UNIVERSITY OF CAPE COAST

EVALUATION OF FINANCIAL PERFORMANCE OF RURAL BANKS IN GHANA. A CASE STUDY OF NZEMA MANLE RURAL BANK LIMITED

SARAH EFUA ACKON

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BY

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Dissertation submitted to the Department of Finance of the School of Business, College of Humanities and Legal Studies, University of Cape Coast, in partial fillfilment of the requirements for the award of Master of Business Administration degree in Finance

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DECLARATION

Candidate's Declaration

I hereby declare that this dissertation is the result of my original work and that no part of it has been presented for another degree in this university or elsewhere except for those duly acknowledged in the text.

Candidate Signature: ……. Date: ……

Name: Sarah Efuah Ackon

Supervisor's Declaration

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

Supervisor's Signature: …… Date: ……...

Name: Dr. Michael Owusu Appiah

ABSTRACT

Though rural banks remain a major backbone of the developing economies' financial sector, their performance and ability to meet their mandates have been debated among policymakers and the general public. Thus, this study assesses the financial performance of rural banks in Ghana, focusing on Nzema Manle Rural Bank Limited. Specifically, this study examines the effect of the liquidity position of the bank, annual loans, non-performing loans, and bank size on financial performance. The research follows the positivist research paradigm with an explanatory research design and a quantitative approach. The data were analysed using both descriptive and inferential statistics, specifically ordinary least square (OLS) regression. The results show that the liquidity position of the bank influences financial performance positively, while non-performing loans and bank size negatively influence bank's financial performance. Annual loans, however, had an elastic but statistically insignificant positive effect on financial performance. It can be concluded that Nzema Manle Rural Bank Limited's liquidity position has a statistically significant beneficial impact on its financial performance. The study recommends that the bank should improve its liquidity position to obtain benefits from the investment in short-term assets. Also, the bank should enhance its credit risk management system, specifically the screening and monitoring of loan applications and credit facilities granted to its clients, to reduce the effect of non-performing loans.

KEYWORDS

Financial Performance

Ghana

Non-Performing Loans

Nzema Manle Rural Bank Limited

Return on Assets

Rural Banks

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DEDICATION

To my Family.

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LIST OF ACRONYMS

ARB	Association of Rural Banks
NI)L	Non-Performing Loans
OLS	Ordinary Least Square
RCBs	Rural and Community Banks
RoA	Return on Asset
RoE	Return on Equity
SPSS	Statistical Package for Social Sciences
UCC	University of Cape Coast

CHAPTER ONE

INTRODUCTION

Rural banks perform important roles in every economy, encouraging rural residents to save money, releasing resources from rural areas into the financial system to support development, and spotting promising companies in their local regions for investment and growth (Association of Rural Banks [ARB], 2018). Financial institutions are seen to be effective in reducing poverty, however some actually make things worse by engaging in illicit activity and poor resource management. It is possible to interpret the demise of the majority of these institutions as the result of an inability to assess and forecast their future financial situations.

Despite the role that rural banks have played in the financial environment and the government's efforts to spur growth, with fewer expectations in the financial scene (Owusu-Antwi, Antwi & Margret, 2014). Numerous issues have plagued the functioning of rural banks, ranging from inadequate governance to low capitalization, bad customer service, and poor management.

Background to the Study

By transforming deposits into profitable investments on a worldwide scale, the financial industry plays a significant economic role in providing financial intermediation and economic acceleration. The goal of all developed and developing countries is to enjoy consistent economic growth through a proper financial inclusion system as an end to poverty. Expanding financial services is expected to eventually lead to financial inclusion of the general public and cover rural residents, a crucial sign of economic success. As per

the definition by Diniz et al. (2012), financial inclusion is "the making of formal financial services accessible and affordable to all individuals, especially those with low incomes and in the rural areas". Hence, having a sound and profitable banking sector globally, which Africa is not an exception, cannot be overemphasised because it contributes to the stability of the financial economy.

Rural banks perform important roles in every economy, encouraging rural residents to save money, releasing resources from rural areas into the financial system to support development, and spotting promising companies in their local regions for investment and growth (Association of Rural Banks [ARB], 2018). Financial institutions are seen to be effective in reducing poverty, however some actually make things worse by engaging in illicit activity and poor resource management (Appiahene, Missah, Gyening, Adu-Gyamfi & Opoku, 2022; Boateng & Agyei, 2013). It is possible to interpret the demise of the majority of these institutions as the result of an inability to assess and forecast their future financial situations.

The spotlight on Ghana's commercial banks' performance has been more intense as a result of the recent global financial crisis. The unprecedented impact of the 2008 Global Financial Crisis coupled with the recent banking crisis in Ghana, little attention has been given to the financial performance of rural banks. Governments, regulators, academic studies, and society have all paid close attention to large commercial banks, whether they are in financial trouble or not. More importantly, considering that 23 rural banks were closed in 2007 and that three MFIs disrupted the economic operations of Brong Ahafo region, it is critical to assess rural banks' financial

stability. In January 2016, 70 MFIs were closed, with a potential for additional 108 closure as instructed by the Bank of Ghana.

In terms of financial intermediation and economic acceleration, the financial sector contributes significantly to the economy. It is therefore impossible to overstate the importance of having a healthy and successful banking industry is necessary for a sound economic and financial environment. The topic of company financial performance has been linked to an economy's potential growth. The banking sector has triggered the attention by all, particularly in the area of performance. From a single-country or cross-country viewpoint, researchers have strived to investigate the determinants of banks' financial performance. An economy's potential growth has been linked to rural banks' performance (Aboagye & Otieku, 2010). To mobilise funds and lessen the financial hardship of small- and medium-sized business owners and farmers, rural banking was created. Rural banks were expected to oversee credit, offer ancillary financial services, and supply agricultural finance (Shekhar & Shekhar, 2007).

Despite growing competition, Ghana's banking industry continues to be one of the most lucrative. In an effort to stay competitive, banks are visible to a variety of factors that may have an impact on their profitability. The rural banks are one of the major actors in the banking sector in Ghana. Rural banks' consistent growth and wide-ranging reach, particularly in the rural sector, are well known. The majority of the clientele in the informal economy make up the rural banking sector. In addition, the majority of these rural banks' service areas include a population that is heavily involved in agriculture, and the rural banks aim to meet their financial needs. According to the literature that is

currently available, rural banks in Ghana have made a major contribution to the socioeconomic welfare of the rural population.

Beginning a few years ago, rural banks in Ghana have greatly increased their financial resources, which has helped the country's economy expand. Regarding ownership structure, operational philosophy, and management structure, it possesses distinctive traits. Rural Banks are community-owned, in contrast to the big commercial banks. They benefit geographically from this, which makes effective management easier. In Ghana, rural banks have essentially been the main channel for promoting the idea of financial inclusion. Rural and Community Banks (RCBs) have gained widespread recognition for their role in facilitating local financial transactions by successfully attaining its founding goal.

Due to the fact that rural inhabitants made up a large proportion of the Ghana's population from the 2010 population census, rural banks developed as an economic development strategy aimed at revitalising the area (Aboagye & Otieku, 2010). However, it is impossible to ignore the reality that a sizable section of the population lives in rural areas. In order to help the rural population segment that has been denied access to formal financial services, the concept of rural banks has been established. They were developed to grant financial services to low-income categories, especially those who are self-employed, and to undertake financial intermediation for rural residents in order to reduce poverty. Hence evaluation of their financial performance for them to maintain their functions is paramount and some of the reasons are detailed below.

Ghana's rural banks' financial health is a significant major cause for concern (Owusu-Antwi, Antwi & Margret, 2014). Understanding the dynamics that can affect their performance is essential for determining how stable and growing they are. The financial health of rural banks is significantly influenced by economic factors (Mushonga et al., 2018). The populations they serve are directly impacted by variables like agricultural productivity, interest rates, exchange rates, and inflation rates (Hatmanu, Cautisanu & Ifrim, 2020). Changes in these economic variables may influence borrowers' income and ability to repay loans, which may raise the number of non-performing loans and reduce the profitability of rural banks (Akhter, 2023).

This study examines the determinants of financial performance of rural banks in Ghana, considering the importance of the banking sector with much emphasis on rural banks. Both underdeveloped and developing economies have looked at the factors that influence bank profitability. The main stream banking companies have received the majority of attention from researchers looking at banks in one economy or across nations. Therefore, the purpose of this study is to investigate the determinants of financial performance in the context of rural banks.

Statement of the Problem

For around 30 years, rural banks have been a part of Ghana's financial landscape. The launch of the rural banks in Ghana can be viewed as a special experiment and learning opportunity for enhancing the effectiveness of the rural credit delivery system. Rural banks were designed to become specialised financial institutions that help grow the rural economy by lending money to

craftsmen, small business owners, small and marginal farmers, and agricultural labourers. Their inception can be linked to the requirement for a more solid institutional framework for granting rural loans.

Numerous issues have plagued the functioning of rural banks, ranging from inadequate governance to low capitalization, bad customer service, and poor management at Nzema-Manle Rural Bank despite the role that rural banks have played in the financial environment and the government's efforts to spur growth (Owusu-Antwi, Antwi & Margret, 2014). As indicated by Owusu Antwi et al. (2014), the primary goal of offering financial services to rural residents has not been met to the expected level because many of them are still unbanked or underbanked. This problem can be found in Nzema-Manle Rural Bank which is expected to reduce financial performance in the near future (Mawutor & Awah, 2015). Although the bank offers banking services to persons in its catchment area and also introduces cutting-edge goods and works to combat poverty in the area in which it conducts business (Mawutor & Awah, 2015).

Yaron, Benjamin and Chariotonenk (1998) on "Promoting effective rural financial intermediation" blamed the inadequacies of rural finance organisations mostly on their reliance on government funding and donor help. The article went on to explain that due to PCBs' strong reliance on donations from donor organisations, there had been a high incidence of a lack of creativity in the push to self-mobilize deposits, which had led to the need for inadequate collections to offset their lending portfolios.

Asare (2015), who has analysed the financial performance of Ga Rural Bank in Ghana in numerous empirical studies on financial performance, noted

a substantial shift in the trend that led to profitability, high deposit mobilisation, and poor liquidity. In 2015, Antwi and Apau conducted research on the factors that affect the financial performance of rural banks in Ghana. It was determined that CRM had an impact on RCBs' ROA-based performance. Afriyie and Akotey (2012) also investigated the profitability and CRM of particular rural banks in Ghana.

However, studies done on the financial performance of rural banks in Ghana are general to the neglect of Nzema Manle Rural Bank Limited. Specifically, research studies on financial performance for the case of Nzema Manle Rural Bank Limited in the Western region have not been done. The Nzema-Manle Rural Bank Ltd. exists to provide banking services to those in its catchment area, while also introducing innovative products and reducing poverty in the region in which it operates.

Additionally, the Nzema-Manle Rural Bank Ltd. creates and maintains a friendly and rewarding work environment for its staff, who are highly motivated to provide superior customer services and increase shareholder value. The bank operates its banking operations with the utmost honesty and according to ethical business principles in order to maximise profits and play a significant role in the socioeconomic development of its catchment region. Given this and the wider recognition of Nzema Manle Rural Bank's importance to its community, this study sought to close this gap by evaluating the performance of Nzema Manle Rural Bank Limited.

Purpose of the Study

The study sought to investigate the financial performance of Nzema Manle Rural Bank Limited in the western region

Research Objectives

Specifically, the study sought to;

1. evaluate the impact of the liquidity position on financial performance.
2. determine the impact of the annual loan portfolio on financial performance.
3. determine the effect of non-performing loans on financial performance.
4. examine the influence of bank size on financial performance

Research Hypotheses

To guide and keep the study focused, the study hypothesised that;

H_1: Liquidity position of the bank has a positive effect on financial performance

H_2: Annual loans of the bank has a positive effect on financial performance

H_3: Non-performing loans of the bank has a negative effect on financial performance

H_4: Bank size has a positive effect on financial performance

Significance of the Study

The findings of this study provide support to rural banks and other commercial banks to undertake measures to strengthen their financial management practices. Again, the study will help stakeholders and policymakers to know the actual state of "financial management practices of Nzema Manle Rural Bank". Additionally, the study will contribute to the existing literature on the financial management procedures of rural banks. Knowledge of these will enable them to correct any abnormalities that arise

for the benefit of the bank. Furthermore, the study can act as a platform for further investigation.

