

**An Internship Report on “Impact of Deposit Growth Rate on Bank Stability:
An Empirical Analysis of Selected State-Owned Commercial Banks in
Bangladesh” in partial fulfillment of the requirements for the Degree of
Bachelor of Business Administration (BBA).**



SUBMITTED TO

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Letter of Transmittal

20th April, 2026

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Subject: Submission of report entitled **“Impact of Deposit Growth Rate on Bank Stability: An Empirical Analysis of Selected State-Owned Commercial Banks in Bangladesh”**

Dear Sir,

With due respect, I would like to inform you that it is a privilege and great pleasure for me to submit the Project report on “Impact of Deposit Growth Rate on Bank Stability: An Empirical Analysis of Selected State-Owned Commercial Banks in Bangladesh” as a requirement for the completion of the BBA program under the Department of Finance & Banking, Comilla University. I have completed my 3-month-long internship report under your supervision. During the preparation of the report, I have tried my best to make full use of my capabilities to make the report meaningful and worthwhile. I believe the report will at least give you a brief picture of the topic, which will also showcase that I have acquired valuable experiences through this project under your astute supervision. I earnestly thank you for your guidance during the preparation of this report. Please consider all mistakes and shortcomings as a result of human limitations.

I shall be highly glad if you kindly receive this report and provide your valuable judgment. It would really be my immense pleasure if you find this report useful and informative.

Your sincerely,

.....

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Student's Declaration

I sincerely declare that the work in this internship report on “Impact of Deposit Growth Rate on Bank Stability: An Empirical Analysis of Selected State-Owned Commercial Banks in Bangladesh” is an original work done by me under the supervision of Dr. Mohammad Jashim Uddin, Lecturer of the Finance and Banking Department. No part of this report has been previously submitted to any other University/ College/ Institution/ Organization for any academic certificate/ degree/ diploma.

The work I have presented does not breach any existing copyright, and no portion of this report is copied from any work done earlier for any degree. Information derived from the published and unpublished work of others has been acknowledged in the text and references.

I further undertake to identify the department against any loss or damage arising from breach of the foregoing obligation, if any.

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Supervisor Certificate

This is to certify that the project report on “Impact of Deposit Growth Rate on Bank Stability: An Empirical Analysis of Selected State-Owned Commercial Banks in Bangladesh” is done by Jannatul Ferdousi, ID No: 12117058, Registration No: 12117058, Session: 2020-21 as the partial fulfillment of Bachelor of Business Administration (BBA) degree from Department of Finance and Banking, Comilla University, Cumilla.

This project report has been prepared under my guidance and is a report of the authentic work carried out successfully.

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To Whom It May Concern

This is to certify that, **Jannatul Ferdousi**, ID No.12117058, Reg No. 12117058 student of Comilla University, Department of Finance and Banking under BBA program has completed her internship on '**Impact Of Deposit Growth Rate On Bank Stability**':An Empirical Analysis of state-owned commercial Banks in Bangladesh.

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

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

We wish every success in her life.

(Faria Huda)

Assistant General Manager & Head Of Branch
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Executive Summary

This study examines the impact of deposit growth rate on the stability of state-owned commercial banks in Bangladesh, focusing on Sonali Bank PLC, Janata Bank PLC, and Agrani Bank PLC over the period 2010–2024. Bank stability is measured using the Capital Adequacy Ratio (CAR), while Deposit Growth Rate (DGR) is considered the primary explanatory variable. Additional control variables include Loan-to-Deposit Ratio (LDR), Return on Assets (ROA), Cost of Fund (COF), and Bank Size (BS).

The study is motivated by the increasing importance of deposit mobilization in Bangladesh's banking sector and the mixed findings in existing literature regarding its effect on financial stability. While higher deposit growth generally enhances liquidity and lending capacity, excessive growth may lead to inefficient fund allocation and increased risk-taking behavior. This creates a need to empirically investigate the relationship within the context of state-owned commercial banks, which often face structural challenges such as high non-performing loans and operational inefficiencies.

Using secondary data collected from annual reports of the selected banks, the study employs panel data analysis techniques to examine the relationship between the variables. The findings suggest that deposit growth has a significant influence on bank stability, although the direction and magnitude vary depending on other bank-specific factors. Variables such as ROA and bank size positively contribute to stability, while LDR and cost of fund may have mixed or negative effects depending on the context.

The study highlights that deposit growth alone cannot ensure financial stability; rather, it must be supported by efficient management, proper risk control, and sound financial practices. The results provide useful insights for policymakers, regulators, and bank management in formulating strategies to strengthen the stability of the banking sector in Bangladesh.

However, the study is limited by its focus on a small sample of banks and reliance on secondary data. Future research may incorporate more banks, longer time periods, and additional macroeconomic variables to provide a more comprehensive understanding.

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Chapter 01: Introduction

1.1 Introduction

Banking stability plays a crucial role in determining the overall financial soundness and sustainable economic growth of a country. In developing economies like Bangladesh, the banking sector acts as the primary financial intermediary by mobilizing savings and channeling them into productive investments. State-owned commercial banks (SOCBs) such as Sonali Bank Limited, Janata Bank PLC., and Agrani Bank PLC. play a dominant role in this process due to their extensive branch networks, government backing, and large deposit base. As a result, ensuring the stability of these banks is essential for maintaining public confidence and supporting long-term economic development (Bangladesh Bank, 2023; World Bank, 2020).

In recent years, deposit growth has received considerable attention as a key determinant of banking stability. Deposits represent the primary source of funds for commercial banks, and a steady increase in deposits indicates public trust and financial strength. An increase in deposits enhances liquidity and allows banks to expand their lending and investment activities, thereby improving financial performance (Demirgüç-Kunt & Huizinga, 2019). However, the relationship between deposit growth and bank stability is not always straightforward. While moderate deposit growth can strengthen stability, excessive growth may encourage aggressive lending practices and increase exposure to credit risk if not properly managed (Berger & Bouwman, 2017; Levine, 2005).

Furthermore, the effectiveness of deposit growth in improving stability largely depends on how efficiently banks utilize these funds. In many cases, rapid deposit growth without proper risk management can lead to inefficient allocation of resources and deterioration in asset quality. This is particularly relevant in the context of Bangladesh, where state-owned commercial banks have historically faced challenges such as high levels of non-performing loans (NPLs), weak governance, and operational inefficiencies (Rahman, 2019; Uddin & Suzuki, 2011). These structural issues can undermine the positive effects of deposit growth and weaken the financial stability of banks.

Bank stability is commonly measured using the Capital Adequacy Ratio (CAR), which reflects a bank's ability to absorb potential losses and remain solvent under adverse conditions (Basel Committee on Banking Supervision, 2019). A higher CAR indicates a stronger capital base and greater resilience to financial shocks. However, CAR is influenced not only by deposit growth but also by several bank-specific factors such as Loan-to-Deposit Ratio (LDR), Return on Assets (ROA), Cost of Fund (COF), Statutory Liquidity Ratio (SLR), and Bank Size (BS). These variables capture different dimensions of banking performance, including liquidity management,

profitability, cost efficiency, regulatory compliance, and operational scale (Sufian & Habibullah, 2010; Athanasoglou et al., 2008).

For instance, a higher LDR may indicate more aggressive lending behavior, which could increase risk exposure, whereas higher ROA reflects better profitability and efficient use of assets. Similarly, a higher cost of funds can reduce profit margins, thereby affecting overall stability. The statutory liquidity ratio ensures that banks maintain a minimum level of liquid assets, which is essential for meeting short-term obligations and maintaining financial discipline. Bank size also plays a significant role, as larger banks may benefit from economies of scale but may also face greater complexity in risk management (Athanasoglou et al., 2008; Levine, 2005).

Despite the importance of these relationships, previous empirical studies have produced mixed and inconclusive findings. Some studies suggest that deposit growth enhances liquidity and stability, while others argue that it may increase financial vulnerability through excessive risk-taking (Berger & Bouwman, 2017; Sufian & Habibullah, 2010). Moreover, many studies are limited by the use of outdated data, single-bank analysis, or simple econometric techniques that fail to capture the dynamic nature of banking operations.

Therefore, this study aims to examine the impact of deposit growth rate on bank stability, measured by the Capital Adequacy Ratio (CAR), using a panel dataset of selected state-owned commercial banks in Bangladesh. The study also incorporates other important explanatory variables such as LDR, ROA, COF, SLR, and bank size to provide a more comprehensive understanding of the factors influencing banking stability. The findings of this study are expected to provide valuable insights for policymakers, regulators, and bank management in formulating strategies to enhance financial stability and improve the overall performance of the banking sector in Bangladesh.

1.2 Background of the study

The study provides the background of The banking sector is regarded as one of the most important aspects of the financial system of a country, which is essential in churning up savings and directing resources to develop the country economically. The role of state-owned commercial banks (SOCBs) is especially significant in developing economies such as Bangladesh since they play an important role in financial intermediation, promote government policy, and bring financial inclusion to various sectors of the economy (Bangladesh Bank, 2023).

One of the issues that have grown in the recent years is the stability of banks, particularly following the global financial crises and the rising financial risks. Stable banking system guarantees secure depositor funds, and sustains the confidence of the populace and sustainable economic growth. The Capital Adequacy Ratio (CAR) is one of the most important ratios that determine the stability of banks by indicating that the bank can withstand financial shocks and remain afloat even in adverse conditions (Basel Committee on Banking Supervision, 2019).

Commercial banks mainly rely on deposits as their funding source and the increase in deposits means that customers have confidence in the banking system. Increased Deposit Growth rate (DGR) may increase the liquidity status of a bank and allow it to increase lending and investment. The fast expansion of deposits can however result in poor use of funds or taking of more risks unless dealt with in a proper manner. Thus, the connection between the increase in deposits and the stability of banks is not a direct one and must be empirically investigated (Berger and Bouwman, 2017). State-owned commercial banks in Bangladesh are particularly prone to structural problems in terms of large volumes of non-performing loans (NPLs), operational inefficiencies, and governance problems. These issues can undermine the beneficial effect of increasing deposit on the stability of the entire bank. Consequently, the question of whether the increase in deposits actually leads to the enhancement of capital positions of banks or not should be examined.

