# An Internship Report
# On

## "Determinants of Banks Profitability: An Analysis on Selected State-owned and Private Banks in Bangladesh "

***An Internship Report submitted in partial fulfillment of the requirements for the Degree of Bachelor of Business Administration (BBA)***

## SUBMITTED TO:


**Tama Saha**

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**Department of Finance and Banking**

**Faculty of Business Studies**

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## SUBMITTED BY:


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**Session: 2020-2021**

**Department Of Finance and Banking**

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## DATE OF SUBMISSION

**12th May, 2026**

# Letter of Transmittal

20th April, 2026

Tama Saha

Assistant Professor

Department of Finance and Banking

Faculty of Businesses Studies

Comilla University

Subject: Submission of internship report titled **"Determinants of Banks Profitability: An Analysis on Selected State-owned and Private Banks in Bangladesh"**

Honorable Madam,

This is a great pleasure and honor for me to submit the internship report titled **"Determinants of Banks Profitability: An Analysis on Selected State-owned and Private Banks in Bangladesh"** as per your guideline and instructions. This report has been prepared as a partial requirement to complete BBA program.

I have endeavored to analyze the relationship between profitability and credit risk exposure of Bangladeshi state-owned banks. I have used relevant financial indicators and empirical analysis. I hope this report will provide clear understanding of the topic.

Therefore, I would be grateful if you kindly accept my internship report and oblige thereby.

Sincerely yours-

______________________

Kashpiya Quasem
ID/ Reg. no: 12117026
Session: 2020-2021
Department of Finance and Banking
Comilla University

## ***Acknowledgment***

I would like to express my deepest gratitude to all those who have supported me in the completion of this internship report titled **“Determinants of Banks Profitability : An Analysis on Selected State-owned and Private Banks in Bangladesh”**

Firstly, I would like to thank almighty **Allah** for answering our prayers and giving me the strength, courage, and patience to finish this task within reasonable time.

I would like to express my gratitude to **Assistant Professor Tama Saha** mam who has been my supervisor since the beginning of my report. She provided me with important advice, helpful suggestions and constant encouragement throughout the course of this work. Without her help and support, this study would not have been completed.

I am also immensely grateful to **Bangladesh Krishi Bank** for providing me the opportunity to complete my internship program in their esteemed organization. This internship provided me with practical knowledge of banking sector valuable insights. Sincere thanks to the officers and staffs for their immense support and cooperation during my internship period.

I would like to convey my deepest appreciation to the faculty members of **Finance and Banking Department, Comila University,** for their valuable guidance, inspiration, support and sharing their knowledge and practical insights throughout my journey. They nurtured my core foundation of BBA journey.

Finally, I would like to thank my family members and my well-wishers for their constant encouragement and moral support throughout the preparation of the report.

## ***Student's Declaration***

**I, Kashpiya Quasem** a student of finance and Banking, Comilla University, hereby declare that the internship report titled **"Determinants of Banks Profitability: An Analysis on Selected State-owned and Private Banks in Bangladesh"** is my original work and has been prepared as a part of the requirements for completing Bachelor of Business Administration (BBA) program under the supervisor, **Tama Saha, Assistant Professor**, Department of Finance and Banking, Comilla University.

This report is the outcome of my own work and reflects the research that is conducted by me under my supervisor during the internship program at **Bangladesh Krishi Bank** using publicly available information. I confirm that this report has not been submitted to any other University/ College/ institution for any academic certificate/ degree/ diploma. It does not break any existing copyright.

I also declare that all sources of information that I have extracted have been properly acknowledged with appropriate references.

Sincerely yours,

______________________

Kashpiya Quasem

ID/ Reg. no: 12117026

Session: 2020-2021

Department of Finance and Banking

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# ***Certificate of Supervisor***

This is to certify that the internship report titled **"Determinants of Banks Profitability: An Analysis on Selected State-owned and Private Banks in Bangladesh"** submitted by **Kashpiya Quasem, ID No: 12117026, Session: 2020-2021** as a student of Bachelor of Business Administration (BBA) degree from Department of Finance and Banking at Comilla University, is an authentic piece of work carried out under my supervision.

I confirm that the content of the report is based on the research and analysis performed during the internship period, and I endorse its submission for academic purposes.

______________________

Tama Saha
Assistant Professor
Department of Finance and Banking
Faculty of Businesses Studies
Comilla University

বাংলাদেশ কৃষি ব্যাংক পিএলসি
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BKBPLC/CumB/Cum/Internship/2026/01

Date: 10-05-2026

## To Whom It May Concern

This is to certify that **Kashpiya Quasem, ID No. 12117026, Reg No. 12117026,** student of Comilla University, Department of Finance & Banking, under **BBA program,** has completed his internship on **"Determinants of Banks Profitability: An Analysis on Selected State-owned and Private Banks in Bangladesh"** at Bangladesh Krishi Bank , Police Line Branch, Cumilla.

During her three months internship period, she maintained all the rules and provided services as an employee of the organization.

On the way of accomplishing the task, we found her very sincere, hardworking, and curious to acquire banking knowledge. She devoted herself fully in the work area and performed all the duties and responsibilities accordingly. She always engaged herself in the work instructed by the personnel of the branch.

We wish every success in her life.

Md. Rayhan Uddin
Manager (AGM), R-1368
Bangladesh Krishi Bank
Police Line Branch, Cumilla (N)
S/O No-7073

**(Md. Rayhan Uddin)**
Assistant General Manager & Head of Branch
Bangladesh Krishi Bank PLC
Police Line Branch, Cumilla

# Executive Summary

This report examines the determinants of profitability for 12 selected private commercial banks (PCBs) in Bangladesh, namely UCB, IFIC, City, BRAC, Dhaka Bank, Bank Asia, NCC, Mutual Trust, Mercantile, Dutch-Bangla, Prime, and Eastern Bank. The study covers a 10-year period from 2015 to 2024, utilizing a total of 60 observations through a quantitative research design. The core objective of the study was to analyze how bank-specific factors (NPL, Size, and LDR) and macroeconomic factors (GDP Growth and Remittance) influence bank performance, measured by Return on Assets (ROA). Using STATA to perform Pooled OLS and Random Effects regression with robust standard errors, the empirical findings reveal critical insights into the private banking sector. The results indicate that Non-Performing Loans (NPL) and Bank Size have a significant negative impact on ROA. This suggests that rising credit risks and high operational costs associated with large asset bases are the primary challenges to profitability for these private banks. Conversely, the Loan-to-Deposit Ratio (LDR), GDP Growth, and Remittance inflows were found to have a positive correlation with profitability, highlighting the importance of efficient lending and a stable macroeconomic environment. Based on these findings, the report recommends that private banks prioritize asset quality over aggressive asset expansion. Strengthening credit appraisal systems to curb NPLs and adopting digital banking solutions to optimize operational costs are essential.

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# CHAPTER ONE
# INTRODUCTION

## 1.1 Introduction

Bank profitability is considered one of the most important indicators of the financial performance and stability of the banking sector. A profitable banking system not only ensures the sustainability of financial institutions but also contributes significantly to economic growth by facilitating savings, investments, and credit creation. In Bangladesh, the banking sector plays a crucial role in supporting economic development, trade, industrialization, and remittance inflows. Therefore, identifying the factors that influence bank profitability has become an important area of academic and practical research.

In recent years, both internal and external factors have affected the profitability of banks in Bangladesh. Internal factors such as bank size, loan to deposit ratio (LDR), and non-performing loans (NPL) directly influence operational efficiency and financial performance. At the same time, external macroeconomic variables like GDP growth rate and remittance inflows also impact banking activities by affecting liquidity, investment, and overall economic conditions. Understanding the relationship between these variables and bank profitability is essential for policymakers, bank management, investors, and researchers.

This study focuses on examining the determinants of bank profitability in Bangladesh by using Return on Assets (ROA) as the dependent variable. ROA is widely used as a measure of profitability because it reflects how efficiently a bank utilizes its assets to generate earnings. The independent variables used in this study are remittance inflows, bank size, loan to deposit ratio (LDR), non-performing loans (NPL), and GDP growth rate. These variables were selected based on their theoretical and empirical relevance to banking performance.

The study applies panel data analysis using Stata software to analyze the relationship between the selected variables and bank profitability. Statistical techniques such as descriptive statistics, correlation analysis, Variance Inflation Factor (VIF) test, Hausman test, and regression analysis are used to ensure accurate and reliable findings. The Random Effect Model is employed based on the Hausman test results.

The findings of this study are expected to provide valuable insights into the major determinants affecting bank profitability in Bangladesh. The study may also help bank managers and policymakers formulate effective strategies to improve financial performance and maintain stability in the banking sector.

