank-specific factors, industry-specific and macroeconomic variables on banks' efficiency and performance. They discovered that bank size is statistically significant and has a direct relationship with banks' efficiency and performance. Kosak and Zajc (2006) researched into cost efficiency of banks as a parameter of growth and improved financial performance in the banking sector. Their findings were consistent with that of Delis and Papanikolous (2009). In particular they found a direct association between financial development and banks' cost efficiency.

Hansan and Bashir (2003) showed that given a stable macroeconomic environment and improved financial market system, high capital and improved loan-to-asset ratios have positive effects on banks financial performance.

In Asia, Malhotra (2002) delved into the impact of location on the financial performance of regional rural banks in India. He concluded that geographical location of rural banks is not a limiting factor of rural banks' performance.

In another study of the Indian rural banking industry, Ibrahim (2010) evaluated the financial performance of RRBs<sup>2</sup> in specific areas such as number of agencies or branches, district coverage, deposits mobilization, loans portfolio and investments. The study concluded that bank consolidation has enhanced the financial performance of RRBs. This has facilitated growth in branch network, the closure of underperforming RRBs and an increased coverage of the number of districts served by the RRBs. Again, total capital funds have increased tremendously after amalgamation took place in the year 2005-06. He further discovered that credit-deposit ratio has grown over the years indicating a remarkable deployment of credit facilities by RRBs in rural areas.

Robison and Barry (1977) showed that the liquidity challenges of rural banks are mainly due to loan delinquencies and default as well as low levels of deposits. They claimed that banks whose loan portfolios have low risk are less efficient than those with high-risk loan portfolios. Robison

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<sup>2</sup> Regional rural banks

and Barry further concluded that the level of asset quality and availability of liquidity may help to reduce the risks of rural banks.

### 3 Methodology

The financial statements for a period of eleven years (2000 to 2010) were collected for the study. Information concerning profit before tax, loans, Non-Performing Loans (NPL), total assets, current assets and current liabilities were extracted from the financial report for the analysis. The provision of bad debt as well as loan loss was used as the proxy for the non-performing loans. The data analysis were augmented with the following multiple regression model.

$$Y = \beta_0 + \beta_1 LIQ + \beta_2 LON + \beta_3 NPL + \beta_4 SIZ + e$$

*Y* denotes financial performance and it measures the return on assets (ROA). That is the net income returned on each cedi of assets. ROA is widely used by many researchers (for example, Buyinza, 2010; Naceur, 2003; Ito and Fukao, 2006; Haron, 2004; Ramlall, 2009; Athanasoglou *et al.* 2005; Javaid *et al.* 2011) to measure overall profitability from investment in assets. Higher rates of return are desirable. The ROA is calculated as net income before tax divided by total assets.

**LIQ** denotes the liquidity position of the bank. It is the difference between current assets and current liabilities. It also shows the solvency state of the bank. That is, its ability to meet short term claims as they fall due. In addition, it indicates the capacity of the bank to meet depositors demand for withdrawals and customers demand for overdraft facilities. Most importantly it helps a bank to assess its strength in avoiding 'bank-run'.

**LON** denotes the annual loan portfolio of the bank. It is also an indicator of financial intermediation as it measures the total loan advanced to customers annually.

**NPL** denotes non-performing loans. NPL is the total loan default of debtors of the bank per year. It is a credit risk management indicator as it measures loan losses such as impaired loans and bad debts of the bank.

**SIZ:** denotes total assets. It measures the total non-current assets of the bank per year. It also indicates the asset quality level of the bank. The error term is *e*.

## 4 Discussion of the Results

### 4.1 Descriptive Statistics

Table 1 below shows the descriptive statistics about Profit, Liquidity (LIQ), Loans (LON), Non-Performing Loans (NPLs) and Size (SIZ) of the Naara Rural Bank from 2000 to 2010.