The study aims at investigating the effects of the deposit growth rate on bank stability, keeping in view the other significant bank-specific variables Loan-to-Deposit Ratio (LDR), Return on Assets (ROA), Cost of Fund (COF) and Bank Size (BS) that can also affect the financial performance and stability of banks.

1.3 Problem Statement

The stability of the banking sector is a fundamental prerequisite for sustainable economic growth, particularly in developing economies like Bangladesh where banks serve as the primary financial intermediaries. State-owned commercial banks (SOCBs), including Sonali Bank Limited, Janata Bank PLC., and Agrani Bank PLC., play a dominant role in mobilizing deposits, extending credit, and supporting government-led economic activities. Due to their extensive branch networks and public trust, these banks hold a significant portion of total deposits and assets in the banking system. However, ensuring their financial stability has become increasingly challenging in recent years due to structural inefficiencies, governance issues, and rising financial risks.

Deposit growth rate (DGR) is widely recognized as a critical indicator of a bank's operational strength and financial health. A steady increase in deposits enhances liquidity, enables banks to expand lending, and supports investment activities, thereby contributing positively to bank stability (Berger & Bouwman, 2017). However, the relationship between deposit growth and stability is not always linear or positive. Rapid growth in deposits, if not efficiently managed, may encourage excessive lending, deterioration in asset quality, and increased exposure to credit risk. Conversely, slower deposit growth may constrain lending capacity and weaken profitability, ultimately affecting stability. Therefore, understanding the true impact of deposit growth on bank stability requires careful empirical investigation.

In the context of Bangladesh, SOCBs such as Sonali, Janata, and Agrani banks face persistent challenges including high levels of non-performing loans (NPLs), inefficiencies in credit allocation, weak governance structures, and relatively higher operational costs. These structural

weaknesses can undermine the beneficial effects of deposit growth and negatively impact financial stability (Rahman, 2019). For instance, even when deposits increase, ineffective utilization of funds and poor risk management practices may prevent improvements in key stability indicators such as the Capital Adequacy Ratio (CAR). As a result, an increase in deposits does not necessarily guarantee enhanced stability in these banks.

Moreover, bank-specific factors such as Loan-to-Deposit Ratio (LDR), Return on Assets (ROA), Cost of Fund (COF), Statutory Liquidity Ratio (SLR), and Bank Size (BS) play significant roles in determining bank stability. These variables reflect different dimensions of banking operations, including liquidity management, profitability, cost efficiency, regulatory compliance, and scale of operations. For example, a higher LDR may indicate aggressive lending behavior, which could increase risk, while higher ROA reflects better profitability and efficient asset utilization. Similarly, a higher cost of funds may reduce profit margins, thereby affecting stability. The combined influence of these factors alongside deposit growth necessitates a comprehensive analytical framework.

Despite the importance of these relationships, existing empirical studies provide mixed and inconclusive findings. While some researchers argue that deposit growth enhances liquidity and strengthens stability, others suggest that it may increase financial vulnerability due to over-lending and inefficient resource allocation (Sufian & Habibullah, 2010). Additionally, many previous studies are limited in scope, often focusing on a single bank, using outdated data, or applying basic econometric models that fail to account for unobserved heterogeneity and dynamic relationships among variables.

Furthermore, there is a noticeable lack of recent and comprehensive studies that simultaneously examine multiple SOCBs in Bangladesh using updated data and robust econometric techniques. Given the significant role of Sonali, Janata, and Agrani banks in the financial system, a comparative and integrated analysis of these institutions is essential to better understand the determinants of their stability.

Therefore, this study aims to address these gaps by investigating the impact of deposit growth rate on bank stability for Sonali Bank Limited, Janata Bank PLC., and Agrani Bank PLC., using Capital Adequacy Ratio (CAR) as a proxy for stability. The study also incorporates key explanatory variables such as LDR, ROA, COF, SLR, and bank size to provide a more comprehensive understanding of the factors influencing stability. The findings are expected to contribute to the existing literature and provide valuable insights for policymakers, regulators, and bank management in designing effective strategies to enhance financial stability in Bangladesh's state-owned banking sector.

1.4 Significance of the Study.

The study is significant in that it gives empirical data concerning the connection of the growth of deposit and the stability of the bank in the setting of Bangladesh, especially to the state-owned commercial banks. The results of this research will be helpful to the policy, bank management, and financial analysts in their interpretation of whether the rise of deposits is enough to bring about financial stability.

The report will also assist the bank authorities to make a wise decision on how to manage funds, lending behaviors and cost management to enhance capital adequacy. Furthermore, it adds to the current literature by pointing to the role of important bank-specific variables including LDR, ROA, COF, and Bank Size in affecting stability.

Moreover, the findings of the given research can be used by the regulatory authorities to develop effective policies to enhance financial stability of the banking industry and promote long-term financial performance.

1.5 Scope of the Study

The scope of the study will be as follows:

This report explores the effects of the rate of deposit growth on bank stability in the selected state-owned commercial banks in Bangladesh using panel data analysis. The Capital Adequacy Ratio (CAR) is the measure of the bank stability and the Deposit Growth Rate (DGR) is regarded as the key explanatory variable.

The study will cover the following aspects:

- A balanced panel data of 30 observations (3 banks in 10 years)
- Narrow attention of sampled state-owned commercial banks in Bangladesh (Janata Bank PLC, Agrani Bank PLC and Sonali Bank PLC).
- Analysis of fundamental bank specific variables, such as Deposit Growth Rate (DGR), Loan-to-Deposit Ratio (LDR), Return on Assets (ROA), Cost of Fund (COF) and Bank Size (BS).
- Panel econometric models (Pooled OLS, Fixed Effect and Random Effect models).
- Model selection and diagnostic tests such as the Hausman test and autocorrelation test (xtserial) have been used.
- Bank Size (lnTA) measurement.
- Use of secondary information based on annual reports and financial statements of the sampled banks.

The study has limitations in various ways, however. It takes into account few banks because of availability of data and only internal bank-specific variables. It does not include macro economic factors like inflation, interest rates and GDP growth which also can affect the stability of banks. Regardless of these drawbacks, the study offers some useful information on the connection between increasing deposits and a stable bank within the framework of Bangladesh.

1.6 Research Question

- How does deposit growth rate affect the stability of the bank (in terms of Capital Adequacy Ratio) of selected state-owned commercial banks in Bangladesh?
- Sub-questions:
 - Does the rate of deposit growth have effect on the capital adequacy of the banks?
 - What is the relationship between other variables like (Loan-to-Deposit Ratio (LDR), Return on Assets (ROA), Cost of Fund (COF) and Bank Size (BS)) and bank stability?
 - Can the growth of deposits be considered as a guarantee to financial stability of the banking industry?
 - How does deposit growth influence the liquidity position of the banks?
 - Is there any significant long-run relationship between deposit growth and bank stability?
 - How does bank size moderate the relationship between deposit growth and stability?
 - Does a higher loan-to-deposit ratio (LDR) increase financial risk in state-owned banks?
 - What is the impact of cost of fund (COF) on the profitability and stability of banks?

1.7 Objectives of the study

General objective

- The primary aim of the research is to investigate how the deposit growth rate affects the stability of the banks of the chosen state-owned commercial banks in Bangladesh.

Specific Objectives

- To examine the impact of Deposit Growth Rate (DGR) on bank stability, in terms of Capital Adequacy Ratio (CAR).
- To test the effect of the Loan-to-Deposit Ratio (LDR) on the bank stability.
- To evaluate the relationship between Return on Assets (ROA) and bank stability.
- To determine the effects of Cost of Fund (COF) on the capital strength of banks.
- To examine how the Bank Size (BS) affects bank stability.

Chapter 2: Literature Review

2.1 Conceptual Background

Bank stability is a pillar of a well-performing financial system in the sense that it guarantees stability of financial institutions to economic shocks, protection of funds in deposits, and sustainable economic growth. A sound banking industry boosts the financial intermediation through effective mobilization of savings and investment in productive activities. On the other hand, the instability of the banking sector may trigger financial crisis, loss of the confidence of people and critical impacts on the economy (Beck et al., 2013).

The Capital Adequacy Ratio (CAR) is one of the most popular ratios used to determine the stability of banks as it indicates how a bank can absorb losses whilst still being in business. CAR is available as a ratio between the capital of the bank and its risk-weighted assets and is one of the important regulatory mandates according to the Basel framework (Basel Committee on Banking Supervision, 2019). Higher CAR means a greater financial stability and reduced likelihood of bankruptcy.

Deposit Growth Rate (DGR) is an important indicator of the funding strength of a bank, and indicates the degree of confidence that the people have in the banking system. Commercial banks rely on deposits as the main source of funds and continuing growth in deposits increases the liquidity and this allows banks to increase their lending and investment operations. The financial intermediation theory has it that banks are intermediaries between the savers and the borrowers and that the deposit mobilization is crucial in such an arrangement (Allen et al., 2014). Nevertheless, the correlation between the growth of deposits and stability of banks is not entirely linear. Moderate increase in deposits enhances liquidity and financial capacity, but too much or too fast increase in deposits can result in inefficient use of the funds or aggressive lending habits. This may augment credit risk and destabilize finances when not handled well (Berger and Bouwman, 2017).

The liquidity theory of banking also elaborates on how deposits help to stabilize the situation. The classical approach by Diamond and Dybvig (1983) reveals that banks offer liquidity transformation by transforming deposits that are short-term into long-term loans. This role increases the efficiency of the economy but it subject the banks to a liquidity risk and even a run on the banks in case of lack of confidence among the depositors. Besides the growth of deposits, other bank-specific factors have a significant impact on stability. Loan-to-Deposit Ratio (LDR) represents the ratio of deposits that are lent out to borrowers and is a significant factor that is used to gauge the risk of liquidity. An increased LDR implies more aggressive lending that can lead to higher profits, however, it also increases the chances of default and financial instability.

Another important factor of bank stability is Return on Assets (ROA), which is an indicator of efficiency of managers and profitability. Increased profitability allows banks to accumulate

internal capital buffers and, thus, increases their ability to absorb financial shocks (Goddard et al., 2004).