Delimitation

The study focusses only on Nzema Manle Rural Bank Limited because the study conducted in Ghana on evaluating financial management practices of rural banks, Nzema Manle, was not examined. This study will focus on evaluating the financial profitability of Nzema Manle Rural Bank Limited and its performance. It will also focus on the effect of bank specifics variables.

Limitations

The following are the researcher's limitations in conducting this study: For the study, only quantitative research methods will be used. Due to time and financial constraints, the researcher will be unable to evaluate the respondents' qualitative opinions. The study was conducted around a small sample because only Nzema Manle Rural bank Limited was involved. Involving only Nzema Manle Concentration on rural banks would restrict the data obtained during the study. Other rural banks in Nzema in the western region could not be included because of financial resources. The multiple regression technique employed for this study might not be effective in dealing with latent variables, hence the Partial Least Square Structural Equation Modelling could have been used.

Organisation of the Study

The study is organised into five chapters. The first chapter comprises the introduction, background of the study, statement of the problem, study objectives, significance of the study, delimitation, limitation and definition of terms A review of relevant prior literature on issues on theories of financial

performance, the concept of rural banks and an empirical review based on the study's objectives constitutes Chapter Two. The study's methodology is covered in the third chapter, which is followed by Chapter Four, which contains discussions and a summary of the findings. An overview of the research findings, conclusions, and suggestions is provided in Chapter Five.

CHAPTER TWO

LITERATURE REVIEW

Introduction

The study sought to investigate the financial performance of Nzema Manle Rural Bank Limited in the western region. This chapter focuses on reviewing literature connected to the evaluation of the financial performance of rural banks, financial ratios, theoretical framework, an overview of rural banks, and an empirical review of the study's objectives.

Theoretical Review

This study will be supported by efficient structure theory, delegated monitoring theory, and information asymmetry theory as a guide to specifying key variables in the research topic.

Efficient structure theory

The efficient structure hypothesis holds, according to Berger, Hassan and Klapper (2004), that the association between the market structure and the performance of any bank is a result of efficiency. The efficiency theory's premise is that banks with more efficiency have lower costs, which could directly translate into increased profitability. According to the efficient structure theory, banks with greater efficiency have lower costs (better management, technologies, and practises limit costs). The Nzema-Manle Rural Bank Ltd. exists to provide banking services to those in its catchment area, while also introducing innovative products and reducing poverty in the region in which it operates.

Additionally, the Nzema-Manle Rural Bank Ltd. creates and maintains a friendly and rewarding work environment for its staff, who are highly

motivated to provide superior customer services and increase shareholder value. A better scale of operation for banks, according to the notion, results in cheaper expenses. This hypothesis are supported by the fact that most rural banks in Ghana strive for extreme caution in their cost-management techniques. Most of them have managed to withstand the most challenging climate in the banking business as a result of this awareness.

Delegated monitoring theory

Financial institutions are able to monitor net savers in accordance with the delegated monitoring principle (Diamond, 1984). Depositors have given financial intermediaries the task of safeguarding their funds and entrusting them to invest those funds prudently in order to produce higher returns in this situation. Because of this, they have a fiduciary duty to their clients to make sure that there isn't a loss or fall in deposit value brought on by bank employees' carelessness or excessive risk-taking. They are also required to uphold the highest level of confidentiality regarding depositors' and borrowers' accounts due to the high cost of financial information.

These intermediaries have a responsibility to accurately and completely examine material in order to make knowledgeable investment and credit decisions. The depositors expect that after the loan has been granted, the financial intermediaries will act as their agents and keep an eye on the loan accounts and the borrowers' financial situation to make sure that the required principal amount is paid. In order to maximize owners' wealth, financial intermediaries take the required steps to fulfill their allocated supervisory responsibilities. Because of this, depositors who think a financial

institution is not looking out for their best interests or not defending their interests may withdraw their money to criticise the institution.

This hypothesis suggests that individual savers view financial intermediaries as a place where they can outsource their duties, which is keen to the demand side. For instance, because they save money, they have additional cash that they may lend out or put into investments to earn interest. Because they lack the resources to conduct such functions directly, financial intermediaries perform such roles. This is expected to have an impact on depositors' desire for savings and other goods from financial intermediaries. The demand side offered by rural banks in Ghana's rural communities is where this concept intersects.

Information asymmetry theory

According to the information asymmetry theory, incomplete information leads to an information issue. Ex-ante or ex-post effects can be attributed to informational issues in the financial market. Due to the ongoing issues with information in the financial market, there is moral hazard and adverse selection. In contrast, export-related information issues result in expensive compliance audits or assurance services. Three major problems are identified by Hoff and Stiglitz (1990) to include: the screening process; the cost of determining the amount of the default risk (the incentives); and the oversight to ensure loan repayment.

Financial services providers make an effort to offset these costs, at least in part, by enhancing public access to information in line with information theory. For instance, Leland and Pyle (1977) saw financial market intermediaries as a coalition that minimised information asymmetries

and facilitated access to information through information exchange. Due to a lack of information, Diamond and Dybvig (1983) stated that organisations that offer financial services provide insurance in contradiction of idiosyncratic shocks. Financial intermediaries can obtain economies of scale because they can communicate information more quickly, as demonstrated by Diamond (1984).

Conceptual Review

This section reviews the related concepts necessary for an adequate understanding of this study. It focused on the main concepts in the topic and the specific objectives.

Overview of rural bank in Ghana

In Ghana, rural banking was established in 1976 to provide loans to rural residents to help them expand their small enterprises and fund development initiatives. The government established rural banks and put in place specific laws to make it possible for those living in rural regions who are struggling financially, such farmers and fishermen, to access financial assistance. These laws stipulated that commercial banks should ensure that at least 2000 of the entire portfolios is geared toward agriculture.

Due to these policies, the Agricultural Developmental Bank (ADB) has a motive of lending to rural agriculture and related sectors' (Bank of Ghana, 2017). The majority of rural residents were farmers or fisherman, and before the ADB was established, it was not found appealing by commercial banks to provide financial services to them. As a result, the rural residents were ultimately marginalised by geography.

There have been many unsuccessful attempts to persuade major commercial banks to expand their reach into rural regions, particularly via the granting of loans to farmers engaged in the cultivation of food and cash crops. These banks instead focused on other high-value transactions related to the financing of business, industry, and international trade. This created a void in the ability to provide rural communities with a well-structured means of financing, particularly in the sector of agriculture. The rural sector was excluded from the development agenda regarding the failure for commercial banks to lend to them significantly. The rural sector was overlooked since they cannot provide any kind of collateral that commercial banks could rely on. As it became clear that the current system could not support rural expansion, the need for an institutionalized credit framework to fill the gaps left by the financial institutions became apparent. The developed framework was designed to benefit from specific characteristics of non-institutional credit organisations, which led to the development of rural banking in Ghana.

The purpose of rural banks is to mobilise deposits and relieve the financial hardships of small and medium-sized business owners and farmers. They are intended to administer loans, offer ancillary financial services, and extend credit for agricultural inputs (Shekhar & Shekhar, 2007). Rural banks were founded primarily to encourage rural residents to bank, mobilise resources, and raise the standard of living for residents with proper sectoral investments. In Ghana, rural banks have essentially been the main channel for fostering financial inclusion. The success of its founding goals has made RCBs a key player in the local financial intermediation market (ARB Apex Bank, 2011). The ARB Apex Bank had a network of 124 branches as of the

end of 2018 (144). Independent RCBs that serve rural residents by offering financial services have roughly 700 branches dispersed across the nation (www.arbapexbank.com).

The work that managers do to complete the tasks allocated to them regarding the financial management of the organization can be referred to as financial performance. Management has a key role in regulating the company's performance. One of the main features of a company's financial state that can be determined based on an examination of its financial ratios over time is its financial performance. According to Sha (2017), the price earnings ratio, return on investment, and total assets turnover are some financial ratios utilized in conducting fundamental research. Particularly for financial institutions, doing fundamental analysis should take into account.

Contribution of the rural and community banks in Ghana

The Ghanaian banking industry has relied heavily on the rural banking system. The sector is in charge of a sizeable share of all domestic deposits. Their function as financial intermediaries ensures that they raise money and provide loans to rural residents for a range of economic endeavours. They occasionally contribute to the development of the neighbourhood in which they operate with the profits from their operations. They considerably contribute to the socioeconomic advancement of their catchment areas by doing this. Due to the favourable social effects of rural banks, there has been a commendable increase in their establishment across the nation. It is necessary to empower the rural sector for a future reduction in poverty because it is essential to Ghana's overall development. The author emphasises

the role of rural banks in bridging the gap that once existed between the legal banking system and the unofficial financial system.

Financial performance

According to Bank Indonesia rule No. 9/1/PBI/2007, market risk sensitivity and CAMEL may be used in financial performance measurement approaches. This is the criteria that Bank Indonesia has formally established to assess a sound banking system. Bank Indonesia uses CAMEL financial ratios as a financial criterion to evaluate a bank's stability. Financial performance refers to the estimation of specific dimensions that might gauge how successfully a business produces earnings. The financial performance of a firm is the state of the company as shown by its financial statements over a specific time period, and it may be said that the financial performance is the sum of shareholder returns.

Performance measurement is the process of documenting and evaluating the fulfillment of the activities carried out in accordance with the mission's directives based on the outcomes manifested in the form of corporate profitability, the creation of new goods, services, or processes. Return on assets (ROA) focuses on the company's ability to create earnings from its activities, as opposed to return on equity (ROE), which only evaluates the return made on an investment in the business owner. ROA was used to assess how well the business utilized its resources to produce profits. Because of the higher rate of return, a higher ROA demonstrates superior financial performance. If the ROA improved, the company's profitability would also have grown, which would eventually have a positive effect on shareholders' profitability.

For businesses and people, the company's financial performance is crucial. The primary information sources are used to assess the company's historical performance. Even while the company's past performance was significant, many managers and analysts are more focused on the future. such that future performance can be predicted from the historical financial statements. The financial situation of a given company must be known by parties who are interested in its development. The financial statements of the firm in question, which are made up of the balance sheet, as well as the financial statements of other companies, can be used to determine the financial health of an organization.

Financial performance refers to the estimation of specific dimensions that might gauge how successfully a business produces earnings. Financial performance refers to the accomplishments of the company as displayed by its financial statements during a specific time period. A company's financial performance might be viewed as an indication of its future prospects, growth, and strong development potential. Information about financial performance is required to forecast the output capacity of already-existing resources and to evaluate anticipated changes in economic resources that might be managed in the future.

Determinant of bank performance

Financial performance indicates a company's potential earning power in relation to its outlays (Sanni, 2009). Harker and Zenios (1998) define the performance of financial institutions as an economic performance that may be evaluated using a number of financial ratios and indicators, both short- and long-term. For rural banks, macroeconomic and local socioeconomic

situations can be categorised as external factors. The results of Mushonga et al. (2018), which demonstrate that internal rather than external factors mostly impede small banks' performance, are consistent with this. They contend that technology, cultural change, human development, and environmental legislation will be key factors in the industry's future success in South Africa.

A proxy for financial success, return on total assets (ROTA) gauges a bank's overall earnings performance as well as how well it uses its assets. The ratio so compares a company's net assets to its earnings before interest and taxes. As a result, it is seen as a useful indicator of how banks use their assets to produce earnings prior to meeting their contractual obligations. Having said that, the profitability ratio shows how well rural banks can plan their spending on new assets. Here, it is anticipated that making the best decision and using the entire asset base effectively will boost bank profitability (Mehmet & Eda, 2009).

Capital adequacy (CAR)

Banks' capacity to absorb losses and fulfill customer obligations is gauged by their capital adequacy. The CAR and the debt to equity ratio are two metrics of capital adequacy taken into consideration in this study (Rawlin, et al., 2017). The long-term solvency of the bank is confirmed by a greater capital adequacy ratio, which suggests that the bank is adequately provisioned relative to its level of risk. Espenilla (2007) asserts that rural banks must meet a minimum risk-based capital adequacy ratio of 10%. This risk-based capital requirement mostly complies with the 1988 Capital Accord of the Basel Committee and its most recent updates, including the Basel II guidelines.