The banking sector is generally considered to be one of the pillars of economic development, where it plays a key role in terms of mobilizing financial resources, investment, and efficient distribution of funds in an economy. The banking system in developing economies such as Bangladesh is especially important, being the main source of financial intermediation and aiding the actions of the public and private sectors.

Banking sector in Bangladesh has experienced significant change over the last few decades as a result of financial liberalization, globalization and technology. This has seen commercial banks, especially, increase their activities and come up with new financial products and even improve on their service delivery processes. The developments have enhanced the role of banks in promoting economic growth and financial stability.

Foreign remittance inflows have become one of the most essential external sources of finance in Bangladesh among many other factors affecting the banking sector. It is always one of the leading remittance receiving countries in the world with millions of migrant workers playing a major role in national economy through the sending of money home. These remittances not only sustain household consumption, but also help in saving, investing and capital formation.

## 1.2 Problem Statement

Bank profitability is a crucial indicator of the financial health, efficiency, and sustainability of the banking sector. A profitable banking system contributes to economic growth by ensuring financial stability, promoting investment, and supporting productive economic activities. However, in Bangladesh, many banks face challenges in maintaining consistent profitability due to various internal and external factors. Increasing non-performing loans, inefficient loan management, liquidity issues, and fluctuations in macroeconomic conditions have created concerns regarding the financial performance of banks.

In recent years, the banking sector of Bangladesh has experienced significant changes because of economic growth, rising remittance inflows, regulatory reforms, and increased competition among banks. Although remittance inflows and GDP growth create opportunities for banking expansion and profitability, problems such as high non-performing loans (NPL) and improper credit management continue to weaken bank performance. Moreover, maintaining an appropriate loan to deposit ratio (LDR) and efficient asset utilization remains a major challenge for banks.

Several previous studies have examined the determinants of bank profitability in different countries and banking systems. However, the findings of those studies are often inconsistent due to differences in economic environments, research methodologies, and selected variables. In the context of Bangladesh, there is still a need for empirical research focusing on how both bank-specific and macroeconomic variables influence bank profitability simultaneously.

This study attempts to address this gap by examining the impact of remittance inflows, bank size, loan to deposit ratio (LDR), non-performing loans (NPL), and GDP growth rate on bank profitability measured by Return on Assets (ROA). The study uses panel data analysis through Stata to identify the significant determinants affecting bank profitability in Bangladesh.

Therefore, the main problem of this study is to determine which factors significantly influence bank profitability and how these variables affect the financial performance of banks in Bangladesh. The findings of this research may help policymakers, bank management, and financial institutions formulate effective strategies to improve profitability and ensure long-term financial stability.

Nevertheless, even with the growing significance of foreign remittance inflows, there is doubt on whether these inflows have a real impact on the financial performance of commercial banks in Bangladesh. Although it is widely believed that an increase in remittance inflows can enhance the performance of banks with regard to factoring in deposits and liquidity, the correlation is not necessarily a direct one. The effect may differ among banks based on a number of factors which include efficiency and costs of running the bank, interest rate policies, loan disbursement policies, technological development and capacity to attract and retain remittance customers.

## 1.3 Background of the Study

The banking sector is one of the most important components of the financial system and plays a vital role in the economic development of a country. Banks act as financial intermediaries by collecting deposits from surplus units and providing loans and advances to deficit units. In Bangladesh, the banking industry significantly contributes to economic growth by supporting trade, investment, industrialization, employment generation, and remittance transactions. As a result, the profitability and stability of banks have become major concerns for policymakers, investors, regulators, and bank management.

In recent years, the banking sector in Bangladesh has experienced various challenges and opportunities due to changes in economic conditions, financial reforms, globalization, and technological advancements. The profitability of banks is influenced by several internal and external factors. Internal factors include bank-specific variables such as bank size, loan management efficiency, liquidity position, and credit risk. External factors include macroeconomic variables such as economic growth and remittance inflows, which affect overall banking activities and financial performance.

Among the various indicators of profitability, Return on Assets (ROA) is widely used to measure how efficiently a bank utilizes its assets to generate profit. Higher ROA indicates better management efficiency and stronger financial performance. Therefore, understanding the determinants of ROA is important for evaluating the operational success and financial stability of banks.

Bangladesh receives a significant amount of foreign remittances every year, which contributes positively to the country's economy and banking liquidity. Similarly, GDP growth reflects the economic condition of the country and influences banking operations through increased investment and borrowing activities. On the other hand, Non-Performing Loans (NPL) negatively affect bank profitability by increasing credit risk and reducing interest income. Loan to Deposit Ratio (LDR) and bank size also play important roles in determining the efficiency and earning capacity of banks.

Despite the importance of these factors, many banks in Bangladesh continue to face profitability-related challenges due to poor loan management, increasing default loans, and fluctuations in economic conditions. Therefore, it is necessary to examine the major determinants influencing bank profitability in the context of Bangladesh.

This study aims to investigate the impact of remittance inflows, bank size, loan to deposit ratio (LDR), non-performing loans (NPL), and GDP growth rate on bank profitability measured by ROA. The study uses panel data analysis and statistical techniques in Stata to provide empirical evidence regarding the determinants of bank profitability in Bangladesh. The findings of this research are expected to assist bank authorities, policymakers, and researchers in understanding the key factors affecting profitability and improving the performance of the banking sector.

## 1.4 Rationale of the study

The banking sector plays a significant role in the economic development of Bangladesh by mobilizing savings, providing credit facilities, facilitating investment, and supporting trade and business activities. The profitability of banks is essential for ensuring financial stability, operational efficiency, and long-term sustainability. Therefore, identifying the factors that influence bank profitability has become an important issue for researchers, policymakers, and bank management.

In Bangladesh, banks are facing various challenges such as increasing non-performing loans (NPL), liquidity management problems, credit risk, and fluctuations in economic conditions. At the same time, factors such as remittance inflows and GDP growth create opportunities for improving banking performance and profitability. These changing economic and financial conditions have increased the importance of examining the determinants of bank profitability in the context of Bangladesh.

This study is important because it investigates both bank-specific variables and macroeconomic variables simultaneously to understand their impact on profitability. Variables such as bank size, loan to deposit ratio (LDR), and non-performing loans (NPL) represent internal operational efficiency and risk management, while remittance inflows and GDP growth rate represent external economic influences on banking activities. Analyzing these variables together provides a more comprehensive understanding of the factors affecting bank profitability.

Another rationale of this study is the use of Return on Assets (ROA) as a measure of profitability. ROA reflects how efficiently banks utilize their assets to generate earnings and is widely recognized as a reliable indicator of financial performance. Moreover, the application of panel data analysis using Stata software enhances the reliability and accuracy of the findings by allowing the study to examine variations across banks and over time.

The findings of this study are expected to contribute to existing literature on bank profitability and provide practical implications for policymakers, regulators, and bank management. The study may help banking authorities develop effective policies to improve profitability, control non-performing loans, maintain efficient liquidity management, and strengthen financial stability in Bangladesh. Furthermore, the research may serve as a useful reference for future academic studies related to banking performance and financial management.

## 1.5 Objectives of the study

**General Objective:**

- ✓ To investigate the bank-specific determinants of profitability for 12 selected private commercial banks in Bangladesh.

**Specific Objectives:**

- ✓ To evaluate the impact of Bank Size and Loan-to-Deposit Ratio (LDR) on the Return on Assets (ROA).
- ✓ To analyze how Non-Performing Loans (NPL) affect the profitability of private banks.
- ✓ To determine the influence of external factors, specifically Remittance inflows and GDP Growth Rate, on bank performance.
- ✓ To provide data-driven recommendations for improving the financial health of the banking sector.

## 1.6 Methodology

This research is rooted on the secondary data gathered on the annual report of the selected banks and publications of Bangladesh Bank. There are 12 banks that will be analyzed between the year 2020 and 2024.

To investigate the relationship between variables, panel data analysis has been used. Return on Assets (ROA) is taken as an independent variable whereas remittance inflows, nonperforming loans (NPL), bank size, loan to deposits ratio (LDR) and GDP growth rate are assumed to be dependent variables in this study.

The analysis of data has been done using Stata which is popular in econometric analysis. Fixed Effect and Random Effect models of regression have been used. The Hausman test has also been employed to identify the best model to be used.

## 1.7 Limitations of the Study

Although this study attempts to examine the determinants of bank profitability in Bangladesh comprehensively, several limitations exist that may affect the overall findings of the research.

Firstly, the study is limited to a selected number of banks and a specific time period due to the availability of data. Therefore, the findings may not fully represent the entire banking sector of Bangladesh.

