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Financial Institutions in Bangladesh: Assessing Performance, Risk, and Sectoral Contributions in 2023

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Abstract: Financial institutions (FIs) are vital to the economic fabric of Bangladesh, offering a range of services that support the production sector, employment generation, and overall economic growth. This study provides a comprehensive assessment of the performance, risk management practices, and sectoral contributions of FIs in Bangladesh as of end-December 2023. Utilizing data from 35 FIs, including fully government-owned, privately-owned, and jointly established institutions, the research evaluates their financial health through tools like stress testing and the CAMELS rating system. The analysis covers sources of funds, asset composition, liability-asset ratios, asset quality, profitability, capital adequacy, and liquidity. Additionally, the study examines the sector-wise concentration of loans and leases, highlighting the predominant allocation to the industry sector. The findings underscore the pivotal role of FIs in driving economic activities and provide insights into their risk profiles and performance metrics, essential for stakeholders and policymakers aiming to enhance financial stability and economic development in Bangladesh

Keywords: Economic, Finance, Management.

1. INTRODUCTION

Financial institutions (FIs) are indispensable pillars of economic stability and growth, playing a crucial role in mobilizing funds to fuel the production sector, foster employment, and stimulate economic progress. Their influence spans a wide range of financial services, including factoring, SME financing, syndicated financing, equity financing, term financing, merchant banking, venture capital, and working capital financing. Beyond these traditional services, FIs offer unique solutions such as asset-based lending with minimal collateral, which is particularly advantageous for new and potential businesses, especially small and medium-sized enterprises (SMEs) (AL-SAYED, M.E.R.I.T., 2020)

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In Bangladesh, the financial sector is composed of 35 operating financial institutions as of the end of December 2023. This diverse group includes three fully government-owned institutions, 19 privately-owned local companies, and 13 institutions with both local and foreign participation. These institutions collectively operate through 270 branches distributed across the country, underscoring their extensive reach and impact (Adu-Baffour, F., Daum, T. and Birner, R., 2021)
To evaluate the performance of FIs, Bangladesh Bank employs a range of tools, including on-site inspections, stress testing, and the CAMELS rating system. CAMELS, which stands for Capital adequacy, Asset quality, Management efficiency, Earnings, Liquidity, and Sensitivity to market risk, provides a comprehensive framework for assessing financial health. This chapter analyzes the performance of FIs based on these criteria, focusing on their sources of funds, asset composition, liability-asset ratio, asset quality, profitability, capital adequacy, and liquidity (Machiraju, H. R. 2010)
Effective risk management is paramount for the stability of financial institutions. The Basel III framework defines market risk as the potential for losses in on and off-balance sheet positions due to movements in market prices, including interest rate risk, equity price risk, foreign exchange risk, and commodity risk. The assessment of FIs' risk management practices includes analyzing their exposure to various types of risk and evaluating their compliance with regulatory standards (Stavrou, D. I., Ventikos, N. P., & Yang, Z. L. 2018).
Financial institutions significantly contribute to various sectors of the economy. Loans and leases provided by FIs are predominantly concentrated in the industry sector, followed by housing, trade, commerce, and other sectors. This sectoral allocation of funds reflects the strategic role of FIs in supporting industrial development, housing projects, and commercial activities. The analysis also considers the distribution of loans and leases within sub-sectors, identifying areas of high concentration and potential risks (Henderson, S. R. 2024).

2. RELATED WORK

Financial institutions (FIs) are crucial drivers of economic stability and growth, facilitating the mobilization of funds to spur production, generate employment, and stimulate economic progress. These institutions offer a diverse range of financial services, including factoring, SME financing, syndicated financing, equity financing, term financing, merchant banking, venture capital, and working capital financing. These services are essential in providing liquidity, reducing transaction costs, and mitigating risks, thus fostering a conducive environment for economic activities (Gurley & Shaw, 1955; Levine, 1997).
FIs provide unique financial solutions such as asset-based lending with minimal collateral requirements. This is particularly beneficial for new and potential businesses, especially small and medium-sized enterprises (SMEs), which often face challenges in accessing traditional forms of credit. By offering tailored financing options, FIs enable SMEs to expand and innovate, contributing significantly to economic growth and job creation (Beck, Demirguc-Kunt, & Levine, 2005).
As of end-December 2023, the financial sector in Bangladesh comprises 35 operating FIs, including three fully government-owned institutions, 19 privately-owned local companies, and 13 institutions with local and foreign participation. The extensive network of 270 branches

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across the country reflects the reach and impact of these institutions. This diversity in ownership and structure allows for a variety of financial products and services tailored to different market needs (Bangladesh Bank, 2023 et al., Rahman, A. (2023).