The ratio of equity to total assets, which measures capital sufficiency, is seen to be crucial for a bank's capital strength. It is anticipated that if capital adequacy is strong, there will be less need for outside finance, which will increase profitability. The ratio demonstrates the bank's capacity to take losses and manage risk exposure for shareholders. Since well-capitalized banks have fewer costs and risks of insolvency, the capital adequacy ratio is anticipated to have a favourable impact on profitability. In other words, it is widely believed that highly capitalised banks are in the greatest position to be more lucrative as they are expected to bear a smaller cost of financial hardship (Trujillo-Ponce, 2013). In accordance with the conventional risk-return theory, rural banks with higher capital adequacy are regarded as less dangerous than banks with inadequate capital. The risk-return hypothesis therefore contends that decreased risk is linked to worse profitability, indicating a poor correlation between capital sufficiency and performance.

Liquidity performance

Liquidity is the bank's ability to convert assets into cash. It also indicates the amount of money the bank has on hand to meet its cash-flow and credit demands (Aspal & Dhawan, 2016). Due to their excessive exposure to the unrated asset category and their incapacity to manage their short-term liquidity liabilities and loan commitments, the banks' poor performance can be negatively impacted (Samuel, 2018). Furthermore, the bank's profitability and overall performance may suffer if it is unable to meet its short-term liquidity needs. When conditions are steady, a bank with a high liquidity ratio will be better able to protect itself against liquidity risk.

Bank liquidity gauges their capacity to pay short-term debt when it becomes due. The proportion of liquid assets to total assets determines how liquid a company is. Because of this, a bank's advances to deposits ratio is used as a stand-in for liquidity. The bank is more liquid if the ratio is high. According to earlier research (Guru, Staunton & Balashanmugam, 1999), the collapse of banks in the contemporary global economy is caused by a lack of liquidity. Despite this, there is a cost to having more liquid assets. Holding highly liquid assets, for example, is linked to lower rates of return, which lowers revenue and profitability. Thus, we hypothesise that having cash on hand (an asset that doesn't generate interest) is predicted to have a negative correlation with performance (Guru et al., 1999).

If a financial organisation can pay its debts as they become due, it is considered to be liquid. In the banking industry, liquidity refers to a bank's capacity to finance loan portfolio expansion and off-balance sheet demands as well as the withdrawal of deposits and other obligations. Due to erratic liquidity, liquidity risk arises. It results from trying to cater for long-term assets with sources of finance that are short-term puts liabilities at danger of rollover or refinancing.

Another thing that can occur is a decline in the credit rating of banks because it causes an unanticipated outflow of cash or, causes counterparties to stop doing business with the company or stop financing to it. When the markets a firm depends on experience a loss of liquidity, this exposes the firm to additional liquidity risk. Risks associated with market and financial liquidity are inversely correlated, since it becomes more challenging to sell when investors experience funding issues. A trading organisation is again

constrained in its capacity to exit a position in an illiquid asset quickly, which increases its market risk. Therefore, liquidity planning is still a crucial component of banks' risk management strategy.

Deposit

The majority of rural banks use customer deposits as the primary, most affordable source of credit for lending. Rural banks in this area offer minimal to no interest on customer deposits. The perceived interest margin and profitability of rural banks is also larger the more deposits they can convert to loans (Anbar & Alpers, 2011).

Bank size/total asset

Previous research has demonstrated a link between bank profitability and asset size. Kosmidou (2008) revealed a positive relationship amid bank size and profitability, which he attributes to economies of scale that banks have as a result of their involvement in the banking sector. Due to their ability to raise more affordable capital, Kosmidou (2008) shows that big banks are more lucrative. However, Gibson (2005) contends that bank scale may have a detrimental impact on profitability because of the bureaucracy in the management of banks. In stark contrast, growing a financial company's size rarely results in cost savings, which boosts banks' profitability (Bikker & Hu, 2012).

Another element that previous empirical research has revealed as having an impact on bank profitability is the size of the bank, as measured by total assets. The research that is currently available, however, suggests that there is no definite link between the size of total assets and bank profitability. For example, Chodorow-Reich, Darmouni, Luck and Plosser (2022). asserted

that as a bank grows in size, cost reductions may be realised. Shaffer's findings are supported by those of Berger et al. (1987). In particular, Shaffer (1985) shown that large economies of scale are attained with growing bank size, improving financial performance. Other research, however, has revealed a conflict between a bank's size and its financial performance. For instance, Naceur (2003) found that due to inefficiencies brought on by diseconomies of scale, large banks typically have lower profit levels.

Asset quality/credit risk

One of the key factors in assessing a bank's general health is asset quality. The credit portfolio's quality and the credit administration program are the primary factors influencing total asset quality ("FDIC: Federal Deposit Insurance Corporation," 2020). One metric for measuring the success of bankers' lending decisions is the ratio of gross NPL to gross advances (GA). According to Rostami (2015), since loans have the highest default risk, a rise in the proportion of NPL indicates a decline in asset quality.

According to Ab-Rahim, Kadri, Ee-Ling and Dee (2018), banks that have greater provision for loan loss ratios are taking more risks. 40 An important factor to consider when assessing a bank's strength is the quality of its assets. Identifying the portion of nonperforming assets as a percentage of all assets is the main goal of measuring an asset's status. The positive asset quality grade demonstrates that banks are adept at identifying, quantifying, monitoring, and controlling credit risk (Rozzani & Rahman, 2013). The outcome of asset quality calculations indicates the current and potential credit risk.

Variations in asset quality can be seen in the loan portfolio of the rural bank's credit quality and soundness. In essence, asset quality shows the bank's credit risk. Unrecoverable loans or delays in loan servicing are related to credit risk. Credit risk may have a devastating and snowball effect on the bank, ultimately causing its demise (Bessist, 2002). The credit risk and the amount of accrued outstanding loans and interest increase in direct proportion to the provision for bad debt to advances ratio (Ramlall, 2009). The risk-return hypothesis is used by Gentry (1970) to reach the conclusion that there ought to be a positive connection between greater risk and greater profitability. As a result, portfolio adjustments that have a detrimental impact on performance are reflected in asset quality. Poor asset quality may hurt a bank's profitability by lowering interest income and so driving up costs. Therefore, it is anticipated that the loan portfolio's quality and risk will both decline as the ratio rises.

Credit risk is the chance that a borrower or issuer of a financial instrument, such as a person, business, or even a country, won't be able to repay in accordance with the terms. This definition was provided by Van Greuning and Bratanovic in 2009. The cost of replenishing cash flow in the event of a counterparty default is how another school of thinking defines credit risk. In other words, the risk that the counterparty won't fulfil a duty to its debtors. It is the possibility that a bank or counterparty loan client won't fulfill their commitment in line with the conditions stipulated (Boateng, 2019).

The phrase the possibility that a debtor or a counterparty default in paying a preset obligation in accordance with the agreed terms is the most appropriate definition. Payments may be delayed or not made at all due to credit risk, which impacts a bank's liquidity and causes cash flow issues. In general, credit risk encompasses the possibility that an oblige or counterparty will not fulfil their duty to pay back debt as well as the possibility that their credit standing would worsen. (Kargi, 2014) asserts that credit risk can be present in any operations whose success is dependent on the counterparty's performance.

Default risk and portfolio risk are the two primary hazards that, in general, give rise to credit risks. Both inherent and concentration risks are present in the portfolio. Credit risk can come from both external and internal elements in a bank's loan portfolio. Some examples of external effects include fluctuations in macroeconomic factors such as asset prices, interest rates, foreign exchange rates, economic sanctions, and governmental policies. Some of the intrinsic problems include a few issues with loan administration and regulations, flaws in the assessments, and post-disbursement monitoring.

Loan amount and portfolio

A bank's ability to turn a profit depends on the quantity of credit it can extend to its customers and how well it can collect it. Therefore, banks should raise the number of loans they issue to their customers in order to generate enough profit to support their operations. Nyamsogoro (2010) proposed that financial institutions might expand the magnitude of loans and the pool of borrowers. could use both tactics at once.

Schreiner (2001) recommended the following factors which enable banks to maximise their loan size: term to maturity, dollar amount each instalment, number of instalments, duration between instalments, and average balance. Before expanding the size of loans, a bank should take these factors into account. The time between the time allotted to clients and the due date for loan repayment is known as the maturity of the loan. Loan size is the amount of time left for the loan to be disbursed by the due date (Nyamsogoro, 2010). It is suggested that the amount of time allotted for loan repayment impacts whether banks can remain solvent.

According to Brake (2000), the risk posed by loans with extended maturities has a significant impact on how well banks are doing financially. In contrast, Schreiner (2001) suggested that while longer loan maturities are associated with higher bank profitability, they also result in lower coverage. According to the two academics, banks must exercise caution when assessing loan maturity. It is preferable for the bank to shorten the loan maturity if it wishes to attract more borrowers. On the other side, it is preferable to extend the loan maturity if the bank wants to decrease the number of borrowers and enhance profit. The two methods are used to assess a bank's financial viability. The interest rates, however, are what determine this.

The monetary amount of each payment, which has an impact on a bank's profitability, can also be used to describe the loan size. Due to the amount of the loan, more interest earnings would be generated. Additionally, it refers to the largest loss a default could cause (Nyamsogoro, 2010), Since their expenditures are largely set, the big loan size lowers the average cost of loan distribution. Therefore, because lenders are more cautious because they

are exposed to more risk, extended loan maturities would mean excess per-dollar variable amount.

Once more, the interval between instalments may impact banks' financial success. The bank is more at risk as loan payments rise since the borrower could stop making payments (Murodovich & Jahongir, 2022). However, frequent loan payments may have an effect on banks' financial performance, according to Armendáriz and Morduch (2007). High repayment rates can be attained if this is done, which will lower default.

Profitability

Profit, according to Bessis (2005), is the sum of revenue remaining after all costs have been paid. It implies that any business is profitable if it can produce more income than it spends. While profitability is a measure of the ongoing profit earned, profit is typically expressed as a monetary value. Ratios of profitability reveal a company's overall effectiveness. Profitability ratios could be classified into two including; margins and returns. The ratios that show returns are used to gauge the creation of returns for shareholders in an efficient manner. However, margin-based statistics show the company's ability to convert revenues into profits at all levels of evaluation.

Stakeholders will consider profitability as their starting point when evaluating the success of the organisation. The top priority for bank and company management is to maximise profits. Profitable businesses can raise the value of their shares and give shareholders dividends. Investors are drawn to profitable banks, particularly listed companies. Even depositors in the case of banks research profitable banks before opting to place their money there.

Utilizing qualitative and quantitative data from the company, performance evaluation examines the level of financial and economic performance. The data used to calculate the financial ratios can be found in the annual reports published by companies. It is appropriate to compare the ratios with other companies in the same industry to determine whether the performance is within industry standards. Comparing the present and prior performances a firm is essential for a more accurate assessment and overseeing the firm's financial capacity.

Profitability indicators

Excess net income is left over for the owner of the company organization after all expenses (aside from shareholders' dividends) have been deducted from the revenue generated is the ultimate indicator of performance in any market-oriented economy. To determine if a potential borrower will be financially successful or unsuccessful in relation to other firms in the same industry, most loan officers review any new loan application by comparing the pretax and after-tax net income. Profitability is a measure of how well a business is doing financially. There are various profitability indicators available for evaluating a company's financial performance, however there are primarily two different sorts of profitability ratios. Specifically, the ratios of the rate of return and the profit margin.

Rate of return ratios

These ratios illustrate the connection between investment and profit. They are shown as;

Return on assets (ROA)

$$ROA = \frac{\text{Profit after tax}}{\text{Average Total Assets}}$$

ROA is peculiar even though it is frequently used since its numerator gauges the return to shareholders. The contribution of all investors (shareholders and lenders) is represented by its denominator, though.

Earning Power

Mathematically;

$$\text{Earning Power} = \frac{\text{Profit before interest and Tax}}{\text{Average Total Asset}}$$

It is an indicator of company performance that is unaffected by interest rates and tax obligations. It emphasises operating performance and disregards the impact of capital structure and tax considerations. Earning power is then suitable for company comparison. The metric is internally consistent once again. The denominator reflects overall funding, and the numerator measures pre-tax earnings from all sources of financing.

Return on capital employed (ROCE)

It is defined mathematically as:

$$\text{ROCE} = \frac{\text{Profit before Interest and Tax } (1 - \text{TAX RATE})}{\text{Average Total Asset}}$$

The ROCE ratio is internally consistent since it takes taxation into account rather than capital structure. ROCE has the benefit of being defined as being analogous to the company.