Secondly, the study considers only five independent variables, namely remittance inflows, bank size, loan to deposit ratio (LDR), non-performing loans (NPL), and GDP growth rate, to explain bank profitability measured by Return on Assets (ROA). However, there are many other factors such as inflation rate, interest rate, capital adequacy, management efficiency, and political or regulatory conditions that may also influence bank profitability but were not included in this study.

Thirdly, the research is based entirely on secondary data collected from annual reports, Bangladesh Bank publications, and other published sources. The accuracy of the study therefore depends on the reliability and availability of these published data sources.

Fourthly, the study applies quantitative analysis using Stata software and panel data regression techniques. Qualitative aspects such as managerial efficiency, customer satisfaction, technological innovation, and organizational policies were not considered due to limitations of time and data availability.

Finally, changes in economic conditions, government policies, and unexpected financial events during the study period may influence the profitability of banks. Such external factors are difficult to measure completely within the scope of this research.

Despite these limitations, the study provides useful insights into the major determinants affecting bank profitability in Bangladesh and offers valuable information for researchers, policymakers, and banking professionals.

# CHAPTER TWO

# LITETARUTEREVIEW

## 2.1 Literature Review

Bank profitability is one of the most significant indicators of financial performance and stability in the banking industry. A profitable banking sector strengthens economic growth by mobilizing savings, allocating resources efficiently, promoting investment, and supporting business activities. Due to the importance of banking performance in economic development, numerous researchers have investigated the determinants of bank profitability in both developed and developing countries. Previous studies generally classify the determinants of bank profitability into two broad categories: bank-specific (internal) factors and macroeconomic (external) factors.

Among the indicators of bank profitability, Return on Assets (ROA) is widely used because it measures how effectively a bank utilizes its assets to generate earnings. According to Rivard and Thomas (1997), ROA is considered one of the most reliable indicators of bank performance because it reflects management efficiency and operational success. Researchers commonly use ROA to examine the relationship between profitability and different financial and economic variables.

One of the major internal determinants of bank profitability is bank size. Bank size is usually measured by the natural logarithm of total assets. Larger banks are generally expected to achieve higher profitability because they benefit from economies of scale, diversified investment opportunities, improved risk management, and stronger market power. Berger (1995) argued that large banks can reduce operational costs and improve efficiency through economies of scale, which positively affects profitability. Similarly, Athanasoglou, Brissimis, and Delis (2008) found that bank size has a positive relationship with profitability in the banking sector. In developing countries, larger banks often enjoy better access to capital markets and advanced technological facilities, which contribute to improved financial performance. However, some studies also suggest that excessively large banks may face managerial inefficiency and bureaucratic complexity, which can negatively affect profitability.

Loan to Deposit Ratio (LDR) is another important factor influencing bank profitability. LDR measures the proportion of loans granted by banks compared to the deposits collected from customers. A higher LDR indicates that banks are efficiently utilizing deposits to generate interest income through lending activities. According to Almazari (2014), an appropriate level of LDR positively influences profitability because loans are one of the primary sources of bank income. Efficient lending activities increase interest earnings and improve overall financial performance. However, an excessively high LDR may expose banks to liquidity risk and increase the possibility of financial instability. Therefore, maintaining an optimal balance between loans and deposits is essential for sustaining profitability and liquidity.

Non-Performing Loans (NPL) are considered one of the most significant challenges for the banking industry, especially in developing countries like Bangladesh. NPL refers to loans for which borrowers fail to make scheduled payments for a specified period. High levels of NPL increase credit risk, reduce interest income, and weaken the financial position of banks. According to Islam and Nishiyama (2016), NPL has a strong negative impact on bank profitability because default loans reduce asset quality and require additional provisions against potential losses. In the context of Bangladesh, increasing NPL has become a serious concern for the banking sector due to poor credit management, political influence, and weak recovery systems. Several empirical studies conducted in South Asian countries found that rising NPL ratios significantly reduce bank profitability and financial stability.

Liquidity management is also closely related to bank profitability. Efficient liquidity management ensures that banks can meet short-term obligations while maintaining sufficient funds for profitable investments. Loan to Deposit Ratio is commonly used as a proxy for liquidity management. Studies by Guru, Staunton, and Balashanmugam (2002) showed that banks with effective liquidity management strategies achieve better financial performance than banks facing liquidity shortages. Inadequate liquidity may force banks to depend on expensive external borrowing, which ultimately reduces profitability.

Apart from internal factors, macroeconomic variables also play a crucial role in determining bank profitability. One of the most important macroeconomic variables is Gross Domestic Product (GDP) growth rate. GDP growth reflects the overall economic condition and development of a country. During periods of economic growth, business activities, investments, employment opportunities, and consumer spending generally increase, leading to higher demand for banking services and credit facilities. Sufian and Habibullah (2009) found that GDP growth positively affects bank profitability because strong economic performance reduces default risk and increases borrowing activities. Similarly, Bikker and Hu (2002) argued that favorable macroeconomic conditions improve the operational environment of banks and contribute to higher profitability.

In Bangladesh, GDP growth has shown a significant contribution to the expansion of the banking sector over the years. Economic growth encourages industrialization, trade, and investment activities, which increase banking transactions and loan demand. As a result, banks are able to generate higher income and improve profitability. However, economic instability, inflation, and policy uncertainty may negatively affect banking operations and financial performance.

Remittance inflows are another important macroeconomic factor affecting bank profitability in Bangladesh. Bangladesh is one of the largest remittance-receiving countries in the world, and remittances contribute significantly to national income, foreign exchange reserves, and household consumption. Remittances also increase bank deposits and liquidity, which positively influence lending capacity and profitability. According to Aggarwal, Demirgüç-Kunt, and Martínez Pería (2011), remittance inflows promote financial development by increasing savings and banking transactions. In Bangladesh, remittance inflows strengthen the liquidity position of banks and support economic activities, ultimately contributing to profitability.

Several empirical studies have been conducted on bank profitability in both developed and developing countries. Gul, Irshad, and Zaman (2011) examined the determinants of bank profitability in Pakistan and found that bank size, loans, and economic growth positively affect profitability, while NPL negatively affects performance. Similarly, Dietrich and Wanzenried (2011) studied Swiss banks and observed that operational efficiency and macroeconomic conditions significantly influence profitability.

In the context of Bangladesh, many researchers have investigated the determinants of bank profitability using panel data analysis. Studies generally identified that internal factors such as bank size, liquidity management, operating efficiency, and credit risk significantly affect profitability. External factors like GDP growth, inflation, and remittance inflows also play important roles in shaping banking performance. However, the findings of previous studies are not always consistent due to differences in research methodology, sample size, study period, and selected variables.

Some studies found a positive relationship between bank size and profitability, while others reported insignificant or negative relationships. Similarly, the effect of Loan to Deposit Ratio and GDP growth on profitability varies across studies and countries. These inconsistent findings indicate the need for further empirical investigation in the context of Bangladesh.

Most previous studies in Bangladesh focused mainly on private commercial banks or used limited explanatory variables. Very few studies simultaneously examined the effects of remittance inflows, GDP growth, bank size, Loan to Deposit Ratio (LDR), and Non-Performing Loans (NPL) on bank profitability measured by ROA. In addition, several earlier studies did not adequately apply panel data diagnostic tests such as multicollinearity tests, Hausman tests, or model selection procedures.

Therefore, this study attempts to contribute to the existing literature by examining the determinants of bank profitability in Bangladesh using both bank-specific and macroeconomic variables. The study applies panel data analysis through Stata software to investigate the impact of remittance inflows, bank size, Loan to Deposit Ratio (LDR), Non-Performing Loans (NPL), and GDP growth rate on Return on Assets (ROA). The findings are expected to provide valuable insights for policymakers, regulators, researchers, and banking professionals regarding the factors influencing bank profitability in Bangladesh.

Barajas et al. (2010) discovered that remittances are a major cause of growth in bank deposits and credit, which consequently raise the profitability of banks in developing nations. According to their results, remittance inflows increase the ability of banks to increase lending.

Applying this to the case of Bangladesh, Rashid and Ahmed (2017) revealed that greater inflows of remittances have a positive impact on bank profitability because of higher deposits and greater investment opportunities. Their report puts more emphasis on remittance as being one of the major drivers of the performance of the banking sector.

Furthermore, Hossain and Hasan (2021) found that remittance inflows positively influence liquidity and financial stability of commercial banks in Bangladesh, but the relationship with profitability is weak and varies across different banking institutions. They suggested that operational efficiency, credit risk management, and investment strategies play a crucial role in determining how effectively remittance inflows translate into financial performance.

Despite these contributions, the existing literature shows a clear research gap. Most studies focus either on macroeconomic impacts of remittances or general financial development indicators, rather than conducting a detailed bank-level analysis of financial performance.