**Table 1: SUMMARY STATISTICS**

VARIABLES	OBS	MEAN	STAN. DEV.	MIN.	MAX.
PROF	11	75863.09	85165.94	-25,268	253536
LIQ	11	132739.3	169780.5	-15,357	519669
LON	11	483141.7	877812.2	7,364	2934649
NPL	11	13961	17556.35	1,106	53387
SIZ	11	2599695	2733300	169105	8829348

*Source: Authors' analysis based on the financial statements of Naara Rural Bank (2000 to 2010)*

The average profit of the bank over the eleven year period began with a loss of ¢25,268 in 2000 to a gain of ¢253,536 in 2010. This indicates a 903.46 percentage growth in the net profit of the bank over the period under this study. The short term liquidity position of the bank in 2000 was negative ¢15, 357. This means its short term assets were not enough to pay its short term liabilities an indication of cash flow challenges. Such a situation can lead to a “run” on the bank and insolvency. However, its liquidity position has improved over the years as indicated by the 2010 figure of positive ¢519, 669.

The loans that were advanced within the period also increased quite significantly from ¢7364 in 2000 to ¢2,934,649 in 2010 indicating 39,751.29 percentage growth in loans disbursed over the period.

The non-performing loans (NPLs) were expected to decrease but it rather increased from as low as ¢1106 in 2000 to ¢53387 in 2010. This has the tendency of adversely affecting the banks liquidity position in subsequent years if measures are not put in place to curb it.

Size (SIZ) of the bank increased from a minimum of 169,105 to a maximum of 8,829,348 which represent an expansion in the total assets of the bank within the period of study.

## 5 Result of Regression

A multiple regression technique was used for the analysis of the relationship between profitability and liquidity, loans, non-performing loans and the size of the bank. The result of the regression output obtained through STATA is presented in table 4.2 below.

**Table 2: The Result of the Multiple Regression**

ROA	COEFFICIENT	STAD. ERROR	t	P>  t
LIQ	0.403	0.703	5.7	0.001**
LON	0.003	0.011	0.31	0.766
NPL	-1.993	0.481	-4.14	0.006**
SIZ	0.241	0.005	5.34	0.002**
-CON	-2453.284	498.051	-0.49	0.640

R - Square = 0.992; Adjusted R - Square = 0.9874; Prob. > F = 0.000.  
 Note: \*\* indicate 5% significance level.

*Source: Authors' analysis based on the financial statements of Naara Rural Bank (2000 to 2010)*

From the diagram above liquidity (LIQ) is positive and significant at the five percent (5%) significance level. This means that if the bank has more money to give out as loans within the short term its profitability will increase. This result confirms the theory that banks will usually lend on short term basis in order to increase profitability. However, in order for rural banks to have real positive impacts on the development of their catchment areas it is imperative that they lend on long term basis to microenterprises.

Theoretically, loans should increase the profit level of banks because lenders lend to make profit, so the positive relationship between loans and profitability is a confirmation of the theory underlying financial intermediation. It also confirms the findings of Naceur (2003). However, the result indicates that this relationship is not significant. This result is worrying because it shows that the increased in loans does not lead to a proportionate increase in the profit of the bank due to the fact that much of the loans they give go bad which is evidenced in the rising rate of its non-performing loans (NPLs).

The non-performing loans (NPL) variable is significant but negatively related to financial performance. A critical review of table 2 indicates that, whereas a 1 percent increase in NPL reduces the bank's profitability by about 2 percent, the loans portfolio increases the profit level marginally by just 0.003 percent. This means that the NPL erodes NRB's<sup>3</sup> financial performance at a faster rate than additions made to it by the loans and advances made within the period. This calls for the tightening up of the credit risk management system of the bank. This finding confirms the result of Achou and Tenguh (2008) concerning a similar study of the Qatar banking sector.

Finally, Size as measured by the total assets of the bank is positive and statistically significant at the 5 percent significance level. This indicates that as more branches or agencies are opened, the

<sup>3</sup> Naara Rural Bank



bank's customer base, products and services go up leading to growth in its profitability. It also shows that the bank may be benefiting from economies of scale. It implies that well capitalized banks have capacity to absorb loan losses and thus face lower risks of experiencing financial distress. This result contradicts the findings of Naceur (2003) and Buyinza (2010).

## 6 Ratio Analysis

One way of establishing references and managing the financial performance of an institution is through the use of financial ratios. Ratios show the relationship between two financial balances. Financial statements are used by managers to improve performance, by credit officers for the evaluation of the credit worthiness of borrowers and by shareholders to forecast earnings, dividends, free cash flow, and stock prices (Brigham and Enhardt, 2002). Some of the financial ratios of Naara Rural Bank have been calculated and presented in table 3.