Return on equity (ROE)

$$\text{ROE} = \frac{Equity\ Earnings}{\text{Average Equity}}$$

Equity stockholders are quite interested in this metric. Preference dividends are subtracted from earnings after tax to determine the numerator of this metric. In contrast hand, the denominator consists entirely of the contributions

made by equity owners. ROE, also known as return on net worth, gauges how profitable equity funds are for the company. ROE is the crucial accounting indicator of success because any company's principal goal is to maximise shareholders' wealth (Chandra, 2011). These accounting measures are better obtained from book values relating to equity and assets.

Profit margin ratios

These ratios show how sales and profit are related to one another. There are various ways to assess profit margins because the measurement of profit might occur at various stages. The operational profit margin, net profit margin, and gross profit margin are the most widely used profit margin ratios.

Gross profi

$$\text{Gross Profit Margin} = \frac{Gross\ pofit}{\text{Net Sales}} \times 100\%$$

Any business entity's gross profit (GP) is the sum of its net sales minus the cost of sales. The GP margin shows the profit after deducting the cost of production. The ratio evaluates both pricing and production efficiency. It is required to conduct in-depth analyses of the ratios of different cost components (such as labour, materials, and manufacturing overheads) to sales in order to identify the variables influencing the fluctuation in gross profit margin.

Operating profit margin ratio

$$\frac{Operating\ pofit}{\text{Net Sales}} \times 100\%$$

These ratios show how much money is left over after covering production costs. Depreciation costs are included with selling, general, and administrative costs. It displays the company's operational effectiveness.

Net profit margin

It is expressed as;

$$\frac{Net\ pofit}{\text{Net Sales}} \times 100\%$$

This ratio displays the earnings remaining as a percentage of net sales for equity and preference stockholders. The efficiency of production and selling is measured by the net profit margin ratio. The analyst can determine the sources of business efficiency and inefficiency by using the gross and net profit margin ratios together to analyse the firm's cost and profit structure.

Empirical Review

The elements that affect bank performance or the drivers of bank performance have been the subject of several empirical research. In general, a combination of financial ratios analysis has been used to gauge the financial performance of banks and other financial institutions. The empirical review has been categorised by this study's intended hypothesis.

Non-performing loans on banks' performance.

The association amid credit risk management (CRM) and bank profitability on the GSE was examined by Mawutor (2015). Data from seven banks were analysed over a six-year period using a multiple linear regression. The findings showed that non-performing loan recovery (NPLR) and ROA had a negative and negligible link, but LATD and ROA had a negative and significant relationship.

Antwi and Apau (2015) conducted research on the factors that affect the financial performance of Ghana's rural banks. They came to the conclusion that credit risk management had an impact on RCBs' ROAO performance. Profitability suffered from operational efficiency. CAR was a key factor in determining how well Ghana's rural and community banks performed. Similarly, Yusheng (2017) conducted a study to ascertain how CRM affected the financial success of commercial banks in Ghana. While NPLR and capital adequacy ratio (CAR) served as stand-ins for CRM, ROE served as a performance measure. While CAR had a positive and negligible link with ROE, NPLR demonstrated a negative and substantial relationship influence on ROE.

The relationship between CRM and profitability among Kenyan commercial banks was also examined by Aduda and Gitonga (2011). The researchers employed NPLR as a credit risk measure and ROE as a predictor of profitability. They discovered that NPLR had a 72.19% impact on Kenyan commercial banks' profitability. It shows that a change of one unit in NPLR will cause a change of 72.19% in ROE. They came to the conclusion that profitability and credit management are related, and that profitability is influenced by this relationship.

In their investigation into the factors affecting Indian bank profitability, Kuknor and Rastogi (2021) employed both ROA and ROE as profitability measures. Their regression analysis' results demonstrated that non-performing loans significantly affect banks' profits. In the same vain, Mendoza and Rivera (2017) examined how the profitability of the rural banks in the Philippines was impacted by credit risk and capital adequacy. As a

measure of profitability, ROA and ROE were utilised. Credit risk was measured using the "loan loss provision to total loans (LLP/TL) and CAR." The regression investigation reveals a negative, statistically insignificant association amid profitability measures and CRM.

Isanzu (2017) conducted an empirical investigation of the effects of credit risk on the seven-year financial performance of Chinese banks. She used ROA as a proxy to quantify credit risk in relation to financial performance, along with non-performing loans. The results of the regression analysis revealed a substantial and negative association amid NPL and ROA. ROA was positively and considerably impacted by capital adequacy ratio (CAR). Impairment reserve has a negative impact on gross loan and ROA. The percentage of impairment charges also had a favourable impact on ROA.

Fofack (2005) conducted study on the reasons behind non-performing loans in sub-Saharan Africa and the effects they have on the macroeconomy. Correlation and causation analyses were performed on the NPL determinants. Two sections made up the correlation causality analysis. First, it was determined whether NPLs and macroeconomic were related. The focus of the investigation at the microeconomic level was the correlation between NPLs and several banking sector metrics.

The findings suggested a bad correlation between GDP and NPLs. Inflation and NPL had a negative association, indicating that inflation would reduce the assets and equity of banks. NPLs and the rise in the real exchange rate were positively correlated. NPLs and monetary expansion once more had a bad correlation. The findings also showed that most banking-specific

factors, such as ROA and equity, total deposits, net interest margin, and net income, were negatively correlated with nonperforming loans (NPLs).

Using a regression model over a twelve-year period with ROA as a proxy for profitability and the loan loss reserve ratio to a gross loan as a proxy for asset quality, Kosmidou (2008) examined the factors influencing bank profits in Greece during the period of EU financial integration. The results revealed a significant negative association amid asset quality and bank profitability.

Liquidity performance on banks' performance

In their 2018 study, Makkar and Hardeep looked at the variables affecting the profitability of Indian commercial banks. The profitability metric was ROA. The study's findings showed that among the factors affecting bank profitability, bank liquidity seems to have the most bearing on the success of Indian commercial banks.

Samad (2004) looked into seven regionally incorporated rural banks' operations in the Gulf from 1994 to 2001. The performance of the seven banks was evaluated in comparison to Bahrain's banking sector, which served as a benchmark. The statistical significance of the performance metrics was assessed using Student's t-test throughout the article. The findings showed that Bahrain's rural banks were significantly less lucrative, liquid, and susceptible to credit risk than the industry as a whole, of which wholesale banks make up the majority.

Tan, Floros and Anchor (2017) looked at how risk, competition, and efficiency affected the profitability of Chinese banks as assessed by ROA, ROE, and NIM. They learned through their investigation that there was a

weak and unimportant negative correlation between credit risk and profitability. However, liquidity risk has a favourable and considerable impact on the profitability of Chinese banks. Profitability was negatively impacted by the capital risk. The size of the bank was found to be positively and significantly related to profitability. Cost effectiveness greatly and negatively impacted Chinese banks? ROA, but had a beneficial impact on ROE and NIMu. They discovered once more that Chinese banks with less competition are less profitable than those with more competition.

In a two-stage process, Kiyota (2009) examined the profitability and cost-efficiency of rural banks operating in 29 Sub-Saharan African nations between 2000 and 2006. In order to provide cross-country information on the effectiveness and performance of African rural banks, the paper uses the "stochastic frontier approach (SFA) to estimate profit and cost efficiency, financial ratios, and the Tobit regression." The results show that international banks typically outperform domestic banks in terms of profit efficiency and cost-efficiency, according to a variety of performance ratios and stochastic cost and profit frontier estimation.

The factors affecting the profitability of Indian public sector banks were studied by Naresh Kedia in 2016. The independent variables of the bank-specific variable, such as operational costs, and credit-to-deposit ratio, were employed in the study. Profitability was determined by net profit, with the analysis based on multiple regression. According to the investigation, net profit was strongly and positively correlated with interest income and the credit to deposit ratio. NPA has a small but favourable relationship with net

profit. However, there was a weak and unimportant correlation between operating expenses and net profit.

The impact of CRM on the financial performance of Kenyan commercial banks was studied by Gathigia, Munyua, and Mwangi in 2016. Performance was measured by ROE, whilst credit risk was assessed using the following metrics: loans to advances ratio. They employed fixed effects estimating approaches for their panel data analysis and the general method of moments (GMM). Their conclusions suggested that CRM has a considerable and detrimental effect on the financial health of Kenyan commercial banks. It is implied that low asset quality or a high proportion of non-performing loans to total assets cause bad bank performance.

In Ghana, Anarfi (2016) studied banks' profitability using ROA. They came to the conclusion that capital and bank loans influence profitability. The overhead expense significantly and negatively affected the profitability of Ghanaian banks. They discovered no relationship between bank deposit and profitability in Ghana. The only macroeconomic factor that negatively impacted profitability was the exchange rate.

Ali Sulieman Alshatti in 2016 investigated the determinants of profitability in commercial banks in Jordan. Asset size, asset quality, capital sufficiency, capitalization, and leverage were the independent factors, whilst ROA and ROE served as proxies for profitability. ROA is positively impacted by capital adequacy, capitalization, and leverage, according to a panel of data from 13 banks over ten years. Liquidity, asset size, and financial structure have minimal effects on ROA. Asset quality has a negative impact on ROE

and ROA, although capitalization and leverage have positive effects on ROE. ROE is unaffected by asset size, financial structure, or liquidity.

Determinants of lending behaviour of Nepalese commercial banks during a seven-year period was undertaken by Yuga (2016) on four commercial banks. Advances and Loans were the dependent variables, whereas "bank size, liquidity, investment portfolio, cash reserve ratio, and deposit to capital ratio" were the independent factors. Only Bank Size and Cash Reserve Ratio were positively correlated with Loans and Advances, according to the correlation analysis. The outcomes of the regression study also revealed a favourable and statistically significant correlation between the volume of commercial bank lending and its size. Loans and advances had a detrimental and statistically significant association with liquidity, the cash reserve ratio, and the investment portfolio. On the other hand, the association between deposits and loans and advances was statistically negligible.

In their study on risk management and the performance of listed banks in Ghana, Ofsu-Hene and Amoh (2016) used ROA and ROE as performance indicators. They conducted their study using a least squares estimator and a linear multiple regression model. The findings showed that risk index (RI) had a small but substantial positive association with ROE and no significant link with ROA. The association between the size of the bank and the performance metrics, ROA and ROE, was insignificant. Whether or if shareholders grow their equity has no bearing on ROA or ROE.

Despite having a large negative impact on ROE, capital adequacy had no discernible link with ROA. Both ROA and ROE demonstrated a strong negative correlation with NPL. Since banks use their earned profits to service

NPLs, an increase in NPLs results in a decline in performance. Additionally, there was a strong inverse association between ROA and ROE and the cost-to-income ratio. Market share as a proxy for concentration (CON) showed a strong positive correlation with ROA and ROE. Inflation and the exchange rate were macroeconomic factors that significantly correlated positively with ROA and ROE.

Yakubu (2016) looked into the macroeconomic and bank-specific factors that affect Ghanaian banks' profitability among characteristics considered in the study. Inflation rate, real interest rate, and GDP growth were the macroeconomic variables used. In order to determine the correlation between the variables, the researcher used ordinary least square regression. Asset management (ROA) served as the dependent variable. The findings showed that the profitability was positively and statistically related to bank size. Profitability and liquidity were positively and statistically significantly correlated. As GDP and inflation had inverse relationship with profitability, CAR and expense management are positively associated. Last but not least, real interest rate positively but insignificantly correlated with profitability.

Pankaj Sinha and Saksha Sharma (2015) used bank-specific, industry-specific, and macroeconomic data in their analysis to analyse the factors that determine profitability. The profit and endogeneity aspects were taken into account by the researchers using the Generalized Method of Moments (GMM). They came to the conclusion from their investigation that the "factors unique to banks, such as the capital-to-assets ratio, operational effectiveness, and diversification, had a significant and favourable impact" on the bank profitability. Profitability of Indian banks is significantly impacted

by credit risk as indicated by provisions for bad loans. The Herfindahl Hirschman Index (HHI) conclusion of the structure conduct hypothesis (SCP) revealed the cyclicality of banks earnings with an unfavourable impact emanating from inflation on profits.