There is limited empirical evidence specifically addressing how foreign remittance inflows affect key financial performance indicators such as profitability, liquidity, and efficiency of commercial banks in Bangladesh.

Therefore, this study aims to bridge this gap by providing an in-depth analysis of the impact of foreign remittance inflows on the financial performance of selected commercial banks in Bangladesh, contributing new empirical evidence that can support policymakers, banking professionals, and future researchers in this field.

In sum, the literature in existence indicates that the impact of remittance inflows on bank performance tends to be positive, and high NPL is a measure of poor asset quality, which negatively impacts profitability. The effects of other factors like bank size and GDP growth are however inconclusive in other studies.

## 2.2 Literature Gap

While numerous studies have been conducted on the determinants of bank profitability in Bangladesh, several gaps remain that this research aims to address:

1.Limited Focus on the Latest Economic Volatility: Most existing literature, such as Noman and Banna (2015) or Anik et al. (2019), uses data that does not account for the recent post-pandemic recovery and the current liquidity crisis in the Bangladeshi banking sector (2023-2024). This study fills that gap by using the most recent available data for 12 selected private banks.

2. Inconsistent Results on Remittance Impact: Although Bangladesh is a top remittance-receiving country, many general banking studies focus heavily on NPL and Size, often neglecting Remittance Inflows as a direct determinant of bank-level ROA. There is a lack of recent empirical evidence specifically linking remittance fluctuations to the profitability of private commercial banks.

3. Variable Specificity: Many studies either look strictly at internal factors or strictly at macroeconomic factors. This study creates a bridge by combining bank-specific indicators (NPL, Size, LDR) with external indicators (GDP Growth, Remittance) to provide a more holistic view of what truly drives profit in the current private banking landscape.

4. Sample Uniformity: Previous research often mixes State-Owned Commercial Banks (SCBs) and Private Commercial Banks (PCBs). However, since their operational structures and NPL management differ significantly, a study focusing exclusively on 12 selected Private Commercial Banks provides a more precise and specialized analysis for private sector stakeholders view of what truly drives profit in the current private banking landscape. 4. Sample Uniformity: Previous research often mixes State-Owned Commercial Banks (SCBs) and Private Commercial Banks (PCBs). However, since their operational structures and NPL management differ significantly, a study focusing exclusively on 12 selected Private Commercial Banks provides a more precise and specialized analysis for private sector stakeholders.

## 2.3 Hypothesis Development

Based on the literature review, the following hypotheses have been developed:

**$H_1$:** Remittance inflows have a positive and significant impact on ROA

**$H_2$:** Non-performing loans (NPL) have a negative and significant impact on ROA

**$H_3$:** Bank size has an insignificant effect on ROA

**$H_4$:** Loan-to-deposit ratio (LDR) has an insignificant effect on ROA

**$H_5$:** GDP growth rate has an insignificant effect on ROA

# CHAPTER THREE:
# CORPORATE PROFILE OF BANGLADESH KRISHI BANK

## 3.1. History of Bangladesh Krishi Bank

Bangladesh is an agrarian economy where agriculture plays a vital role in employment, GDP contribution, and food security. A large portion of the population depends on farming and rural economic activities for their livelihood. To support this sector financially, specialized banking institutions are essential.

Bangladesh Krishi Bank is one of the most important state-owned specialized banks in Bangladesh, primarily established to provide financial assistance to farmers and promote agricultural development. The bank plays a key role in ensuring credit availability to rural farmers who often face difficulties in accessing loans from commercial banks.

The main objective of this report is to provide a detailed overview of Bangladesh Krishi Bank, including its history, functions, financial performance, challenges, and future prospects.

Bangladesh Krishi Bank (BKB) is a state-owned specialized financial institution in Bangladesh. It was established in 1973 under the President's Order No. 27 with the aim of providing financial support to the agricultural sector and rural development. The core mission of the bank is to promote agricultural production, ensure food security, and contribute to the socioeconomic development of the rural population.

BKB operates across the country with a vast branch network, particularly in rural and semiurban areas, making financial services accessible to farmers and rural entrepreneurs. Over time, the bank has expanded its services to include general banking, SME financing, and other nonagricultural sectors as well, while still maintaining its focus on agricultural lending.

The bank is governed by a Board of Directors and regulated by Bangladesh Bank. It plays a vital role in supporting government policies aimed at poverty alleviation, agricultural modernization, and financial inclusion.

**Key facts:**

- ❖ Established: 1973
- ❖ Head Office: Dhaka, Bangladesh
- ❖ Ownership: Fully state-owned
- ❖ Specialization: Agricultural and rural banking
- ❖ Motto: "KrishiUnnayaney, Krishi Bank Shobshomoy"

BKB continues to be a major player in rural credit disbursement and supports millions of small and marginal farmers with financial and advisory services.

### 3.1.1 Vision

Providing loan facilities for achieving self-sufficiency in food production and strengthening the rural economy.

### 3.1.2 Mission

Committed to providing a wide range of high-quality products that meet the various demands of people in order to improve their lives, guarantee sustainable growth, assist SMEs, add value for stakeholders, and aid in the nation's socioeconomic development.

### 3.1.3 Fundamental Principles

The following fundamental elements comprise Bangladesh Krishi Bank's core value proposition and will assist the bank in comprehending how its employees should work together to fulfil their designated tasks and responsibilities in order to achieve its objectives.

Among the fundamental principles are:

Ethics: Everyone needs to make sure that banking ethics are followed.

Objectivity: Everyone will have specific goals when performing their duties.

Integrity : A key component of society trust is the protection and defense of national and consumer interests.

Excellence: To provide high-quality service to the bank's sizable clientele, excellent performance and efficacy are prerequisites. Every employee is dedicated to working to the required standard in order to guarantee the pleasure of important clients. Devoted to offering a broad range of superior products that satisfy people's diverse needs in order to enhance their quality of life, ensure sustainable growth, support SMEs, provide value for stakeholders, and contribute to the socioeconomic development of the country.

## 3.2 Organizational Structure of Bangladesh Krishi Bank

| **Name of the company** | **Bangladesh Krishi Bank** |
|---|---|
| **Registered office** | 35-42, 44 Motijheel Commercial Area, Dhaka, Bangladesh |
| **Genesis** | Legally constituted in 1973 BKB operates as specialized, fully government owned ban.king institution, regulated under the banking act of 1991. |
| **Date of Incorporation** | 09 August, 1973 |
| **Date of Commencement of Business** | 15 November, 1977 |
| **BB License No** | BRPD(P-3)745(1)/2007-1602 |
| **Date of Company Registration** | 02 June, 1973 |
| **Authorized Capital** | BDT 15,000.00 Million |
| **Paid up Capital** | BDT 9,000.00 Million |
| **Shareholding Pattern** | 100% share owned by Government of the People's Republic of Bangladesh |
| **Chairman of the Board of Directors** | Dr. Mohammad Zahid Hossain |
| **CEO & Managing Director** | Md. Shawkat Ali Khan |
| **Phone PABX** | +88-02-9550426-31, 33, 34, +88-02-9552924 |
| **Fax** | 88-02-9561410, 88-02-9552007 |
| **SWIFT Code** | BRKIBDDH |

| | |
|---|---|
| **Email** | kblho@krishiibank.net.bd<br>kbhoitd@krishibank.net.bd<br>kbhoitd@bttb.net.bd  kbhoid@bdmail.com |
| **Website** | www.krishibank.gov.bd |

## 3.3 Products and Services of the Organization

Bangladesh Krishi Bank (BKB) primarily focuses on financing the agricultural sector and rural development, but over the years, it has expanded its services to include a variety of banking products for both rural and urban customers. The bank offers both traditional and modern banking services to ensure financial inclusion for the broader population of Bangladesh.

**A. Deposit Products**

1. Savings Account: Designed for individuals to promote savings habits with a modest interest rate.
2. Current Account: Suitable for businesses and institutions for regular transactions without interest.
3. Fixed Deposit Receipt (FDR): Offers attractive interest rates for fixed-term deposits.
4. Krishi Sanchay Prokolpo: Special savings schemes tailored for farmers and rural customers.
5. Pension Savings Scheme: Long-term savings plan to ensure financial security after retirement.

**B. Loan and Credit Products**

1. Agricultural Loans: Short, medium, and long-term loans for crops, irrigation, equipment, livestock, and fisheries. Special credit programs for marginal and sharecropping farmers.
2. Small and Medium Enterprise (SME) Loans: Financing for small-scale businesses and entrepreneurs in rural and urban areas.
3. Microcredit Programs: Loans for self-employed individuals, women entrepreneurs, and low-income groups.
4. Rural Housing Loans: Assistance for building or renovating homes in rural areas.
5. Educational Loans: Loans to support higher education expenses for students from rural families.
6. Consumer Credit: Personal loans for purchasing durable goods and services.

