BANGLADESH BANK
Central Bank of Bangladesh

Macro Prudential Supervision of Financial System

Bangladesh Systemic Risk Dashboard (BSRD)

Financial Stability Department
December 2022

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Advisor

Nurun Nahar
Deputy Governor

Editors

1. Md. Khurshid Alam, Executive Director (Grade-1)
2. Md. Alauddin, Director (FSD)

Co-editors

1. Dr. Bijoy Krishna Deb, Additional Director
2. Samiran Das, Joint Director
3. Shantanu Biswas, Joint Director
4. Mst. Shahida Kamrun, Deputy Director

Data Support

1. Banking Regulation and Policy Department
2. Department of Off-site Supervision
3. Department of Financial Institutions and Markets
4. Debt Management Department
5. Statistics Department

- *This dashboard is based on data and information available as of end December 2022, unless stated otherwise.*
- *This dashboard can be accessed through internet at https://www.bb.org.bd/en/index.php/publication/publictn/1/70*

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List of acronyms

ADR	Advance-to-Deposit Ratio
BB	Bangladesh Bank
BRPD	Banking Regulation and Policy Department
DFIM	Department of Financial Institutions and Markets
DMD	Debt Management Department
DOS	Department of Off-site Supervision
DSE	Dhaka Stock Exchange
DSEX	DSE Broad Index
FCBs	Foreign Commercial Banks
FIs	Financial Institutions
FSD	Financial Stability Department
FY	Fiscal Year
GDP	Gross Domestic Product
GNDI	Gross National Disposable Income
H1	First half of a calendar year
H2	Second half of a calendar year
IMF	International Monetary Fund
LCR	Liquidity Coverage Ratio
LHS	Left Hand Side
NBDC	Non-bank Depository Corporation
NFCs	Non-financial Corporations
NII	Net Interest Income
NPL	Non-performing Loan
NSFR	Net Stable Funding Ratio
PCBs	Private Commercial Banks
PD	Primary Dealer
P/E ratio	Price/Earnings Ratio
RHS	Right Hand Side
ROA	Return on Assets
ROE	Return on Equity
RWA	Risk-weighted Assets
SOCBs	State-owned Commercial Banks
SBs	Specialized Banks
T-bill	Treasury Bill
T-bond	Treasury Bond
TOI	Total Operating Income
Y-o-Y	Year-on-year

Bangladesh Systemic Risk Dashboard: An Overview

In keeping pace with its past development trajectory, Bangladesh's real GDP growth stood at 7.10 percent in FY22, although the IMF predicted that growth would be somewhat constrained the following year due to the forecasted downturn in the economies of its major trading partners. Thanks to several effective policy measures implemented by the Government and the central bank that aided in narrowing of the current account deficit during the review period after experiencing a widening trend over the prior periods. Likewise, Government deficit-to-GDP ratio fell, although both the aggregate and Government debt ratios in relation to nominal GDP grew in FY22 compared to FY21. Two other macroeconomic indicators, namely the household debt-to-Gross National Disposable Income (GNDI) ratio and the NFC debt-to-GDP ratio, accelerated in the second half of 2022.

There were growing tendencies in the annual growth rate of loans from banks and NBDCs to households and private non-financial corporations throughout 2022. Apart from that, banks continued to maintain both the LCR and the NSFR well above the required level in H2 of 2022, though the sector had to get liquidity support from Bangladesh Bank amounting BDT 7415.25 billion through the arrangement of assured liquidity support, Repo, and special Repo facilities as opposed to BDT 1716.31 billion in H1. During this period, the ADR for the banking industry was around 79.0 percent, recording an increase of 4.23 percentage points over the previous position.

Banks' investment in treasury bonds with a remaining maturity of over 5 years and up to 10 years remained the largest in terms of volume, whereas the ones with a remaining maturity of more than 15 years remained the smallest at end-December 2022. On the other hand, treasury bills with remaining maturities of up to 91 days remained the largest in terms of volume. Furthermore, there was an outstanding of BDT 180.0 billion in Shari'ah-based SUKUK bonds and BDT 46.48 billion in Special-Purpose Treasury Bonds (SPTB) of different maturities. Equity indices of DSE, the prime bourse of Bangladesh, moved downward and the market P/E ratio declined as well during H2 of 2022 compared to the preceding period. The average call money borrowing rate accelerated and also the weighted average interest rate on banks' advances and deposits rebelled slightly in the review period. The value of BDT in relation to the USD witnessed a significant depreciation.

Banks' gross NPL ratio came down at end-December 2022 compared to that of end-June 2022, which might have resulted in acceleration in the profitability indices of the sector such as ROA and ROE. Also, Tier-1 capital to RWA ratio increased marginally during this period. On the other hand, the NPL ratio of FIs continued to rise considerably, which led to decline in overall profit and significant erosion in the FIs' Tier-1 capital to RWA ratio, dripping to 0.97 percent against the regulatory threshold of 5.0 percent. The provision maintenance ratios for banks and FIs were 86.65 percent and 89.60 percent respectively at end-December 2022.

Annualized growth of banks' credit to the residential housing sector accelerated, while the same to the commercial housing sector and Government sector decelerated during the review period compared to those of the preceding period. NBDCs' contribution posted a growth in the housing sector but opposite took place in the Government sector. However, in terms of volume, both banks' and NBDCs' loans to counterpart sectors portrayed a gradual increase over time. Also, in both cases, NFCs occupied the lion's share. Banks' cross-border claim surged during the review period, though it remained very insignificant in comparison with the volume of their assets. Besides, assets to nominal GDP ratio for both domestic and foreign banks slightly increased at end-December 2022, while it plummeted for FIs. Banks' leverage ratio, defined as Tier-1 capital to total exposure according to Basel-III, increased, while the leverage ratio of FIs, defined as assets to capital, squeezed during the review period.