Annual loan amount on performance

In a 2009 study on the factors impacting bank profitability in Malaysia, Fadzlan Sufian used ROA whereas LLP/TL were used as bank-specific determinants. As additional macroeconomic drivers in the model, they used LNGDP and INFL. According to the data, banks that have a higher loan concentration exhibit lower profitability. Banks that have higher capitalization levels, more non-interest income, and higher operating costs are more profitable. The study discovered once more that the profitability of the Malaysian bank is badly impacted by economic growth. The profitability of Malaysian banks is positively impacted by high inflation rates.

For five years, Kithinji (2010) investigated how credit risk affected the profitability of Kenyan commercial banks. The regression findings showed that the amount of credit granted only little increases profit. Again, profit rises as the number of NPLs rises. As a result, there was an inverse link between profit and the amount of credit provided, whereas there was an inverse relationship between profit and the amount of NPLs. The t-test found no correlation between profits, credit availability, and the proportion of NPL.

The consequence is that factors other than NPLs and credit have an impact on the profitability of Kenyan banks. Therefore, the study suggested that commercial banks should pay more attention to other criteria if their goal is to forecast profit rather than non-performing loans. Financial ratios were

employed by Tarawneh (2006) to evaluate the performance of Omani banks. His findings demonstrated that operational effectiveness, asset management, and bank size had a significant and favourable impact on the financial performance of the banks.

Bank size/total asset on banks performance

Naceur (2003)'s findings were supported by Buyinza (2010), who found that bank size is negatively and significantly connected with profitability. In contrast, bank consolidation, cost efficiency, and a bank's ability to take on more risk were found to be the main determinants of banks' profitability, according to Buyinza (2010).

In order to assess the effects of industry- and bank-specific factors on banks' productivity and performance, Delis and Papanikolous (2009) used a semi-parametric model. They discovered that the statistical significance of bank size and its direct relationship to banks' effectiveness and performance. According to Hansan and Bashir's 2003 research, banks' financial performance is positively impacted by high capital and better loan-to-asset ratios under conditions of macroeconomic stability and an enhanced financial market system.

Ahmed and Khababa (2010) evaluated the financial performance of Saudi Arabian commercial banks. The authors examine the impact of market size, concentration, and business risk on the bank's profitability as shown by ROE and ROA. The actual findings from the models demonstrated that one of the key factors affecting a bank's profitability is its size. Alper and Anbar (2011) discovered a similar association amid asset size and profitability. It implies that bigger banks generate higher ROE and ROA. Additionally, the

asset size variable's positive and substantial coefficients support the hypothesis of economies of scale.

Economies of scale, which they credit to and assert that larger banks are more profitable, is said to significantly influence profitability, according to Molyneux (1993). Growing a financial company's size, according to many other scholars, does not considerably cut expenses, raising the prospect that very large banks may eventually have scale inefficiencies. It appears that empirical evidence also points to a conflict between profitability and bank size.

Empirical gaps

The financial performance of rural banks in Ghana has been the subject of empirical investigations, although Nzema Manle Rural Bank Limited has been mostly ignored. There haven't been any studies done specifically on the financial performance for the instance of Nzema Manle Rural Bank Limited in the Western area. The Nzema-Manle Rural Bank Ltd.'s goals are to reduce poverty in the area it serves, introduce innovative products, and offer banking services to persons in its catchment area.

The Nzema-Manle Rural Bank Ltd. also cultivates and upholds a warm and pleasant work environment for its employees, who are highly motivated to deliver top-notch client services and boost shareholder value. To maximize profits and contribute significantly to the socioeconomic development of its catchment area, the bank conducts all of its banking operations with the utmost integrity and in accordance with ethical business principles. This study aimed to address this gap by examining the performance of Nzema Manle

Rural Bank Limited in light of this and the increased acknowledgement of Nzema Manle Rural Bank's significance to its community.

Conceptual Framework

In this case, the financial performance indicator serves as the dependent variable, and the conceptual framework for the study is used to describe the relationship between the dependent and independent factors discovered during the research. where the independent variables are the non-performing loans, loan amount, bank size, and bank liquidity. The link between these factors is shown in the diagram below.

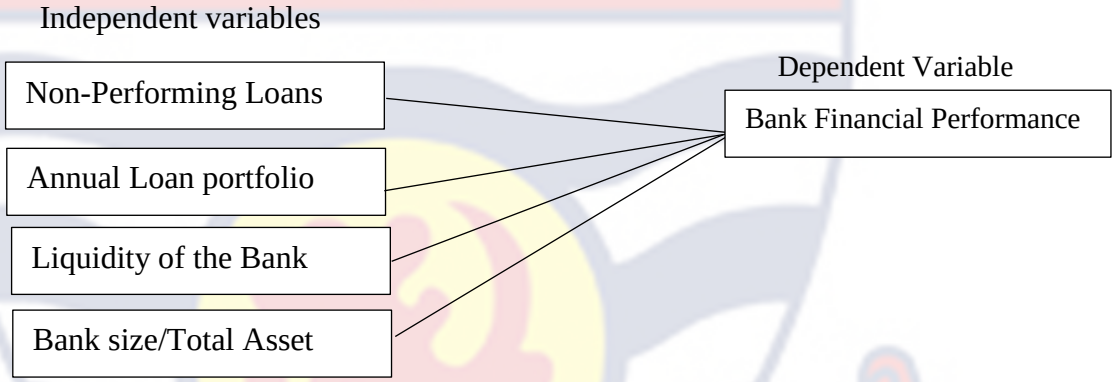

Figure 1: Conceptual Framework
Source: Author's Construct (2022)

The diagram above seeks to establish the link between non-performing loans, Annual loan portfolio, liquidity of the bank and bank size/total assets, and rural banks' financial performance,

Chapter Summary

The study's literature review is covered in this chapter and contains relevant theories, ideas, and empirical studies. efficient structure, delegated monitoring, and information asymmetry theories received special consideration. Other conceptual issues, such financial performance or bank profitability measurements and their determinants, have been addressed. Of

course, the existing literature highlighted that these factors are essential for every organization in the financial sector to succeed. as evidenced by the theories Overall, the evaluated literature formed the basis for the conceptual framework that guided the study's methodology.

CHAPTER THREE

RESEARCH METHODS

Introduction

The study sought to investigate the financial performance of Nzema Manle Rural Bank Limited in the western region. This study focused on Nzema Manle Rural Bank Limited and investigated the factors that affect the financial performance of rural banks in Ghana. This chapter examines the research techniques utilised to carry out the study. Research design, study area, population, sample and sampling techniques, data collection tool, data collection procedure, research tool, reliability, and data analysis are all components of research methodology.

Research Paradigm

To explain a study's reasoning or hypothesis, according to Antwi and Appau (2015), there should be a connection between the research and philosophical schools of thought. This study utilized a positivist research philosophy. Due to the positivist worldview premise that there is an objective ontological framework in social reality and that individuals respond to this framework objectively, the positivist research paradigm provides the philosophical foundation for the study (Morgan & Smircich, 1980) to improve their ability to describe the parameters of their relationships, positivists adopt scientific methods and employ quantitative approaches. Positivism seeks to discover and present the truth through empirical evidence (Antwi & Appau, 2015).

Research Design

Thus, a research design is a strategy that outlines how information on a certain issue should be gathered and analysed (Sekaran, 2011). The study

adopts an explanatory design with a case study approach thinking since this study is a case study in nature. According to Yin (2003), which Aboagyc and Otieku (2010) quote, a case study is an empirical tool used to examine a current occurrence in its actual setting. On the other hand, causal or explanatory research seeks to identify cause-effect relationships that are testable (Saunders, Lewis & Thornhil, 2012). In the context of the study, the researcher sought to investigate the effect of annual loans, liquidity, NPL and bank size on other profitability measures.

Research Approach

According to Holden and Lynch (2004), the approach to a research study entails a methodological relationship between the research philosophy and subsequent choice of methods to collect and analyse data. It could be a qualitative, quantitative or mixed approach. Pure quantitative research depends on gathering arithmetical data and other features of the quantitative pattern. Therefore, a quantitative approach is known for its contributions to multivariate and statistical prediction techniques (Sarantakos, 2005). This study employs the quantitative research approach. The quantitative approach is suitable for the positivist philosophical perspective chosen because the study's objective strictly requires estimating effects Positive philosophers assess quantitative studies' rigour by checking for Validity, dependability, objectivity, accuracy, and generalisation (Antwi & Appau, 2015). In addition, the researcher sought to perform a numerical assessment of the study variables to ensure an objective assessment.

Study Organisation

The Nzema-Manle Rural Bank Ltd, whose registered office is now at Aiyinasi in the Ellembele District of Ghana, was incorporated on 14th July 1980 but commenced banking operations on 3rd April 1981. The bank presently has ten agencies at Awiebo, Aiyinasi, Asasetre, Axim, Boinso, Eikwe, Elubo, Gwira Enyinasi, Amanful and Jema. The vision of Nzema-Manle Rural Bank Ltd is to provide efficient, reliable and viable rural banking services.

The Nzema-Manle Rural Bank Ltd. exists to provide banking services to those in its catchment area, while also introducing innovative products and reducing poverty in the region in which it operates (Mawutor & Awah, 2015). Additionally, the Nzema-Manle Rural Bank Ltd. creates and maintains a friendly and rewarding work environment for its staff, who are highly motivated to provide superior customer services and increase shareholder value. The bank operates its banking operations with the utmost honesty and according to ethical business principles in order to maximise profits and play a significant role in the socioeconomic development of its catchment region.

The nine-member board of directors of Nzema Manle Rural Bank Limited is the organization's main success factor (Mawutor & Awah, 2015). The governing body is responsible for formulating policies and ensuring that the business complies with all legal and regulatory requirements in order to protect the interests of shareholders and other stakeholders. The board also provides guidance and advise to the company's management in carrying out its operating policies and putting its operational strategy into practice (Wheelen et al., 2017).

The "Supervising Manager, the Senior Operations Manager, the Human Resources Manager, the Credit Officer, and the Chief Internal Auditor make up the top management's" five-person team. Planning and decision-making are management functions that determine the overall business's goals. The Top Management is in charge of overseeing how the Banks' branches are run on a daily basis. Branch managers are in charge of running the bank's branches in addition to the top management team.

Study Variables

This section presents the discussion on the various variables in the study.

Dependent Variable

In this study, return on assets (ROA) is taken into account as the main dependent variable or the baseline, while return on equity (ROE) is taken into account as an alternative measure or proxy. A financial ratio called ROA is used to assess how profits or earnings compare to total assets. ROA might be used as a measure of financial success in this study because it examines and evaluates the profitability performance of all assets. This statistic includes efficiency (total asset turnover) and effectiveness, as is well known. The (ROE), also known as return on net worth, gauges how profitable equity funds are for the company. ROE is the crucial accounting indicator of success because any company's principal goal is to maximise shareholders' wealth (Chandra, 2011).

Independent variables

The independent variables employed in this study include variables similar to those used in other studies such as Awo and Akotey (2019),

Makkar and Hardeep (2018), Floros and Anchor (2017), Yuga (2016), and Awo and Akotey (2012). The extant literature posits that banks use some input factors to generate revenue: loans that turn out to be nonperforming, liquidity, annual loan portfolio, and bank size. These determinants have been employed in this study.

Control variables

Aside from these variables, the study also included national annual inflation and interest rates as control variables. Extant literature posits that these variables have the potential to influence bank financial performance significantly-profitability (Dietrich & Wanzenreid, 2009; Donkor & Tweneboa-Kodua, 2013; Owusu-Antwi, Antwi & Crabbe 2014). As such, this study controlled for the influence of the average annual consumer price index and the average annual treasury bill rate.

Variables Measurement

This section presents the variables in this study, their measurements and the empirical justifications. This is summarised and presented in Table l.