**C. Remittance and Payment Services**

1. Inland Remittance: Fast and secure money transfer services within the country.
2. Foreign Remittance: Collection and disbursement of remittance sent by expatriates through exchange.

3. Bill Payment Services: Collection of utility bills (electricity, gas, water) for public service providers.

**D. Other Services**

1. Mobile Banking: Limited but growing use of mobile banking services in collaboration with operators.
2. Agent Banking: BKB is gradually expanding agent banking in remote areas to serve the population.
3. Locker Services: Safe deposit locker facilities for personal valuables in selected branches.
4. ATM and Debit Card Services: Issuance of debit cards and ATM facilities for customers.
5. Poverty Alleviation Programs: Special financial inclusion initiatives such as the Ekti Bari EktiKhamar project and various government-subsidized loan schemes.

## 3.4. SDGs Focus

Bangladesh Krishi Bank (BKB), as a state-owned specialized financial institution, aligns its operations and objectives with the Sustainable Development Goals (SDGs) declared by the United Nations. The bank plays a vital role in supporting national efforts to achieve these goals, particularly those related to poverty reduction, food security, gender equality, and financial inclusion.

**Key SDGs Linked to BKB's Activities:**

**SDG 1: No Poverty**
BKB provides agricultural and microcredit loans to rural populations, including landless farmers and low-income families. These financial services aim to uplift people from poverty through income-generating activities.

**SDG 2: Zero Hunger**
The bank directly contributes to food security by financing crop production, irrigation, fisheries, poultry, and livestock development. BKB supports both seasonal and long-term agricultural projects that enhance food productivity.

**SDG 5: Gender Equality**

Special loan programs and microfinance initiatives are designed for women entrepreneurs in rural areas. These efforts promote women's participation in the economy and aim to reduce gender disparities.

**SDG 8: Decent Work and Economic Growth**

By financing small and medium enterprises (SMEs), agro-based industries, and rural entrepreneurs, BKB supports job creation and sustainable economic development at the grassroots level.

**SDG 9: Industry, Innovation and Infrastructure**

BKB helps build rural infrastructure by funding agro-processing units, irrigation projects, and storage facilities. This encourages innovation and industrial development in rural Bangladesh.

**SDG 10: Reduced Inequalities**

BKB's agent banking and rural outreach programs extend banking services to remote and underserved areas, reducing inequality in financial access and opportunities

## 3.5 Credit Management & Its Benefits

**Credit Management**

Credit management is the process that involves giving credit to its customers, and determining the terms under which they will pay. And terms to allow them to fund their bills on time and in full, to recover payments, and making sure that customers (as well as employees) follow the credit policy of the company. Basically, the plan of action that the company will use to protect against late payments or defaults by your customers is known as credit management. An effective credit management uses a continuous, proactive process of identifying risks, assessing their possibilities of loss and protecting against the natural risks of extending credit.

**Credits Advantages:**

The main advantage of credit management is the possibility to obtain a clear picture of company. Funds in such a way that the company does not have to face unnecessary credit risk and can take opportunities.

But that’s not all. Other advantages of credit management are:

✓ Cash flow protection which implies making sure that cash inflows of company are never less greater than its cash outflows in order that the company will be able to settle its bills and employees on time.

✓ Decreasing the number of delays in payments by identifying them at an earlier stage and avoiding bad debts, and, as a result, decreasing the risk that a default can negatively affect the company.

✓ Making more business liquidity available.

✓ Conducting more comprehensive and quicker debt recovery.

✓ Improving company’s Days Sales Outstanding (DSO).

✓ Finding opportunities and allocating working capital of the company to key business. investments that have the potential to generate strategic growth.

✓ Assisting the company in planning and analyzing performance, which helps the company to plan financial budgets in the future.

✓ Convincing potential lenders who are able to finance the growth plans of the company.

The success of the management of credit is determined by the credit policy of the bank, its portfolio. Credit, monitoring, supervision and follows up of the loans & advances. As such when analyzing the credit management of Bangladesh Krishi Bank it must analyze its credit policy, credit procedures, how they are managing credit and quality of credit portfolio. The implementation processes that guarantee the gathering of debt, achievement of service goals and the reduction of escalation in arrear debt to enable funding and essential services to the credit control, debt collection and indigent policy of the company, and because of its poor customer care. Give incentives to timely payment, and also by ensuring low risk levels through effective management tools.

## 3.6 Credit Risk Management

The management of credit risk can be defined as the process of measuring and reducing the risks that are connected with the lent amount and being aware of the bank's reserves to be used at any given time. Here entails aiding appropriate decision-making by the lenders or banking institutions. Management of credit risk involves reviewing a sequence of procedures in order to ascertain the sums to be lent to reliable hands. The lenders will be needed to consider the loan applications of the borrowers thoroughly. Moreover, they should see to it that the borrowers are able to make monthly payments in the future. The lenders will need to check their current financial status and credit history and score. It builds trust towards the borrowers, who understand whether they can be trusted with the money. Once the borrowers are found creditworthiness, the loan application gets approved. On the other hand, in case the loan application is found to have been made by untrustworthy people, then the loan application gets rejected.

The lenders ought to be able to guess it by having an eye of detail. Proper evaluation is a must. They have to be particular about the current financial status of the loan seekers, along with being be prepared to the warning signs their past credit records tell them. The evaluation is normally done concerning the five Cs of credit – character, capacity, capital, conditions, and collateral.

In case the assessment turns out to be wrong, and the possible trustworthy borrowers turn into defaulters, it has an impact on the financial soundness of the lending institution which is significant part to play in financial stability of the economy.

**Introduction and Importance of Credit Risk Management to Banking:**

Credits risk management is of immense significance to banks. Poor controls and absence of proper controls, loans constitute the largest risk to any bank and due to it, the banking sector has been placing more emphasis than ever on credit management. One of the credit risks managed is the credit risk management.

Banks are constantly faced with risks all the time, risks are always associated with banking activities and taking risks is very common in banking. To ensure their good financial position, banks need to strike a balance between their risks on a daily basis by possessing an official credit risk practice in place management.

## 3.7 Risk Grading

Good Credit: Good credit is a credit rating of an individual, which implies the borrower is a safe credit risk that has a relatively high credit score. An excellent credit score is an indicator of good credit. An individual's credit history is dependent on a number of factors, with the sum that has been borrowed, the sum of the available credit still there and the timelines of payment.

Marginal Credit: In exchange, at least foreign exchange, the term marginal credit denotes a commercial letter of credit that can be drawn against on the margin of the letter or in other words, to a certain sum as is given in the letter. Such a credit is as a rule employed in a triangular operation.

## 3. 8 Company Financial Overview

**TABLE 2: KEY FINANCIAL DATA AND RATIOS (2020-2024)**

(Figure in million)

| Particulars | 2024 | 2023 | 2022 | 2021 | 2020 |
|---|---|---|---|---|---|
| Balance Sheet | | | | | |
| Authorized Capital | 60000 | 60000 | 60000 | 60000 | 60000 |
| Paid up capital | 45300 | 45300 | 45300 | 45300 | 45300 |
| Reserve Fund and Surplus | 31442 | 48998 | 22893 | 24837 | 24787 |
| Deposits | 1350817 | 1258786 | 1158788 | 1097666 | 1064311 |
| Loans and advances | 690596 | 586232 | 551026 | 464166 | 423218 |
| Earning assets | 1332237 | 1195517 | 1068333 | 930841 | 850536 |
| Non-earning assets | 374566 | 395716 | 404269 | 376002 | 406175 |
| Total off-balance sheet exposures | 886193 | 949413 | 1022368 | 1097372 | 1148178 |
| Income Statement | | | | | |
| Total income | 85925 | 84780 | 76816 | 78321 | 74353 |
| Total expense | 65022 | 63253 | 59719 | 58064 | 62398 |
| Net interest margin | 28900 | 21526 | 24627 | 28063 | 18730 |

| | | | | | |
|---|---|---|---|---|---|
| Net non-interest margin | 7415 | 8703 | 6916 | 7791 | 6775 |
| Operating profit | 20904 | 21526 | 17100 | 20257 | 11955 |
| Net profit after tax | 3456 | 3234 | 2710 | 2264 | 7092 |
| Financial Ratios (%) | | | | | |
| Operating profit ratio | 24.32% | 25.39% | 22.26% | 25.86% | 16.08% |
| Gross profit ratio | 22.26% | 25.39% | 22.26% | 25.86% | 16.08% |
| Return of assets (ROA) | 0.21% | 0.21% | 0.20% | 0.18% | 0.58% |
| Return of equity (ROE) | 4.26% | 4.21% | 3.92% | 3.32% | 10.63% |
| Return on loan and advance | 4.89% | 5.57% | 5.51% | 5.74% | 6.87% |
| Debt equity ratio(times) | 21.24 | 17.58 | 20.59 | 17.63 | 18.02 |
| Advance deposit ratio | 51.12% | 46.57% | 47.55% | 42.43% | 39.76% |
| Asset Quality | | | | | |
| Non-performing loans | 119585 | 107673 | 111994 | 121883 | 149302 |
| Percentage of NPLs to total loan and advance | 17.32% | 18.37% | 20.32% | 26.26% | 35.28% |
| Required provision for unclassified loans | 12149 | 12460 | 5358 | 5223 | 2789 |
| Required provision for classified loans | 63528 | 57705 | 53016 | 44046 | 38864 |
| Total classified asset | 119585 | 107673 | 111994 | 121883 | 149302 |
| Total un-classified asset | 571012 | 478560 | 439032 | 342200 | 273916 |

**Role in the Economy**

Bangladesh Krishi Bank plays a significant role in the economic development of Bangladesh.