1. Macro risk

## 1.1 Current and forecasted real GDP growth
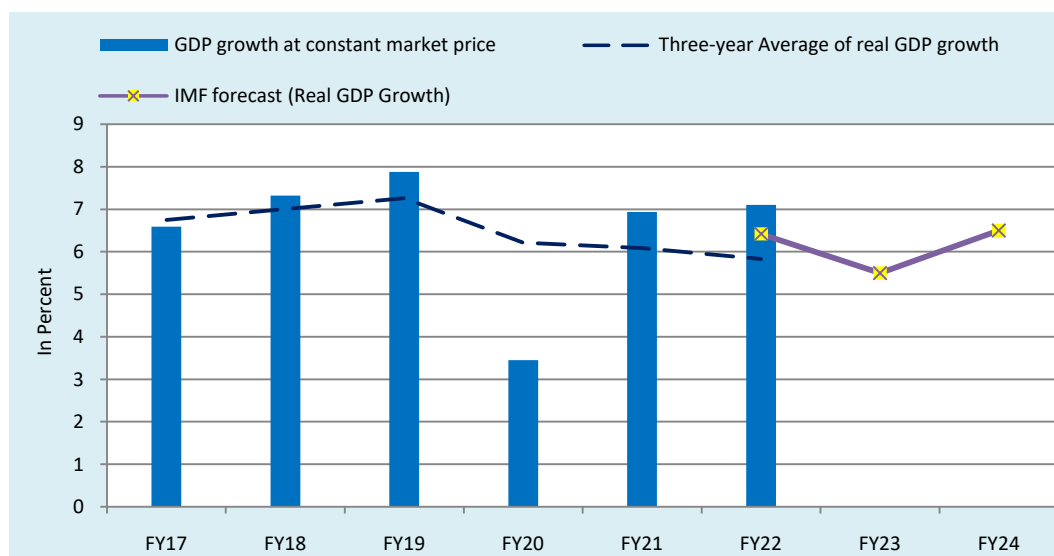
Notes: 1) The base year is 2015-16. 2) GDP growth at constant market price for FY22 is revised, and 3) As half yearly GDP is not calculated in Bangladesh, GDP growth is shown for only fiscal years.
Source: Monthly Economic Trends, Statistics Department, BB; IMF's World Economic Outlook, April and October 2023.

The real GDP growth was 7.10 percent in FY22, up from 6.94 percent in FY21, as the economic activities got notable momentum after the easing of Covid-19 situation and associated containment measures. However, according to the IMF's projections, growth may decelerate in FY23 due to the possible contagion effect of a worldwide economic downturn.

1.2 Current account balance-to-GDP ratio
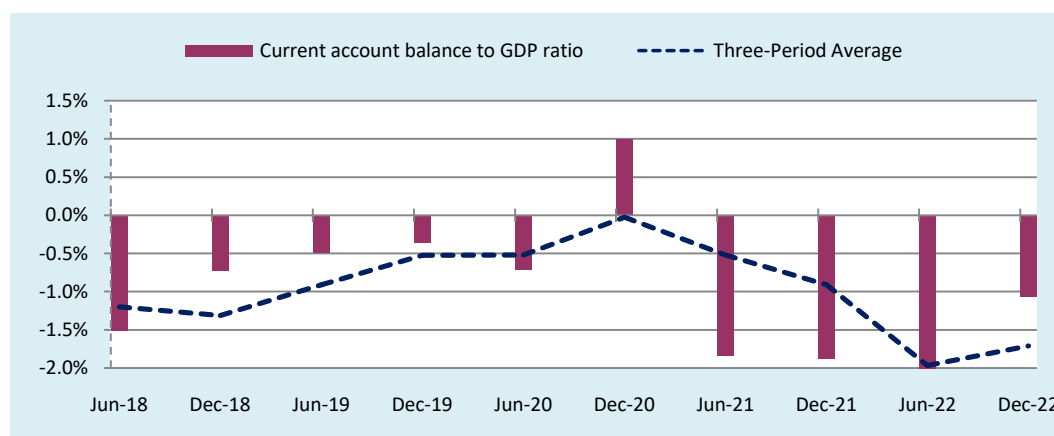
**Note:** 1) Data for June-22 is revised. 2) Provisional data is used for December-22. 3) As half yearly GDP is not calculated in Bangladesh, June based GDP data is used for December in calculating the concerned ratio.
Source: Monthly Economic Trends, Statistics Department, BB.

According to the chart, the current account deficit balance-to-GDP ratio narrowed in the second half of 2022 compared to the first half of the year.

1. Macro risk–Cont'd.
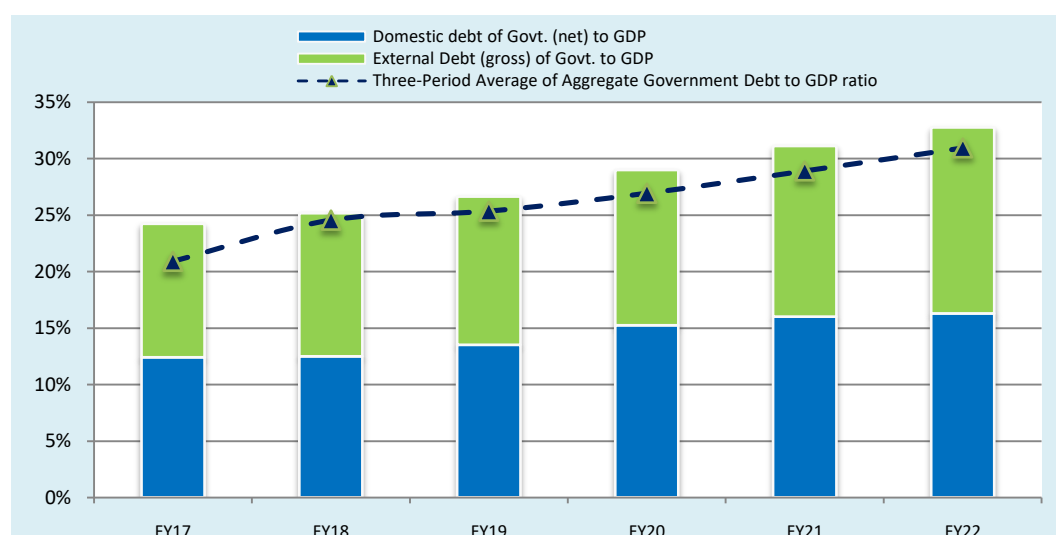
1.3 Aggregate debt-to-GDP ratio
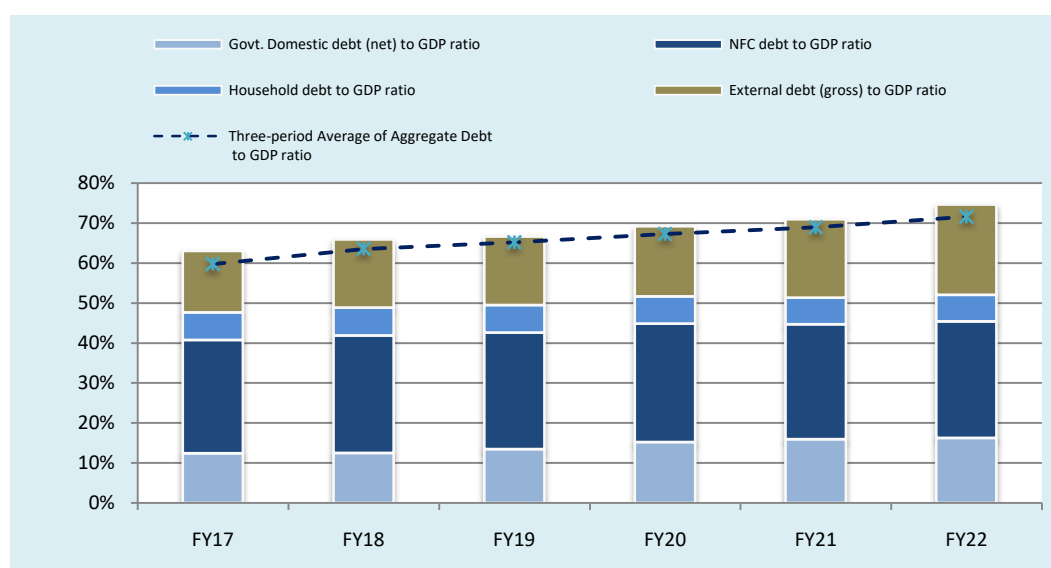
Notes: 1) Because of unavailability of half yearly data of GDP, aggregate debt-to-GDP ratio is shown only for fiscal years. 2) Aggregate debt includes both domestic and external debt position. 3) Domestic debt refers to the claims on Government (net), households, and non-financial corporation (NFC) by depository corporations. 4) FY22 data is revised.
Sources: Monthly Economic Trends, Statistics Department, BB; National Summary Data Page (NSDP), BB.