**Table 3: Key Financial Indicators of Naara Rural Bank**

<b>YEAR</b>	<b>ROE</b>	<b>ROA</b>	<b>LIQUIDITY</b>	<b>PROFIT/LOANS</b>	<b>PROFIT/NON-PERFORMING LOANS</b>
2000	0.45	0.07	1.14	1.01	4.36
2001	0.49	0.09	1.18	3.14	18.85
2002	0.18	0.02	1.12	0.55	9.26
2003	0.26	0.03	1.05	0.73	8.75
2004	-0.43	-0.02	0.99	-0.34	-1.32
2005	0.46	0.03	1.03	0.61	35.98
2006	0.45	0.04	1.05	0.51	28.10
2007	0.33	0.03	1.02	0.29	11.61
2008	0.38	0.03	1.06	0.22	4.82
2009	0.30	0.03	1.07	0.17	5.67
2010	0.30	0.03	1.06	0.09	4.75
<b>AVERAGE</b>	<b>0.29</b>	<b>0.035</b>	<b>1.07</b>	<b>0.64</b>	<b>11.89</b>

*Source: Authors' analysis based on the financial statements of Naara Rural Bank (2000 to 2010)*

### 6.1 Profitability Ratios

One of the objectives of the study is to examine the bank's financial performance in terms of its income, expenditure and profitability trends over the period. Primarily, businesses are run to make profit. Shareholders expect to be paid dividends at the end of every year. Therefore, profitability ratios of the bank were required to inform management, potential investors, shareholders, the general public and other stakeholders about how well the bank is doing.

In terms of the Bank's ROA, performance was high (6.75%) in the year 2000. The subsequent year (2001) had a poor performance of 0.01%. From 2002 to 2010, performance ranged from negative 2.07 percent to positive 3 percent.

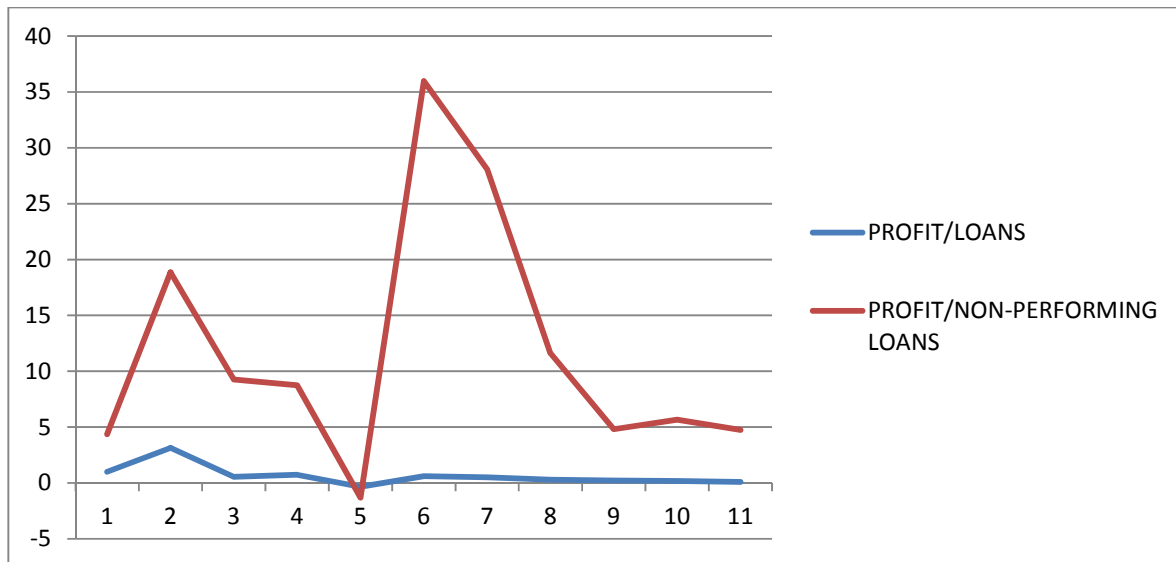
The Bank's ROE which was 45 percent in 2000, recorded its highest performance of 49 percent in 2001. There was however a significant drop in the subsequent years resulting in negative 43 percent in 2004. After the 2004 challenges its financial performance witness a remarkable improvement as it recorded a minimum of 30 percent return on shareholders' investment. It is worth noting that Naara's ROE is one of the highest in the RCBs' industry in Ghana.