Table 1: Variables and Measurements

No	Variable	Measurement	Empirical justification
1	Return on Asset	The ratio of income before tax to total asset	Awo and Akotey (2019); Awo and Akotey (2012); Buyinza, (2010); Naceur, 2003
2	Return on Equity	The ration of income before tax to total equity	Musah and Adutwumwaa, (2021)
3	Liquidity	difference between current assets and current liabilities	Awo and Akotey (2019); Buyinza (2010); Naceur, 2003
4	Annual Loans	Total annual loans and advances to customers	Awo and Akotey (2019); Buyinza (2010); Naceur, 2003
5	Non-performing loans	The total annual loan defaults and impairments	Awo and Akotey (2019); Buyinza (2010); Naceur, 2003
6	Bank size	Total non- current assets	Buyinza (2010); Naceur, 2003
7	Inflation	Annual average consumer price index	Awo and Akotey (2019); Sugiharto, Sulistiowati, and Nofiyanti, (2018); Sufian (2009)
8	Interest rate	Annual average treasury bill rate	Awo and Akotey (2019); Sufian (2009)

Source: Author's Compilation (2022)

Data and Data Sources

The study employs secondary data from secondary sources of data collection techniques, Secondary data of financial statements from 2010 to 2019 were collected from audited financial reports and financial statements of Nzema Manle Rural Bank Limited for the study. This period was selected based on consistent data availability. To ensure a robust analysis, the 10-year data yielding 10 observations were interpolated into quarters achieving a total of 40 observations which were subsequently used for estimation. Data was taken from the financial report on profit before taxes, loans, NPL, total assets, current assets, and current liabilities, liquidity ratio, ROA, and ROE. The data for the macroeconomic two variables (inflation and interest rates) were obtained from the Bank of Ghana database.

Data Collection Procedure

Before the data collection exercise resumes, the researcher downloaded the published annual reports from the Nzema Manle Rural Bank Limited's website and the macroeconomic data from the website of the Bank of Ghana (2017). The researcher extracted the relevant data from the financial statement of Nzema Manle Rural Bank Limited.

Data Processing and Analysis

The data collected was edited and coded before analysing using Microsoft excel. The actual analyses were done using ordinary least square regression via the SPSS, Version 26.

Regression model

The data analysis will be augmented with the following multiple regression model.

$$Y = \beta_0+\beta_1 LIQ+\beta_2NPL+ \beta_3ALA+\beta_4BS+\beta_5INF+\beta_6IntR+E_1$$

Where,

Y denotes financial performance, proxied by the ROA in the baseline model and replaced by the returns on equity (ROE) in the robustness test model.

NPL: NPL stands for total annual loan defaults by bank debtors. It serves as a CRM indicator by tracking loan losses such impaired loans and bad debts owed to the bank.

LIQ: represents the bank's liquidity status. It is the difference between current liabilities and assets. It also demonstrates the bank's financial stability. Specifically, its capacity to pay short-term claims as they become due. Additionally, it shows if the bank is able to meet customer demand for overdraft facilities as well as depositor demand for withdrawals. Most

notably, it assists a bank in determining how strong it is in preventing a "bank run."

BS: size of the bank or entire assets. It annually calculates the bank's total non-current assets. Additionally, it shows the bank's level of asset quality.

ALA: represents the amount of the bank's yearly loans. Due to its measurement of the overall loan amount advanced to consumers each year, it also serves as a financial intermediation indicator.

INF: denotes inflation.

IntR: represents interest rate.

ε_i: denotes the error term.

Ethical Considerations

The study has considered all the necessary ethical requirements in research required by the University of Cape Coast. Key ethical issues such as fair and responsible data use and research originality have been dully respected. The researcher also obtained permission from the study's organisation before using the bank to conduct the case study research. The investigator assured the bank that the research was for academic purposes.

Chapter Summary

The current study investigated the determinants of profitability. Accordingly, explanatory research design and quantitative research approach were utilised to address the research question. The research variables were measured to ensure adequacy for further analysis. Measures such as ROA and ROE were employed as dependent variables to proxy for financial performance. The ordinary least square regression approach was utilised as the estimation technique.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

This study evaluates the financial performance of rural banks in Nzema, using Nzema Manle Rural Bank Limited as a case study. The study specifically examined the effect of the bank's liquidity position, non-performing loans, annual loan portfolio and bank size on the banks financial performance while controlling for inflation and interest rates. This chapter presents the formal empirical analysis and discussion of the data and results, respectively, for the research objectives of this study. The study used panel data for ten years, between 2010 and 2019. The yearly data gathered were interpolated into quarters yielding 40 observations for almost all variables.

The study employed ordinary least square regression in SPSS to analyse the data. As required by statistical analysis, the study first presents the descriptive statistics and the data quality checks to give a broad overview of the data for the study and to ascertain the validity of the data for the analysis. Finally, the chapter presents the results of the hypotheses for the study and subsequently presents the formal discussion of the result in line with the extant literature and the theories employed to underpin the study. The chapter concluded by summarising the main points in this chapter.

Descriptive Statistics

The descriptive statistics employed in this study include; mean, standard deviation, maximum, minimum, and the number of observations, Table 2 presents the descriptive statistics for ROA, ROE, Loans, Liquidity, NPL and the size of Nzema Manle Rural Bank Limited for the period

between 2010 and 2019. Table 2 shows that the average return on asset (ROA) of the Nzema Manle Rural Bank Limited within the period between 2010 and 2019 was 0.03, within the limits of 0.01 and 0.050 Thus, the ratio of the net income returned on each cedi of assets employed by the bank is 3%, on average, ceteris paribus. The ranges of 0.01 and 0.05 indicate that the lowest ratio of profit to asset of the Nzema Manle Rural Bank Limited within the period of 2010 to 2019 was 1% while the highest was 5%.

For return on equity (ROE), the results in Table 2 depicts that the average ratio of profit to equity holding of the bank between the period of 2010 to 2019 was 0.29, within the ranges of 0.11 and 0.44. Thus, the ratio of the net income before tax returned on each cedi of equity holdings of the bank is 29%, on average, ceteris paribus. So, every cedi of the equity holding of the bank generates an average of 29% of total profit before tax. The limits of 0.1 1 and 0044 indicate the lowest ratio and the highest ratios, respectively, of profit before tax to total equity of the bank within the 10-year period.

Also, in Table 2, Non-performing loans (NPL) depicted an average of ,319.10,with a record highest of GHCI 026,741.00 and a minimum of GHQ 123,527.00. This means that Nzema Manle Rural Bank Limited has recorded non-performing loans of Cd-10519,319.10 every quarter between 2010 to 2019, on average, ceteris paribus. This has the potential to negatively impact the bank's liquidity position in subsequent years if no measures are taken.

Table 2: Descriptive Statistics of the Repressors and the Regressands

Variables	Obs	Minimum	Maximum	Mean	Std. Error	Std. Deviation
Return on Assets (RoA)	40	0.01	0.05	0.03	0.00	0.01
Return on Equity (RoE)	40	0.11	0.44	0.29	0.03	0.10
Non- Performing Loans (NPL)	40	123527.00	1026741.00	519319.10	115591.22	365531.53
Bank Size (BS)	40	167933.00	1501196.00	681884.10	159533.85	504490.34
Liquidity (LIQ)	40	276271.00	2762013.00	1784465.30	271367.98	858140.89
Total Annual Loan (Loan)	40	2211922.00	8475859.00	5381361.90	590832.43	1868376.18
Inflation	40	8.68	12.52	12.14	1.08	3.41
Interest Rates	36	11.83	22.92	18.38	1.33	4.00

Note: Obs means the number of observations

Source: Field data (2022)

The result in Table 2 further revealed that Nzema Manle Rural Bank Limited maintained a firm size of GH¢681 ,884.10 annually for the period between 2010 and 2019. Thus, the bank maintained an asset quality level ofGHC681 ,884e 10 for the period of 2010 to 2019, on average, ceteris paribus. The results further confirmed that this annual average size tell within the limits of GH¢ 167,933.00 and GH¢ 1,501,196.00.

Similarly, the liquidity level of the Nzema Manle Rural Bank Limited recorded a mean of GH¢ 1,784,465.00, within the ranges of GH¢ 76,271.00 and GH¢ 2,762,013.00. Thus, the average difference between current assets and current liabilities within the period between 2010 to 2019 stood at GH¢1,784,465.00, while the lowest and the highest were GH¢ 276,271.00 and GH¢ 2,762,013.00 respectively. These figures show a positive value, indicating that the Nzema Manle Rural Bank Limited maintained good solvency state within the period under consideration.

Furthermore, Table 2 revealed that the annual loans disbursed during the period averaged GH¢5,381,362.00, within the limits of GHC2,211,922.00 and GH¢8,475,859.00Thus, within the period 2010 to 2019, the Nzema Manle Rural Bank Limited granted a total of GH¢5,381,362.00 in loans to its customers annually, while the lowest and the highest loan granted in a quarter in the period under consideration were GH¢2,211,922.00 and GH¢ 8,475,859.00 respectively. These high amounts may have a detrimental effect on liquidity if non-performance increases.

Finally, Table 2 also provides the descriptive statistics for the two microeconomic variables controlled in this study, A careful examination of the results in Table 2 shows that the average annual inflation between 2010 to

2019 obtained a mean of 12.14 within the ranges of 8.68 and 17.52, while the interest rate pulled an average of 18.38 with a minimum of 1 1 083 and a maximum of 22,920 It can also be seen that all the variables recorded 40 observations except the interest rate, which does not have data for 2019.

Correlation Matrix and Collinearity Test

This study employed the correlation matrix to check for possible multicollinearity in the data. The correlation matrix in Table 3 illustrating the pairwise correlations between the variables indicates that there were no significant multicollinearity issues among them, as none of the pairwise correlations exceeded 0.9, and only 4 exceeded 0.7. This indicates that all the variables are suitable for inclusion in a multivariate regression analysis per the views of Kim et al. (2021), and Vijayakumaran (2019).

Table 3: Correlation Matrix

	1	2	3	4	5	6	7	8
(1)	1							
(2)	[a]0.623	1						
(3)	[b]0.476	[b]0.513	1					
(4)	[a]0.636	[a]0.751	[a]0.740	1				
(5)	[a]-0.768	[b]-0.542	-0.194	-0.075	1			
(6)	[a]-0.762	[a]-0.662	[a]-0.655	[a]-0.692	[b]0.586	1		
(7)	-0.144	-0.076	[b]0.565	[b]0.525	[b]0.429	-[c]0.323	1	
(8)	-0.081	0.119	0.231	[a]0.631	[a]0.687	-0.018	[a]0.600	1

Source: Field data (2022)

Note: (1) Size, (2) Loan, (3) NPL, (4) Liquidity, (5) RoA, (6) RoE, (7) Inflation and (8) Interest. *The superscripts a, b and c denotes significance at 1%, 5% and 10% respectively. Further data quality tests have been presented with the model results for the specific objectives.*

Analysis of Specific Objectives

This section presents the formal analysis of the specific objectives and the hypotheses. As such, it presents the analysis for hypotheses I to four as specified in chapter one of this study o This study proxied financial performance with return on asset ratio while using return on equity ratio as a robustness test analysis. The baseline model containing return on asset as the proxy for financial performance is presented in model 1, while the robustness test model containing ROE is presented in model 2. The results are presented in Table 4.

Table 4: Separate Effects of Liquidity, Non-Performing Loans, Annual Loan and Bank Size on the financial performance of Nzema Manle Rural Bank Limited

Independent Variables	Coeff	t-value	p-value	Tolerance	VIF
Model 1 (Return on Asset)	– Baseline Model				
Liquidity	0.122**				
	[0.000]	3.222	0.023	0.136	7.354
Non-Performing Loan	-0.099*				
	[0.000]	-1.984	0.098	0.099	10.136
Annual Loan	0.300				
Bank Size	-0.040***				
	[0.000]	-4.704	0.005	0.243	4.123
Constant	0.026**				
	[0.007]	3.747	0.018		
Controls					
Inflation	0.001**				
	[0.003]	0.221	0.046	0.361	2.774
Interest Rate	0.002***				
	[0.002]	0.712	0.005	0.361	2.774
Model 2 (Return on Equity)					
Liquidity	-0.227				
	[0.000]	-0.093	0.930	0.136	7.354
Non-Performing Loan	-0.194***				
	[0.000]	-4.507	0.006	0.099	10.136
Annual Loan	0.355*				
	[0.000]	2.018	0.098	0.431	2.319

Table 4 Continue

Bank Size	-0.208**				
	[0.000]	-3.740	0.013	0.243	4.123
Constant	0.341**				
	[0.048]	7.029	0.001		
Controls					
Inflation	-0.027**				
	[0.018]	-1.512	0.027	0.361	2.774
Interest Rate	0.018*				
	[0.015]	1.165	0.064	0.361	2.774

Significance levels depicted as *** represents p<ø01 ** represents and * represents l.
Note: VIF means variance inflationary factor, and all values in brackets are the standard errors of the coefficients.
Source: Field data (2022)

Effect of liquidity position of the bank on its financial performance

The results in Table 4 depict sufficient support for the hypothesis that the liquidity position of the Nzema Manle Rural Bank Limited has a statistically significant positive effect on the financial performance of the bank. The results in the baseline model show that a unit change in the bank's liquidity position will lead to a 12.2% increase in the return on asset of the bank at a 5 per cent significance level, on average, ceteris paribus. This means the bank's profitability will increase if it has more funds to lend out in the short term. This outcome supports the idea that banks often lend on a short-term basis in order to boost profits. However, in order for Nzema Manle Rural Bank Limited to have an impact on the growth of its attractive areas, it must offer long-term loans to microbusinesses. That notwithstanding, the value of the long-term gain from the long-term loan will depend on the loan performance ratio.