The aggregate debt-to-GDP ratio increased slightly in FY22 compared to FY21, continuing a trend of moderate growth. Non-financial corporations' debts persisted to make up the lion's share of total debt.
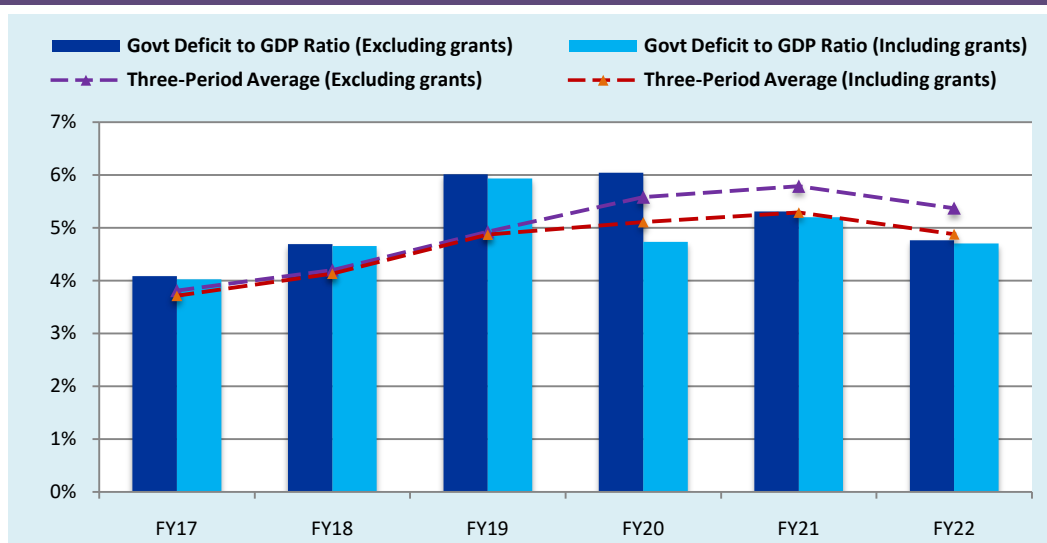
1.4 Government debt-to-GDP ratio

Notes: 1) Because of unavailability of half yearly data of GDP, the ratio is shown only for fiscal years.
Source: Monthly Economic Trends, Statistics Department, BB; National Summary Data Page (NSDP), BB.

In comparison with FY21, the Government's debt-to-GDP ratio emerged in FY22. The ratio has been showing an increasing trend since FY17.

2

1. Macro risk–Cont'd.

1.5 Government deficit-to-GDP ratio

Notes: 1) Because of unavailability of half yearly data of GDP, Government deficit-to-GDP ratio is shown for fiscal years only. 2) For FY20 to FY22, GDP is considered as per new base year 2015-16. 3) Data for FY2 is revised.
Source: Monthly Report on Fiscal Position, December-2022 issue, Ministry of Finance, Government of Bangladesh.

Compared to the preceding fiscal year, the Government's deficit-to-GDP ratio dropped in FY22, both including and excluding grants.

1.6 Household debt-to-gross national disposable income ratio
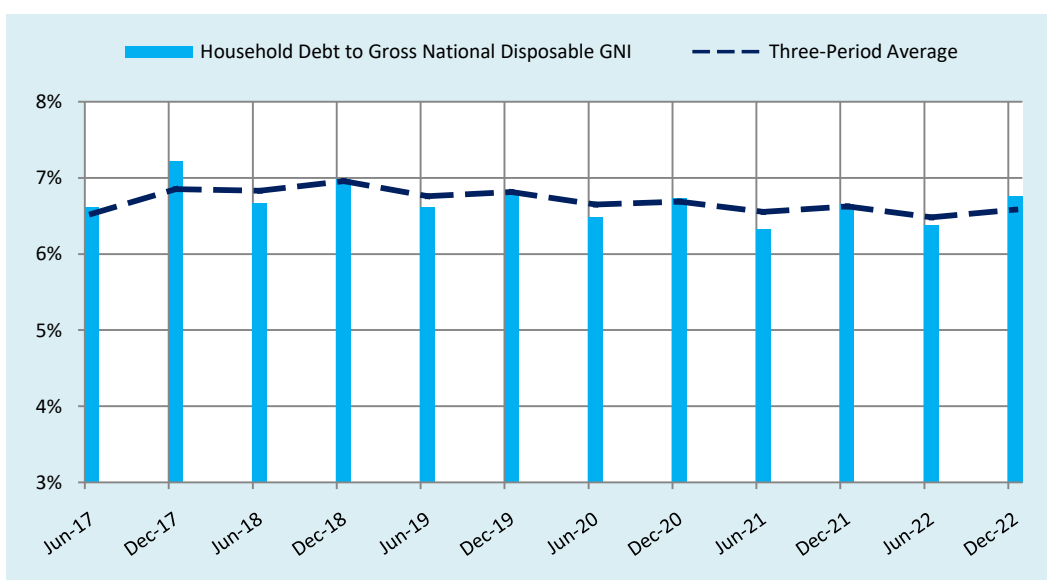
Notes: 1) Dec-22 based data is provisional. 2) Jun-22 based data is revised. 3) As half yearly gross national disposable income (GNDI) is not calculated in Bangladesh, June based data of gross national disposable income (GNDI) is used for December in calculating the ratio.
Sources: Monthly Economic Trends, Statistics Department, BB.