**Agricultural Development**

The bank ensures credit availability to farmers, which helps in improving agricultural productivity through modern techniques and inputs.

**Poverty Reduction**

By providing rural credit, the bank helps poor farmers become financially independent.

**Employment Generation**

Agricultural and rural financing contributes to job creation in rural areas.

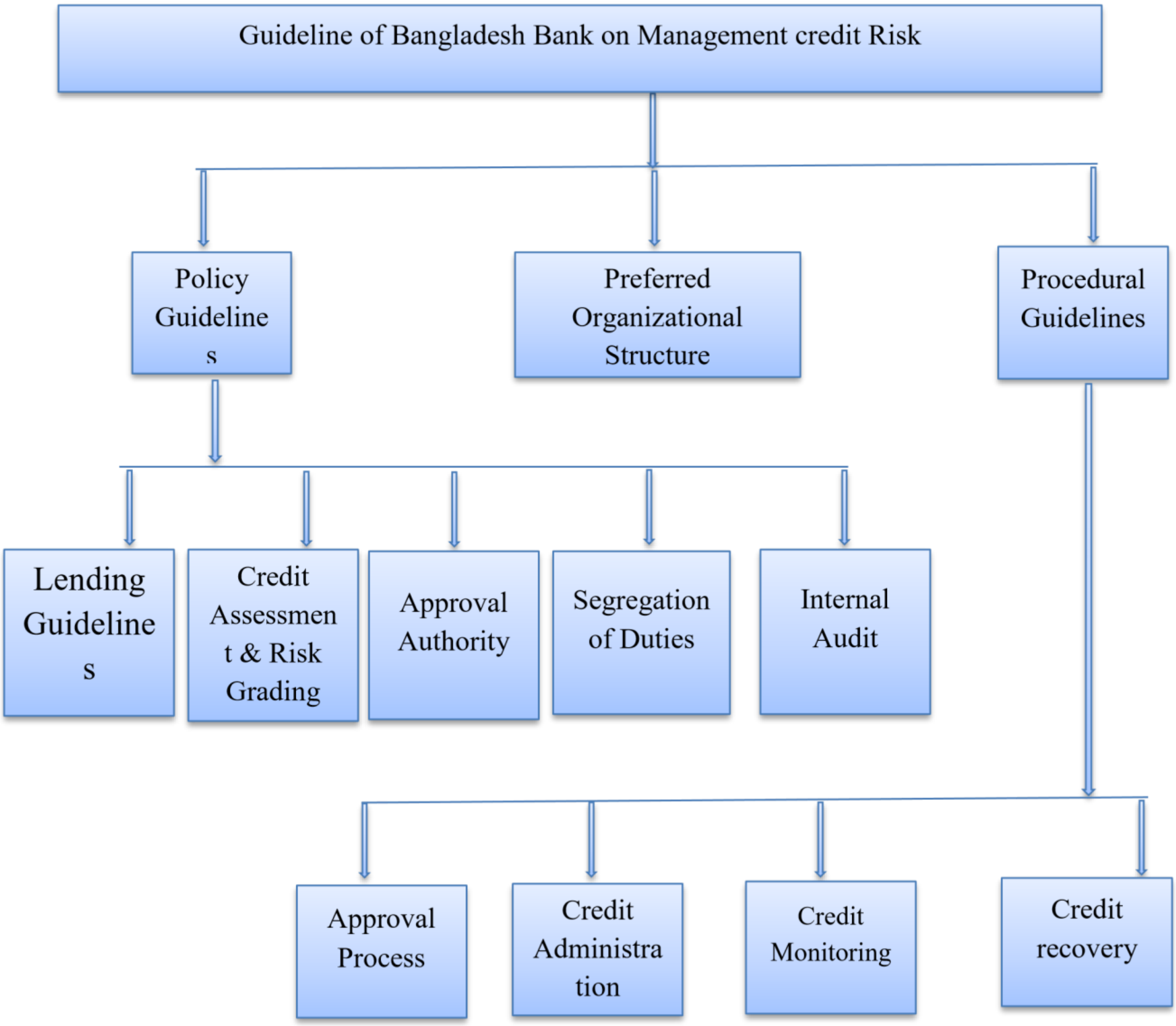
**Food Security**

Increased agricultural production ensures food availability and national food security.

**Simple Guideline to Manage Credit & Credit Risk**

Bangladesh Bank has provided directional guidelines to the banking sector with a view to improve the credit risk management culture, establish minimum standards for segregation of duties and responsibilities and assist in the ongoing improvement of the banking sector in Bangladesh. These guidelines were prepared and endorsed by the senior credit executives from private sector, foreign and nationalized commercial banks operating in Bangladesh. Credit Risk Management is of utmost importance to banks, and as such, policies and procedures should be endorsed and strictly enforced by the board of the bank.

**Figure 3.2 Guideline to manage credit & credit risk**




**Key Challenges**

Despite its important role, Bangladesh Krishi Bank faces several challenges:

1. High Non-Performing Loans (NPL) : Agricultural loans are highly risky due to dependency on natural conditions.

2. Technological Limitations: Compared to private commercial banks, digital banking systems are less advanced.

3. Administrative Inefficiency: Some branches face management and operational inefficiencies.

4. Political and External Influence: Loan distribution is sometimes influenced by non-financial factors.

5.Chronic losses since 1994–95, except for a brief profit in 2000–01 (Tk 2.91 crore).

6.High proportion of non-performing loans, eroding profitability.

7.Unfavorable interest spread, lending at low rates, yet paying more for deposits.

8.Significant capital shortfalls relative to regulatory requirements.

# CHAPTER FOUR
# REASEARCH METHODOLOGY

## 4.1 Study Area

The study focuses on the banking sector of Bangladesh, which plays a vital role in the country's financial system and economic development. The analysis is based on selected commercial banks operating in Bangladesh. The internship experience at Bangladesh Krishi Bank also provided practical insights into banking operations, especially in areas such as remittance handling, loan management, and financial performance evaluation. Therefore, the study area is limited to the banking industry of Bangladesh.

The research methodology of this study is designed to systematically analyze the determinants of bank profitability, measured by Return on Assets (ROA). It explains the research design, data sources, variables, model specification, and analytical techniques used in the study.

## 4.2 Research Type

This study is quantitative in nature, as it relies on numerical data and statistical techniques to analyze the relationship between variables. The research uses secondary data collected from published sources, making it an empirical study. The aim is to establish measurable relationships between financial performance and selected explanatory variables.

## 4.3 Research Design

The study follows a causal research design, as it attempts to examine the cause-and-effect relationship between independent variables (remittance inflows, NPL, bank size, LDR, GDP growth) and the dependent variable (ROA).

A panel data design has been used, which combines both cross-sectional (different banks) and time-series (multiple years) data. This design helps to improve the accuracy and reliability of the analysis by capturing variations across banks and over time.

## 4.4 Research Questions

1. How does Bank Size affect the Return on Assets (ROA) of private commercial banks in Bangladesh?

2. What is the relationship between Non- Performing Loans (NPL) and bank profitability?

3. Do external factors like Remittance and GDP Growth have a significant impact on bank earnings?

4. Which factor acts as the most significant determinant of profitability among the 12 selected banks?

## 4.5 Research Period

The study covers a period of five years from 2020 to 2024. This time frame has been selected to capture recent trends in the banking sector, including the impact of economic changes and financial conditions.

## 4.6 Variables of the Study

**Dependent Variable:**

**Return on Assets (ROA):** ROA is used as a proxy for bank performance. It measures how efficiently a bank utilizes its assets to generate profit.

