

An Internship Report on
***“Impact of Capital Adequacy on Financial Performance of
Bangladesh Krishi Bank.”***



***This report has been submitted for partial fulfillment of the requirements for the
degree of Bachelor of Business Administration (BBA).***

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DATE OF SUBMISSION : 20th April 2026

Letter of Transmittal

Date: 20 April, 2026

To

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Subject: Submission of Internship Report Titled “Impact of Capital Adequacy on Financial Performance of Bangladesh Krishi Bank.”

Honorable Sir,

With due respect and great pleasure, I, Jonaed Mia, a student of the BBA program, am submitting my internship report on the topic “**Impact of Capital Adequacy on Financial Performance of Bangladesh Krishi Bank.**” This report is a mandatory for completing the Bachelor of Business Administration degree at Comilla University. I have tried my utmost to gather relevant information and make this report as analytical and reliable as possible.

I sincerely express my deepest appreciation for your continuous guidance, kind supervision, and valuable support in preparing this report. I am truly grateful for having the opportunity to conduct this study,

I would be grateful if you kindly go through my report and evaluate it, keeping its limitations in mind.

Sincerely Yours,

Jonaed Mia

ID No./Reg. No: 12117041

Session: 2020–2021

Bachelor of Business Administration (BBA) in Finance and Banking

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Student Declaration

I, Jonaed Mia, a student of Bachelor of Business Administration (BBA), Department of Finance and Banking, Comilla University, hereby declare that the internship report titled “**Impact of Capital Adequacy on Financial Performance of Bangladesh Krishi Bank**” has been prepared by me based on three months of practical experience at Bangladesh Krishi Bank, Cumilla Branch.

I also confirm that this report is prepared solely for academic purposes and has not been submitted to any other institution or for any other degree.

.....

Jonaed Mia

ID No./Reg. No: 12117041

Session: 2020–2021

Bachelor of Business Administration

Department of Finance and Banking

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Supervisor's Certificate

This is to certify that Jonaed Mia (ID & Registration No: 12117041), a student of the Bachelor of Business Administration (BBA) Program at Comilla University, has completed his internship report under my supervision. He has successfully completed his internship at Bangladesh Krishi Bank and prepared the report titled **“Impact of Capital Adequacy on Financial Performance of Bangladesh Krishi Bank”** as a partial requirement for the BBA degree.

The report has been prepared independently under my guidance, and he is permitted to submit it. I wish him every success in his future academic and professional life.

.....

Md. Al-Amin

Assistant Professor & Internship Supervisor

Department of Finance and Banking

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Acknowledgement

First of all, I would like to express my deepest gratitude to Almighty Allah for keeping me physically fit and mentally alert to complete this report successfully.

I would like to express my sincere gratitude and appreciation to my supervisor, Md. Al-Amin, Assistant Professor, Department of Finance & Banking, Comilla University, Cumilla, for his valuable guidance, continuous support, and proper direction throughout the preparation of this report. His encouragement and supervision played a significant role in completing this work.

I am also deeply indebted to my parents for their endless love, care, encouragement, and continuous support. Without their sacrifices and inspiration, it would not have been possible for me to complete this report as well as my BBA program.

Preparing this report titled **“Impact of Capital Adequacy on Financial Performance of Bangladesh Krishi Bank”** was not an easy task, as it required proper data collection, analysis, and presentation in a systematic manner. I am grateful to all individuals who directly or indirectly supported and encouraged me during this process.

Finally, I would like to acknowledge the various online resources and websites that provided valuable information for completing this report.

Internship Certificate



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To Whom It May Concern

This is to certify that Jonaed Mia, ID No. 12117041, Reg No. 12117041, student of Comilla University, Department of Finance & Banking, under BBA program, has been undergoing his internship on **Capital Adequacy on Financial Performance of Bangladesh Krishi Bank** at Bangladesh Krishi Bank, Cumilla Branch, Cumilla.

During his internship period, he is maintaining all the rules and providing services as an employee of the organization.

We wish every success in his life.


(Md. Arshaduzzaman Khan)

Assistant General Manager & Head of Branch
Bangladesh Krishi Bank
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মোঃ আরশাদুজ্জামান খান
অবস্থাপক (সদস্য)
বাংলাদেশ কৃষি ব্যাংক
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Executive Summary

This research looks at how capital adequacy affects the financial performance of Bangladesh Krishi Bank. The main goal of the study is to look at how the bank's capital strength, as measured by the Capital Adequacy Ratio (CAR), affects its profitability and overall financial stability. Return on Assets (ROA) is the main way to measure a company's financial performance. Other indicators that help with this are the Non-Performing Loan (NPL) ratio, the Loan-Deposit Ratio (LDR), the Loan Growth Rate (LGR), and the Liquid Asset Ratio (LAR). The study uses secondary data from the audited annual reports of Bangladesh Krishi Bank, publications from Bangladesh Bank, and other relevant financial statements from 2010 to 2024. A quantitative research methodology is employed, and the data are examined utilizing descriptive statistics, correlation analysis, and multiple regression techniques via Stata and Microsoft Excel. The study's results should show the link between capital adequacy and bank performance. They should also show whether having more capital makes a bank more profitable and stable financially. The study also emphasizes the significance of sustaining an appropriate capital structure to ensure adherence to regulatory mandates and enhance the efficiency of risk management. The research offers valuable insights for policymakers, bank management, and regulatory authorities concerning the impact of capital adequacy on the financial performance of Bangladesh Krishi Bank.

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CHAPTER 01

Introduction

1.0 Introduction

The banking sector is a key pillar of economic development as it facilitates capital formation, mobilizes savings, and ensures efficient allocation of financial resources. In developing economies like Bangladesh, banks also play a developmental role by supporting priority sectors such as agriculture, industry, and small enterprises. Among these institutions, is a specialized state-owned bank that primarily focuses on agricultural financing, which is essential for rural development and food security (Rahman et al., 2018). Capital adequacy is a crucial indicator of a bank's financial strength, reflecting its ability to absorb unexpected losses and maintain stability during financial distress. According to the Basel III framework introduced by , banks are required to maintain a minimum Capital Adequacy Ratio (CAR) to ensure safety, soundness, and depositor confidence in the banking system (Basel Committee on Banking Supervision, 2010). Financial performance of banks is commonly measured using indicators such as Return on Assets (ROA), Return on Equity (ROE), and profitability ratios. Empirical studies suggest that well-capitalized banks tend to perform better due to their ability to absorb risks and maintain financial stability (Berger, 1995; Athanasoglou et al., 2008). However, some studies also argue that excessive capital may reduce profitability due to lower leverage benefits (Das, 2013). In the context of agricultural banking, financial performance is highly influenced by external risks such as weather conditions, natural disasters, price volatility, and market instability. These factors often lead to higher default rates and increased Non-Performing Loans (NPLs), which negatively affect profitability (Altman, 2002). In Bangladesh, state-owned banks such as face persistent challenges due to rising NPLs and weak credit recovery systems (Mamun et al., 2022). Furthermore, liquidity and lending behavior are also important determinants of bank performance. Variables such as Loan-to-Deposit Ratio (LDR), Loan-to-Asset Ratio (LAR), and Loan Growth Rate (LGR) are widely used to assess banking efficiency and risk exposure. Studies show that while higher lending may improve profitability, it also increases credit risk if not properly managed (Mishkin, 2012; Ozili, 2015). Despite the importance of capital adequacy in ensuring financial stability, there is limited empirical research specifically focusing on its impact on the financial performance of . Therefore, this study aims to examine the relationship between Capital Adequacy Ratio (CAR) and financial performance, along with other explanatory variables such as NPL, LDR, LAR, and LGR over the

period 2010–2024. The findings are expected to provide valuable insights for policymakers, regulators, and bank management in improving financial stability and operational efficiency.