Cost of Fund (COF) is the price paid by banks to get financial assets. Increase in funding costs causes a fall in net interest margins and profitability that can undermine financial stability in the long run (Maudos & De Guevara, 2004).

Bank Size (BS) is another important factor of stability. The economy of scale, risk diversification and accessibility to capital markets are often enjoyed by larger banks and can promote stability. Nevertheless, they can also experience greater complexity in their operation and systemic risk, which yield mixed empirical results (Boyd and Runkle, 1993; Sufian and Habibullah, 2021). Bank stability is, in general, the effect of a complex of factors such as growth in deposits, profitability, liquidity control, and cost-effectiveness. Thus, these variables cannot be examined individually and instead have to be considered as a system to have a complete picture of the banking stability..

2.2 Empirical Review

There is an extensive amount of empirical literature on the determinants of bank stability, and especially the deposit growth and the profitability, liquidity, and risk factors. Nevertheless, the results of the research in different studies are inconclusive and situational. According to Berger and Bouwman (2017), the evidence is that deposit growth has a positive contribution to the liquidity creation and ability of banks to facilitate economic activities. According to their research, banks that have a greater deposit inflow are in a better position to increase lending and enhance financial performance. However, they also warn that a high rate of deposit growth can promote risk-taking behavior that can result in instability.

Demirguc-Kunt and Huizinga (2019) note that the funding structure is a crucial factor in measure the banks activities. Their results show that banks that depend on deposits as a source of funds are more stable than those that depend on funding through the market. Nevertheless, the success of the deposit financing relies on the efficiency of the funds expenditure to a great extent.

Beck et al. (2013) compare cross-country data and discover that competition and structural features in the banking sector have a significant impact on the stability. Their research indicates that institutional quality and regulatory environments are important in influencing the correlation between bank specific variables and stability. The connection between stability and lending behavior has also been a topic of study. Higher Loan-to-Deposit Ratios are linked with a greater credit risk and non-performing loans that have a negative impact on the stability of banks, as concluded by Louzis et al. (2012). This implies that violent lending policies may destroy financial stability unless they are backed with appropriate risk management behaviors. One of the most important factors of bank stability has always been profitability. Goddard et al. (2004) show that more profitable banks can more easily sustain sufficient levels of capital, and absorb financial shocks. On the same note, Athanasoglou et al. (2020) discover that efficiency, quality of assets,

and cost management are specific bank-specific elements that have a considerable impact on profitability and, therefore, stability.

Another key determinant is cost effectiveness. Maudos and De Guevara (2004) demonstrate that increased cost of funding lowers the interest margins and deteriorates the performance of the banks. This in its turn affects financial stability in a negative way especially in a highly competitive banking environment. The effects of the bank size on the stability have yielded conflicting literature. Boyd and Runkle (1993) claim that bigger banks are more stable because of the benefits of diversification. Other studies however indicate that big banks might have a higher risk of doing risky things and thus exposed to financial shocks. When considering developing economies, Allen et al. (2014) emphasize that structural vulnerabilities, regulatory inefficiencies, and governance problems can have an important impact on the banking stability. High non-performing loans, inefficiency and political interference are some of the challenges in state-owned commercial banks in countries such as Bangladesh, which can undermine the positive impact of increased deposit growth.

Although there is an abundance of literature, there is a dearth of studies that directly deal with the direct influence of Deposit Growth Rate on the stability of the bank in developing countries through panel data techniques. Besides, numerous available studies are based on the conventional econometric methods that fail to adequately address the unobserved heterogeneity among banks. Thus, the current study has an addition to the existing literature by using sophisticated panel data methodology to test the association between deposit expansion and bank stability in the setting of Bangladesh and gives more solid and context-related findings.

2.3 Research Gap

Even though past research has identified several determinants of bank stability, relatively little attention has been given to the direct impact of deposit growth rate on the stability of banks, particularly in developing economies such as Bangladesh. Most existing studies have primarily focused on traditional indicators such as profitability, liquidity, and risk management, while the role of deposit growth remains less explored and often inconclusive. As a result, the relationship between deposit growth and bank stability is still not clearly established in the literature.

Deposit growth is generally considered a positive indicator, reflecting public confidence in the banking system and providing banks with the necessary funds to expand their lending and investment activities. However, the effect of deposit growth on stability is not always straightforward. In some cases, rapid growth in deposits may encourage aggressive lending practices, which can increase credit risk and negatively affect the overall stability of banks if not managed efficiently. Therefore, the actual impact of deposit growth on bank stability requires deeper empirical investigation.

Moreover, state-owned commercial banks in Bangladesh, such as Sonali Bank Limited, Janata Bank PLC., and Agrani Bank PLC., face unique structural challenges. These include high levels of non-performing loans (NPLs), operational inefficiencies, weak governance structures, and limitations in risk management practices. Such issues can weaken the positive influence of deposit growth and create uncertainty regarding its effect on financial stability. Consequently, the relationship between deposit growth and bank stability in the context of these banks becomes more complex and context-specific.

In addition, there is a lack of comprehensive studies that examine multiple state-owned commercial banks simultaneously using recent data and appropriate econometric techniques. Many previous studies are limited in scope, focusing on single institutions or relying on outdated datasets, which restricts the generalizability of their findings. This indicates a clear gap in the literature, particularly in the context of Bangladesh.

Therefore, it is necessary to conduct a focused empirical study to analyze how deposit growth rate affects bank stability, measured by the Capital Adequacy Ratio (CAR), while also considering other relevant bank-specific variables such as Loan-to-Deposit Ratio (LDR), Return on Assets (ROA), Cost of Fund (COF), and Bank Size (BS). As such, this research aims to address this gap by investigating the impact of deposit growth rate on the stability of selected state-owned commercial banks in Bangladesh, providing insights that may help policymakers and bank management improve financial stability and decision-making.

2.4 Theoretical Background and Hypothesis Development.

The theoretical framework of this research is premised on the well-established financial and banking theories that describe the association between the growth of deposits and the stability of banks. The most significant theories and the relationships that are to be expected are discussed below:

1. Bank Stability and Deposit Growth rate (DGR).

The growth of deposits indicates the capacity of a bank to lure deposits and increase the financial base. Financial intermediation theory suggests that increase in growth of deposits increases liquidity and stability of the bank.

Empirical evidence indicates that higher deposits enhance lending ability and financial strength.

H1: Deposit Growth Rate is significantly positively related to Capital Adequacy Ratio.

2. Bank Stability and Loan to Deposit Ratio (LDR).

LDR shows the extent of deposits lent out. The liquidity risk theory points out that the greater the LDR, the greater the exposure of risk and less stability due to excessive lending.

H2: Loan-to-Deposit Ratio and Capitals Adequacy Ratio show a significant negative relationship.

3. Bank Stability and Return on Assets (ROA).

ROA indicates profitability and effective utilization of assets. Profitability theory states that increased profitability fortifies the capital and enhances financial stability

H3: Return on Assets and Capital Adequacy Ratio have significant positive relationship.

4. Cost of Fund (COF) and Stability of Banks.

Cost of fund is the cost of accessing funds. Increased expenses decrease the profit margin and financial capacity.

H4: There is a significant negative relationship between Cost of Fund and Capital Adequacy Ratio.

5. Bank Size (BS) and Bank Stability.

Economies of scale theory holds that bigger banks can have the advantage of diversification and scale of operations that enhance stability. Nevertheless, large size can also bring the complexity.

H5: There is a real relationship between Bank Size and Capital Adequacy Ratio.

2.5 Conceptual Framework

This research has a conceptual framework that is founded on the correlation between bank specific variables and bank stability. The primary independent variable is Deposit Growth Rate (DGR) and the control variables are Loan-to-Deposit Ratio (LDR), Return on Assets (ROA), Cost of Fund (COF) and Bank Size (BS). The dependent variable is the Capital Adequacy Ratio (CAR) that measures bank stability.

The framework further indicates that the growth rate in deposits might affect the stability of the banks, but this is also conditional on the efficiency of the banks in the management of their lending procedures, profitability and the cost of funds. Bank stability therefore is a product of a combination of various internal factors and not a singular variable.

DGR, LDR, ROA, COF, BS → CAR .This model emphasizes the fact that increasing the rate of deposits is not enough to guarantee financial stability and proper financial management is a key to the existence of a sound banking system.

Chapter: 3 Organizational Profile

3.1 Overview of Sonali Bank PLC

Sonali Bank PLC is a state owned commercial bank, the biggest in Bangladesh. It was formed through a merger of various banks, such as National Bank of Pakistan, Bank of Bahawalpur and premier bank, under the Bangladesh Banks (Nationalization) Order of 1972. The bank was later reorganized and registered as Sonali Bank PLC on June 3, 2007, in order to enhance efficiency in its operations and quality of services. The Bangladesh Bank granted its banking license on June 5, 2007, and it started functioning as a corporate entity from November 15, 2007 through a vendor agreement with the Government of Bangladesh.

Sonali Bank has over time diversified its operations by engaging in other activities other than the traditional banking. It also set up a subsidiary, Sonali Investment Limited, in 2009 to encourage investment and economic growth. Currently, the bank has an extensive network of branches both locally and overseas. The majority of the branches are within Bangladesh, both rural and urban, and some of the branches are in other countries, such as India.

The bank transacts in foreign trade via the branches of the authorized dealers and has correspondent relations with many foreign banks. A well-organized administrative system (such as a number of departments at the head office and countrywide regional offices) helps it to conduct its business. Sonali Bank provides financial solutions to millions of customers in a variety of financial products and services.

Sonali Bank (UK) Limited has a presence in the United Kingdom, and has representative offices in the Middle East. The bank is significant in ensuring remittances among the Bangladeshi expatriates working in foreign countries. It also works with the exchange houses and financial institutions in other nations so as to provide easy and safe remittance services.

Vision

To be a leading state owned commercial bank in Bangladesh with excellent global presence, with good service, management and financial stability.

Mission

To deliver a wide variety of quality financial products and services that satisfy the customer needs, generate value to the stakeholders and to make a contribution towards the overall socio-economic development of the country.