To evaluate the performance of FIs, Bangladesh Bank employs various tools, including on-site inspections, stress testing, and the CAMELS rating system. The CAMELS framework—encompassing Capital adequacy, Asset quality, Management efficiency, Earnings, Liquidity, and Sensitivity to market risk—provides a comprehensive assessment of financial health. Studies have shown that the CAMELS rating system is effective in predicting bank failures and assessing overall financial stability (Barr, Seiford, & Siems, 1994; Cole & Gunther, 1998).

Effective risk management is critical for maintaining the stability of financial institutions. The Basel III framework outlines the management of market risk, which includes interest rate risk, equity price risk, foreign exchange risk, and commodity risk. FIs must adhere to stringent regulatory standards to manage these risks effectively. Research has demonstrated that robust risk management practices, including stress testing and scenario analysis, are vital for financial institutions to withstand economic shocks (Jorion, 2007; Hull, 2012).

Financial institutions significantly contribute to various sectors of the economy through loans and leases. The industry sector, followed by housing, trade, and commerce, receives the majority of these funds. The sectoral allocation of funds by FIs supports industrial development, housing projects, and commercial activities, thereby stimulating economic growth. Studies have shown that well-distributed financial resources across different sectors enhance economic stability and growth (Rajan & Zingales, 1998).

An in-depth analysis of the loans and leases provided by FIs reveals a concentration in the industry sector, with significant allocations to housing, trade, and commerce. The Herfindahl-Hirschman Index (HHI) indicates a low level of concentration among various sub-sectors, suggesting a diversified portfolio that mitigates risk. This diversification is crucial for maintaining financial stability and supporting sustained economic growth (Herfindahl, 1950; Hirschman, 1964).

The liability-asset ratio is an important indicator of financial health, reflecting the proportion of liabilities to assets. Since 2017, the liability-asset ratio of the FIs sector has shown fluctuations, largely due to variations in equity contributions. A higher liability-asset ratio in 2023 compared to the previous year underscores the need for effective capital management to ensure financial stability (Modigliani & Miller, 1958).

3. METHODOLOGY

3.1 Data Collection

The study utilizes comprehensive data from the Department of Financial Institutions and Markets, Bangladesh Bank, covering the performance, risk management practices, and sectoral contributions of financial institutions (FIs) in Bangladesh. The data spans from 2022 to 2023 and includes financial statements, regulatory reports, and market analyses. The primary sources of data include:

- Annual reports of FIs
- Bangladesh Bank’s publications
- Financial statistics from the Bangladesh Bureau of Statistics (BBS)

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3.2 Variables and Measurements

The study examines several key variables to assess the performance, risk management practices, and sectoral contributions of FIs:

- **Sources of Funds**: Measured by the amounts raised from share capital, bonds, borrowings, term deposits, and other sources.
- **Asset Composition**: Includes cash, balances with Bangladesh Bank and other banks, investments, loans, leases, fixed assets, and non-financial assets.
- **Liability-Asset Ratio**: The proportion of total liabilities to total assets.
- **Asset Quality**: Measured by the non-performing loans (NPL) ratio and provision coverage ratio.
- **Profitability**: Analyzed through metrics such as return on assets (ROA), net profit after tax, and other operating income.
- **Capital Adequacy**: Evaluated using the Capital Adequacy Ratio (CAR).
- **Liquidity**: Assessed through the Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR).

3.3 Analytical Methods

1. **Descriptive Analysis**:
   - Summary statistics to describe the central tendency and variability of the data, including means, medians, and standard deviations.
2. **Trend Analysis**:
   - Examination of changes in key financial indicators over the study period, focusing on sources of funds, asset composition, liability-asset ratio, asset quality, profitability, capital adequacy, and liquidity.
3. **Comparative Analysis**:
   - Comparison of performance indicators across different types of FIs to identify patterns and differences in financial health and risk management.
4. **Correlation and Regression Analysis**:
   - Correlation analysis to explore relationships between variables.
   - Regression models to identify the factors influencing key performance metrics such as ROA, CAR, and NPL ratio.
5. **Risk Assessment**:
   - Assessment of risk management practices using the CAMELS rating system, which includes Capital adequacy, Asset quality, Management efficiency, Earnings, Liquidity, and Sensitivity to market risk.
6. **Sectoral Analysis**:
   - Evaluation of the sector-wise concentration of loans and leases, utilizing the Herfindahl-Hirschman Index (HHI) to measure the concentration within industry sub-sectors.