1.1 The Background of the Study

The banking sector plays a vital role in the economic development of a country by mobilizing savings, facilitating investment, and ensuring efficient allocation of financial resources. In developing economies like Bangladesh, banks also serve as important instruments for implementing government development policies, particularly in agriculture and rural development. Among these institutions, Bangladesh Krishi Bank is a specialized state-owned bank that focuses on providing credit facilities to the agricultural sector, which is the backbone of the rural economy. Bangladesh Krishi Bank was established to support the post-independence economic reconstruction of the country by ensuring the availability of institutional credit in rural and agricultural areas. Over time, the bank has expanded its branch network across rural regions to improve financial inclusion and support farmers, sharecroppers, and small entrepreneurs. Its primary objective is not only profit generation but also socio-economic development through agricultural financing. Agricultural financing, however, is inherently risky due to its dependence on external factors such as weather conditions, natural disasters, seasonal fluctuations, and unstable market prices. These uncertainties often affect the repayment capacity of borrowers, leading to higher levels of default risk in agricultural loans. As a result, banks engaged in agricultural lending face significant challenges in maintaining asset quality and financial stability. In the modern banking environment, capital adequacy has become a critical requirement for ensuring the financial soundness of banks. It reflects the ability of a bank to absorb potential losses and maintain stability during periods of financial stress. Maintaining adequate capital is essential not only for protecting depositors but also for ensuring the long-term sustainability of banking operations. However, Bangladesh Krishi Bank has been facing persistent financial difficulties over the years due to rising non-performing loans, weak credit recovery mechanisms, and declining profitability. These challenges have weakened its capital base and affected its overall financial performance. In addition, structural issues such as inefficient credit appraisal systems, inadequate monitoring, and policy-driven lending have further contributed to financial stress within the bank.

Moreover, delays in loan recovery and limited adoption of modern banking technologies have also affected operational efficiency. These issues have raised serious concerns regarding the long-term financial stability of the bank and its ability to effectively support rural economic development. Against this backdrop, it becomes essential to examine the relationship between capital adequacy and financial performance of Bangladesh Krishi Bank. Understanding this relationship will help in identifying the key financial challenges faced by the bank and provide insights for improving its financial stability and operational efficiency in the future.

1.2 The Problem Statement

A bank needs to have enough money on hand to cover unexpected losses if it wants to stay in business for a long time. Capital protects against many risks, including credit, market, and operational risks. It is also very important for the whole financial system to stay stable and for depositors to trust the banks. Basel III says that Bangladeshi banks must keep at least 10% of their capital as a Capital Adequacy Ratio (CAR). This rule is there to make sure that banks stay stable and can deal with economic shocks. Bangladesh Krishi Bank PLC has never been able to do this, though. This shows that it is having a lot of financial problems. The bank's CAR has dropped a lot, from -22.61% in 2010 to -73.59% in 2024. This shows that the bank doesn't have much money left and is in a lot of trouble with its money. The bank's money situation has gotten worse because it keeps losing money. For a long time, the Return on Assets (ROA) has been negative, and in 2024 it hit -15.23%. This is a very important sign of how well a business is running and how well it is using its assets. The bank keeps losing money because it isn't making enough money from its assets. The very high number of Non-Performing Loans (NPLs) is one of the main reasons for this poor performance. The NPL ratio has jumped to 38.65%, which is way too high for the business. When a lot of loans go bad, it makes provisioning much harder, lowers net income, and directly eats into the bank's capital base. This means that high NPLs, low profitability, and low capital adequacy all work together to make financial problems worse. The government gives BKB money and helps it get back on its feet from time to time, but there are still problems with how it is set up and how it works. There are other financial problems that could hurt the bank's overall performance, such as managing liquidity, high costs, and uncontrolled loan growth. However, research hasn't shown how much these things affect the bank's stability. Because of this, there isn't

much research on how capital adequacy and other financial metrics affect BKB's performance. The goal of this study is to look at the link between capital adequacy and financial performance, focusing on key indicators like CAR, the NPL ratio, and profitability. The study covers the years 2010 to 2024 and seeks to determine whether inadequate capital is the primary cause of financial instability or if other factors are more critical. The findings are intended to provide policymakers, regulators, and bank managers with valuable insights to formulate effective strategies for enhancing BKB's overall performance and reinstating financial stability.

1.3 Significance of the Study

This study is important for Bangladesh, especially to find out how much money Bangladesh Krishi Bank has. The government owns BKB, which mainly helps farmers. If it runs out of money, it can have a big effect on the economy as a whole, on the lives of people who live in rural areas, and on how well farms work. So, the economy, society, and banks all need to figure out why it doesn't have enough money. This study will be very useful for people who make rules and laws, like the Bangladesh Bank. It shows clearly how BKB's finances are doing, with big problems like falling capital adequacy, rising non-performing loans (NPLs), and falling profits. These ideas can help regulators build better systems for keeping an eye on things and fixing problems when they come up. The results can also help with important policy decisions, like how to change the rules, how to give banks more money, and how to make state-owned banks work better. The report is also useful for the people in charge of BKB. The study finds that Return on Assets (ROA), Capital Adequacy Ratio (CAR), Non-Performing Loans (NPL), and Loan-to-Deposit Ratio (LDR) are the most important financial metrics that affect performance. This helps the bank figure out what is wrong. The results can help management get better at figuring out credit risk, getting back loans, and managing assets and cash flow. This will lead to better business operations and higher profits. This research is crucial for both the banking and agricultural sectors in Bangladesh. BKB lends money to farmers and businesses that work with farming. The money from the bank has a direct effect on the growth of the rural economy, food security, and farming. If the bank runs out of money when loans are due, it may not be able to give them out, which could slow down the growth of rural areas and the productivity of farms. To keep the agricultural sector growing over the long term, BKB needs to keep its finances stable. This study contributes to the existing body of knowledge

by analyzing a state-owned specialized bank operating within a unique social and economic framework. This study is unique compared to previous research because it focuses solely on private commercial banks. We don't know much about groups like BKB that want to help people grow and make rules. This study can help with future research on how well banks work, how stable the economy is, and how public sector banks work in poor countries. Finally, the results have an impact on the whole economy. Government-owned banks are always having trouble with money, so they often need help from the government. This makes it even harder for the government to stick to its budget. This can cause budget shortfalls and have an indirect effect on the economy as a whole. By finding Bangladesh's biggest banking problems and suggesting ways to fix them, this research can help the country's banking system become more stable and efficient.

1.4 The Scope of the Study

The study's scope is meant to make sure that Bangladesh Krishi Bank's (BKB) financial performance is looked at in a focused and systematic way in relation to the whole banking sector in Bangladesh. The study is based on an internship, so the institutions, time period, variables, and method used are all clear and follow academic standards. This research focuses exclusively on Bangladesh Krishi Bank (BKB) PLC, the premier specialized state-owned bank in Bangladesh. The analysis is done on all of the branches together, even though the bank has a lot of them all over the country. The head office sends us financial information, and every year we get reports that show how well the bank is doing overall and with money. The goal is to find out how well the bank is doing overall and how stable its finances are, so there is no analysis at the branch level. The study looks at a full fifteen years, from 2010 to 2024, to see how long-term financial trends have changed. BKB's finances changed a lot during this time. For example, the rules changed, Non-Performing Loans (NPLs) kept going up, and the last time they had a lot of money problems. The big drop in major indices, especially in 2024, tells us a lot about how the bank is doing with its money right now. The main point of the study is to look at how capital adequacy affects a business's profits. The Capital Adequacy Ratio (CAR) is the most important number that explains things, and the Return on Assets (ROA) is the most important number that shows how well a business is doing with its money. The Non-Performing Loan (NPL) ratio and the Loan-to-Deposit Ratio (LDR) are two other important financial metrics that show how well the company is

managing its credit risk and cash flow. These were chosen because they are good ways to tell how well banks are doing and how safe their money is. The study employs secondary data from credible sources, including BKB's annual reports and publications from the Bangladesh Bank. Quantitative methods, such as regression analysis, are used to ascertain the relationships among the chosen variables. Statistical software, such as STATA, is utilized to validate the accuracy and reliability of the findings. The study is limited to a single bank, which may impede the generalization of results to other commercial banks or financial institutions. It focuses primarily on quantitative financial indicators and inadequately considers qualitative factors such as managerial effectiveness, governance frameworks, and policy implications. Despite these limitations, it clearly illustrates BKB's financial condition and the benefits of sufficient capital on its financial performance.