Strategic objectives:

- Strengthen financial stability (maintain CAR)
- Enhance deposit mobilization
- Improve asset quality (reduce NPLs)
- Increase profitability
- Expand lending to productive sectors
- Promote digital banking services
- Ensure regulatory compliance
- Improve operational efficiency
- Enhance customer satisfaction
- Strengthen corporate governance

Corporate Profile of Sonali Bank PLC:

Name of the Company	:Sonali Bank PLC
Chairman (Current Charge)	:Muhammed Mahbubur Rahman
Managing Director & Chief Executive Officer	:Md. Shawkat Ali Khan
Company Secretary	:Md. Mahtab Hossain
Legal Status	:Public Limited Company
Genesis	:Emerged as a nationalized commercial bank in 1972, following the Bangladesh Bank (Nationalization) Order 1972 (PO No. 26 of 1972), by merging the National Bank of Pakistan, Bank of Bahawalpur, and Premier Bank.
Date of Incorporation	: 03 June, 2007
Date of Vendor's Agreement	: 15 November, 2007
Registered Office	:35-42, 44 Motijheel Commercial Area, Dhaka, Bangladesh
Authorised Capital	:Taka 6000.00 Crore
Paid-up Capital	:Taka 4530.00 Crore
Number of Employee	:18,187
Number of Branches	:1234
Phone-PABX	:0257161080-88
FAX	:88-02-9561410, 9552007
SWIFT	:BSONBDDH
Website	: https://www.sonalibank.com.bd
E-mail	: info@sonalibank.com.bd

3.2 Overview of Agrani Bank PLC

Agrani Bank PLC is a number one state owned commercial bank in Bangladesh and it contributes a great part in the financial system of Bangladesh. The bank was set up in 1972, under the nationalization of a few commercial banks after the independence of Bangladesh. It has grown over the years to become a modern financial institution through the implementation of new technologies and the extension of its banking services.

Agrani Bank is credited with the introduction of agent banking services to Bangladesh which has seen the extension of financial services to rural and underserved groups. Besides traditional banking, the bank also has Islamic banking services in some of its branches to cater to the requirements of various customer segments.

The bank has a broad network of branches and agent outlets in the country where the customers can easily access it both in town and in the rural areas. It also has links with foreign banks and exchange houses to provide international trade and remittance services. Agrani Bank remains involved in the economic development through financing diverse sectors including agriculture, industry and small businesses.

Vision

To be a contemporary, effective, and customer-oriented bank that guarantees sustainable development and promotes global competitiveness of the country.

Mission

To provide innovative and quality banking services to its customers using talented human resources, new technology and good ethical conduct, and help the national economic growth.

Strategic Objectives

- To increase banking services to the rural and unbanked communities.
- To enhance quality of services with the help of digital transformation.
- In order to enhance risk management and financial stability.
- To gain customer satisfaction and confidence.
- In order to develop the personnel skills and productivity.
- To promote transparency and accountability
- In order to boost investment in productive sectors.
- To boost remittance inflow and foreign trade
- In order to achieve sustainable and inclusive growth.

Corporate Profile Of Agrani Bank PLC:

Name of the Company : Agrani Bank PLC
Chairman : Syed Abu Naser Bukhtear Ahmed
Managing Director & Chief Executive Officer : Md. Anwarul Islam
Company Secretary : Md. Rafiqul Islam
Legal Status : Public Limited Company
Genesis : Established as a nationalized commercial bank in 1972 after independence of Bangladesh
Date of Incorporation : 17 May 2007
Registered Office : Motijheel Commercial Area Dhaka Bangladesh
Authorised Capital : Taka 6000.00 Crore
Paid-up Capital : Taka 3000.00 Crore
Number of Employees : 11000+
Number of Branches : 950+
Phone-PABX : 02-9566153
FAX : 88-02-9562346
SWIFT : AGBKBDDH
Website : https://www.agranibank.org
E-mail : info@agranibank.org

3.3 Overview of Janata Bank PLC

The second largest bank in Bangladesh which is a state owned commercial bank is Janata Bank PLC and is a crucial bank in the banking sector of Bangladesh. The nationalization policy of the government saw the merger of the United Bank Limited and Union Bank Limited to form the present Bank.

The bank offers a broad spectrum of financial services such as deposits, loans, financing international trade and remittance services. Janata Bank has many branches in the country and even a few branches abroad which means that it has banking services to a wide range of customers.

Janata Bank is also participating in economic development by funding sectors that are critical like agriculture, industry and small and medium enterprises (SMEs). It also has good standing with the foreign correspondents so that it can carry out international transactions and the inflow of remittance.

Vision

To be a reliable and competitive banking institution in the region and worldwide by being excellent in service and innovation.

Mission

To offer effective, customer-focused financial services through good governance, modern banking practices and to act towards sustainable economic development.

Strategic Objectives

- To ensure good financial performance and capital adequacy.
- To raise the level of customer service and customer satisfaction.
- To embrace new banking technologies and systems.
- To enhance internal control and practices of governance.
- To grow loan and deposit portfolio.
- To enhance recovery of bad loans.
- To create high performance and motivated human resources.
- To expand the involvement in global trade and remittances.
- In order to promote ethical and transparent banking practices.

Corporate Profile of Janata Bank PLC

Corporate Profile of Janata Bank PLC
Name of the Company : Janata Bank PLC
Chairman : Md. Abul Kalam Azad
Managing Director & Chief Executive Officer : Md. Abdus Salam Azad
Company Secretary : Md. Abdus Salam
Legal Status : Public Limited Company
Genesis : Established as a nationalized commercial bank in 1972 after independence of Bangladesh
Date of Incorporation : 15 November 2007
Registered Office : Motijheel Commercial Area Dhaka Bangladesh
Authorised Capital : Taka 6000.00 Crore
Paid-up Capital : Taka 3000.00 Crore
Number of Employees : 15000+
Number of Branches : 900+
Phone-PABX : 02-9550418-20
FAX : 88-02-9564122
SWIFT : JANBBDDH
Website : https://www.janatabank-bd.com
E-mail : info@janatabank-bd.com

3.4 Operational activities of selected state-owned commercial banks (Sonali, Janata and Agrani)

Activities	Description	Relevance to Study
Deposit mobilization	The banks collect deposits from individuals, businesses, and government institutions through various deposit schemes such as savings, current, and fixed deposits.	deposit growth rate (DGR), Determines which is the core variable of the study.
Loans and advances	Loans & Advances Banks provide short-term and long-term loans to different sectors including agriculture, industry, trade, and SMEs to support economic activities	Used to calculate Loan-to-Deposit Ratio (LDR) and reflects lending behavior affecting stability.
Foreign trade and services	Foreign Trade Services Facilitation of import and export financing through letters of credit (LC), guarantees, and other trade-related services	Contributes to income generation and overall financial performance.
Remittance services	Remittance Services Handling inward and outward remittances, especially from expatriates, through international banking channels.	Increases deposit base and strengthens liquidity position
Investment operations	Investment Operations Investment in government securities, treasury bills, bonds, and other financial instruments	Ensures safe income and supports financial stability.
Liquidity management	Liquidity Management Maintaining required liquidity levels as per Bangladesh Bank regulations, including SLR and CRR requirements.	Ensures the bank's ability to meet short-term obligations and maintain stability.
Risk management	Risk Management Managing credit risk, operational risk, and market risk through internal policies and regulatory compliance.	impacts bank stability and capital adequacy (CAR).

Without it they are working with huge network and operations, digital banking services and government and public services which are providing online banking mobile banking ATM services and electronic fund transfer without it handling government transactions seller disbursement pension payments and public fund management also.

3.5 Relevance to the Study

The selection of Sonali Bank Limited, Janata Bank PLC., and Agrani Bank PLC. is justified based on the following reasons:

- These are major state-owned commercial banks (SOCBs) in Bangladesh
- They hold a large share of total deposits and assets
- They play a significant role in economic development and financial intermediation
- Availability of reliable financial data for analysis
- Presence of structural challenges, making them suitable for examining stability issues
- Helps to analyze the impact of deposit growth rate (DGR) on bank stability (CAR)

Chapter 4: Methodology

4.1 Nature of the Study

This study is analytical and quantitative in nature. It aims to examine the relationship between deposit growth rate and bank stability in selected state-owned commercial banks in Bangladesh. The study investigates how deposit growth and other bank-specific financial indicators influence the capital adequacy and overall stability of banks. The objective is to identify whether a significant relationship exists between the dependent and independent variables.

4.2 Types and Sources of Data

The study is based on secondary data. Data have been collected from:

- Annual reports of selected state-owned commercial banks
- Financial statements (balance sheet and income statement)
- Bangladesh Bank publication

The data cover a period of 10 years, providing a time-series and cross-sectional (panel) dataset.

4.3 Target Population and Sample Selection

The target population of the study includes all state-owned commercial banks in Bangladesh. However, due to data availability constraints, the sample consists of three major banks:

- Janata Bank PLC
- Agrani Bank PLC
- Sonali Bank PLC

The study uses a balanced panel dataset with 3 banks over 10 years, resulting in 30 observations.