However, the results in the test model in Model 2, using ROE of the bank, show a negative and insignificant coefficient. indicating that liquidity does not have a statistically significant effect on return on equity as a measure

of financial performance of Nzema Manle Rural Bank Limited. This is reasonable as the recent changes in the financial sector require banks to hold huge reserves, which form part of equity n These reserves do not add anything to the income generation activities of the bank. Thus, finding a yielding relationship between equity and income is highly unlikely o This result confirms why return on equity is not often preferred in measuring bank financial performance.

Effect of annual loan portfolio of the bank on its financial performance

The result in Table 4 also failed to provide sufficient support for the second hypothesis, which holds that the annual loan portfolio of the Nzema Manle Rural Bank Limited has a statistically significant positive effect on its financial performance. From Table 3, the annual loan portfolio showed a positive coefficient of 0.300 but failed to pass the significance test in the baseline model. Theoretically, loans should increase bank profitability because lenders lend to earn a profit; therefore, the positive effect of loans on profitability (return on asset) confirms the theory underlying financial intermediation.

The result, however, indicates that this effect is not significant. This result is disturbing because it demonstrates that the increase in loans has not resulted in a proportional increase in the bank's profits. This result may be due to the high nonperforming loan ratios, indicating that a significant proportion of the bank's loans go bad, as evidenced by the high ratio of non-performing loans (NPLs) in most parts of the period under consideration indicated in Figure 3.

Supporting the above discussion, the results in the robustness test model (model 2), which employed ROE, showed a positive effect of loans on financial performance at a 5 per cent significance level, on average, ceteris paribus. This validates the assumption that loans must increase the profitability of the firm.

Effect of NPL of the bank on its financial performance On non-performing loans, the results in the baseline model (Model l) provided sufficient justification for the third hypothesis. The result shows that, at a significance level of 10%, a unit increase in NPL of the Nzema Manle Rural Bank Limited will lead to a 909 per cent decrease in its profitability (return on asset) ceteris paribus. Thus, non-performing loans and the profitability of Nzema Manle Rural Bank Limited depict a significant and somewhat elastic negative relationship. The results show that at a 10% significance, a unit increase in non-performing loans reduces the bank's profitability by approximately 10 %.whereas the loan portfolio shows an insignificant and inelastic 30% increase in the profit level. This indicates that non-performing loans erode Nzema Manle Rural Bank Limited's financial performance faster than loans and advances added during the period. As a result, Nzema Manle Rural Bank Limited's credit risk management procedures need to be tightened.

Supporting the result in the baseline model, the result in model 2 confirmed a statistically significant negative coefficient of 0.194 at a 1% significance level. Thus, non-performing loans and the financial performance (return on equity) of Nzema Manle Rural Bank Limited depict a statistically significant negative and elastic causal relationship. This shows that at a 1%

significance, a unit increase in non-performing loans will decrease the profitability of Nzema Manle Rural Bank Limited's financial performance by approximately 20% on average ceteris paribus. This is a clear indication that non-performing loans eat away the profitability of Nzema Manle Rural Bank Limited at a very high rate. This indicates that Nzema Manle Rural Bank Limited has a weak credit risk management system that needs urgent attention.

Effect of bank size on its financial performance

Finally, in Table 4, the results in the baseline model show a negative and statistically significant coefficient for bank size on financial performance. At a 1% significance level, bank size obtained an inelastic and statistically significant negative coefficient of 000409 This indicates that bank size has a statistically significant negative effect on the financial performance (return on asset) of Nzema Manle Rural Bank Limited Thus, at a 1% significance level, a unit increase in the size of Nzema Manle Rural Bank Limited will reduce its profitability by 4 per cent on average ceteris paribus. This result contradicts the last hypothesis of this study which holds that the size of the Nzema Manle Rural Bank Limited has a statistically significant positive effect on its financial performance.

Theoretically, scale in the form of earning assets correlates and causes profitability to increase; yet, a high concentration of non-earning assets may have the opposite impact. As a result, the relationship between size and profitability is an empirical mystery. This result is reflective as this study employed total non-current assets as a proxy for the bank size. The total non-current assets represent a large chunk of non-earning assets. For example, an

investment in additional branches or agencies can only positively contribute to profitability or financial performance if it increases the bank's customer base, and services. Thus, the result shows that the Nzema Manle Rural Bank Limited has made some large investments in non-current assets that are rather taking from the profit instead of contributing to it. In addition, the result suggests that the bank may not be experiencing any significant economies of scale, implying that the bank may not be able to absorb loan losses and is therefore highly likely to experience financial distress.

Careful examination of the result in the robustness test model (model 2) upported the result in the baseline model, and the explanations advanced in support of it. Model 2 shows an elastic and a statistically significant negative effect of bank size on financial performance (return on equity). At a 5% significance level, bank size obtained a negative coefficient of 0.208, indicating that a unit increase in bank size will lead to an approximately 21% reduction in profitability of the Nzema Manle Rural Bank Limited, on average, ceteris paribus.

Results of the control variables in the models assessing the separate effects of liquidity, non-performing loans, annual loan and bank size on the financial performance of Nzema Manle Rural Bank Limited

The results in models 1 and 2 in Table 4 contain results of two exogenous variables that may have alternative explanations for the dependent variables. In the baseline model (Model l), both inflation and interest rate have inelastic but statistically significant positive coefficients of 0.001 and 0.002 at 5% and 1% significance levels, respectively. Thus, a unit increase in inflation and interest rates will lead to a 0. I % and 0.2 0 0 increase in the financial performance of Nzema Manle Rural Bank Limited, respectively on

average, ceteris paribus. Though banks are most often forced to increase the interest rates, they pay on fixed deposits and their borrowings from other banks, it is significant to note that rural banks most often invest in larger banks and treasury bills hence gaining more when the interest rates go up.

The inelastic form of the coefficients explains that as the high-interest rates become more attractive to some customers, customer deposits also decrease. This is even more significant in Ghana now as some depositors may have less faith in the financial system due to the contagion effects. To secure their capital and keep their peace of mind, some depositors would decide to invest their money in treasury bills, which would result in less deposits for the banks. Thus, the benefits during high-interest rate and inflation periods appear to outweigh the negative effects However, since this study's scope and data are limited, the possibility of this finding's spillover effects is constrained.

This finding is in line with the results of Bourke (1989), Molyneux (1993), and Alexiou and Sofoklis (2009). On the other hand, the findings contradict the results of Naceur (2003), and Sayilgan and Yildirim (2009), who obtained a negative effect.

However, in model 2, the inflation coefficient attended a negative value while the interest rate remained positive at 5% and 10% significance levels, respectively. The negative coefficient of inflation means that the profitability of the Nzema Manle Rural Bank Limited decreases as the inflation in the country increases.

Diagnostics statistics of the models assessing the separate effects of liquidity, non-performing loans, annual loan and bank size on the financial performance of Nzema Manle Rural Bank Limited

Aside from the p-values, the models in Table 4 also present t-values, tolerance and variance inflationary factors (VIFs). The values served as additional significance tests, while the tolerance and the V IFS present further collinearity tests to complement the correlation matrix. For t-values, this study adopts the 1.96 minimum threshold for a 5% confidence level test. From Table3, it can be observed that the t-values align with the p-values. This study used the minimum 0.10 threshold for tolerance and a maximum of 10 for the VIF coefficient.

Sensitivity analysis and robustness test

This study employed a second measure of the independent variable to check the robustness and sensitivity of the result. The results in Table 4 showed that though the coefficients are different in magnitude, most of them are the same in direction. The difference in magnitude can be attributed to the values of the denominators in the two ratios employed. This study presents further trend analysis to better understand the causal effects of the regression models Figures 2 and 3 contain the trend analyses. Figure 2 graphically shows how each of the proxies of the dependent variables relates to the two external or macroeconomic indicators (inflation and interest rate) controlled in this study.

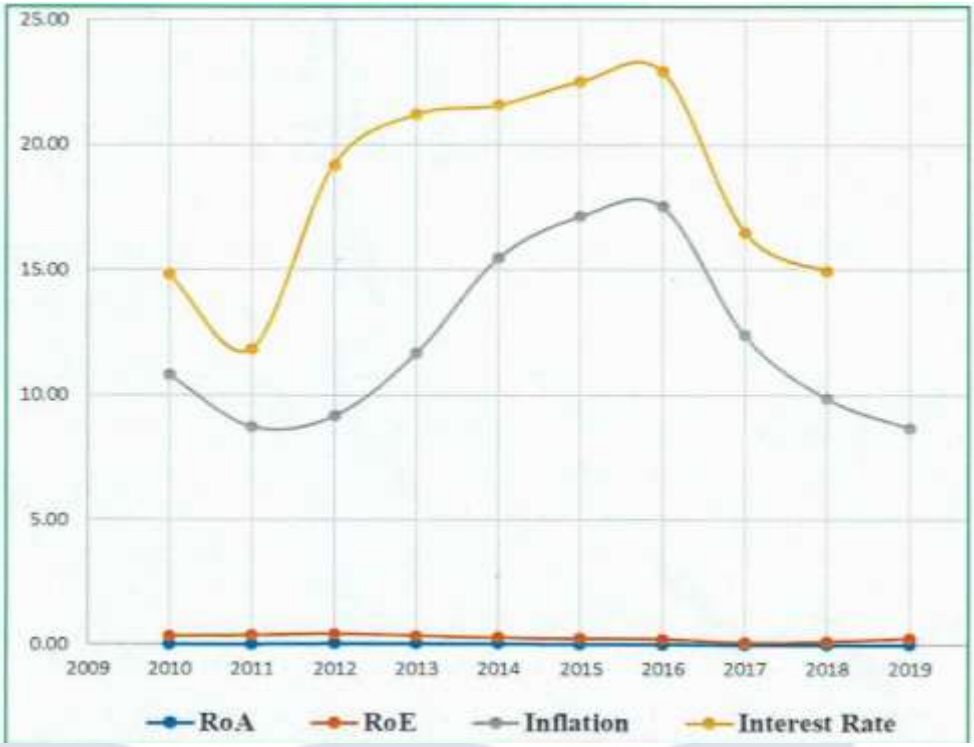

Figure 2: Graph of Nzema Manle Rural Bank Limited's ROA, ROE, and Ghana's National inflation and Interest Rates

Source: Field Data (2022)

Furthermore, this study plots a comparative graph of the Nzema Manle Rural Bank Limited financial performance indicators and determinants and the national financial sector performance indicators and determinants, as shown in

Figure 3. Notably, the non-performing loan ratio of the Nzema Manle Rural Bank Limited soared higher above the national average between 2013 to 2016, where it began to fall till the end of the period under consideration in this study. This indicates that the Nzema Manle Rural Bank Limited has improved its credit risk management system since 2017. It could also be that the Nzema Manle Rural Bank Limited has shifted the cost of non-performing loans to their customers hence the reduction in the ratio of the cost of non-performing loans.