1.5 Research Gap

There has been considerable research in Bangladesh regarding the relationship between capital adequacy and the operational efficiency of banks. However, significant gaps remain, particularly concerning state-owned banks that operate exclusively in a specific region. Most of the research so far has been about Islamic banks and private commercial banks. This is because these places usually have more to do with information and want to make money. A lot of people, on the other hand, don't know much about Bangladesh Krishi Bank (BKB). It has a special job that includes both social and economic work. This is what makes BKB different from other banks, and research on private banks may not be able to use it. One big problem with previous studies is that they didn't include data from 2023 to 2024 or any years after that. During this time, Bangladesh Bank changed its rules a lot, making it harder to figure out who could get a loan and how to get one. Because of a big rise in Non-Performing Loans (NPLs), banks have had to change how they do business. This means that earlier studies may not accurately show BKB's current financial situation. There hasn't been much research on BKB's "distressed banking condition." If a bank's Capital Adequacy Ratio (CAR) stays low for a long time, it could hurt the bank's long-term health and stability. But not much research has been done on what this means. This aspect is essential, as a CAR that remains negative for an extended period is rarely observed in banking studies; therefore, it requires further investigation. Most of the time, earlier studies have only looked at a few things, like CAR and

indicators of how profitable a business is. They didn't include some important information, like the Non-Performing Loan (NPL) ratio and the Loan-to-Deposit Ratio (LDR). It's hard to see why BKB is having money problems when you only look at one side of things. The objective of this study is to examine these issues through a comprehensive analysis of BKB's finances. It evaluates various financial factors and data from 2010 to 2024 to ascertain the impact of sufficient capital on financial performance. This methodology not only enhances the data's utility but also clarifies the challenges encountered by Bangladesh's specialty state-owned banks in their financial management.

1.6 Research Questions

We formulated the following research questions to achieve the objectives of this study:

RQ 1: What is the influence of the Capital Adequacy Ratio (CAR) on the financial performance (ROA) of Bangladesh Krishi Bank PLC?

RQ 2: Is there a statistically significant correlation between the Non-Performing Loan (NPL) Ratio and the bank's profits during the study period? RQ 3: How do liquidity metrics such as the Loan-to-Deposit Ratio (LDR) and the Liquid Asset Ratio (LAR) affect the bank's Return on Assets (ROA)?

RQ 4: How does the Loan Growth Rate (LGR) affect the bank's financial health?

RQ 5: Which independent variable provides the most accurate prediction of the financial stability and success of Bangladesh Krishi Bank PLC?

1.7 Research Objectives

Primary Objective

→ To examine the impact of Capital Adequacy Ratio (CAR) on the Return on Assets (ROA) of Bangladesh Krishi Bank PLC from 2010 to 2024.

Secondary Objectives

- To investigate the effects of Non-Performing Loans (NPL), Loan-Deposit Ratio (LDR), Liquid Asset Ratio (LAR), and Loan Growth Rate (LGR) on the bank's profitability.
- To make rules that will improve the finances and performance of Bangladesh Krishi Bank PLC.

CHAPTER 02

An Overview of Bangladesh Krishi Bank

2.1 A glance at Bangladesh Krishi Bank

Bangladesh Krishi Bank is the largest state-owned commercial bank in Bangladesh that focuses on agriculture. The major purpose of President's Order No. 27 of 1973 was to improve the agricultural sector by giving loans to businesses. The bank was founded up in the first few years after independence to satisfy the pressing need for formal financial services in rural and agricultural communities, when it was very hard to secure credit. Since it started, BKB has been a big part of the country's attempts to make farming better, industrialize rural areas, and cut down on poverty. The major purpose of Bangladesh Krishi Bank is to help farmers, sharecroppers, landless workers, and businesses who work in agriculture, agro-based industries, fisheries, livestock, and cottage industries get loans. BKB is not like other commercial banks since it has a strong developmental mission. It doesn't strive to generate as much money as possible; instead, it works on financial inclusion and boosting the economy in rural areas. Because of this, the bank has been very important in carrying out the government's programs for rural development and agricultural lending. The bank has a lot of branches in both rural and urban areas of Bangladesh. The main office of the company is in the Motijheel Commercial Area of Dhaka. This is where rules are made, credit is managed, and administrative control is used. The bank has a lot of branches, which lets them help people in faraway places who can't get financial services. Over the years, this wide-ranging effort has done a lot to get more people in rural Bangladesh involved in the economy. In 1977, Bangladesh Krishi Bank started offering commercial banking services. The goal was to get people in both cities and rural areas to spend their savings on useful things like farming and building. The bank has since grown its business in many areas of finance, such as getting people to open accounts, lending money to small and medium-sized businesses, and running government-backed credit programs. It also helps with state-funded programs like crop loans, agricultural subsidies, and programs that help people get out of poverty. Over the years, the bank has incorporated modern banking services like internet banking, ATMs, electronic cash transfers, and becoming a part of national payment systems. These new technologies have made things run more smoothly and improved customer service, but there are still problems with managing risk, getting loans back, and keeping the business stable. Bangladesh Krishi Bank has come a long way, but its finances and structure are still not good. It is very exposed to agricultural credit risk, relies on government policy directions, and has more and more Non-Performing Loans (NPLs), which puts its financial stability at risk. These issues have led to a drop in profits and worries about having

enough capital in the last few years, making it a good example for real-world financial research. Bangladesh Krishi Bank is still an essential aspect of the country's financial system as a whole. It is an important part of the country's social and economic structure since it helps rural areas grow their economies, make sure they have enough food, and improve agriculture. At the same time, its money troubles illustrate how crucial it is to keep an eye on things, adjust policies when necessary, and manage risks carefully to make sure it continues around for a long time.

2.2 Vision and Mission

Mission

- √ To make sure that individuals can cultivate their own food, give money to farmers, small enterprises, and businesses that are focused on agriculture
- √ To lend money to farmers, fisherman, people who own animals, people who need support with their crops, and those who need help getting out of poverty
- √ To offer different types of deposits, such as Current, Savings, SND, and Term Deposits
- √ To make it easier for the government to sell things like Sanchayapatra and prize bonds, and to make sure that sending money is quick and easy

Vision

- √ To make the rural economy stronger and help people grow their own food.

2.3 Core Values

- √ Putting the consumer first
- √ A pledge to run a business in a fair way
- √ Focus on improving rural and community areas
- √ Acting professionally and being responsibleOur motto is "Service First."

2.4 Core Business of Bangladesh Krishi Bank

The major business of Bangladesh Krishi Bank is to handle deposits. People and corporations can open both savings and checking accounts at Bangladesh Krishi Bank. People can open accounts by themselves or with other people. They can also access modern banking services like ATMs and debit cards, as well as excellent interest rates.

Deposit Schemes

- √ Monthly Profit Plan
- √ Monthly Savings Plan
- √ Fixed Deposit Receipt (FDR)
- √ Time Deposit Plans

Credit Programs

- √ Loans to help farmers and small farmers buy land
- √ Microcredit to assist people get out of debt
- √ Money for enterprises that grow crops

International Banking

- √ Import
- √ Export
- √ Remittance

Corporate Financing

- √ Giving money to enterprises that are based on agriculture
- √ helping firms grow and promote themselves

Programs to Help People Leave Poverty

- √ Help with credit for growth in remote areas
- √ Focus on lowering poverty in rural areas

ICT Services

- √ Core Banking Solution (CBS)
- √ Computers do banking chores
- √ Services at ATMs BACH (Bangladesh Automated Clearing House)
- √ RTGS (Real Time Gross Settlement)
- √ NPSB

2.5 Corporate Profile of Bangladesh Krishi Bank

Particulars	Information
Name	Bangladesh Krishi Bank
Date of Incorporation	31 March, 1973
Licenced Obtained	Banking licence issue under Bangladesh Krishi Bank Order, 1973
Formal Inauguration	1977

Registered Office	Krishi Bank Bhaban, 83-85 Motijheel Commercial Area, Dhaka-1000, Bangladesh
Chairman	Md. Zahid Hossain
Managing Director	Sanchia Binte Ali
Authorised Capital	Tk. 50,000m
Paid-up Capital	Tk. 9,000m
Number of Branches	1038
Number of Divisional Office	9
Regional Audit Office	53
E-mail	info@krishibank.org.bd
Phone	(+88 02) 9560021

2.6 Hierarchical Structure of BKB

The Board of Directors is at the top tier of management, established under government banking regulations. The overall management structure ensures smooth administration and operational efficiency.