The ratio of household debt-to-gross national disposable income (GNDI) was higher in December 2022 compared to June 2022. Also, the ratio increased slightly from the position of December 2021.

1. Macro risk–Cont'd.

1.7 Non-financial Corporation (NFC) debt-to-GDP ratio
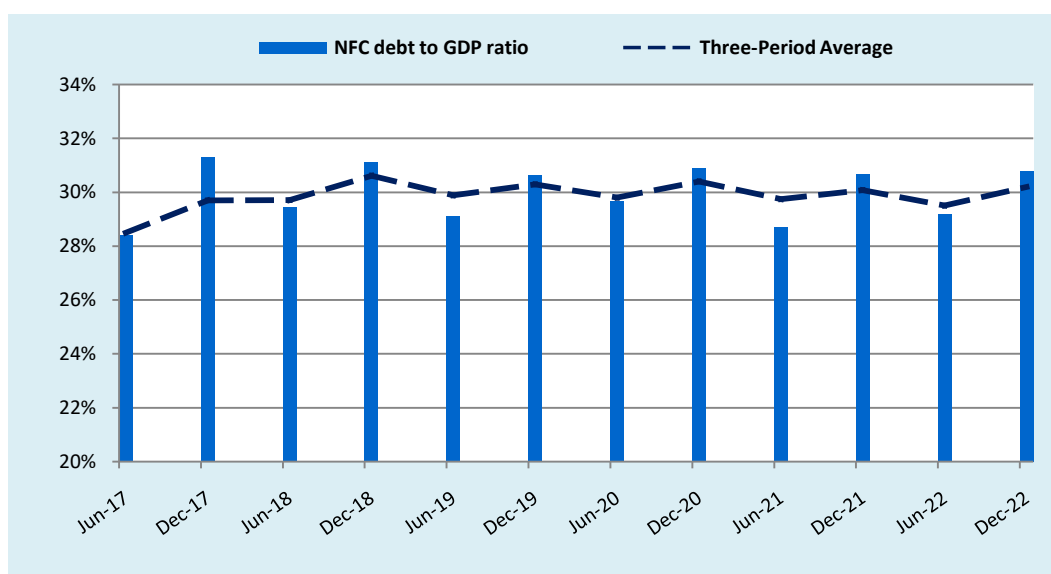
Notes: 1) Dec-22 based data is provisional. 2) Jun-22 based data is revised. 3) NFC debt includes debts of both public and private NFCs. 4) As half yearly GDP is not calculated in Bangladesh, June based GDP data is used for December in calculating the ratio.
Sources: Monthly Economic Trends, Statistics Department, BB.

The NFCs' debt-to-GDP ratio increased at end-December 2022 compared to that of end-June 2022. Also, the ratio rose in comparison with the same of end-December 2021. It is note-worthy that private NFCs' debt accounted for the major part of total NFC debt.

2. Credit risk

2.1 Annual Growth rate of banks' loans to households
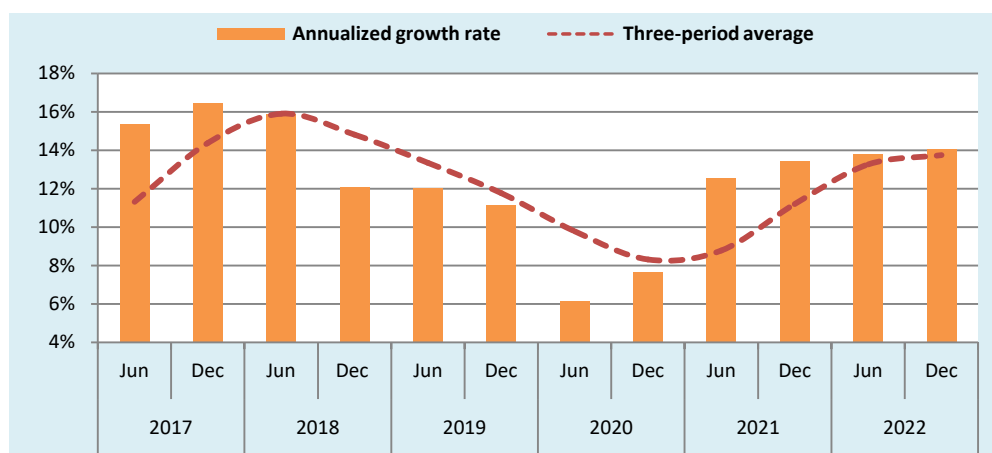
**Notes:** 1) Loans refer to outstanding loans and advances extended to domestic households (individuals) excluding bills.
2) Jun-22 data is revised.
Source: Statistics Department, BB.

An increasing growth propensity was observed from December 2020 to December 2022, in contrast to a general downward trend in banks' credit growth to the household sector after December 2017.