3.4. Data Validation

To ensure the reliability and accuracy of the data, the following validation steps are undertaken:

- Cross-verification with multiple data sources.
- Consistency checks for reported figures.

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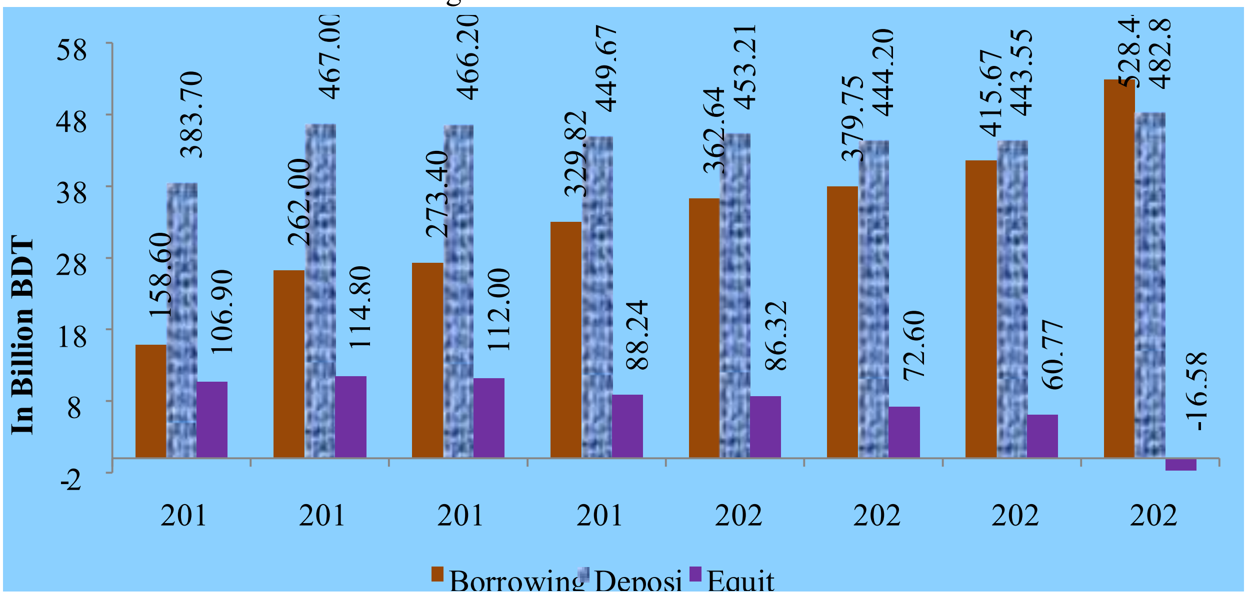
- Application of standard financial metrics and accounting principles to validate calculations.

4. RESULT AND DISCUSSION

4.1 Sources of Fund

The different funding sources of the FIs are illustrated in figure 1. Among the sources, borrowings, deposits, and equity were BDT 528.44 billion, BDT 482.81 billion, and BDT -16.58 billion representing 53.13 percent, 48.54 percent and -1.67 percent of total liabilities and equities of the FIs, as of end-December 2023. These shares were 45.18 percent, 48.21 percent, and 6.61 percent respectively at end-December 2022. It is noteworthy that borrowings and deposits increased by 27.13 percent and 8.85 percent respectively while equity registered a decline of 127.29 percent in the review year compared to those of the preceding year.

Figure 1: Fis' Sources of Funds



Source: Department of Financial Institutions and Markets, Bangladesh Bank.

4.2 Assets Composition

Among the different components of assets, investments and loans increased in 2023 in contrast to those of the preceding year (figure 2). The total assets of the FIs reached BDT 994.66 billion at end-December 2023 with an increase of 8.12 percent from the previous year. As of end-December of the review year, the share of loans and leases to total assets was 74.09 percent, which was 72.42 percent at end-December 2022. Cash, balance with BB, balance with other banks and FIs, money at call collectively held 14.30 percent of total assets in the reporting year, registering a decline of 1.85 percentage points compared to the position at end-December 2022. Likewise, loans accounted for 68.04 percent of total assets at end-December 2023, which was 4.72 percentage points higher compared to the same of end-December 2022. Investments, leases, and all other assets (including fixed and non-financial assets) constituted 4.84 percent,

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6.05 percent, and 6.78 percent of total assets in 2023 respectively. In addition, fixed assets and non-financial assets decreased by 91.54 percent and 90.31 percent respectively in the reporting year. FIs‟ total assets to GDP[1] ratio increased slightly to 3.10 percent in 2023 from 3.03 percent in the previous year (figure 3).