Hierarchical Framework

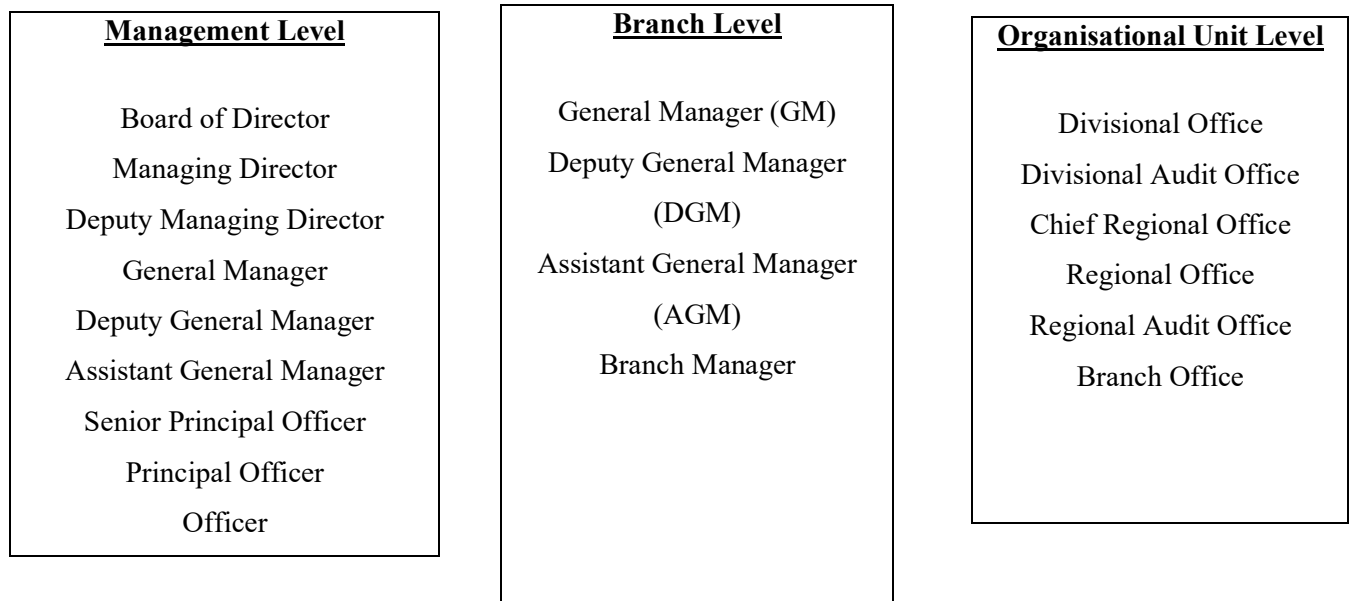


Diagram: Hierarchical Framework of BKB

CHAPTER 03

Literature Review

3.1 Literature Review of the Study

In both developed and developing economies, a vast body of literature in banking and finance has extensively examined the relationship between capital adequacy and financial performance. Capital adequacy is widely considered a fundamental indicator of the financial soundness and stability of banking institutions (Basel Committee on Banking Supervision, 2010). The Capital Adequacy Ratio (CAR) is used as a core regulatory measure under the Basel framework to assess whether a bank has sufficient capital to absorb potential losses (Basel Committee on Banking Supervision, 2010). It is considered a key safeguard for maintaining confidence in the financial system and ensuring systemic stability. A higher CAR is generally associated with lower insolvency risk and stronger depositor and investor confidence, which ultimately contributes to improved financial performance (Berger, 1995; Demirgüç-Kunt & Huizinga, 1999). Well-capitalized banks are better able to withstand financial shocks, maintain liquidity, and continue lending activities even during economic downturns. However, several studies also argue that excessively high capital levels may reduce profitability by limiting leverage and efficient asset utilization (Goddard et al., 2004; Staikouras & Wood, 2004). This creates a fundamental trade-off between risk and return in modern banking theory (Mishkin, 2012), where banks must balance stability with profitability. The debate regarding optimal capital levels continues in the literature. While strong capital positions enhance resilience, they may also reduce return on equity if idle capital is not effectively utilized. Therefore, banks face continuous pressure to maintain an optimal capital structure that ensures both safety and profitability. This balance becomes more complex in developing economies where financial markets are less efficient and regulatory constraints are more stringent. Asset quality is another major determinant of bank performance. The Non-Performing Loan (NPL) ratio is widely used as a key indicator of credit risk and asset quality in banking institutions (Altman, 2002). High levels of NPLs indicate poor loan performance and inefficiencies in credit management. Empirical studies consistently show that higher NPL ratios negatively affect profitability by increasing provisioning costs, reducing interest income, and weakening the capital base of banks (Masood & Pervez, 2019). As NPLs increase, banks are forced to allocate more resources to cover potential losses, which directly reduces their earning capacity.

A rising NPL ratio also creates a feedback effect on capital adequacy. As loan losses accumulate, capital buffers decline, thereby weakening the bank's ability to absorb future shocks (Ozili, 2015). This interaction between asset quality and capital adequacy highlights the interconnected nature of banking performance indicators. In agricultural banking, these issues become more pronounced due to the vulnerability of borrowers to external shocks such as climate change, floods, droughts, and price fluctuations (Mishkin, 2012). Liquidity management is another critical factor influencing bank performance. The Loan-to-Deposit Ratio (LDR) is commonly used to measure a bank's liquidity position and lending efficiency (Ozili, 2015). A higher LDR indicates aggressive lending practices, which may increase profitability in the short run but also elevate liquidity and default risks if not properly managed (Ly, 2015). Similarly, the Loan-to-Asset Ratio (LAR) reflects how efficiently a bank utilizes its asset base to generate income (Chen et al., 2018). Efficient asset utilization is positively associated with profitability; however, excessive exposure to loans may increase vulnerability to credit risk. The Loan Growth Rate (LGR) is another important determinant of banking performance. Rapid loan growth can enhance income generation and market share in the short term. However, if credit expansion is not supported by strong risk assessment and monitoring systems, it can significantly increase default risk in the long run (Kayode et al., 2015; Chen et al., 2018). Therefore, sustainable loan growth requires a balance between expansion and risk control mechanisms to ensure long-term financial stability. Overall, the literature suggests that bank performance is influenced by the combined effect of capital adequacy, asset quality, liquidity, and loan growth rather than any single factor in isolation (Goddard et al., 2004; Athanasoglou et al., 2008). These factors are highly interrelated. For instance, increasing NPLs can reduce profitability and simultaneously weaken capital adequacy, while poor liquidity management can intensify financial stress. Similarly, uncontrolled loan growth may temporarily increase income but lead to long-term instability if risk management practices are weak. In developing countries like Bangladesh, the banking sector faces additional structural and institutional challenges. Most empirical studies in Bangladesh have focused on private commercial banks and Islamic banks rather than state-owned specialized institutions (Rahman et al., 2018; Mamun et al., 2022). These banks operate primarily with profit-maximization objectives and diversified portfolios, which differ significantly from state-owned banks that operate under developmental mandates. State-owned banks such as play a dual role in the financial system. On one hand, they are expected to maintain financial stability and adequate