4.4 Model Specification

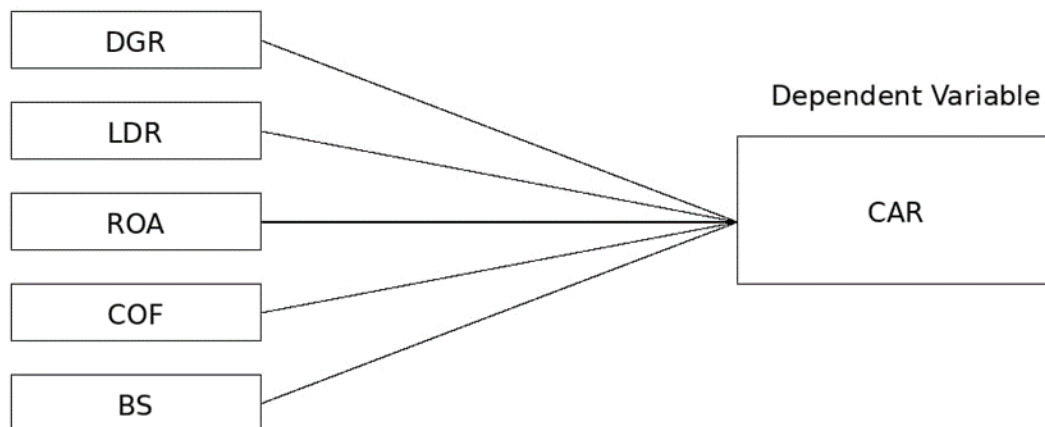
To examine the impact of deposit growth rate on bank stability, the following panel regression model is used:

$$CAR_{it} = \beta_0 + \beta_1 DGR_{it} + \beta_2 LDR_{it} + \beta_3 ROA_{it} + \beta_4 COF_{it} + \beta_5 BS_{it} + \varepsilon_{it}$$

Where:

- CAR = Capital Adequacy Ratio
- DGR = Deposit Growth Rate
- LDR = Loan to Deposit Ratio
- ROA = Return on Assets
- COF = Cost of Fund
- BS = Bank Size
- i = individual bank
- t = time period (year)
- ε_{it} = error term

Independent Variables



4.5 Variables and Their Sources

Dependent variable	Definition	Source
CAR	CAR is used as a proxy for bank stability. It quantifies the sufficiency of bank capital in comparison with its risk-weighted assets and shows the capability of a bank to withstand financial shocks	(Basel Committee on Banking Supervision, 2019).
Independent Variable		
DGR	DGR is calculated as the percentage change in total deposits annually. It indicates the increase in the number of deposits of customers and trust in the banking system	(Demirguc-Kunt and Huizinga, 2019).
LDR	$LDR = \text{total loans} / \text{total deposits}$. It reflects the lending intensity and liquidity risk. An enhanced LDR can amplify the credit risk and decrease the stability	(Berger and Bouwman, 2017).
ROA	ROA is the profitability and efficiency of banks. Increased profitability leads to more internal capital formation and has a positive impact on the stability of banks	(Sufian and Habibullah, 2021).
COF	COF is the expense that banks incur to get money. Increased funding expenses decrease profitability and can have an adverse impact on the stability of banks	(Athanasoglou et al., 2020).
BS	Bank Size is a natural logarithm of total assets ($\ln TA$). It depicts the size of the bank and can affect stability due to the economies of scale and diversification	(Sufian and Habibullah, 2021)

4.6 Estimation Techniques

The study employs panel data regression techniques, including:

Pooled Ordinary Least Squares (Pooled OLS):

Assumes no individual bank effect and estimates a common regression.

Fixed Effect Model (FE):

Controls for unobserved bank-specific characteristics that remain constant over time.

Random Effect Model (RE):

Assumes that individual effects are random and uncorrelated with explanatory variables

4.7 Model Selection Test

To determine the most appropriate model, the Hausman specification test is applied. The null hypothesis assumes that the Random Effect model is appropriate. Based on the test results (p-value < 0.05), the null hypothesis is rejected, indicating that the Fixed Effect model is more suitable. Therefore, the Fixed Effect model is selected as the final model for analysis.

4.8 Diagnostic Tests

To ensure the reliability of the results, several diagnostic tests are conducted:

- Correlation Analysis: To check the relationship among variables
- Autocorrelation Test (xtserial): To detect serial correlation in panel data
- Outlier Check (extremes): To identify extreme values in the dataset

4.9 Software Used

The data analysis is conducted using Stata software. Various commands such as "reg", "xtreg", "hausman", and "xtserial" are used to perform regression analysis and diagnostic testing.

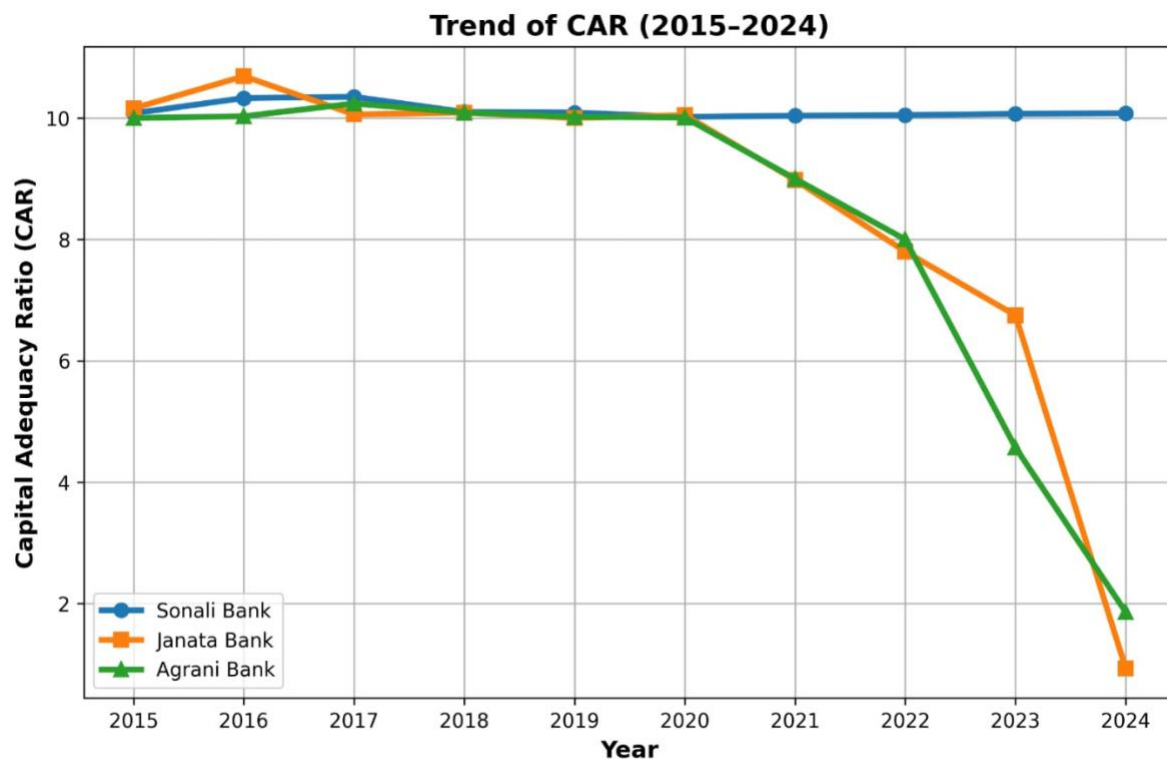
Chapter 5: Data Analysis

5.1 Data Analysis

This chapter gives the empirical analysis and results of the study. The main aim of the chapter is to focus on the effect of Deposit Growth Rate (DGR) on bank stability in terms of the Capital Adequacy Ratio (CAR) during the years 2015-2024. There is also shown the 10 year trend analysis of the DGR and CAR to understand the situation banking stability and data reliability. The analysis is performed with the help of Stata software and is systematic. To summarize the data characteristics, first, descriptive statistics will be presented. Second, a pairwise correlation matrix is tested to evaluate the correlation between variables. Third, an Ordinary Least Squares (OLS) regression equation is estimated. The Variance Inflation Factor (VIF) test is then performed to test the multicollinearity of independent variables. Then, Fixed Effect (FE) and Random Effect (RE) panel data regression models are estimated. Lastly, Hausman test is used to choose the best model between Fixed Effect and Random Effect models.

5.2 Trend Analysis

CAR:



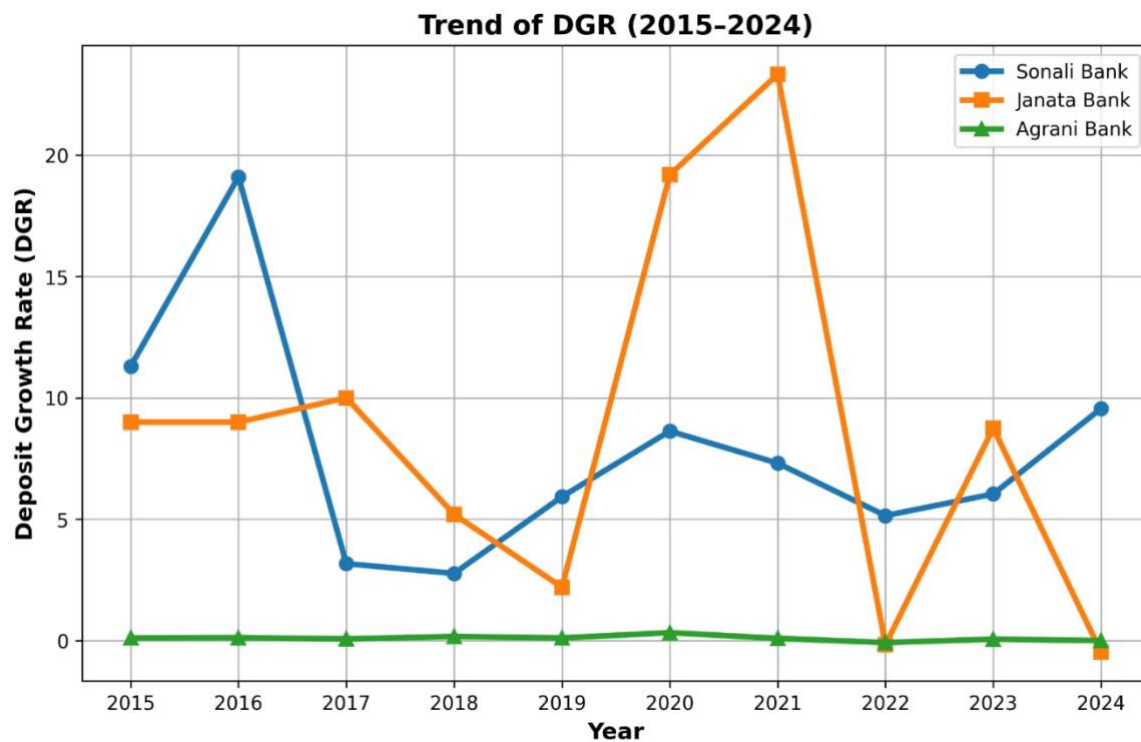
Interpretation of CAR Trend

The trend of Capital Adequacy Ratio (CAR) of Sonali Bank, Janata Bank and Agrani bank between the years 2015-2024 indicate that there is a clear difference in the financial strength of the banks. The CAR of Sonali Bank remained relatively stable during the period under study with an approximate range of 10.02 per cent to 10.35 per cent. This consistency means that the bank has been capable of having adequate capital over its risk-weighted assets, showing a stable financial status.