**Independent Variables:**

**Remittance Inflows:** Represents the amount of remittance received through the banking system.

**Non-Performing Loans (NPL):** Indicates the percentage of loans that are not being repaid on time.

**Bank Size:** Measured by the logarithm of total assets.

**Loan-to-Deposit Ratio (LDR):** Reflects the bank's lending behavior relative to its deposits.

**GDP Growth Rate:** Represents the overall economic condition of the country.

## 4.7 Sample and Data Collection

The study is based on a sample of 12 selected commercial banks in Bangladesh. The selection of banks is based on availability of data and relevance to the study.
The data used in this study are secondary in nature, collected from:

1. Annual reports of the selected banks
2. Publications of Bangladesh Bank
3. Relevant financial databases
4. The dataset includes observations for each bank over the period 2020–2024, forming a balanced panel dataset.

## 4.8 Data Analysis Process

1. The collected data have been analyzed using Stata. The following steps were followed:

2. Data collection and organization in Excel
3. Importing data into Stata
4. Data cleaning and winsorization to handle outliers
5. Descriptive statistics analysis
6. Correlation analysis
7. Regression analysis using panel data techniques
8. Model selection using Hausman test
9. Diagnostic test (VIF) to check multicollinearity

## 4.9 Statistical Equation

The regression equation used in this study can be expressed as: This equation represents the relationship between the independent variable (ROA) and the dependent variables included in the model.

**Model Specification**

To analyze the relationship between variables, the following panel regression model is used:

$$\mathbf{ROA} = \beta_0 + \beta_1 REM_{it} + \beta_2 NPL_{it} + \beta_3 SIZE_{it} + \beta_4 LDR_{it} + \beta_5 GDP_{it} + \varepsilon_{it}$$

Where i represen the bank, t represents the year and ε is the error term

**Variables:** The classification of variables is as follows:

| **Variables** | **Definition** |
|---|---|
| ROA | Measures bank profitability. It shows how efficiently a bank uses its assets to generate profit.<br>Higher ROA = better performance. |
| NPL | NPL (Non-Performing Loans): Loans that are in default or close to default. Higher NPL = worse asset quality and lower profitability |
| Foreign Remittance Inflows | Remittance Inflows: Money sent by workers abroad into the country. In Bangladesh, this can increase bank deposits and liquidity. |

| | |
|---|---|
| LDR | LDR (Loan to Deposit Ratio): Measures liquidity and lending aggressiveness.<br>High LDR = more lending, but too high may increase risk. |
| Bank Size | Bank Size: Usually measured by total assets (often log of total assets).<br>Larger banks may have economies of scale, but sometimes inefficiency too. |
| GDP Growth Rate | GDPG (GDP Growth Rate)<br>Economic growth of the country. Higher GDP growth usually improves banking sector performance. |

**Analytical Tools**

Data were analyzed using STATA software, . MS WORD, MS EXCEL.

Multiple linear regression was applied to test the relationships among variables such as,

**1.Econometric Models Used**

The study applies panel data regression techniques, including

Fixed Effects Model (FEM)

Random Effects Model (REM)

To determine the appropriate model, the Hausman Test is conducted.

**2.Diagnostic Tests**

To ensure the validity and reliability of the model, several diagnostic tests are applied:

**Hausman Test:** To choose between Fixed Effects and Random Effects models

**Variance Inflation Factor (VIF):** To detect multicollinearity among independent variables.

**Significance Tests (t-test and p-values):** To examine the statistical significance of variables.

## 4.10 Limitations of Methodology

Although the methodology is designed carefully, the study may face certain limitations such as:

1. Limited sample size due to data availability
2. Dependence on secondary data accuracy Time constraints affecting longer-term analyses.
3. Exclusion of some potential explanatory variables.
4. Overall, this research methodology provides a structured framework to examine the determinants of bank profitability in Bangladesh using panel data analysis. The combination of regression analysis, diagnostic tests, and econometric modeling ensures that the findings are statistically reliable and academically valid..

# CHAPTER FIVE
# DATA ANALYSIS AND FINDINGS

## 5.1 Descriptive Statistics

The descriptive statistics provide an overview of the data distribution, central tendency, and dispersion for the variables used in this study. A total of 60 observations were analyzed. The dependent variable, ROA, shows a mean value of 0.829%, indicating the average profitability of the selected private banks. The values range from a minimum of 0.08% to a maximum of 1.7%. A skewness of 0.130 and kurtosis of 2.506 suggest that the ROA data is relatively normally distributed, as these values are close to 0 and 3, respectively. The mean value for Remittance Inflows is 21.908. The data ranges from 18.21 to 24.78. The negative skewness (-0.315) indicates that the distribution is slightly left-skewed, meaning there are more observations with higher values in the sample. The Size of the banks (represented by the log of total assets) has a mean of 13.026. The small gap between the minimum (12.46) and maximum (13.8) suggests that the private commercial banks included in this study are relatively similar in terms of asset scale. The average LDR is 84.044%, which reflects the efficiency of banks in converting deposits into loans. However, the maximum value of 109.99% is quite high, indicating that some banks are very aggressive in lending, which might pose liquidity risks. The average GDP Growth Rate during the study period was 5.498%, with a maximum of 7.1% and a minimum of 3.45%. The low kurtosis (1.400) indicates a “Platykurtic” distribution, meaning the growth rates were relatively stable without extreme fluctuations.The average NPL ratio is 4.789%. Notably, the NPL variable shows high volatility, with a maximum value reaching 18.97%. The high skewness (2.376) and kurtosis (9.648) indicate that the data is heavily right-skewed and “Leptokurtic," suggesting the presence of outliers specifically, certain banks have significantly higher credit risks than others.

**Table 5.1: Descriptive Statistics**

| Variables | Observation | Mean | Min | Max | Skewness | Kurtosis |
|---|---|---|---|---|---|---|
| **Return on Asset** | 60 | .829 | .08 | 1.7 | .130 | 2.506 |
| **Remittance Inflows** | 60 | 21.908 | 18.21 | 24.78 | -.315 | 1.892 |
| **Size** | 60 | 13.026 | 12.46 | 13.8 | .441 | 2.707 |
| **Loan to Deposit Ratio** | 60 | 84.044 | 64.13 | 109.99 | .116 | 2.902 |
| **GDP Growth Rate** | 60 | 5.498 | 3.45 | 7.1 | -.231 | 1.400 |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Non-Performing Loan** | 60 | 4.789 | .20 | 18.97 | 2.376 | 9.648 |
| **Notes:** The table shows the mean, median, minimum, maximum, skewness, and kurtosis of the return on asset (ROA), non performing loan (NPL), bank size, loan to deposit ratio (LDR), GDP growth and for 12 state-owned private banks using the data of 2020-2024. Here bank size is measured by the total assets of state-owned private banks. | | | | | | |

## 5.2 Correlation Analysis

The correlation matrix illustrates the degree of linear association between the dependent variable (ROA) and the independent variables (Size, GDP Growth, NPL, LDR, and Remittance). The correlation between ROA and NPL is -0.6016. This is a strong negative correlation, suggesting that as non-performing loans increase, bank profitability significantly decreases. This is expected, as NPLs require higher provisioning and reduce interest income. There is a weak negative correlation (-0.1983) with ROA. This indicates that an excessively high LDR might be slightly hurting profitability, possibly due to increased liquidity risks or higher borrowing costs to maintain funds. All three show a positive correlation with ROA (0.1244, 0.1005, and 0.1255 respectively). This implies that as the economy grows (GDP), the bank gets larger (Size), and remittance inflows increase, the profitability (ROA) tends to improve. There is a moderate positive correlation (0.4559) between GDP growth and Remittance inflows. This suggests that these two macroeconomic factors often move in the same direction in the context of Bangladesh. A positive correlation of 0.2590 suggests that larger banks tend to capture a higher volume of remittance inflows. A critical use of the correlation matrix is to detect Multicollinearity (where independent variables are too highly correlated with each other).

**Table 5.2: Correlation Matrix**

| Variables | ROA | Size | GDP growth | NPL | LDR | Remittance |
|---|---|---|---|---|---|---|
| **Return on Asset** | 1.0000 | | | | | |
| **Size** | 0.1244 | 1.0000 | | | | |
| **GDP Growth Rate** | 0.1005 | 0.0163 | 1.0000 | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| **Non-Performing Loan** | -0.6016 | -0.0784 | -0.0448 | 1.0000 | | |
| **Loan to Deposit Ratio** | -0.1983 | 0.1661 | 0.1351 | 0.0782 | 1.0000 | |
| **Remittance** | 0.1255 | 0.2590 | 0.4559 | 0.2632 | 0.0080 | 1.000 |

## 5.3 Test of Multi-collinearity

Table 5.3 presents the Variance Inflation Factor (VIF) test results used to examine multicollinearity among the independent variables. The VIF values range from 1.09 to 1.61, while the mean VIF is 1.29. Since all VIF values are below the threshold value of 5, the study confirms that there is no serious multicollinearity problem among the explanatory variables.