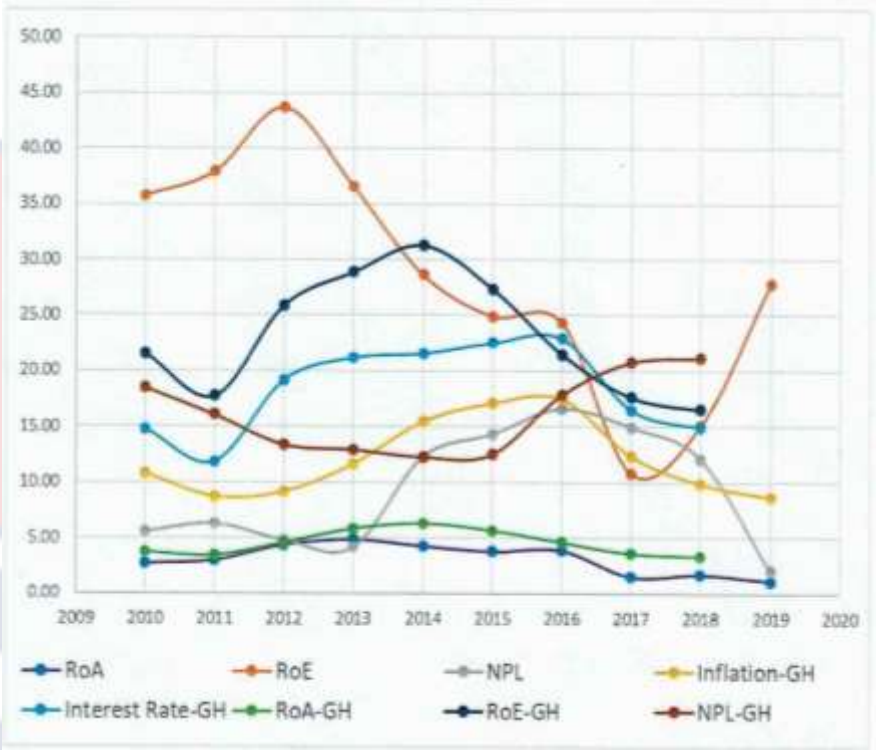

Figure 3: A Comparative Graph of Nzema Manle Rural Bank Limited's Financial Performance Indicators and the National Financial Sector Performance Indicators

Source: Field Data (2022)

Another interesting observation from Figure 3 is the fact that the returns on equity of the Nzema Manle Rural Bank Limited within the period between 2010 to 2019 were higher than the national average for the financial sector. This depicts an appealing performance by the Nzema Manle Rural Bank Limited. However, the returns on assets of the Nzema Manle Rural Bank Limited remain a little below the national average throughout the period under consideration.

Discussion of Results

This section presents the formal discussion of the results obtained for the specific hypotheses of the study with respect to existing empirical works and the theories underpinning the study. As such, the specific objectives informed the subheadings in this section.

Result of the effect of the liquidity position of the bank on its financial performance

The first specific objective of this study sought to assess the effect of the liquidity position of the Nzema Manle Rural Bank Limited on its financial performance. The results obtained for this objective depict sufficient support for its adjourned hypothesis that the liquidity position of the Nzema Manle Rural Bank Limited has a statistically significant positive effect on its financial performance. This means that a good liquidity position will increase the bank's financial performance, ceteris paribus. This result corroborates the findings of Awo and Akotey (2012), who found the liquidity position of rural banks in Ghana to have a statistically significant positive effect on their financial performance.

Also, the result is consistent with the findings of Awo and Akotey (2019), who discovered that liquidity management has a statistically significant positive effect on profitability, and who concluded that the rural bank's liquidity management is robust, resulting in greater returns from its investment in short-term instruments. This study's findings also support the results of Makkar and Hardeep (2018) and Floros and Anchor (2017), who found liquidity and profitability to have a statistically significant positive causal effect. This finding also supports the results of Yakubu (2016) and

Yuga (2016). However, the current study's results contradict Buyinza's (2010) conclusion that liquidity decreases profitability.

Result of the effect of annual loan portfolio of the bank on its financial performance

The second specific objective of this study sought to examine the effect of annual loans on the financial performance of Nzema Manle Rural Bank Limited. The result from the analysis failed to provide sufficient support for the adjourned hypothesis, which holds that the annual loan portfolio of the Nzema Manle Rural Bank Limited has a statistically significant positive effect on its financial performance. The result indicated that there is an insignificant positive effect of loans on financial performance. Though the magnitude of the effect is encouraging, and its direction aligns with the findings of Shaffer (1985), Berger et al. (1987) Awo and Akotey (2012), Marwa and Aziakpono (2016) and Awo and Akotey (2019), its insignificant state means that it is not an effective contributor to the financial performance of Nzema Manle Rural Bank Limited.

The findings imply that the Nzema Manle Rural Bank Limited has loosened its restrictions on the ongoing mobilisation of funds within rural communities and the expansion of rural banking to those who were formerly shut out of the formal financial system. This could help stimulate more economic activity within rural communities, raising the standard of living and welfare of rural residents. While this finding failed to provide sufficient evidence that loans increase banks profitability, it corroborates those of Awo and Akotey (2012), Buyinza (2010) and Naceur (2003), who found no significant relation annual loans and banks' financial performance.

Result of the effect of non-performing loans of the bank on its financial performance

The result of the third objective provided sufficient justification for the adjourned hypothesis that non-performing loan has a statistically significant negative effect on the financial performance of Nzema Manle Rural Bank Limited. This finding is theoretically valid because non-performing loans are theoretically expenditures and are expected to decrease banks? profitability unless: (l) the bank passes on the cost of non-performing loans on previously approved loans as margins on the price of new loans to new customers; and (2) the "bank's credit risk management unit has an effective recovery system for retrieving bad and doubtful debts. While the first method is ineffective as a credit risk management system and would not be fair to genuine borrowers", the second method is effective and innovative, though difficult.

Empirically, this result validates the conclusion reached by Achou and Tenguh (2008) in a similar study of the Qatari banking sector. The findings of the current study also lend support to the results of Danson and Adano (201 1), Aduda and Gitonga (2011), JV1awutor (2015), Yusheng (2017), Kuknor and Rastogi (2021), Mendoza and Rivera (2017), and Isanzu (2017)0 They all found a negative and statistically significant effect of non-performing loans on the financial performance of firms in the financial sector. However, the result of this current study contradicts the findings of Afriyie and Akotey (2013).

Result of the effect of bank size on its financial performance

Finally, the fourth hypothesis's result shows an inverse relationship to the one hypothesised for this study. The results indicated a negative and

statistically significant coefficient for bank size on financial performance. It indicates that bank size has a statistically significant negative effect on the financial performance (return on asset) of Nzema Manle Rural Bank Limited. This finding explains that the Nzema Manle Rural Bank Limited has a lot of unearning assets. Though the result looks shocking at first sight, it may reflect the reality in the Nzema Manle Rural Bank Limited because this study used total noncurrent assets as a proxy for bank size. Theoretically, bank size should positively contribute to its financial performance, but when unearning assets heavily dominate the size, it could be negative as the non-earning assets turn to incur expenses that rather take from the financial gains of the bank than contribute to it.

Empirically, this finding supports the results of Naceur (2003) and Buyinza (2010), who also found a negative relationship between bank size and financial performance. However, the current study's disapproved the results of Hansan and Bashir (2003), Delis and Papanikolous (2009), Ahmed and Khababa (2010), Alper and Anbar (2011), who found bank size to have a statistically significant positive effect on bank financial performance. Also, the finding of the current study repudiates the findings of Shaffer (1985), Awo and Akotey (2012), and Awo and Akotey (2019), who also found a statistically significant positive effect of bank size on banks' financial performance. That notwithstanding, it is worth mentioning that while these extant works employed total assets (current and non-current assets) as a proxy for bank size, this current study used total non-current assets as the proxy for bank size.

Chapter Summary

The chapter analysed the data concerning the specific objectives and the study's hypothesis. Firstly, the chapter provided key descriptive characteristics to understand the nature of the data of this study. A correlation matrix followed the descriptive statistics to check for collinearity and the study's overall data quality. The analysis supported the first and the third hypotheses but not the second and fourth. While the results showed an insignificant result for the annual loan, bank size was rather negative and statistically related to banks' financial performance. Finally, the chapter provided a formal discussion of the results regarding the theories underpinning the study and the empirical literature reviewed.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This study examined the determinants of the financial performance of rural banks in Ghana, focusing on Nzema Manle Rural Bank Limited. The study employed the return on assets (ROA) as a proxy to measure the bank's financial performance while using the return on equity (ROE) as a robustness test measure. Liquidity position, annual advances and loan amount, non-performing loans and bank size have been used as the determinants of performance while controlling for macroeconomic variables such as inflation and interest rates. Accordingly, this final chapter presents the summary of the research, the summary of findings, conclusions and recommendations.

Summary of the Research

This research examined the financial performance of rural banks in Ghana focusing Nzema Manle Rural Bank Limited. The study formulated four main specific objectives to provide balance. These objectives include:

1. to evaluate the effect of the liquidity position of the bank on its financial performance,
2. to determine the effect of the annual loan portfolio of the bank on its financial performance,
3. to examine the effect of non-performing loans of the bank on its financial performance,
4. and to examine the effect of bank size on its financial performance

The study employed an explanatory research design with a case study thinking and a quantitative research approach. The Bank of Ghana's annual

reports and the industry summary statistics were used in the study to sample a 10-year data which were interpolated into quarters and subsequently used for the analysis. The statistical software for social sciences was used to analyse the data using the ordinary least square regression model (SPSS).

Summary of Findings

This study produced several insightful and significant findings that may have practical implications for the Nzema Manle Rural Bank Limited. While the coefficient of the effect of annual loans and advances was positive but not significant, the coefficient of bank size was negative and statistically significant. The negative and statistically significant coefficient of bank size variable represents a complete reversal of the research hypothesis for this study. This shows that the total non-current assets of the Nzema Manle Rural Bank Limited did not contribute to the profitability of the bank in the period under consideration. The following were specifically found.

- The liquidity position of the bank has a statistically significant positive effect on its financial performance.
- Annual loans of the bank do not have a statistically significant positive effect on its financial performance.
- Non-performing loans of the bank have a statistically significant negative effect on its financial performance.
- Bank size does not have a statistically significant positive effect on its financial performance.

Conclusions

Based on the results, it is concluded that the Nzema Manle Rural Bank Limited's liquidity position has a statistically significant beneficial impact on its financial performance, as measured by return on assets and supported by

return on equity. For the second premise, it is determined that the Nzema Manle Rural Bank Limited's annual loans and advances have no statistically significant beneficial impact on its financial performance as measured by return on assets.

However, a statistically significant positive effect is revealed by the robustness test using return on equity. For the third hypothesis, it is determined that the Nzema Manle Rural Bank Limited's non-performing loans have a statistically significant detrimental impact on its financial performance. Finally, it is determined that the Nzema Manle Rural Bank Limited's size, as measured by all of its non-current assets, positively affects its financial performance.

Recommendations

Based on the conclusion, this study recommends that the Nzema Manle Rural Bank Limited should consider the following:

1. To enhance its liquidity position and optimise the benefits from short-term investment instruments, it is crucial for the rural bank to focus on improving its liquidity management.
2. Strengthen loan application screenings because the bank's negative and statistically significant non-performing loan coefficient shows that many of the loans are defaulted on, as shown by the insignificant positive effect, which shows that an increase in loans does not result in a corresponding increase in the bank's profit.
3. Improve its loan monitoring and screening procedures. Since these groups have peer and social monitoring mechanisms that can reduce moral hazard, adverse selection, information asymmetry, and loan defaults, it

can boost its loan recovery rate by developing group lending models utilizing an understanding of the old G susu' schemes. Individual loans should be secured by marketable assets and microinsurance products so that they can be sold in the event of default and the debt repaid.

4. To raise the earning potential of the assets over their expenditure rate in accordance with the fourth hypothesis, the bank must operationalize its non-current assets. The Nzema Manle Rural Bank Limited must expand its "mobilization of funds within rural communities, and the expansion of rural banking to those previously excluded from the formal financial sector" through operationalizing non-current assets.

Suggestions for Future Research

The fact that a single study cannot cover the entire spectrum of a phenomenon, this study suggests some directions for filature research to complement the results obtained in this current one. Firstly, it will be prudent for further studies to replicate this research on more firms in the financial sector and even in other sectors. Also, in a multi-firm analysis of this current topic, it will be good to assess the moderating role of firm-specific characteristics in the relationship between the financial performance measures and the financial performance determinants. As a result of the peer and social monitoring mechanisms that these groups have, which can lessen moral hazard, adverse selection, information asymmetry, and loan defaults, it is possible to increase the loan recovery rate of these groups by creating group lending models using the knowledge of the old G susu' schemes.

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