2.2 Annual Growth rate of NBDCs' loans to households
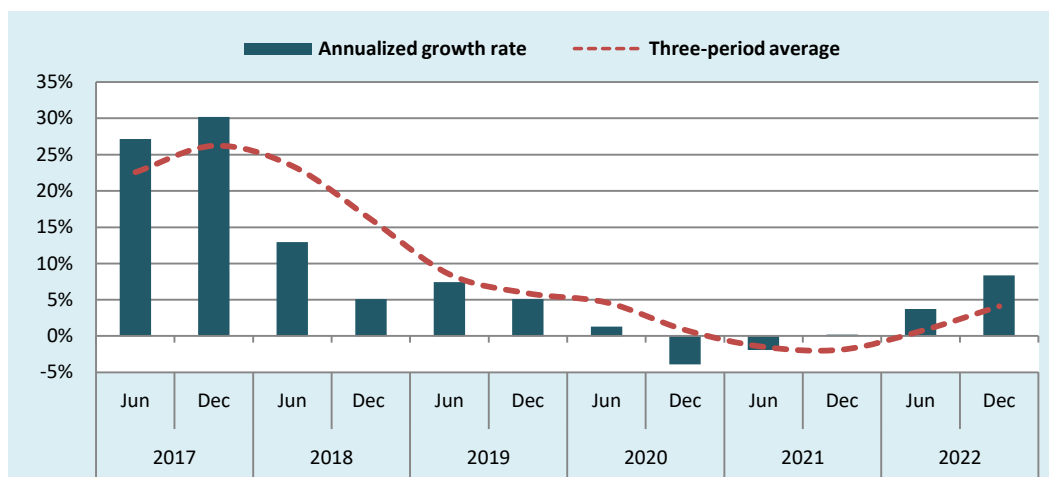
Notes: NBDCs include deposit taking FIs[1], Ansar-VDP Unnayan Bank, Karmasangsthan Bank, Grameen Bank and Bangladesh Samabaya Bank.
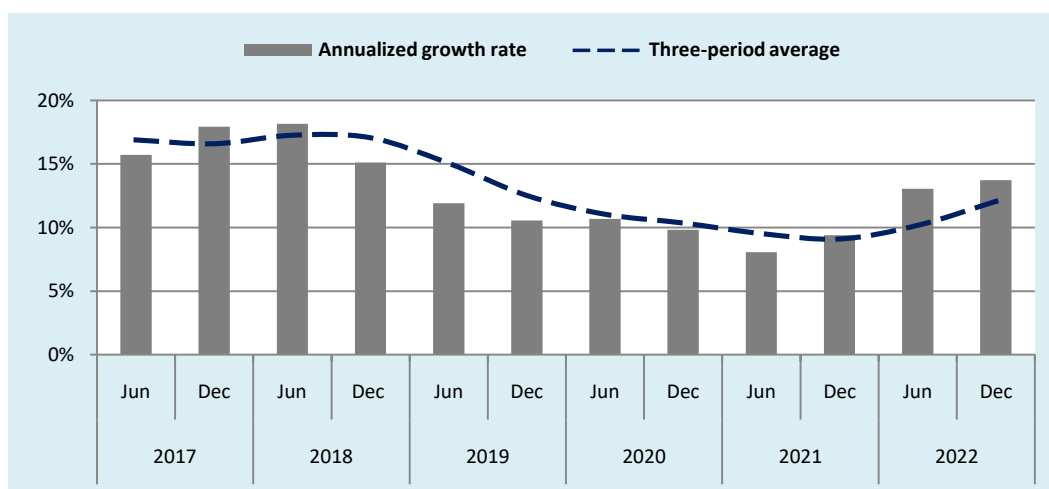**Source:** Statistics Department, BB.

After December 2017, the growth of non-bank depository corporations' (NBDC) loans to the household sector has been on a declining trend, and during FY21, the growth became negative. It then showed an upward trend, which continued till December 2022.

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[1]FIs refer to non-bank financial institutions. Out of 35 FIs, 29 are deposit taking FIs.

2. Credit risk–Cont'd.

## 2.3 Growth of banks' loans to private non-financial corporations

Notes: Loans refer to outstanding loans and advances extended to private NFCs excluding bills.
Source: Statistics Department, BB.

Following a general declining trend seen after June 2018, the growth of banks' loan to private NFCs registered a modest increasing trend from December 2021 to December 2022.

2.4 Growth of NBDCs' loans to private non-financial corporations
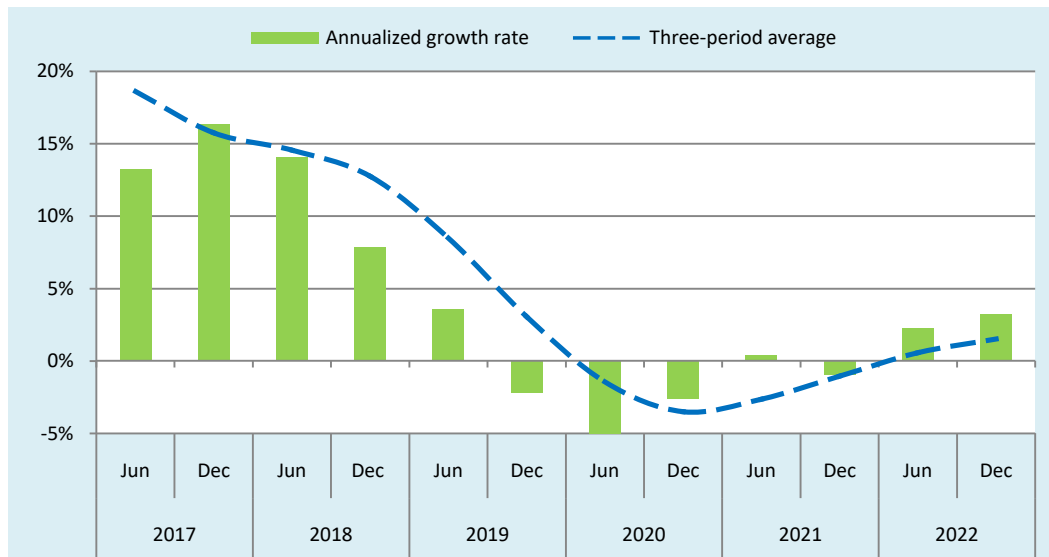

Notes: NFC refers to private NFCs only. NBDCs include deposit taking FIs, Ansar-VDP Unnayan Bank, Karmasangsthan Bank, Grameen Bank, and Bangladesh Samabaya Bank.
Source: Statistics Department, BB.

NBDCs' loans to private NFCs exhibited a positive growth in 2022, in contrast to the downward and negative growth that occurred over a few years until December 2021.

2. Credit risk–Cont'd.

2.5 Provision maintenance ratio of banks
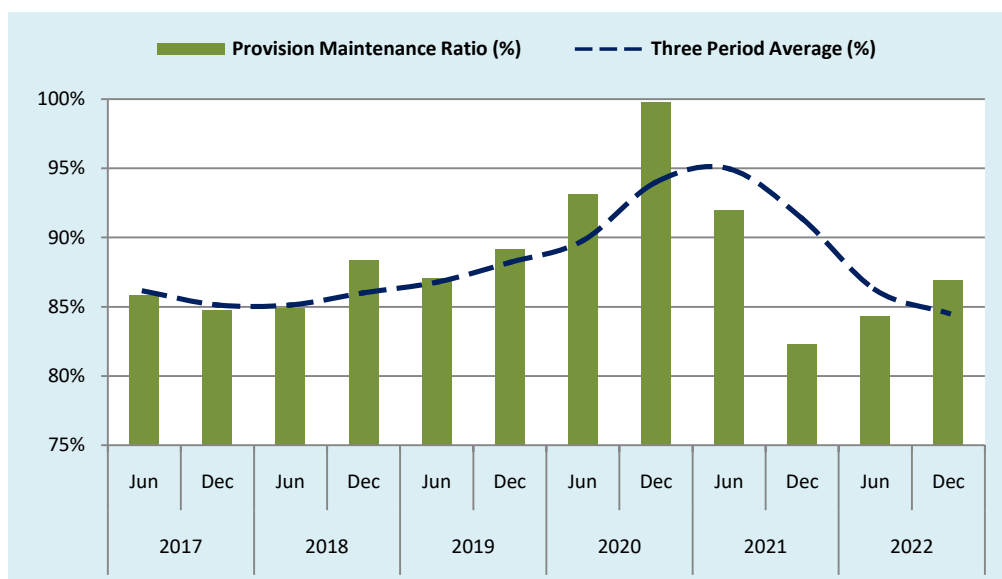
Notes: Provision maintenance ratio refers to maintained provision as a percentage of required provision.
Source: BRPD, BB.