capital buffers; on the other hand, they are responsible for providing agricultural credit and supporting rural development. This dual objective creates inherent tension between profitability and social responsibility. As a result, these banks often face higher credit risk exposure due to lending to financially vulnerable rural borrowers. Agricultural lending is particularly risky due to its dependence on external environmental and economic factors. Natural disasters, crop failures, and fluctuations in agricultural commodity prices significantly affect borrowers' repayment capacity. This leads to higher default rates and increased non-performing loans, which negatively affect both profitability and capital adequacy. In such an environment, maintaining financial sustainability becomes a major challenge for state-owned agricultural banks. Regulatory changes have further influenced the banking sector in recent years. Stricter loan classification, provisioning requirements, and supervisory frameworks have led to an increase in officially reported NPL levels (, 2023). While these changes improve transparency and financial reporting accuracy, they also highlight the underlying asset quality issues within the banking system. A prolonged negative Capital Adequacy Ratio reflects severe financial distress and raises concerns about the long-term sustainability of banking institutions (Basel Committee on Banking Supervision, 2010). Despite extensive global research on capital adequacy and bank performance, there remains limited empirical evidence on financially distressed state-owned banks with persistent capital inadequacy. Existing literature primarily focuses on profitable or commercially oriented banks, leaving a significant gap in understanding the dynamics of loss-making or policy-driven institutions (Berger, 1995; Mishkin, 2012). In particular, long-term negative capital adequacy conditions have not been sufficiently explored in academic research. represents a unique case in this regard, as it operates under prolonged financial stress while simultaneously fulfilling developmental objectives. This dual pressure of financial sustainability and socio-economic responsibility distinguishes it from conventional commercial banks. Finally, the literature consistently emphasizes that capital adequacy, asset quality, liquidity, and loan growth are the most critical determinants of bank performance. However, their combined interaction in a distressed, policy-driven, and state-owned banking environment remains underexplored. This study aims to address this gap by providing an updated empirical analysis of over the period 2010–2024, thereby contributing to both academic literature and practical policy formulation in the banking sector.

CHAPTER 04

Research Methodology

4.1 Research Design

This study employs a quantitative design, examining time-series data from 2010 to 2024. The study utilized a longitudinal methodology to analyze the evolving relationship between capital adequacy and the financial performance of Bangladesh Krishi Bank (BKB) PLC over time. This study utilizes a quantitative methodology, enabling the objective quantification and statistical examination of financial metrics such as the Capital Adequacy Ratio (CAR), the Non-Performing Loan (NPL) ratio, the Loan-Deposit Ratio (LDR), the Liquid Asset Ratio (LAR), and the Loan Growth Rate (LGR). This methodology assists the researcher in elucidating the relationship between the independent and dependent variables. The longitudinal design effectively illustrates the bank's performance changes over time, reflecting its structural evolution, trends, and fluctuations. The study examines data from the past 15 years to assess the impact of variations in capital adequacy and other financial factors on the overall stability and profitability of Bangladesh Krishi Bank. This approach facilitates the observation of the bank's financial condition over time, whether improving or deteriorating. It is essential to determine the duration of the bank's funds. Furthermore, the methodology ensures that the findings reflect actual historical spending patterns rather than transient changes, thereby enhancing the reliability and accuracy of the research.

4.2 Data Sources

The study only uses secondary data from reliable and verified sources, like the Capital Adequacy Ratio (CAR), the Return on Assets (ROA), and the Non-Performing Loan (NPL) ratios. You can always count on these ratios to be correct and the same. These numbers come from the Bangladesh Krishi Bank PLC's audited annual reports for the years 2010 to 2024, the Bangladesh Bank's reports and scheduled bank statistics, and the official financial statements and regulatory disclosures.

4.3 Data Analysis Techniques

Techniques	Particulars
Descriptive Statistics	Mean, standard deviation, minimum, maximum values of all variables are calculated
Correlation	Used to examine relationship among variables and detect multicollinearity.
Multicollinearity Test (VIF Test)	Used to identify Multicollinearity issues among independent variables.
Regression Analysis	Applied to estimate coefficient and determine statistical significance.
Model Evaluation	R ² and adjusted R ² are used to measure the explanatory power of the model.
Hypothesis Testing	Statistical tests are conducted to accept or reject the proposed hypotheses

4.4 Model Specification

The study used a multiple linear regression model to look at the relationship between Bangladesh Krishi Bank's capital adequacy, key financial indicators, and its financial performance.

$$ROA_t = \beta_0 + \beta_1 CAR_t + \beta_2 NPL_t + \beta_3 LDR_t + \beta_4 LGR_t + \beta_5 LAR_t + \varepsilon_t$$

Where:

ROA_t = The return on assets at time t

CAR_t = The Capital Adequacy Ratio at time t

NPL_t = Non-Performing Loan Ratio at time

LDR_t = Loan–Deposit Ratio at time t

LGR_t = Loan Growth Rate at time t

LAR_t = Liquid Asset Ratio

β_0 = Intercept

β_1 – β_5 = Coefficient of independent variables

ε_t = error term

3.5 Description of Variables

Variable	Type	Symbol	Definition	Measurement
Return on Assets	Dependent	ROA	Measures the financial performance of BKB by showing how efficiently the bank uses its total assets to generate profits.	$\text{Net Profit} \div \text{Total Assets} \times 100$
Capital Adequacy Ratio	Independent	CAR	Indicates the bank's capital strength relative to risk-weighted assets, reflecting its ability to absorb losses and remain solvent.	$(\text{Tier 1 Capital} + \text{Tier 2 Capital}) \div \text{Risk Weighted Assets} \times 100$
Non-Performing Loan Ratio	Independent	NPL	Shows the proportion of loans that are not being repaid on time, reflecting credit risk and asset quality.	$\text{Non-Performing Loans} \div \text{Total Loans} \times 100$
Loan–Deposit Ratio	Independent	LDR	Reflects the efficiency of utilizing deposits for lending activities and indicates liquidity and lending performance.	$\text{Total Loans} \div \text{Total Deposits} \times 100$
Loan Growth Rate	Independent	LGR	Measures the annual growth of loans, indicating the bank's credit	$(\text{Current Year Loans} - \text{Previous Year Loans}) \div$

			expansion and income-generating capacity.	$\text{Previous Year Loans} \times 100$
Liquid Asset Ratio	Independent	LAR	Shows the proportion of liquid assets to total assets, reflecting the bank's ability to meet short-term obligations.	$\text{Liquid Assets} \div \text{Total Assets} \times 100$