Conversely, Janata Bank has initially kept its CAR at greater than 10 percent over the years 2015-2019; nevertheless, it is evident that it has been decreasing since 2020. The ratio decreased approximately 10.05 percent in 2020 to 0.93 percent in 2024, which is a severe worsening of the capital adequacy and the financial risk. Similarly, Agrani Bank shows a stable CAR close to 10% up to 2020, but thereafter a significant downward trend is observed. The CAR fell significantly in 2024 to 1.86% compared to the 2020 figure of about 10.01% indicating a loss of capital strength and the capacity to withstand financial shocks.

At last The analysis shows that Sonali Bank has a stronger financial position, as compared to Janata and Agrani Banks that are characterized by a decreasing capital adequacy that could be associated with the presence of more non-performing loans, reduced profitability, and risk exposure.

DGR:



Interpretation of DGR Trend

The trend of the Deposit Growth rate (DGR) of the chosen banks shows that it has been fluctuating considerably throughout the period of the study. Sonali Bank has a growth trend characterized by a relatively stable yet fluctuating growth pattern. The DGR peaked at an approximate of 19.1 per cent in 2016, then declined after that with moderate increases thereafter reaching an approximation of 9.56 per cent in 2024. This shows a moderate but stable growth of deposits.

The trend in the growth of deposits at Janata Bank is volatile. The DGR increased significantly to around 23.32% in 2021, but also recorded negative growth in certain years, such as -0.16% in 2022 and -0.47% in 2024. Such volatility implies that there is instability in deposit mobilization and depositor confidence.

The growth of deposits of Agrani Bank is rather low over the period. Even though positive growth can be noted, the rates are fairly low, even negative in specific years (e.g., -0.077 in 2022), which means that it performs worse in terms of attracting deposits.

Overall The undulating and occasionally negative DGR, especially in Janata and Agrani Banks, shows irregularity in the increase of deposits, which can have negative implications on liquidity and the financial stability in general.

The analysis of CAR and DGR combined indicates that banks that maintain a stable capital adequacy and stable deposit growth are in a better financial position like Sonali Bank, compared to those whose CAR is declining and DGR is fluctuating, which pose a greater financial risk and instability.

5.3: Descriptive Statistics of the Dependent and Independent Variables.

The descriptive statistics give an overview of the central tendency, dispersion, and distribution of all the variables in the study. The panel data is balanced having 30 observations of three state owned commercial banks during 10 years.

Descriptive Statistics of all variables (N = 30).

Variable	Mean	SD	Min	Max	Median	Skewness	Kurtosis
CAR	9.018	2.431	0.930	10.69	10.045	-2.361	7.521
DGR	5.533	6.411	-0.470	23.32	4.16	1.21	3.848
LDR	65.861	12.087	46.570	90.13	64.425	.31	2.043
ROA	.083	.553	-2.090	1	.135	-2.323	9.811
COF	6.061	1.561	3.460	9.06	6.29	-.005	2.192
BS	12.642	2.045	3.690	14.17	13.455	-2.901	13.245

Descriptive Statistics Interpretation:

With 30 observations, the model will give a summary of the descriptive statistics of the dependent variable and the independent variable throughout the study.

It is clear that the dependent variable, Capital Adequacy Ratio (CAR) is 9.018 with a minimum value of 0.930 and a maximum of 10.69. This implies that the average level of capital adequacy in the sampled banks is near to regulatory requirements, though there are some differences in the banks and yearly. The standard deviation of 2.431 indicates that there are moderate changes in the capital strength over time.

The independent variable, Deposit Growth Rate (DGR) has a mean of 5.533, minimum of -0.470, and maximum 23.32. This means that there is a huge fluctuation in the deposit growth with some quarters recording negative growth. The large variation signifies the instability in the deposit mobilization in the sample banks.

The Loan-to-Deposit Ratio (LDR) has a mean of 65.861, a low of 46.570 and a high of 90.13. This implies that on average, banks send out 66 percent of their deposits as loans. The diverse spectrum indicates the variations in lending practices and risk exposure across the banks.

Mean value of the Return on Assets (ROA), which is a measure of profitability, equals 0.083, having the lowest value of -2.090 and the highest value of 1. This means that the degree of profitability is poor and volatile with some of the banks registering losses at some times.

The average of Cost of Fund (COF) is 6.061 with the lowest amount of 3.460 and the highest amount of 9.06. This implies that the costs of funds raised by banks are moderate and it can have impacts on their profitability and stability.

Lastly, Bank Size (BS), which is a natural logarithm of total assets, has a mean of 12.642, minimum of 3.690 and a maximum of 14.17. This means that there is a significant difference in the size of banks, as it shows a difference in the size of operations and financial ability of the chosen banks.

In sum, the descriptive statistics indicate that the banks have a moderate level of capital adequacy, but there is great dispersion in terms of growth of deposits, profitability and cost of funds, which can be a key element in the stability of the banks.

5.4 Correlation Analysis

The pairwise correlation table shows the interaction between the dependent and independent variables in the research. It assists in determining the direction and strength of association among variables as well as gives an initial clue as to possible multicollinearity problems.

Table : Pairwise Correlation Matrix.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
(1) CAR	1.000					
(2) DGR	0.301 (0.107)	1.000				
(3) LDR	-0.618 (0.000)	-0.151 (0.427)	1.000			
(4) ROA	0.691 (0.000)	0.229 (0.223)	-0.369 (0.045)	1.000		
(5) COF	-0.401 (0.028)	0.240 (0.202)	0.450 (0.013)	-0.270 (0.149)	1.000	
(6) BS	-0.042 (0.826)	0.422 (0.020)	-0.123 (0.519)	0.008 (0.966)	0.206 (0.274)	1.000

Correlation Results Interpretation:

The results show that the dependent variable, Capital Adequacy Ratio (CAR), has a positive correlation with Deposit Growth Rate (DGR) ($r = 0.301$), indicating a weak positive relationship. Nevertheless, the correlation is not so significant indicating that the deposit growth may not be a powerful determinant of bank stability on its own.

Loan-to-Deposit Ratio (LDR) exhibits a negative correlation with CAR ($r = -0.618$) and the correlation is found to be statistically significant. It means that, an increase in lending in comparison to deposits can decrease the stability of the banks, perhaps because of the increased risk of credit.

CAR and Return on Assets (ROA) have a high positive and significant association ($r = 0.691$). This shows that the more profitable banks will have greater capital adequacy, thus, increasing stability.

CAR and Cost of Fund (COF) correlate negatively ($r = -0.401$) and this is significantly significant as an increase in funding costs can make banks less stable as a result of less profitability. Conversely, Bank Size (BS) is indicated to be very weakly correlated with CAR ($r = -0.042$) though not statistically significant. This means that capital adequacy is not directly related to the size of the bank in this sample.

There are moderately positive correlations between the independent variables, including LDR and COF ($r = 0.450$), which is statistically significant. Anyway, all the correlation coefficients are less than 0.80, which means that there is no severe multicollinearity issue between the variables. In general, the correlation analysis indicates that the profitability (ROA) and lending behavior (LDR) are more related to bank stability, than the deposit growth, and it does not seem that multicollinearity is a problem in the present study.

5.5 :Model Specification (Pooled OLS)

This study initially employs the Pooled Ordinary Least Squares (OLS) regression model as a baseline to examine the impact of deposit growth rate and other bank-specific variables on bank stability (measured by CAR)

CAR	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
DGR	.091	.052	1.75	.093	-.016	.198	*
LDR	-.075	.028	-2.66	.014	-.133	-.017	**
ROA	2.041	.568	3.59	.001	.868	3.214	***
COF	-.206	.221	-0.93	.362	-.662	.251	
BS	-.197	.154	-1.27	.215	-.515	.122	
Constant	17.007	2.633	6.46	0	11.573	22.441	***
Mean dependent var	9.018		SD dependent var	2.431			
R-squared	0.683		Number of obs	30			
F-test	10.338		Prob > F	0.000			
Akaike crit. (AIC)	114.958		Bayesian crit. (BIC)	123.366			

*** $p < .01$, ** $p < .05$, * $p < .1$

Pooled OLS Results Interpretation:

The analysis of the linear regression looks at the influence of the deposit growth rate and other bank-specific variables on the stability of the bank, in terms of Capital Adequacy Ratio (CAR). The results are based on 30 observations.

The Deposit Growth rate (DGR) coefficient is 0.091 which shows a positive correlation with CAR. This implies that an increase in deposit growth can enhance bank stability. The p-value of 0.093 however indicates that this relationship is not statistically significant at the 5% level but it is weakly significant at the 10% level.

The coefficient of Loan to Deposit Ratio (LDR) is -0.075 and is significant at the 5% level ($p = 0.014$). This means that as LDR increases, the stability of banks is impacted negatively, that is, the more the banks loan as compared to bank deposits, the more the financial risk.

Return on Assets (ROA) exhibits a good positive and significant relationship with CAR. The coefficient is 2.041 with a p-value of 0.001 and it means that more profitable banks will have high capital adequacy and stability.

The coefficient of Cost of Fund (COF) = -0.206 which shows that it has a negative correlation with CAR. Nevertheless, the p-value of 0.362 indicates that such effect is not significant statistically.

Equally, bank size (BS) has a negative coefficient of -0.197 and a p-value of 0.215, which means that the bank size is not a significant factor in influencing the stability of banks in this model.

The value of R-squared is 0.683 indicating that the independent variables explain about 68.3 percent of variation in CAR. F-statistics = 10.338 and the probability value = 0.000 means that the entire model is significant. So the findings indicate that the most significant determinants of the bank stability are ROA and LDR with the weak positive but insignificant contribution of DGR.

5.6: Multicollinearity Test (VIF) :

Variable	VIF	1/VIF
COF	1.53	0.654975
LDR	1.48	0.674964
DGR	1.42	0.702383
BS	1.27	0.784604
ROA	1.27	0.789610
Mean Vif	1.39	

Multicollinearity Test (VIF) Interpretation.