Banks' provision maintenance ratio increased from end-June 2022 to end-December 2022, reaching 86.92 percent.

2.6 Provision maintenance ratio of FIs
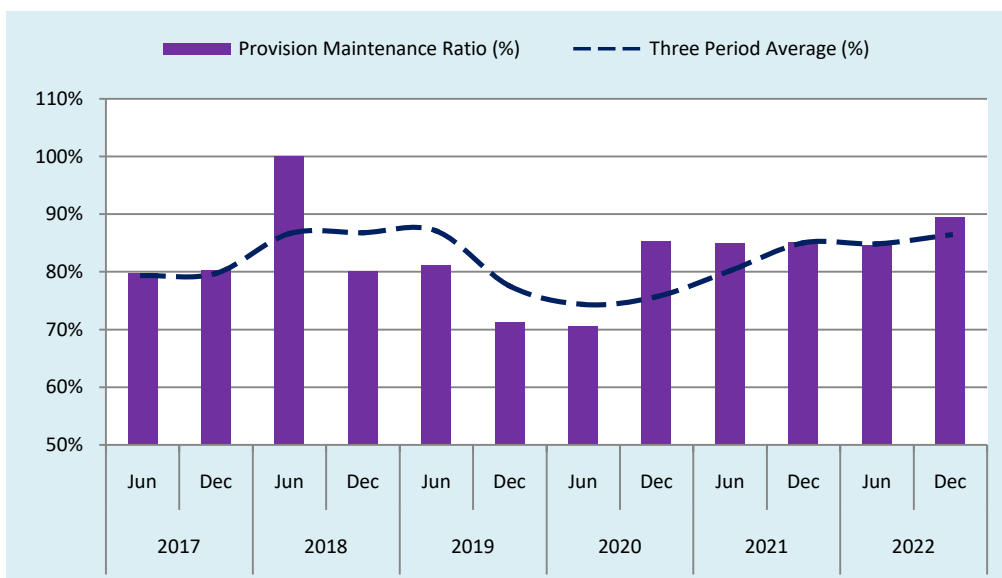
Notes: Data for June 2022 and December 2022 are un-audited.
Source: DFIM, BB.

After being almost unchanged between December 2020 and June 2022, FIs' provision maintenance ratio witnessed an increase at the end of December 2022 and reached 89.60 percent.

2. Credit risk–Cont'd.

2.7 Changes in banks' interest rates for housing loans

a. No. of banks having changes in their interest rates for housing loans

b. Percentage of banks having changes in their interest rates for housing loans

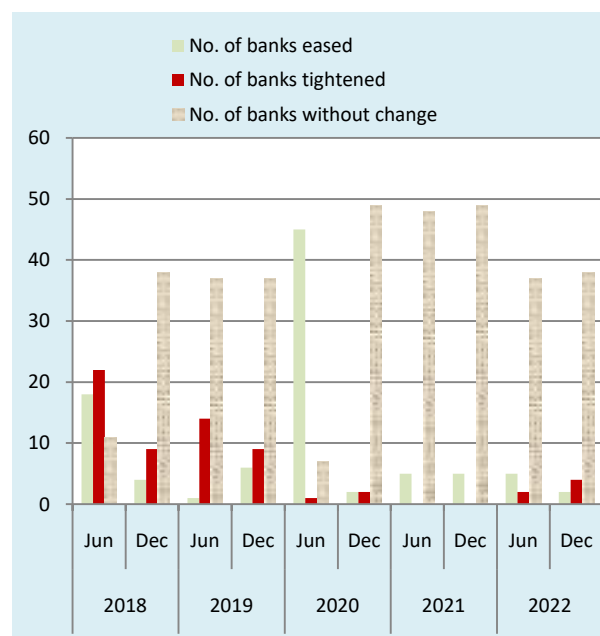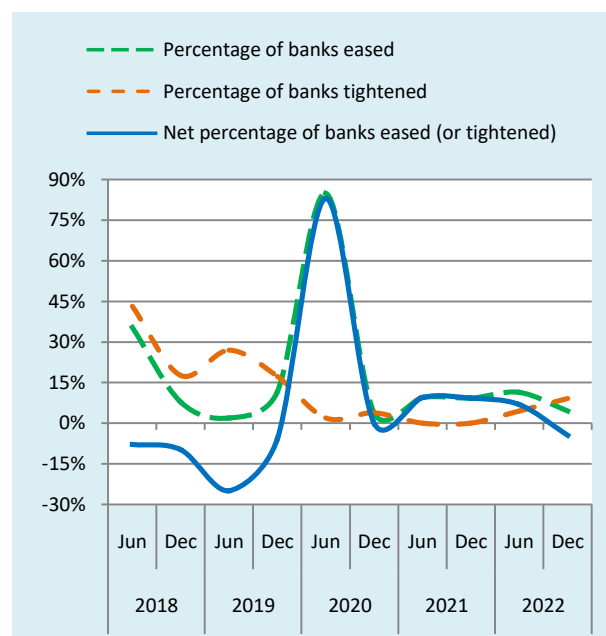**Notes:** Changes in banks' announced interest rate for housing loans have been used as a proxy for changes in banks' credit standards. Net percentage change is the difference between the share of banks reporting that interest rates have been eased (decreased) and the share of banks reporting that they have been tightened (increased). A positive net percentage change indicates that a larger proportion of banks have eased credit standards ("net easing"), whereas a negative net percentage change indicates that a larger proportion of banks have tightened credit standards ("net tightening").

Source: Monthly Economic Trends, Statistics Department, BB', and Scheduled bank lending rate, Bangladesh Bank website
(https://www.bb.org.bd/en/index.php/financialactivity/interestlending).

During the second half of 2022, 4.5 percent of 44 respondent scheduled banks eased the interest rates of housing loans, while 9.1 percent of banks tightened the same; the remaining banks kept their rates unchanged. As a result, after netting of, a net tightening was observed during this period.