3.6 Conceptual Framework

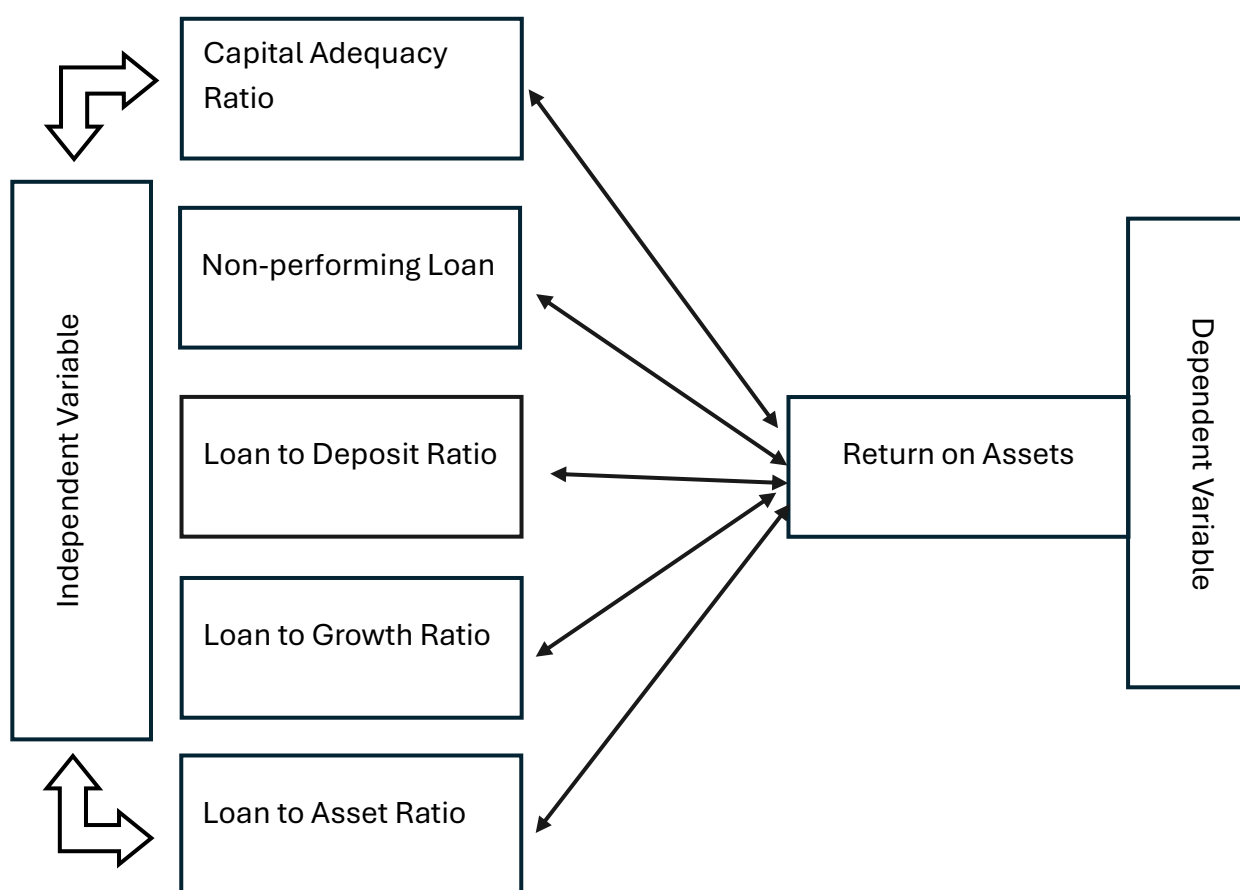


Diagram: Conceptual Framework

3.7 Hypotheses of the Study

The following null hypotheses (H_0) aim to examine the relationship between the independent variables and the financial performance (ROA) of Bangladesh Krishi Bank (BKB) PLC:

H₀₁: The Capital Adequacy Ratio (CAR) does not significantly influence the ROA.

H₀₂: The Non-Performing Loan (NPL) Ratio doesn't have a big effect on the ROA.

H₀₃: The Loan–Deposit Ratio (LDR) doesn't have a big effect on the ROA.

H₀₄: The Loan Growth Rate (LGR) doesn't have a big effect on the ROA.

H₀₅: The Liquid Asset Ratio (LAR) doesn't have a big impact on ROA.

We will use p-values to find out how important these ideas are in terms of statistics.

CHAPTER 04

Statistical Analysis

4.1 Descriptive Statistics

Descriptive Statistics							
Variable	Obs	Mean	Std. Dev.	Min	Max	Skewness	Kurtosis
ROA	15	-4.168	4.4902	-15.23	-0.77	-1.7545	2.7174
CAR	15	-39.988	12.9375	-73.69	-19.92	-0.7376	2.4788
NPL Ratio	15	21.952	7.9799	9.00	38.65	0.0472	2.8109
LDR	15	88.3707	8.6079	77.60	103.80	0.6190	1.9877
LGR	15	9.4547	5.8779	3.29	23.06	0.8360	2.9473
LAR	15	17.0320	3.5537	11.92	26.84	1.3040	4.9776

Table 01: Descriptive Statistics

Interpretation of Descriptive Statistics

Table 1's descriptive statistics show how the company's finances changed over the course of 15 years. They show that the company was having a lot of trouble with its money and how it worked. The Return on Assets (ROA) indicator, which shows how much money the bank makes, is -4.168%. This means that the bank has never been able to make money from its assets. The organization never made money during the study period; it always lost money. This shows that the lowest value is -15.23% and the highest value is -0.77%. The Capital Adequacy Ratio (CAR) is also not doing well. The average value is -39.988%, which is a lot lower than what international banking rules say it should be. The bank is in a lot of financial trouble and has lost a lot of money because its CAR has been negative for a long time. The standard deviation of 12.9375 is pretty high, which means that the bank's capital position has changed a lot over time. This means that the bank's capital structure isn't stable. The Non-Performing Loan (NPL) Ratio shows that the average quality of assets is 21.952%. The loan portfolio isn't as good as it used to be because this number is so high. 38.65% is the highest percentage, which means that the bank still needs to pay

back a lot of the loans it has made. There is a high risk of default, so the bank makes less money. It also needs to put away more money for future losses and is always under pressure to keep its capital strong. The average Loan-to-Deposit Ratio (LDR) is 88.3707%. This means that a lot of deposits have been used to make loans. People are borrowing money, but if they don't pay it back quickly, they might not have enough money to pay their bills. The average Loan Growth Rate (LGR) is 9.4547%, while the average Liquid Asset Ratio (LAR) is 17.0320%. This means that the business isn't too bad at saving money. But when you look at the big drop in profits and capital adequacy, it seems like the liquidity indicators are more stable. From a distributional point of view, the skewness and kurtosis values give us more information about the data's properties. The LAR variable's skewness is 1.3040, which means that the distribution is not even and has a longer tail on the right side. The kurtosis value of 4.9776 shows that the distribution is leptokurtic, which means that the data series has values that are either very high or very low. This kind of statistical behavior shows that the way liquidity was handled during the study period wasn't stable or steady. The descriptive statistical analysis shows that the company has always had money problems, like low profits, not enough capital, and a lot of loans that aren't being paid back. As these cases show, the company's overall financial performance, risk management, and stability of the capital structure were not good during the study period.

4.2 Correlation Analysis

Correlation Analysis						
Variable	Return on Assets	Capital Adequacy Ratio	Nonperforming Loan Ratio	Loan-Deposit Ratio	Loan-Growth Ratio	Loan-Asset Ratio
Return on Assets	1.0000					
Capital Adequacy Ratio	0.7130*	1.0000				
Nonperforming Loan Ratio	-0.3840	-0.2800	1.0000			
Loan-Deposit Ratio	0.1576	0.4733	0.4346	1.0000		
Loan-Growth Ratio	-0.1942	0.2444	-0.0307	-0.1186	1.0000	
Loan-Asset Ratio	0.5570*	0.6996*	0.2006	0.6521*	0.1776	1.0000

Note: * indicates significance at 5% level

Table 02: Correlation Analysis

Interpretation of Correlation Analysis

Table 2's Correlation Matrix shows how the financial variables you chose are related to one another. A coefficient close to +1 means that the two things are very closely linked in a good way. If it is close to -1, it means that the two things are very much the same. The asterisk (*) means that the relationship is statistically significant at the 5% level. There is a strong and statistically significant positive relationship of 0.7130 between the Capital Adequacy Ratio (CAR) and the Return on Assets (ROA) analysis, which shows how profitable a business is. This means that the bank makes more money when it has more money to work with. This means that having a lot of money can help the business run well and make money. The Non-Performing Loan (NPL) Ratio,

on the other hand, has a negative relationship with ROA of -0.3840. This means that the company usually makes less money when more loans go bad. This relationship shows that bad assets can hurt your profits. The Loan-to-Asset Ratio (LAR) and ROA also have a positive relationship of 0.5570. This means that lending money that takes up more of your assets is more profitable. This means that a big part of making more money is lending money in ways that make money. The Capital Adequacy Ratio (CAR) shows that LAR and CAR are very closely related, with a value of 0.6996. This means that if you have a lot of money, you are more likely to lend it based on what you have. There is also a moderate positive correlation of 0.4733 between the Loan-to-Deposit Ratio (LDR) and the CAR. This means that the strength of the capital affects how much money is lent out. The CAR and NPL Ratio are negatively correlated (-0.2800), which means that the bank's capital position gets worse when more loans aren't paid back. However, the correlation structure doesn't show that this connection is very strong. The Loan-to-Deposit Ratio (LDR) and the Loan-to-Asset Ratio (LAR) are very close to each other at 0.6521. It makes sense that both numbers show how much money the bank is lending and how it spends its money. This strong connection means that more loans are likely to be made when more deposits are made. The Loan Growth Rate (LGR), on the other hand, doesn't have strong or statistically significant links to most of the other variables. This means that the growth rate of loans during the study period didn't have a consistent or strong effect on profitability, capital adequacy, or liquidity conditions when compared to the quality and structure of the current loan portfolio. The correlation analysis shows that the company's finances are mostly affected by how much money it has and how well it uses what it has. But the study period showed that the quality of the assets had a very bad effect on the company's ability to make money and stay financially stable.