The Variance Inflation Factor (VIF) test was done to investigate the existence of multicollinearity among the independent variables. The findings indicate that VIFs of all the explanatory variables are not very high, with the COF (1.53), LDR (1.48), DGR (1.42), BS (1.27), and ROA (1.27). The mean VIF is 1.39.

All of the VIF values are also significantly lower than the generally accepted value of 5, which means that the independent variables do not have a severe multicollinearity issue. Thus, the regression estimates will be accurate and will not be influenced by a high level of correlation between the explanatory variables.

5.7:Random Effects Model (GLS)

Model Estimation

Generalized Least Squares (GLS) is used to estimate the Random Effects (RE) model to test the effect of Deposit Growth Rate (DGR), Loan to Deposit Ratio (LDR), Return on Assets (ROA), Cost of Fund (COF) and Bank Size (BS) on the bank stability, which is measured by Capital Adequacy Ratio (CAR). The results of the model indicate that the overall model is statistically significant, as the Wald chi-square value is 51.69, and the probability value (Prob > chi 2) is 0.000. This means that there is a strong influence of the independent variables on the dependent variable. R-squared value also shows that about 68.29 percent of the change in CAR can be attributed to the explanatory variables that were used to come up with the model.

CAR	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
DGR	.091	.052	1.75	.081	-.011	.193	*
LDR	-.075	.028	-2.66	.008	-.13	-.02	***
ROA	2.041	.568	3.59	0	.927	3.155	***
COF	-.206	.221	-0.93	.352	-.639	.228	
BS	-.197	.154	-1.27	.203	-.499	.106	
Constant	17.007	2.633	6.46	0	11.846	22.167	***
Mean dependent var	9.018		SD dependent var	2.431			
Overall r-squared	0.683		Number of obs	30			
Chi-square	51.690		Prob > chi2	0.000			
R-squared within	0.692		R-squared between	0.772			

*** $p < .01$, ** $p < .05$, * $p < .1$

Random Effects Model (GLS) - Interpretation.

Interpretation of Variables

The coefficient of Deposit Growth Rate (DGR) is positive (0.090), which is slightly significant ($p < 0.10$) and indicates that the greater the growth in deposits, the better the bank stability will be, though negligible.

The LDR Coefficient is negative (-0.074) and is statistically significant ($p < 0.01$) which means that increased lending as compared to deposits decreases the stability of a bank. This implies that heavy lending raises the risk of finances.

The coefficient of Return on Assets (ROA) is positive (2.040) and significant ($p < 0.01$) which means that more profitable banks are more likely to be capital adequate and hence stable.

The coefficient of Cost of Fund (COF) has a negative value (-0.205) but is not statistically significant ($p > 0.05$) which means that increasing the cost of funds can decrease stability, but the effect is not significant enough to be statistically verified.

Likewise, the coefficient of Bank Size (BS) is negative (-0.196) and not significantly significant, hence the big bank size in this model does not significantly affect stability.

In general, according to the Random Effects model, profitability (ROA) has a significant positive impact on bank stability whereas the excessive lending (LDR) has a negative impact on it. The growth of deposits exhibits a feeble positive impact, but cost of funds and bank size show no significant impact.

5.8: Fixed Effects Model

Model Estimation

The Fixed Effects (FE) model is used to determine how Deposit Growth Rate (DGR), Loan to Deposit Ratio (LDR), Return on Assets (ROA), Cost of Fund (COF) and Bank Size (BS) affect bank stability, which is determined by Capital Adequacy Ratio (CAR).

The overall model has a statistically significant F-statistic of 15.83 with the probability value (Prob > F) of 0.000 indicating that the explanatory variables work together to affect the dependent variable. The value of R-squared (in the range of = 0.782) shows that about 78.2 percentage of the change in CAR can be attributed to the independent variables among the panel units.

CAR	Coef.	St.Err.	t-value	p-value	[95% Conf	Interval]	Sig
DGR	-.013	.052	-0.26	.8	-.121	.094	
LDR	-.15	.032	-4.63	0	-.217	-.083	***
ROA	1.843	.468	3.94	.001	.873	2.813	***
COF	-.495	.197	-2.52	.02	-.904	-.087	**
BS	-.144	.135	-1.07	.296	-.423	.135	
Constant	23.647	2.796	8.46	0	17.849	29.445	***
Mean dependent var	9.018		SD dependent var	2.431			
R-squared	0.782		Number of obs	30			
F-test	15.827		Prob > F	0.000			
Akaike crit. (AIC)	100.248		Bayesian crit. (BIC)	108.655			

*** $p < .01$, ** $p < .05$, * $p < .1$

Fixed Effects Model Interpretation.

Interpretation of Variables

The coefficient of Deposit Growth rate (DGR) is negative (-0.013) and statistically insignificant ($p > 0.05$) which implies that the deposit growth does not affect the bank stability significantly in the fixed effects model.

The value of the Loan to Deposit Ratio (LDR) coefficient is negative (-0.150) and has a significant value ($p < 0.01$), implying that increased loan exposure compared to deposits leads to a lower bank stability. This means that aggressive lending incurs more financial risk

The coefficient of Return on Assets (ROA) is positive (1.843) and significant ($p < 0.01$), which means that more profitable banks are more likely to keep the capital adequacy high, thereby increasing stability.

The coefficient of Cost of Fund (COF) is negative (-0.495) and has a significant statistical value ($p < 0.05$) indicating a negative relationship between bank stability and the cost of funding.

The coefficient of Bank Size (BS) is negative (-0.144) though not statistically significant ($p > 0.05$) indicating that bank size does not significantly affect stability.

So, The Fixed Effects model demonstrates that profitability (ROA) has a positive and significant impact on bank stability whereas a greater loan exposure (LDR) and cost of funds (COF) have a negative effect on stability. There are no significant impacts on deposit growth and bank size. The Fixed Effects model is more suitable, hence it is employed in the ultimate analysis based on the result of the Hausman test. The results suggest that even though the increase in deposits does not have a significant impact on stability, other bank-specific aspects like profitability and lending behavior are still important.

5.9: Hausman test

The Hausman test was done to identify which model to use between Fixed Effects and Random Effects. The chi-square value of the test is 9.30 and the p-value is 0.0096. The p-value is not greater than 0.05, which means that the null hypothesis is rejected, and so it is clear that the Fixed Effects model is the most suitable, whereas the Random Effects model is not. So, the final analysis is with Fixed Effects model.

Chi-square=9.30
Prob>chi2=0.0096

5.10: Final Model Selection:

According to the Hausman test, Fixed Effects model is chosen as the best model to use in this study. The test value indicates that p-value is lower than 0.05 meaning that the null hypothesis is not accepted and the Fixed Effects model is used instead of the Random Effects model. Thus, the last model to be analyzed in this study is the Fixed Effects model.

Finally, the Model is to be interpreted. Because the Fixed Effects model is chosen as the final model, all interpretations and conclusions of this study are made using the results of the Fixed Effects estimation. The model looks at the effect of the Deposit Growth Rate (DGR), Loan to Deposit Ratio (LDR), Return on Assets (ROA), Cost of Fund (COF), and Bank Size (BS) on the bank stability in terms of Capital Adequacy Ratio (CAR).

Chapter 6: Findings, Recommendation, Conclusion

6.1 Limitations of the Study

- The study is limited to only three state-owned commercial banks (Sonali, Janata, and Agrani), which may not represent the entire banking sector of Bangladesh.
- The analysis is based on secondary data collected from annual reports, which may contain reporting bias or inconsistencies.
- The study covers a specific time period (2010–2024), so the findings may not reflect long-term trends beyond this period.
- Only a limited number of variables (DGR, LDR, ROA, COF, BS) are considered, while other important factors such as macroeconomic variables (inflation, GDP, interest rate) are excluded.
- The study uses quantitative methods only and does not include qualitative analysis such as management efficiency or governance practices.
- Possible data limitations and missing values may affect the accuracy of the results.
- External factors like economic shocks, policy changes, and global financial conditions are not fully considered.

6.2 Major Findings of the Study

This section presents the major empirical findings of the study based on the Fixed Effects (FE) model. The analysis focuses on how Deposit Growth Rate (DGR) and other bank-specific variables influence bank stability, measured by the Capital Adequacy Ratio (CAR), in selected state-owned commercial banks in Bangladesh.

The key findings of the study are discussed as follows:

- Firstly, the results indicate that the Deposit Growth Rate (DGR) has a negative but statistically insignificant relationship with CAR. This suggests that although deposit growth is generally expected to enhance bank stability by increasing available funds, in this study it does not play a significant role in determining stability. This may be attributed to inefficient utilization of deposits or weak credit management practices, which limit the effective contribution of deposit growth to capital strength.
- Secondly, the Loan-to-Deposit Ratio (LDR) is found to have a negative and statistically significant impact on CAR. This implies that higher lending relative to deposits increases the exposure of banks to credit risk, thereby weakening their financial stability. Excessive lending may lead to a higher probability of default, which ultimately reduces the capital adequacy position of banks.

- Thirdly, the Return on Assets (ROA) exhibits a positive and statistically significant relationship with CAR. This finding highlights that more profitable banks tend to maintain stronger capital positions and are better equipped to absorb financial shocks. Increased profitability enhances internal capital generation, thereby contributing positively to overall bank stability.
- Furthermore, the Cost of Fund (COF) shows a negative and statistically significant relationship with CAR. This indicates that higher funding costs reduce bank profitability and weaken financial performance, which in turn adversely affects capital adequacy. As the cost of obtaining funds increases, banks face pressure on their earnings, ultimately reducing their stability.
- In addition, Bank Size (BS) is found to have a negative but statistically insignificant relationship with CAR. This suggests that the size of the bank does not play a decisive role in determining stability within the context of this study. While larger banks may benefit from economies of scale, they may also face operational complexities and inefficiencies, resulting in an unclear overall effect.

Overall, the findings of the study suggest that profitability and lending behavior are the most influential determinants of bank stability. In contrast, deposit growth and bank size do not have a statistically significant impact on stability in the selected state-owned commercial banks in Bangladesh.