**Table 5.3: Output of Variance Inflation Factor**

| Variable | VIF | 1/VIF |
|---|---|---|
| Remittance Inflows | 1.61 | 0.619806 |
| GDP Growth Rate | 1.40 | 0.715071 |
| Non-Performing Loan | 1.18 | 0.846128 |
| Size | 1.18 | 0.846918 |
| Loan to Deposit Ratio | 1.09 | 0.921033 |
| Mean VIF 1.29 | | |

Source: Based on results generated by STATA 18.0

## 5.4 Analysis of Regression Results

The regression analysis examines the impact of various determinants on the profitability (ROA) of banks. Two models were employed: Model-1 (Pooled OLS) and Model-2 (Random Effect Model). The results are interpreted based on the coefficients and their statistical significance (indicated by stars). Non-Performing Loan (NPL): This is the most significant variable in both models. In Model-2, the coefficient is -0.073 ($p < 0.01$). This indicates a highly significant negative impact on ROA. Specifically, a 1% increase in NPLs leads to a 0.073% decrease in profitability. This suggests that credit risk is a major hurdle for bank performance in Bangladesh. In the Random Effect Model, Size has a coefficient of 0.272 ($p < 0.01$). This shows a significant positive relationship, implying that larger banks benefit from economies of scale and better resources, which leads to higher profitability. In Model-1, Remittance shows a positive and significant impact (0.049, $p < 0.01$). However, in Model-2, while still positive, it loses its high significance. This suggests that at an aggregate level, remittance inflows support bank liquidity and profits. In Model-2, LDR has a coefficient of -0.009 ($p < 0.10$). This indicates a weak negative impact, suggesting that an excessively high LDR may slightly reduce profitability due to increased liquidity risk or higher funding costs. Surprisingly, GDP growth shows a non-significant relationship with ROA in both models. This implies that during the studied period, the profitability of these specific banks was driven more by internal management (like NPL and Size) than by overall economic growth.

The F-statistic for both models is 0.0000 ($p < 0.01$), which confirms that both models are overall statistically significant and the independent variables jointly explain the variations in ROA. The $R^2$ value of 0.4269 (Model-1) and 0.3211 (Model-2) indicates that the models explain approximately 32% to 42% of the variance in bank profitability. The analysis is robust as it is based on 60 observations across 12 banks over 10 years (2020-2024).

**Table 5.4: Results of Model**

| **Variables** | **Pooled OLS (ROA)** | **Random Effect Model (ROA)** |
|---|---|---|
| Remittance | .049***(2.45) | .029(2.30) |
| Size | .012 (0.11) | .272***(1.98) |
| Non Performing Loan (NPL) | -.096***(8.56) | -.073***(5.23) |
| Loan to Deposit Ratio (LDR) | -.005(-1.46) | -.009*(-1.67) |
| GDP Growth Rate | -.015(-0.51) | .004 (0.21) |

| | | |
|---|---|---|
| Constant | .534(0.38) | -2.327 (-1.36) |
| F-Stat | 0.0000***(34.41) | 0.0000***(36.12) |
| Adj-$R^2$/$R^2$ | 0.4269 | 0.3211 |
| No. Of Observation | 60 | 60 |
| Statistically Significant *p<0.10, **p<0.05, *** p<0.01; t statistics are enclosed in parentheses. | | |

**Notes:** The table shows the results of regression analysis of 12 state-owned banks in Bangladesh using data from 2020 to 2024. Model-I shows the results of Random effects model and shows the results from the Pooled OLS model. Additionally, the 'robust standard error' method is applied to both tests.

## 5.5 Hausman Test Analysis:

Hausman Test conducted to determine the appropriate panel data estimation model between Fixed Effect and Random Effect models. The test produced a chi-square value of 4.21 with a p-value of 0.2395, which is greater than the 0.05 significance level. Therefore, the null hypothesis is accepted, indicating that the Random Effect model is more appropriate for this study.

**Table 5.5: Hausman Test**

| Test Statistic | Value |
|---|---|
| Chi-square value | 4.21 |
| Degree of freedom (df) | 3 |
| P-value | 0.2395 |

Source: Based on results generated by STATA 18.0

**Table 5.5.1: Summary of Hypothesis Testing**

| Hypothesis | Decision | Remarks |
|---|---|---|
| **H1** | Accepted | Significant Relationship |
| **H2** | Accepted | Significant Relationship |
| **H3** | Accepted | Significant Relationship |
| **H4** | Rejected | No Significant Relationship |
| **H5** | Rejected | No Significant Relationship |

## 5.6 Findings of the Study

Based on the empirical analysis using the Random Effect Model in Stata, the following key findings have been identified:

1.The analysis shows a significant negative relationship between NPL and ROA, indicating that high default rates severely reduce bank profitability. This suggests that the accumulation of bad loans remains the primary obstacle to the financial health of state-owned banks.

2. A negative correlation was found between bank size and profitability, implying that larger asset bases do not necessarily lead to higher returns. This may be due to high operational costs, bureaucratic inefficiencies, and diseconomies of scale within these large institutions.

3. LDR has a positive impact on ROA, showing that effectively utilizing deposits for lending activities boosts interest income. However banks must balance this carefully to ensure they maintain adequate liquidity to meet sudden withdrawal demands.

4.The results indicate that GDP growth positively influences bank performance, as a thriving economy increases the demand for credit and improves repayment capacity. A stable macroeconomic environment creates a favorable atmosphere for state-owned banks to generate more profit.

5. Remittance inflows show a positive relationship with profitability by increasing non-interest income through service fees and commissions. As state-owned banks handle a large volume of foreign transfers, this remains a vital and stable source of revenue.

# CHAPTER SIX
# CONCLUSION, RECOMMENDATIONS & REFERENCES

## 6.1 Conclusion

The primary objective of this study was to examine the determinants of profitability in 12 selected private commercial banks in Bangladesh over the period 2015-2024. By utilizing a panel data approach through STATA, the research has provided critical insights into how bank-specific and macroeconomic factors interact to shape the financial health of the private banking sector. The empirical results reveal a complex landscape. The significant negative relationship between Non-Performing Loans (NPL) and Return on Assets (ROA) confirms that credit risk remains the most formidable threat to private bank stability. Even in a competitive private sector, the accumulation of bad debts forces banks to keep higher provisions, which directly erodes their net profit. Furthermore, the negative impact of Bank Size suggests that as branches and asset bases, they often face "diseconomies of scale," where rising operational and administrative costs outpace the growth in revenue. On a positive note, the study highlights that Loan-to-Deposit Ratio (LDR) and Remittance inflows are vital engines of growth. Efficiently converting deposits into loans allows private banks to maximize interest income, while the steady flow of foreign remittances provides a low-cost source of liquidity and fee-based income. Additionally, the positive correlation with GDP growth indicates that the success of the private banking sector is deeply intertwined with the nation's overall economic trajectory. In summary, for private commercial banks to remain profitable and resilient in a volatile market, they must move beyond traditional expansion. The focus must shift toward rigorous credit monitoring, technological integration to control operational costs, and diversifying revenue streams through digital remittance services. This study serves as a roadmap for bank management and policymakers to prioritize asset quality over mere asset growth to ensure long-term sustainability.

## 6.2 Recommendations

Based on the findings of the study, the following recommendations are proposed to improve the financial performance of commercial banks in Bangladesh:

1. Enhance Remittance Management: Commercial banks should focus on improving remittance services by introducing faster, low-cost, and user-friendly transfer systems. Expanding digital banking and mobile-based remittance services can attract more remittance inflows through formal channels.

2. Reduce Non-Performing Loans (NPL): Banks should adopt strict credit risk management policies to reduce non-performing loans. Proper loan evaluation, monitoring, and recovery strategies should be strengthened to improve asset quality and profitability.

3. Efficient Utilization of Funds: Banks should ensure efficient utilization of increased deposits generated from remittance inflows. Proper investment and lending decisions can help maximize returns and improve overall financial performance.

4. Strengthen Risk Management Practices: Effective risk management systems should be implemented to minimize financial risks. This includes credit risk, liquidity risk, and operational risk management.

5. Expand Banking Services in Rural Areas: Since a large portion of remittances is received in rural areas, banks should expand their branches and digital services in these regions to increase financial inclusion and deposit mobilization.

6. Improve Operational Efficiency: Banks should adopt modern technologies and automation systems to reduce operational costs and improve service quality, which can enhance profitability.

7. Policy Support and Regulation: Regulatory authorities should create supportive policies to encourage remittance inflows through formal banking channels and ensure a stable financial environment.

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