4.3 Multicollinearity Test (VIF Test)

Multicollinearity Test		
Variable	VIF	Tolerance (1/VIF)
CAR	3.99	0.2506
LAR	3.08	0.3244
LDR	2.94	0.3402
NPL Ratio	2.47	0.4056
LGR	1.28	0.7794
Mean VIF	2.75	—

Table 03: Multicollinearity Test (VIF Test)

Interpretation of Multicollinearity Test

The Multicollinearity Test in Table 3 can help you figure out if the independent variables in the regression model are too similar to each other. In financial econometric analysis, multicollinearity can make regression estimates less reliable, raise standard errors, and make it harder to understand coefficients. This test is very important because it makes sure that the model used to figure out how healthy the company's finances are is correct and strong. The test uses two well-known measures: the Variance Inflation Factor (VIF) and the Tolerance. The VIF tells you how much the variance of an estimated regression coefficient changes when there is multicollinearity. On the other hand, tolerance tells you how much of the change in one independent variable is not caused by other independent variables. If the VIF value is less than 5 (or sometimes less than 10), multicollinearity is not a big deal in standard econometric practice. The VIF for CAR in this study is the highest, at 3.99. The LAR score is 3.08, the LDR score is 2.94, and the NPL Ratio score is 2.47. The Loan Growth Rate (LGR) is at its lowest point right now, at 1.28. There is no serious multicollinearity among the explanatory variables because all of the VIF values are well below the critical threshold of 5. The Mean VIF value of 2.75 also means that the model doesn't have any problems with multicollinearity. The Tolerance values, which you get by dividing 1 by the VIF, show that the model is even more reliable. The variables don't have anything to do with each other

if the Tolerance value is higher than 0.10 or 0.20. The Tolerance values in this study range from 0.2506 to 0.7794, indicating that each independent variable contributes novel and valuable information to the regression model. The results of the multicollinearity test demonstrate that the explanatory variables employed in the study are not excessively correlated with one another. This ensures that the regression estimates are statistically valid and that the model is effective in determining the factors influencing financial performance.

4.4 Regression Analysis

Regression Analysis			
Return on Assets	Coefficient	t-value	P-value
Capital Adequacy Ratio	0.2562	2.84	0.019
Nonperforming Loan Ratio	-0.0277	-0.24	0.815
Loan -Deposit Ratio	-0.2984	-2.57	0.030
Loan-Growth Ratio	-0.4095	-3.64	0.005
Loan-Asset Ratio	0.6554	2.27	0.049
Constant	25.7670	2.16	0.059

Table 04: Regression Analysis

Interpretation of Regression Analysis

The regression analysis in Table 4 shows that some, but not all, important financial factors affect Return on Assets (ROA), which is a measure of how profitable a business is. The results indicate a statistically significant positive correlation between the Capital Adequacy Ratio (CAR), the Loan-Asset Ratio (LAR), and profitability. The coefficients of 0.2562 and 0.6554, coupled with P-values below 0.05, demonstrate that the bank can achieve profitability by effectively managing substantial loans. Conversely, there exists a statistically significant negative correlation between the Return on Assets (ROA) and both the Loan-Deposit Ratio (LDR) and the Loan-Growth Ratio (LGR), with the LGR exhibiting a P-value of 0.005 and a coefficient of -0.4095. This means that

if loans grow too quickly, the company loses a lot of money. If aggressive credit growth isn't handled properly, it could lead to more credit risk, worse loans, and higher provisioning costs, all of which would lower net income. The LDR has a negative coefficient of -0.2984. This means that turning too many deposits into loans could hurt overall profitability by making it harder to manage money and putting pressure on cash flow. The Non-Performing Loan (NPL) Ratio has a negative coefficient of -0.0277, but this isn't statistically significant because the P-value is 0.815. This means that, according to this model, NPL doesn't have a big effect on profitability when you look at other factors. It's possible that the study period is already measuring the effect of asset quality in a roundabout way, through other factors or the way the bank's financial system is set up. The regression results show that the two most important things that affect how much money you make are having enough money and using your assets wisely. When the company lends too much money too quickly, on the other hand, it doesn't do as well financially. The results show that you need to be careful about how much credit and capital you grow if you want to keep making money over the long term. You shouldn't use risky methods that help you grow quickly.

4.5 Model Summary

Model Summary	
Statistic	Value
Number of Observations	15
F-statistic	10.04
Prob > F	0.0018
R-squared	0.8480
Adjusted R-squared	0.7636

Table 05: Model Summary

Interpretation of Model Summary

Table 5's Model Summary Statistics show how well the regression model that looked at the company's financial performance fits and explains the data. The best independent variables for explaining changes in Return on Assets (ROA) are the Capital Adequacy Ratio (CAR), the Loan–Deposit Ratio (LDR), the Loan Growth Ratio (LGR), the Loan–Asset Ratio (LAR), and the Non-Performing Loan (NPL) ratio. The F-statistic value of 10.04 and the Prob > F value of 0.0018 show that the whole regression model is statistically significant. The null hypothesis, which says that all coefficients are equal to zero, is not true because the probability value is much lower than the standard 0.05 threshold. To put it another way, all of the independent variables have a statistically significant and important effect on ROA when you look at them all together. In general, this means that the model is correct and does a good job of explaining the dependent variable. The R-squared value of 0.8480 means that the model's independent variables can explain about 84.80% of the change in ROA. The financial indicators used are very important for figuring out how profitable the research period was because they can tell you a lot. This also means that the model doesn't include a lot of outside factors that affect ROA. It's better to guess the 0.7636 Adjusted R-squared score because adding more factors can make R-squared look better. This number shows that the model still explains about 76.36% of the changes in ROA, even when you take into account how many predictors there are and how big the sample is. This means that the model is strong in both its structure and its data. You can also use the variables to figure out how much money something makes. The summary statistics for the model show that the regression model is statistically strong, fits well, and can be used to make decisions. The study's financial variables do a good job of showing what has the biggest effect on profitability, as shown by the high R-squared and F-statistic values. This is a good place to start in the real world when it comes to making smart decisions and coming up with rules that will keep the bank's money safe.

4.6 Hypothesis Testing

Hypothesis Testing				
Hypothesis	Relationship	P-value	Significance (5%)	Decision
H1: CAR has a significant effect on ROA	Positive (+)	0.019	Significant	Accepted
H2: NPL Ratio has a significant effect on ROA	Negative (-)	0.815	Not Significant	Rejected
H3: LDR has a significant effect on ROA	Negative (-)	0.030	Significant	Accepted
H4: LGR has a significant effect on ROA	Negative (-)	0.005	Significant	Accepted
H5: LAR has a significant effect on ROA	Positive (+)	0.049	Significant	Accepted

Table 06: Hypothesis Testing

Interpretation of Hypothesis Testing

The official results of the hypothesis test are shown in Table 6. This test checks to see if the first guesses about the important financial factors are correct. The study shows that four of the five proposed hypotheses are correct, but one is not statistically significant at the 0.05 level. The P-value of 0.019 shows that there is a statistically significant positive relationship between the Capital Adequacy Ratio (CAR) and the Return on Assets (ROA). H1 is true because the bank needs a lot of cash to stay stable and make money. If the bank has enough money, this result shows that it can handle shocks better and make more money over time. H5 is also true because the Loan–Asset Ratio (LAR) has a statistically significant and positive effect on ROA, with a P-value of

0.049. In other words, the bank can make more money by lending money for useful things. It shows that a company's ability to make money is greatly affected by how well it uses its resources. The Loan–Deposit Ratio (LDR) and the Loan Growth Ratio (LGR) both have a statistically significant negative effect on ROA. This means that H3 and H4 are both true. LGR is very important ($P = 0.005$), which means that profits drop a lot when loans grow too quickly and without any checks. This means that giving out too many loans could make credit less safe and make the company's work less effective, which would hurt the bottom line in the long run. LDR ($P = 0.030$) has a big bad effect that shows that putting too much money into loans could make it hard to get cash and mess up your finances, which would lower your overall returns. It is not statistically significant that the Non-Performing Loan (NPL) Ratio has a P-value of 0.815. This means that H2 is false. This model demonstrates that NPL alone does not significantly affect ROA. This is a little surprising because many people think that the quality of assets is a big part of making money. But in this case, it seems that capital adequacy and loan growth dynamics have a bigger effect on the company's finances than NPL alone. This could be because they affect other things that help explain things. The hypothesis tests show that a business needs a lot of money and needs to use its resources wisely to make money. But if you give away too much money too quickly, it can hurt your business. The results show that getting more loans isn't the best way to make money in the long run. Instead, you should focus on being more careful with your money, saving more, and not letting your credit grow too quickly.