Figure 2: fIs asset composition

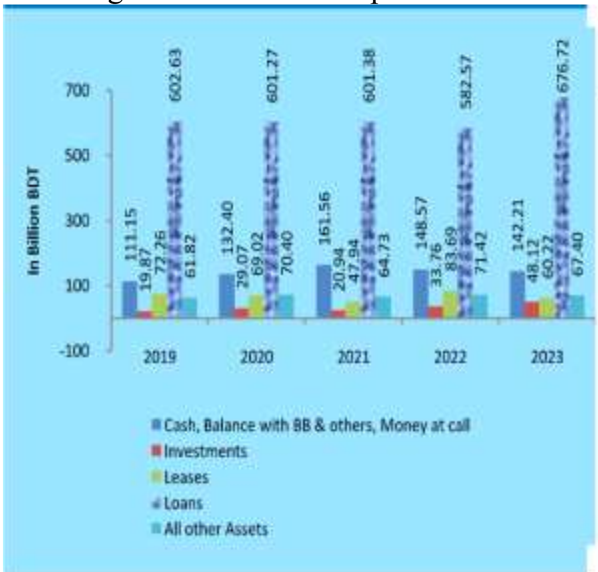
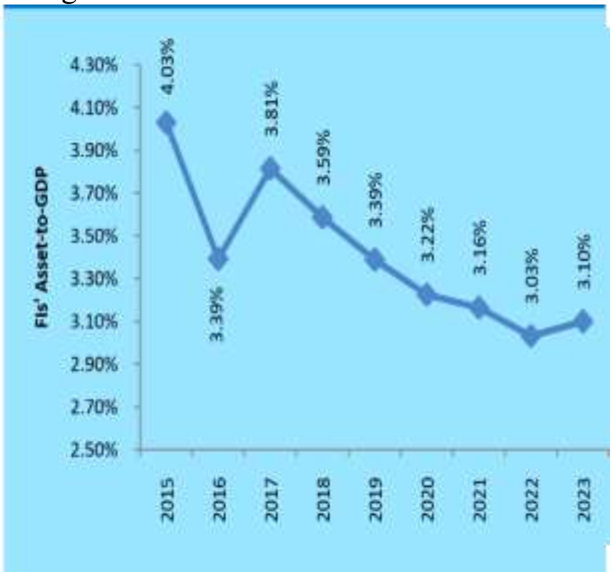


figure 3: fIs total assets to GDP ratio



Source: Department of Financial Institutions and Markets, Bangladesh Bank; Bangladesh Bureau of Statistics (Cited in Monthly Economic Trends, BB).

4.3 Sector-Wise Concentration of Loans

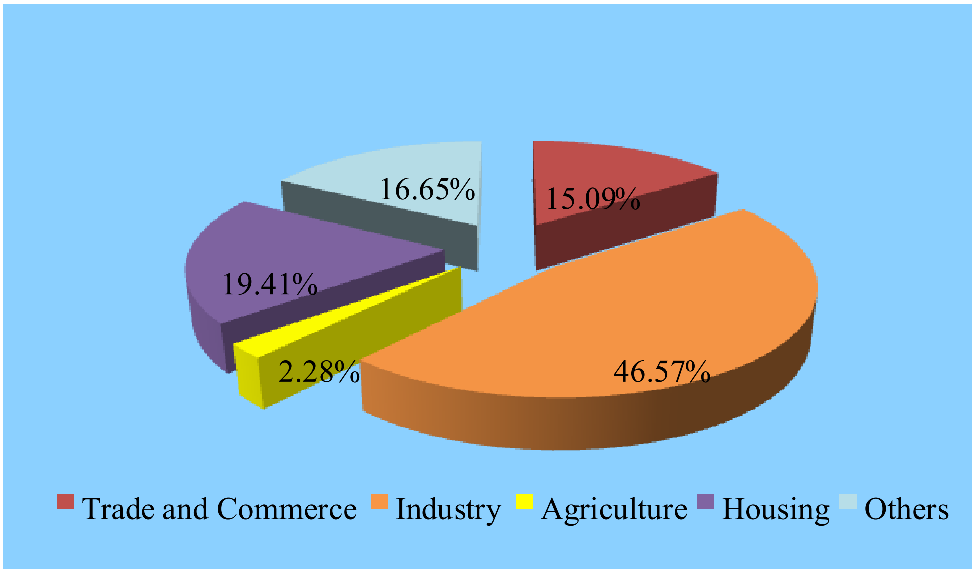


Figure 4: FI's Sector-Wise Share

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Source: Department of Financial Institutions and Markets, held only 2.28 percent of loans and leases of Bangladesh Bank.