## 6.2 Liquidity Ratios

Liquidity ratios are used to assess the capacity of an institution to meet its short term debt obligations. Illiquidity can lead to bank run due to multiple or panic withdrawals, bank failure and closure. Our analyses indicate that the Bank's average liquidity position over the study period is 1.07. This result is a reflection of a sound solvency status of the Bank.

Attention is however drawn to the low margin of contributions by loans toward profit as against the high deductions by NPLs from profits levels. The average contribution of loans to profit during the eleven year period is GH¢0.64 while the reduction due to NPLs is GH¢11.89. Figure 1 is a review of the trend analysis between NPLs and loans portfolio of Naara Rural Bank. The trend of deductions from profit levels by NPLs is very steep especially between 2005 and 2006. But the additions to profit levels by its credit portfolio is very gentle and at a reducing rate.

Figure 1: Trend Analysis of Credit Portfolio and NPLs of NRB



Source: Authors' analysis based on the financial statements of Naara Rural Bank (2000 to 2010)

In terms of industry analysis, Naara Rural Bank's (NRB) has outperforms the benchmark of the nationwide network of rural and community banks (RCBs) in Ghana. In particular, its loans and advances, total assest and deposits mobilization have exceeded the average of the nationwide network of RCBs. Its capital adequacy ratio is also significantly higher than the 10% minimum requirement of the Bank of Ghana. Management should however initiative actions to stop it continuous decline. Table 4 prevents key financial indicators of Naara Rural Bank (NRB) and the nationwide network of RCBs from 2006 to 2010.

Table 4: Capital Adequacy, Loans and Assets of NRB<sup>4</sup> versus the RCBs Industry Averages

Years	Capital Adequacy Ratio		Loans		Asset		Deposits	
	Industry (%)	NRB (%)	Industry (¢)	NRB (¢)	Industry (¢)	NRB (¢)	Industry (¢)	NRB (¢)
2006	12.77	15.59	951,227	863,468	2,460,668	2,144,000	1,859,878	146,647
2007	19.70	15.14	1,407,754	1,462,695	3,127,007	3,276,578	7,369,281	2,389,393
2008	18.26	13.77	1,817,763	2,670,718	3,746,945	4,117,894	2,790,087	3,187,403
2009	19.75	15.05	2,035,471	3,278,399	4,833,156	5,468,303	3,530,866	4,465,371
2010	19.03	13.56	2,548,259	4,560,750	6,560,197	8,336,867	5,095,429	6,697,425

Source: Authors' analysis based on the financial statements of NRB and RCBs (200 to 2010)

## 7 Conclusion and Recommendations

This study shows that there is a significant relationship between rural banks financial performance on one hand and size as measured by total assets, liquidity, and non-performing loans. The study concludes that the financial performance of Naara Rural Bank has been stable over the past eleven (11) years. Its financial performance is above the average of the nationwide network of rural and community banks. However, its credit risk management practices as indicated by the level of non-performing loans are not stringent enough.

In line with the findings of the study and for the bank to continue to survive through growth and profitability we recommend the following to Naara Rural Bank, in particular, and to the RCBs industry as a whole:

1. The bank should intensify its loan screening and monitoring activities to increase the loans recovery rate. It is important to concentrate on lending to salary workers and identifiable groups such as market women associations, farmers associations, fishermen/fishmongers associations, faith-based groups and other civil societies. This will ensure higher rate of loans recovery and enhancement of the bank's returns.

<sup>4</sup> NRB means Naara Rural Bank

2. Loans to individuals should be secured by micro insurance products and marketable securities so that in the event of default such securities can be sold to defray the debt.
3. Issues pertaining to the selection, training, placement, job evaluation, discipline, and remuneration of the staffs of RCBs credit units need to be tackled effectively.
4. Government and opinion leaders interferences in the management and lending operations of rural banks should be eliminated by Bank of Ghana and ARB Apex Bank. Rather the competencies of RCBs boards should be developed and their autonomy should be upheld. And as Aboagye and Otieku (2010) recommended “Laws and codes of conduct recently designed to guide the conduct of RCBs’ business should be allowed to work ... and that RCBs should pay attention to developing the competencies of their boards and senior management”.

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