CHAPTER 05

Findings, Recommendations, Limitations, & Conclusion

Findings

The statistical investigation, which included descriptive statistics, a correlation matrix, regression results, a multicollinearity test, and hypothesis testing, led to these crucial conclusions: The research indicates that the bank's financial condition has been neither favorable nor stable for the past 15 years. The bank has always lost money, which is shown by its low Return on Assets (ROA). This means that it isn't using its assets well and isn't making enough money. The fact that the business keeps doing poorly suggests that its management and money management aren't working. One of the most crucial things to remember is that the Capital Adequacy Ratio (CAR) is relatively low. This signifies that there isn't enough money. Both correlation and regression studies demonstrate that CAR exerts a robust, positive, and statistically significant influence on ROA. This signifies that the business requires more money to stay steady over time and produce more money. The survey also demonstrates that the quality of assets is still a huge problem because a lot of loans aren't being paid back. NPL reduces profitability, although the regression model does not indicate a statistically significant impact. This means that bad assets can make a company less stable, but they may not have as big of an effect on profits as other things, like how much money the company has and how it lends money. Another important thing to learn is how to lend money and keep track of cash flow. The Loan–Asset Ratio (LAR) has a big, positive effect on how much money a company makes. If the company makes smart loans that are paid back, it will make more money. This shows how important it is to be smart with your money so you can make more of it. The Loan–Deposit Ratio (LDR) and the Loan Growth Ratio (LGR) both have strong negative correlations with ROA. This means that profits went down because they made too many loans and grew them too quickly. The results show that rapid credit expansion may raise credit risk, lower loan quality, and make financial stress worse, all of which would hurt overall performance. The correlation analysis backs up these results by showing a strong link between profitability, capital adequacy, and asset utilization, and a weak link between low asset quality and profitability. The close link between LDR and LAR also shows that the bank's money is very dependent on how much it lends. The test for multicollinearity shows that the independent variables are not too similar to each other. This means that the regression results are correct and can be used to make decisions. Finally, the summary statistics for the model show that the regression model works very well. The high R-squared number means that the variables you chose do a great job of showing how changes

in profitability happen. The whole model is statistically significant, which means that the financial indicators used are good ways to find out how the bank is doing. In short, the analysis shows that the bank makes most of its money by having enough cash on hand and using its assets wisely. However, the bank's money problems got worse because it lent out too much money and grew too quickly.

Recommendations

The study found that Bangladesh Krishi Bank could make a lot of important changes to how it manages money. The research says that the bank is in big trouble because it doesn't have enough money, and it needs to fix that right away. The most important thing is to grow the capital base. The government can help by giving banks more money, letting them keep more of their profits, and teaching them how to use their money better. To keep things stable over time, lower the risk of finances, and increase overall profitability, the Capital Adequacy Ratio (CAR) needs to be higher. The results also show that managing liquidity may be better. The Loan-Deposit Ratio (LDR) doesn't change how much money the bank makes, which means it is lending out too much money compared to how much money it has on deposit. The bank needs to lend money in a way that is beneficial for the bank's long-term health and minimizes the chance that it won't have enough money on hand. The Liquid Asset Ratio (LAR) also shows that having enough cash on hand is good for business. The bank needs to have enough money on hand to pay its debts and keep its finances stable. Another big concern is how quickly loan growth hurts profits. The bank could lose a lot of money because it is lending out a lot of money without thinking about the risks. The number of loans Bangladesh Krishi Bank makes is less important than the quality of the loans it makes. The bank needs to improve its credit appraisal processes, borrower screening, and post-loan monitoring to make loans safer and more profitable. The regression model said that the Non-Performing Loan (NPL) ratio wasn't statistically significant, but banks still have a big problem with it in the real world. To lower the risk of default, the bank should keep improving its recovery mechanisms, make sure the law is followed more strictly, and build up systems for proactive monitoring. If you want to keep your money safe for a long time, you need to know how to handle classified loans. It's also very important to keep your bank account up to date. Digital banking

systems, automating internal processes, and better managing data can help businesses save money and work more efficiently. Making technology better is just as important as helping people grow. To help them do their jobs better and make better decisions, employees should obtain training on a regular basis. Lastly, the bank will work better as a whole if everyone follows the regulations and does what they are intended to do. People will be more responsible if there are better ways to check on things inside the organization, more honest financial reporting, and stronger ways to check on things. The analysis found some problems with the current system that need to be fixed by both management and regulators working together. .

Conclusion

study looked at how capital sufficiency, liquidity management, loan growth, and non-performing loans affected Bangladesh Krishi Bank's financial performance from 2010 to 2024. It used descriptive statistics and regression analysis to give a full picture of the bank's financial health and the main things that affect its Return on Assets (ROA) profitability. The descriptive analysis shows that the Bangladesh Krishi Bank has always lost money during the investigation. This is shown by the fact that the ROA has always been negative. The Capital Adequacy Ratio (CAR) shows that the bank is in a bad situation because it doesn't have enough money. This is a big risk to its long-term stability and financial health. The regression results also show that a company's finances have a big effect on how well it does. If a business has more cash, it can make more money and lose less money. Different things that affect liquidity have different effects on it. For example, the Loan-Deposit Ratio lowers ROA, but the Liquid Asset Ratio helps a business do well. This shows that having a balanced liquidity structure is very important for making more money and staying stable. Studies have shown that lending money quickly without good risk management can cause problems and make the financial risk worse. Please keep in mind that the model does not show that the Non-Performing Loan (NPL) ratio has a statistically significant effect on ROA. This could mean that it has an indirect effect on other things or that other structural problems have a bigger effect on profitability. The model has a high R-squared value of 0.848, which suggests that the features we chose explain a lot of the differences in how well the organization does financially. In conclusion, the analysis shows that Bangladesh Krishi Bank is not doing well financially because

it doesn't have enough money, doesn't manage its liquidity well, and lets its loans grow too quickly. To have better finances in the long run, the bank needs to make sure it has enough capital, manage its liquidity better, and be stricter about lending. Politicians, regulators, and bank managers can use what they learned from this study to make smart decisions about how to run their businesses and spend their money.

Limitations of the Study

We need to talk about some problems with this study, but it does give us useful information about how capital sufficiency affects things. The study only uses secondary data from regulatory bodies and periodic reports. These sources are usually reliable, but they can have reporting biases, changes in accounting, or changes over time that could make the study less accurate and consistent. The study only looks at data from all institutions, not any extra parts or branches. This makes it harder to tell how well something works when there are small differences. The study analyzed a restricted number of cases from 2010 to 2024, suggesting a short timeframe. A more extensive dataset could yield more precise statistical outcomes and enhance the generalizability of the conclusions across diverse contexts. The current dataset is sufficient for a time-series analysis. The study focused exclusively on a single bank, complicating comparisons with other commercial and specialized banks in Bangladesh. The model requires only a limited number of financial metrics, including CAR, NPL, LDR, LGR, and LAR. Insufficient data precludes the inclusion of other significant factors, such as macroeconomic indicators (including inflation, interest rates, and GDP growth), governance quality, management effectiveness, and policy measures. Consequently, the model may not encompass all variables influencing a business's financial performance. The study presumes that independent variables exert a direct influence on profitability; however, this may not reflect actual banking scenarios. This methodology fails to explicitly incorporate structural fractures, non-linear relationships, or external factors such as legal changes or economic crises that could impact results. Furthermore, the recent regulations, particularly those regarding loan classification and reserve allocation for 2023–2024, may significantly impact financial indicators. This analysis is relevant to the specified timeframe. The report does a good job of showing the bank's financial situation, even though it has some flaws. It is also a good starting point for more research and policy evaluation.

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