The loans and leases of FIs are mostly concentrated in the industry sector followed by housing, others, and trade and commerce sector. The industry sector grabbed 46.57 percent of loans and leases of FIs at end December 2023 while the housing, others, and trade and commerce sectors shared 19.41 percent, 16.65 percent and 15.09 percent respectively (figure 4). The agriculture sector FIs during the period.

Table 1 displays FIs' loans and leases in different sub-sectors pertaining to the industry sector as of end December 2023. The aggregate value of the Herfindahl-Hirschman Index (HHI) was 974.77 at end December 2023, indicating a low-level of concentration[2] among different sub-sectors of the industry sector. Amongst the Industry sub-sectors, FIs‟ loans and leases were concentrated notably in the two foremost sub-sectors, namely the „power, gas, petroleum, water and sanitary‟ sub-sector and the garments and knitwear‟ sub-sector, accounting for 17.66 percent and 12.97 percent of total loans and leases in the industry sector respectively.

Table 1: Fis' Loans and Leases in Sub-Sectors of Industry Sector as Of End-December 2023

Sl. No	Sub-sector of Industry Sector	Amount in Billion BDT	Share Percentage	HHI
A)	Garments and Knitwear	44.52	12.97%	168.25
B)	Textiles	40.91	11.92%	142.09
C)	Food Production, Processing & Rice Mills	25.78	7.51%	56.40
D)	Jute and Jute products	2.61	0.76%	0.58
E)	Plastic & Rubber Industry	9.10	2.65%	7.02
F)	Leather and Leather goods	4.44	1.29%	1.67
G)	Iron, Steel and Engineering	35.51	10.35%	107.12
H)	Pharmaceuticals and Chemicals	19.45	5.67%	32.15
I)	Cement and Allied Industry	21.60	6.29%	39.56
J)	Paper, Packaging, Printing, Publishing & Allied Industry	11.49	3.35%	11.22
K)	Wood, Furniture & Fixture	3.17	0.92%	0.85
L)	Glass, Glassware & Ceramic Industry	8.11	2.36%	5.57
M)	Ship Manufacturing & Breaking	5.29	1.54%	2.37
N)	Electronics & Electrical Products	7.57	2.21%	4.88
O)	Power, Gas, Petroleum, Water & Sanitary	60.62	17.66%	311.88
P)	Transport and Aviation	26.63	7.76%	60.22
Q)	Others	16.44	4.79%	22.94
	Industry Total	**343.24**	**100.00%**	**974.77**

Note: * - Herfindahl-Hirschman Index (HHI).

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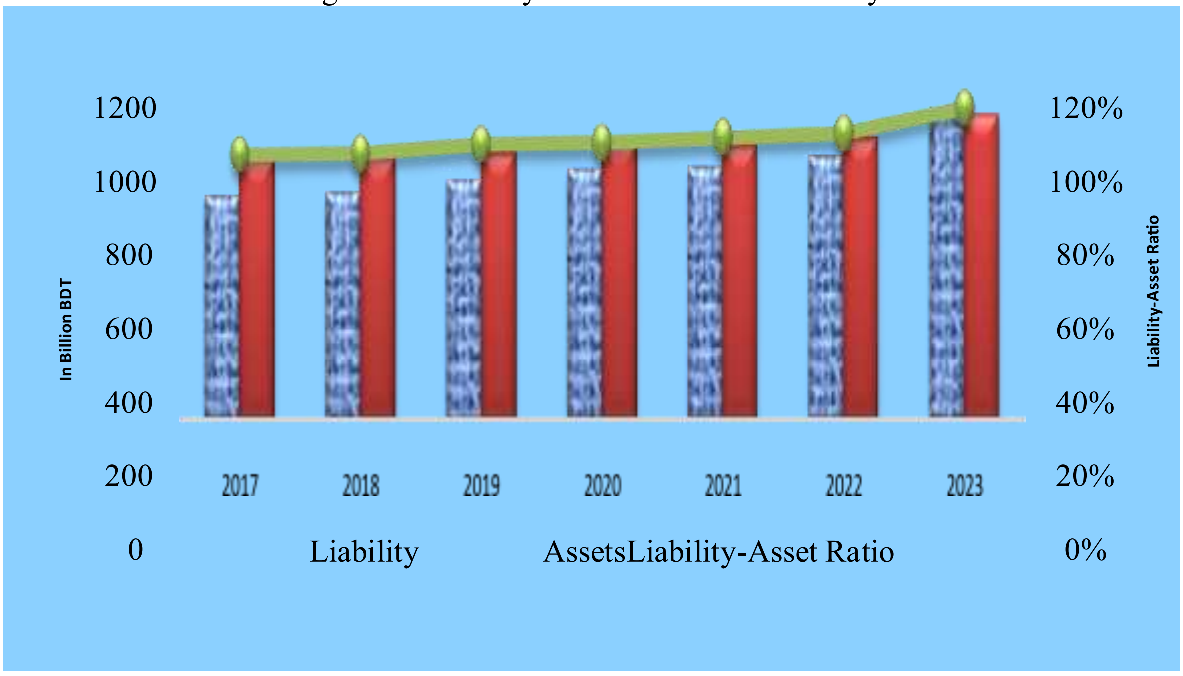
Source: Department of Financial Institutions and Markets, Bangladesh Bank.