3. Funding and liquidity risk

3.1 Bangladesh Bank's liquidity support to banks
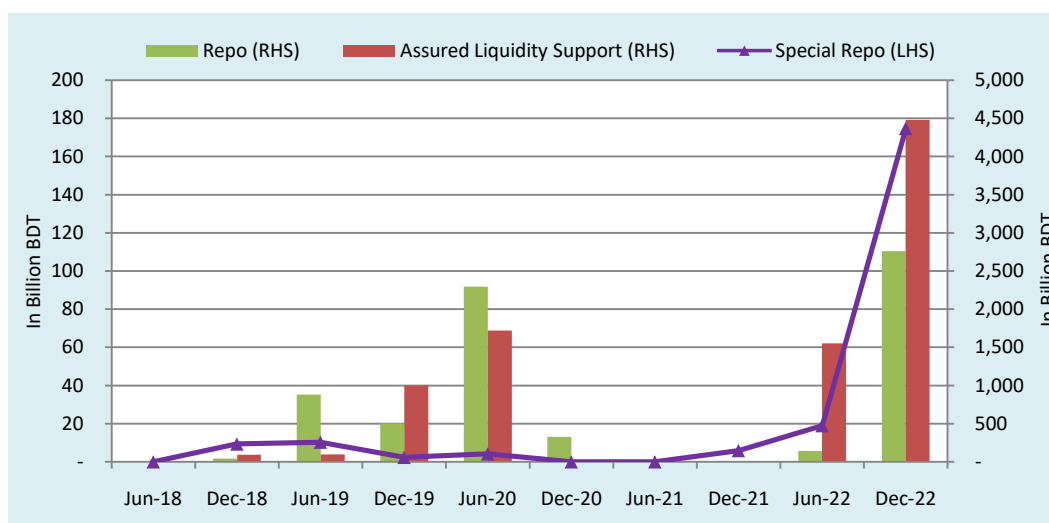
Source: DMD, BB.

Compared to the first half of 2022, Bangladesh Bank's liquidity assistance in the form of Assured Liquidity Support, Repo, and Special Repo extended substantially in the second half of the year.

3.2 Banks' advance-to-deposit ratio (ADR)
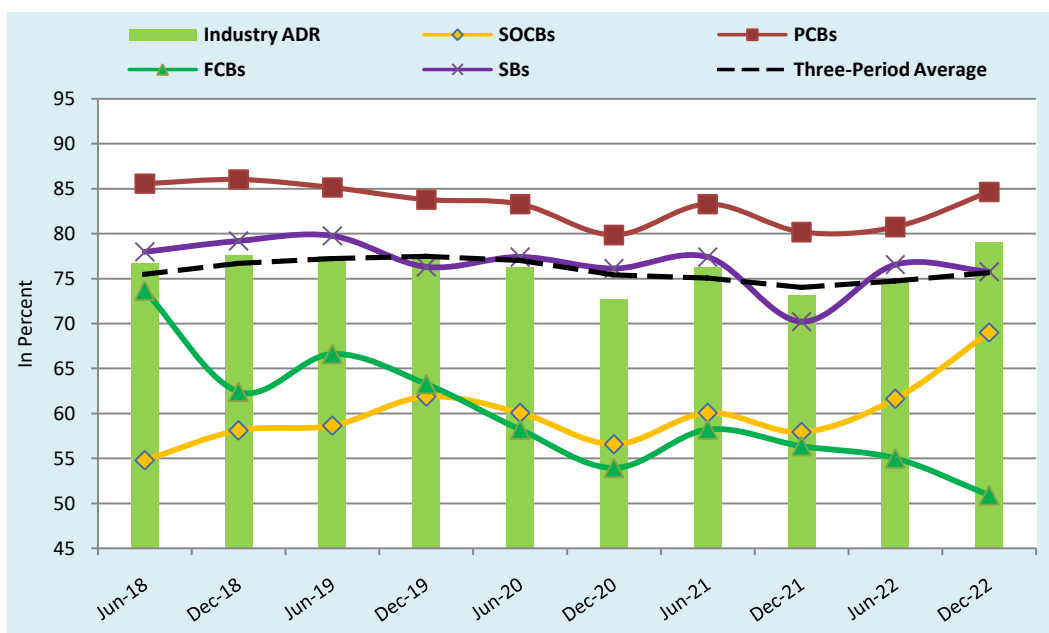
Source: DOS, BB.

The industry Advance-to-Deposit Ratio (ADR) rose steadily in 2022, reaching 79.0 percent at end-December 2022. PCBs had a larger ADR than the industry average, but FCBs and SOCBs had much lower ADRs. Notably, FCBs showed a continuous declining tendency in terms of ADR, in contrast to the industry trend.

3. Funding and liquidity risk–cont'd.

3.3 Maturity profile of Government's outstanding debt securities

a. Treasury Bond

Notes: The maturity profile refers to the residual maturity of long-term and short-term debt securities issued by Government of Bangladesh. Long-term debt securities include Government Treasury bond with a maturity of more than 12 months. Data are based on amounts outstanding at the end of the corresponding period.
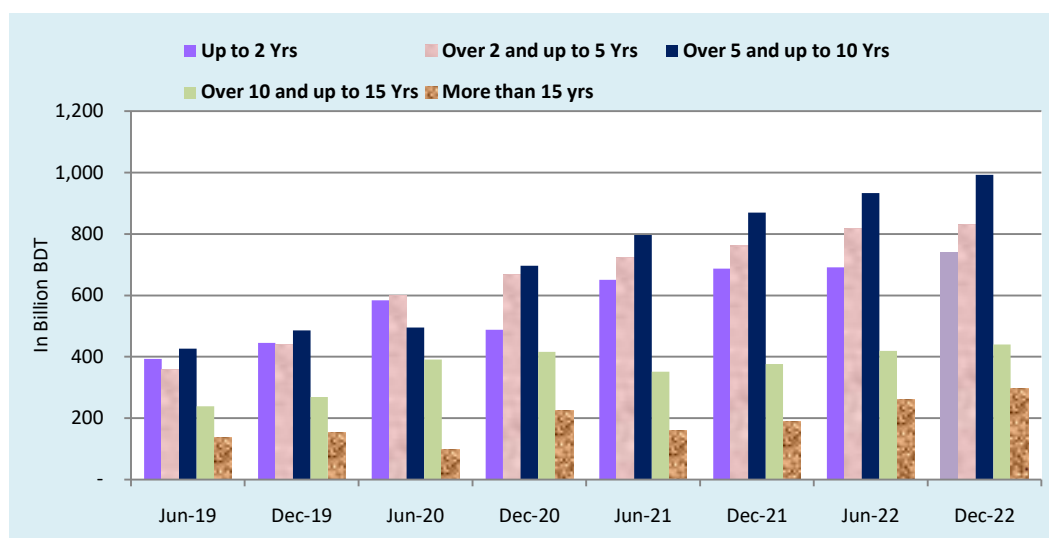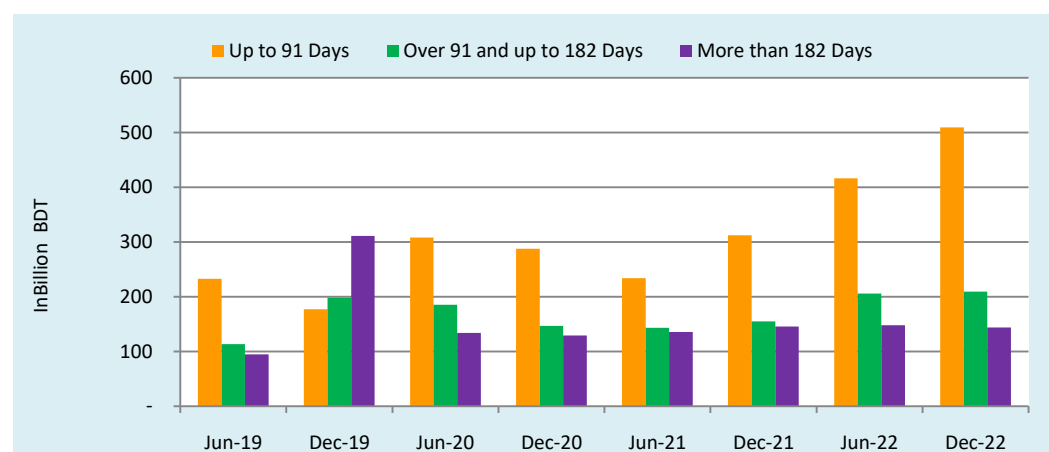**Source:** DMD, BB.