6.3 Recommendations

Following the results of the study, the following recommendations are made to facilitate the stability of the banks in state owned commercial banks in Bangladesh:

- As Loan to Deposit Ratio (LDR) negatively and significantly affects the stability of the banks, banks ought to have more cautious lending policies and not overly provide loans without due risk evaluation.
- Since the impact of Return on Assets (ROA) on stability is highly positive, the banks need to concentrate on enhancing profitability by ensuring effective management of assets, control of costs, and improved investment choices.
- This adverse effect of Cost of Fund (COF) implies that the banks must make the required effort to minimize the cost of funding to the extent of the banks enhancing the deposit mobilization efforts and the optimal level of funding mix.
- Although Deposit Growth rate (DGR) is not significant, banks ought to make sure that the growth of deposits is accompanied with an effective use of funds so as to prevent inefficient distribution of funds.
- Because Bank Size (BS) is not a major determinant of stability, banks must focus on their efficiency in operation and risk management instead of just making them larger.

- Monitoring and supervision should be intensified by the regulatory authorities in order to make sure that banks have sufficient capital and adhere to proper risk management standards.

In general, banks have to pay more attention to enhancing profitability and risk management, instead of depending on the growth of deposits only, in order to attain financial stability in the long run.

6.4: Conclusion

The empirical results show that Deposit Growth Rate is statistically insignificant in influencing bank stability. This implies that the growth in deposits itself is not adequate to secure a high capital base or financial soundness of banks in general. On the other hand, the relationship of Loan to Deposit Ratio (LDR) and Cost of Fund (COF) with CAR is negative and substantial, which means that an excess in lending and an increase in the cost of funding contribute to the financial risk and undermine the adequacy of capital. Return on Assets (ROA) on the other hand has a positive and statistically significant association with CAR which indicates that profitability is important in promoting bank stability. Also, the trend analysis of CAR and DGR corroborates the empirical findings. These results indicate that Sonali bank has a relatively stable capital adequacy and steady deposit growth, but Janata bank and Agrani bank have decreasing CAR and unstable deposit growth as time goes by, and this indicates that they are becoming more vulnerable financially.

In general, the paper confirms the hypothesis that bank stability is not determined by one variable but a combination of several ones. Maintenance of financial stability is strongly dependent on profitability, sound lending policies and effective cost management. Thus, banks need to work on the efficiency of their operations, balanced lending policies, and control of the cost of funds in order to guarantee stability in the long term.

Lastly, this research can add to the extant literature by presenting empirical evidence on the same case in Bangladesh and a suggestion of practical implications to the bank management and policymakers on enhancing the stability of the banking.

References

- Allen, F., Carletti, E., Cull, R., Qian, J., Senbet, L., & Valenzuela, P. (2014). The African financial development gap. *Journal African Economies*, 23(5), 614–642. <https://doi.org/10.1093/jae/eju015>
- Athanasoglou, P. P., Brissimis, S. N., & Delis, M. D. (2008). Bank-specific, industry-specific and macroeconomic determinants of bank profitability. *Journal of International Financial Markets, Institutions and Money*, 18(2), 121–136. <https://doi.org/10.1016/j.intfin.2006.07.001>
- Bangladesh Bank. (2023). Annual report 2022–2023. Dhaka: Bangladesh Bank. <https://www.bb.org.bd>
- Basel Committee on Banking Supervision. (2019). Basel III: Finalising post-crisis reforms. Bank for International Settlements. <https://www.bis.org>
- Beck, T., De Jonghe, O., & Schepens, G. (2013). Bank competition and stability: Cross-country heterogeneity. *Journal of Financial Intermediation*, 22(2), 218–244. <https://doi.org/10.1016/j.jfi.2012.07.001>
- Berger, A. N., & Bouwman, C. H. S. (2017). Bank liquidity creation, monetary policy, and financial crises. *Journal of Financial Stability*, 30, 139–155. <https://doi.org/10.1016/j.jfs.2017.05.001>
- Boyd, J. H., & Runkle, D. E. (1993). Size and performance of banking firms: Testing the predictions of theory. *Journal of Monetary Economics*, 31(1), 47–67. [https://doi.org/10.1016/0304-3932\(93\)90016-9](https://doi.org/10.1016/0304-3932(93)90016-9)
- Demirgüç-Kunt, A., & Huizinga, H. (2019). Bank activity and funding strategies: The impact on risk and returns. *Journal of Financial Economics*, 98(3), 626–650. <https://doi.org/10.1016/j.jfineco.2010.06.004>
- Diamond, D. W., & Dybvig, P. H. (1983). Bank runs, deposit insurance, and liquidity. *Journal of Political Economy*, 91(3), 401–419. <https://doi.org/10.1086/261155>
- Dietrich, A., & Wanzenried, G. (2011). Determinants of bank profitability before and during the crisis: Evidence from Switzerland. *Journal of International Financial Markets, Institutions and Money*, 21(3), 307–327. <https://doi.org/10.1016/j.intfin.2010.11.002>
- Flamini, V., McDonald, C., & Schumacher, L. (2009). The determinants of commercial bank profitability in Sub-Saharan Africa. IMF Working Paper. <https://doi.org/10.5089/9781451871623.001>

- Goddard, J., Molyneux, P., & Wilson, J. O. S. (2004). The profitability of European banks: A cross-sectional and dynamic panel analysis. *The Manchester School*, 72(3), 363–381. <https://doi.org/10.1111/j.1467-9957.2004.00397.x>
- Kosmidou, K. (2008). The determinants of banks' profits in Greece during the period of EU financial integration. *Managerial Finance*, 34(3), 146–159. <https://doi.org/10.1108/03074350810848036>
- Levine, R. (2005). Finance and growth: Theory and evidence. In P. Aghion & S. Durlauf (Eds.), *Handbook of Economic Growth* (Vol. 1, pp. 865–934). Elsevier. [https://doi.org/10.1016/S1574-0684\(05\)01012-9](https://doi.org/10.1016/S1574-0684(05)01012-9)
- Louzis, D. P., Vouldis, A. T., & Metaxas, V. L. (2012). Macroeconomic and bank-specific determinants of non-performing loans. *Journal of Banking & Finance*, 36(4), 1012–1027. <https://doi.org/10.1016/j.jbankfin.2011.10.012>
- Maudos, J., & De Guevara, J. F. (2004). Factors explaining the interest margin in the banking sectors of the European Union. *Journal of Banking & Finance*, 28(9), 2259–2281. <https://doi.org/10.1016/j.jbankfin.2003.09.004>
- Pasiouras, F., & Kosmidou, K. (2007). Factors influencing the profitability of domestic and foreign commercial banks in the European Union. *Research in International Business and Finance*, 21(2), 222–237. <https://doi.org/10.1016/j.ribaf.2006.03.007>
- Rahman, M. (2019). *Banking sector challenges in Bangladesh*. Dhaka: Academic Press.
- Sufian, F., & Habibullah, M. S. (2010). Assessing the impact of financial crisis on bank performance. *Asian Economic Journal*, 24(1), 63–79. <https://doi.org/10.1111/j.1467-8381.2010.02030.x>
- Uddin, M. H., & Suzuki, Y. (2011). Financial sector development and economic growth: Evidence from Bangladesh. *International Journal of Economics and Finance*, 3(4), 102–112.
- World Bank. (2020). *Global financial development report 2020: Bank regulation and supervision*. Washington, DC: World Bank. <https://www.worldbank.org>

APPENDIX

Banks Name	Year	CAR	DGR	LDR	ROA	COF	BS
sonali bank ltd	2015	10.08	11.3	48	0.06	7.34	14.02
sonali bank ltd	2016	10.33	19.1	52.3	0.14	6.95	14.08
sonali bank ltd	2017	10.35	3.17	55.6	0.58	6.62	14.04
sonali bank ltd	2018	10.1	2.77	57.2	0.18	5.22	13.99
sonali bank ltd	2019	10.09	5.93	54.1	0.2	5.29	13.84
sonali bank ltd	2020	10.02	8.63	46.57	0.21	5.3	13.74
sonali bank ltd	2021	10.04	7.31	51.12	0.21	4.98	13.55
sonali bank ltd	2022	10.05	5.15	59.59	0.21	4.87	13.4
sonali bank ltd	2023	10.07	6.04	66.93	0.35	3.46	13.31
sonali bank ltd	2024	10.08	9.56	62.3	0.41	5.02	13.26
janata bank ltd	2015	10.16	9	65.19	0.7	9.06	13.4
janata bank ltd	2016	10.69	9	74.79	0.33	8.05	13.51
janata bank ltd	2017	10.06	10	70.77	0.33	8.04	13.58
janata bank ltd	2018	10.09	5.2	79	0.03	7.1	13.64
janata bank ltd	2019	10	2.2	79.33	0.03	6.63	3.69
janata bank ltd	2020	10.05	19.18	73.46	0.01	6.37	13.78
janata bank ltd	2021	8.98	23.32	67.7	0.24	6.15	13.95
janata bank ltd	2022	7.8	-0.16	82.93	0.09	6.21	14.05
janata bank ltd	2023	6.75	8.75	88.06	0.04	7.49	14.1
janata bank ltd	2024	0.93	-0.47	90.13	-2.09	8.93	14.17
agrani bank ltd	2015	10	0.111	55.64	0.5	4.05	10.94
agrani bank ltd	2016	10.03	0.1229	53.82	-1.12	3.89	11.04
agrani bank ltd	2017	10.24	0.0735	60.16	1	3.48	11.12
agrani bank ltd	2018	10.09	0.1727	63.66	0.13	3.89	11.28
agrani bank ltd	2019	10.02	0.1131	67.29	0.13	4.05	11.36
agrani bank ltd	2020	10.01	0.33	56.41	0.06	6.75	11.6
agrani bank ltd	2021	9	0.0956	59.29	0.06	6.55	11.69
agrani bank ltd	2022	8	-0.0772	78.35	0.1	6.11	11.65
agrani bank ltd	2023	4.57	0.0627	76.5	0.08	6.55	11.72
agrani bank ltd	2024	1.86	0.0033	79.64	-0.72	7.42	11.76