4.4 Liability-Asset Ratio

Since 2017, the liability-asset ratio of the FIs sector has been experiencing some fluctuations with a smaller industry equity contribution (figure 5). At fund-December 2023, the liability-asset ratio rose to 101.67 percent, which was 8.27 percentage points higher than that of the previous year.

Figure .5: Liability-Asset Ratio of FI Industry



Source: Department of Financial Institutions and Markets, Bangladesh Bank.

4.5 Asset Quality

Aggregate non-performing loans and leases of the FIs increased to BDT 215.67 billion at end-December 2023 from BDT 168.21 billion at end-December 2022. The proportion of outstanding non-performing loans and leases to total non-performing loans and leases, i.e., NPL ratio, increased to 29.27 percent in 2023 from 23.88 percent in the previous year (figure 6). Out of 35 FIs, 18 had their NPL ratio higher than FI sector's overall NPL ratio, whereas only 06 FIs were able to maintain their NPL ratio below 05 percent. The industry recorded a provision shortfall of BDT 16.84 billion in 2023 against the required provisions of BDT 140.21 billion (figure 7). Additionally, the provision coverage ratio against all nonperforming loans and leases rose to 57.20 percent at end-December 2023 from 53.68 percent at end December 2022.

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Figure 6: NPL ratio of FI sector

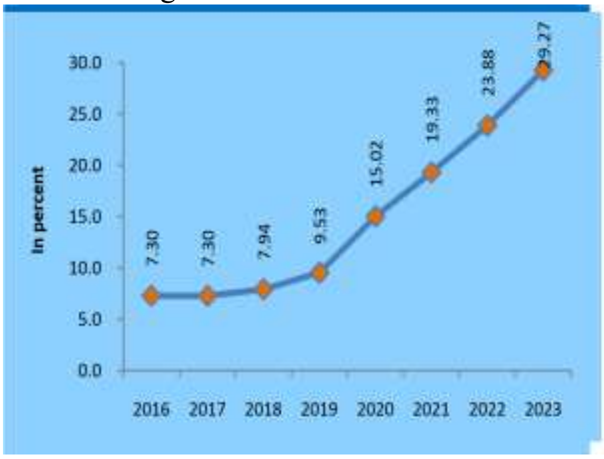
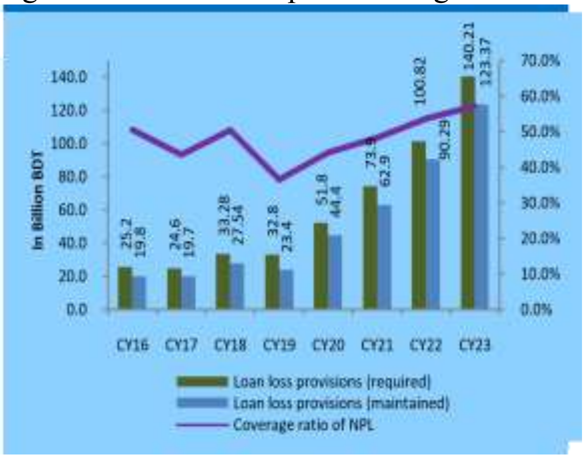


Figure 7: FIs loan loss provisioning



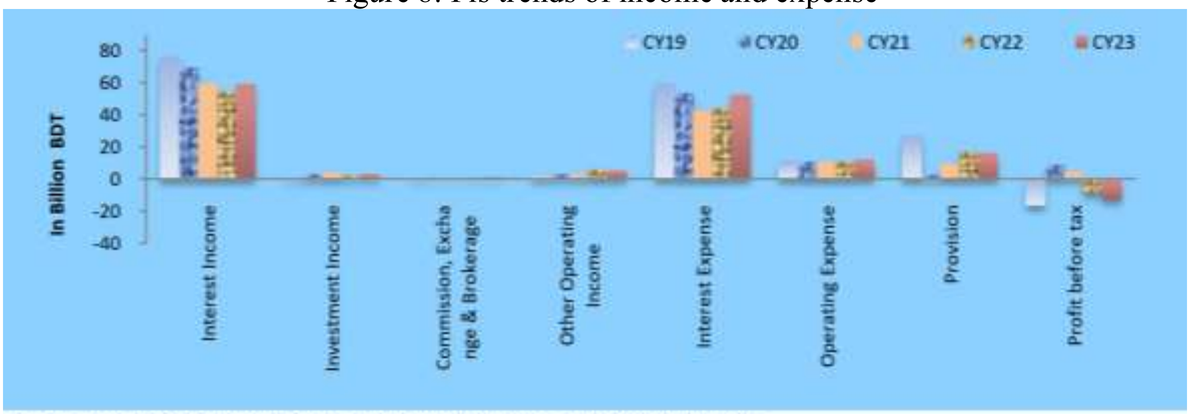
Note: 1. Provisional data were used for 2023.
2. HPL refers to classified loans and leases of the FI sector.
Source: department of Financial Institution and Markets, Bangladesh Bank.

4.6 Profitability

High NPLs exerted considerable negative impact on the overall profitability of the FIs as of end December 2023, which led to overall negative profit before taxes of the industry. In the review year, the FI sector as a whole incurred a loss of BDT 12.84 billion, a BDT 4.00 billion more from the preceding year (figure 8). Moreover, other operating income decreased by 13.37 percent during the period.

At end-December 2023, net profit after tax declined further compared to that of end-December 2022, indicating a challenging situation for the sector. As a result, compared to 2022, Return on Assets (ROA) of the sector experienced a significant decline. The ROA stood at -1.81 percent at end-December 2023, which was -1.27 percent at end-December 2022. The FI sector's net loss after tax was BDT 18.03 billion, while total shareholders‟ equity was BDT -16.58 billion at end-December 2023.

Figure 8: FIs trends of income and expense



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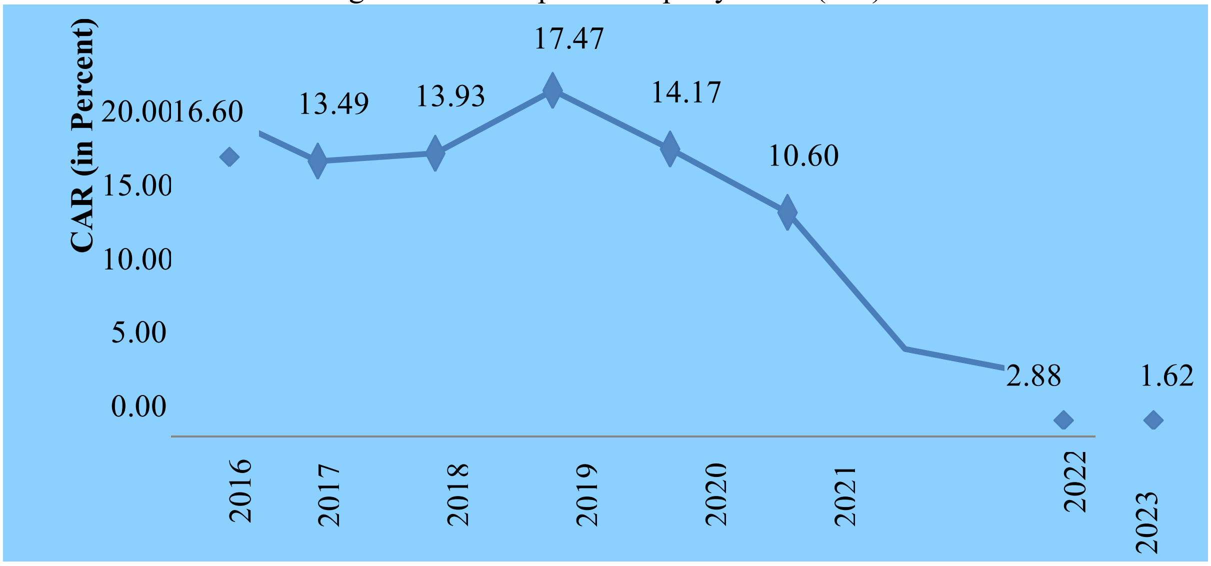
4.7 Capital Adequacy

Capital adequacy ratio (CAR) of the FIs sector has been on a declining trend for a number of consecutive years and reached to 1.62 percent at end-December 2023, notably lower than the minimum regulatory requirement of 10 percent, in line with Basel II framework (Figure 9)

Figure 9: Fis' Capital Adequacy Ratio (Car)

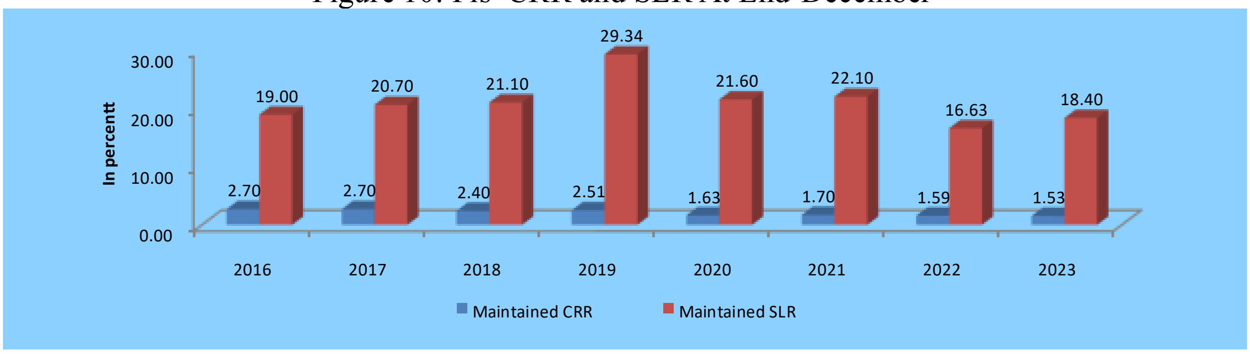


Source: Department of Financial Institutions and Markets, Bangladesh Bank.

4.8 Liquidity

The level of CRR and SLR maintained by FIs are considered to be the key indications of measuring industry liquidity. At end-December 2023, the FIs sector-maintained 1.53 percent of CRR and 18.40 percent of SLR. While CRR declined by 0.06 percentage point compared to that of end-December 2022, SLR improved by 1.77 percentage points. Nevertheless, both the ratios remained within the comfort zone (figure 10).

Figure 10: Fis' CRR and SLR At End-December



Source: Department of Financial Institutions and Markets, Bangladesh Bank.

The overall analysis illustrates that both borrowings and deposits of FIs increased whereas equity decreased in 2023 compared to those of 2022. As the equity of the FI sector came down

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to negative figure, it is a matter of concern for the FI industry. In contrast, the share of loans and leases increased during the period. Moreover, the loans and leases of the FIs are mostly concentrated in few sub-sectors under the industry sector. However, the concentration index measured by HHI reveals the absence of moderate or high concentration in the industry sub-sectors. The burgeoning trend in the NPL ratio and booking of extra loan loss provisions led to a worsening condition in income generation of the FIs. As a result, at end December 2023, ROA recorded a notable decline to -1.81 percent from -1.27 percent at end-December 2022. Moreover, the gradual decrease in the CAR may pose a threat to the stability of the FI sector. Therefore, proper attention appears to be necessary for improving asset quality, profitability and capital adequacy of the FI sector.

5. CONCLUSION

This study provided a comprehensive assessment of the performance, risk management practices and sectoral contributions of financial institutions (FIs) in Bangladesh. By exploring these aspects, the study emphasizes the key role of FIs in the country's economic landscape. Through various services such as SME financing, venture capital, and asset-based lending, FIs contribute significantly to economic stability and growth, particularly benefiting small and medium-sized enterprises (SMEs). The study reveals that effective risk management practices, linked to the Basel III framework, are critical to maintaining financial stability. Tools such as the CAMELS rating system have played an important role in assessing the financial health of FIs, focusing on capital adequacy, asset quality, management efficiency, earnings, liquidity and sensitivity to market risk. Additionally, the sectoral allocation of loans and leases highlights strategic aspects. Role of FIs in supporting industrial development, housing projects, and commercial activities. This targeted allocation of financial resources is essential to drive economic growth and stability.

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