Treasury bonds with a remaining maturity over 5 and up to 10 years remained the largest in terms of volume, whereas the ones with remaining maturity of more than 15 years remained the smallest at end-December 2022. The overall balance of the treasury bonds increased in the review period compared to the preceding period. Additionally, there were Shari'ah-based SUKUK bonds worth BDT 180.00 billion and Special Purpose Treasury Bonds (SPTB) with various maturities amounting to BDT 46.48 billion.

b. Treasury Bill

Notes: Short-term debt securities include Government Treasury bill with a maximum maturity of 12 months. Data are based on amounts outstanding at the end of the corresponding period.
Source: DMD, BB.

Treasury bills with remaining maturities up to 91 days remained the largest in terms of volume. The outstanding of all the treasury bills except maturities more than 182 days increased at end-December 2022 compared to the position of end-June 2022.

3. Funding and liquidity risk–cont'd.

3.4 Subordinated debt
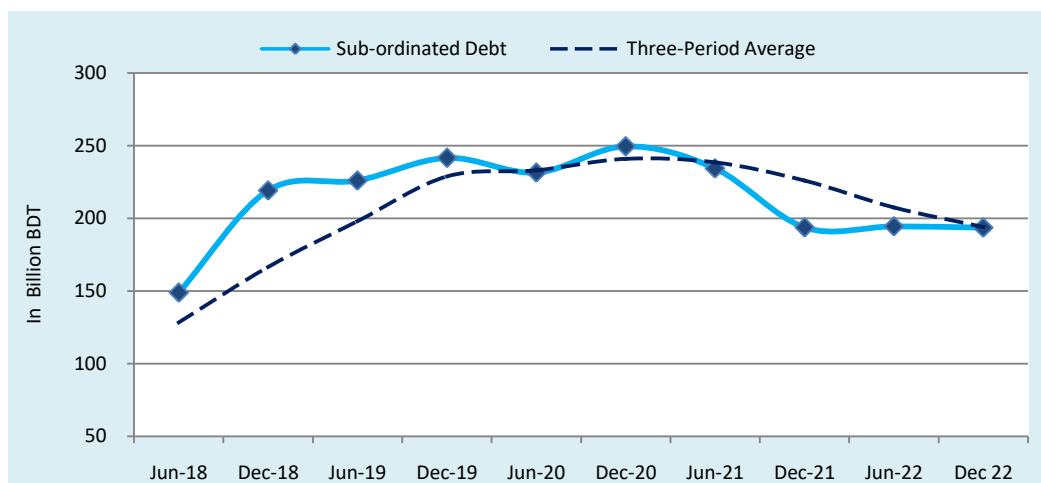
Note: Subordinated debts are eligible to be included as Tier-2 Capital for calculating the regulatory capital as per BASEL III Capital Framework.
Source: DOS, BB.

Subordinated debt issued by banks recorded in a slight decline at the end of December 2022 compared to the end of June 2022.

3.5 Banks' LCR and NSFR
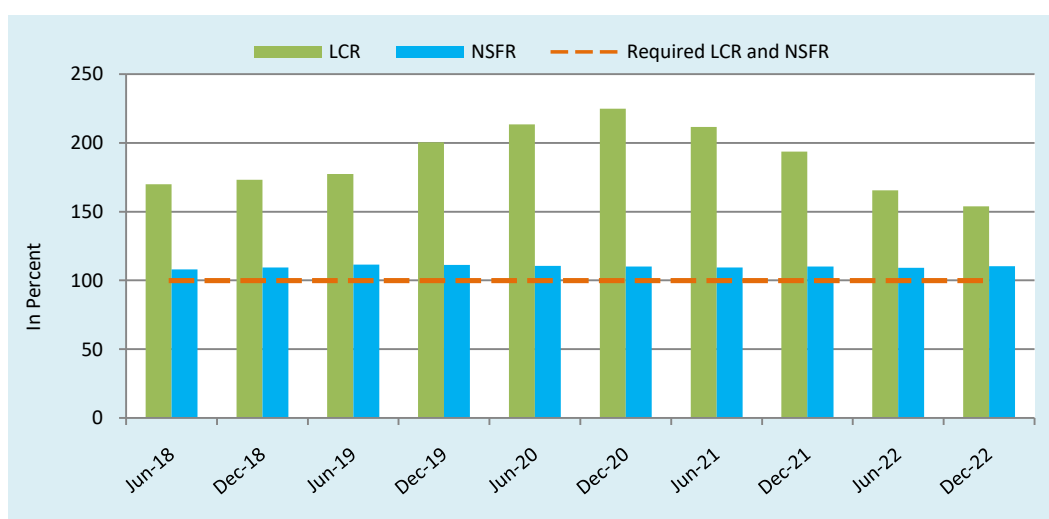
Note: 1) BDBL, BKB, PKB and RAKUB are exempted from maintaining LCR and NSFR. 2) Requirement for LCR is equal or greater than 100 percent and for NSFR, it is above 100 percent in Bangladesh.
Source: DOS, BB.

Though LCR was much higher than the minimum requirement in the review period, it exhibited a declining trend after December 2020. The NSFR, another indicator of banks' liquidity, remained constant at around 110 percent against the benchmark of 'above 100 percent'.

4. Market risk

4.1 Equity indices
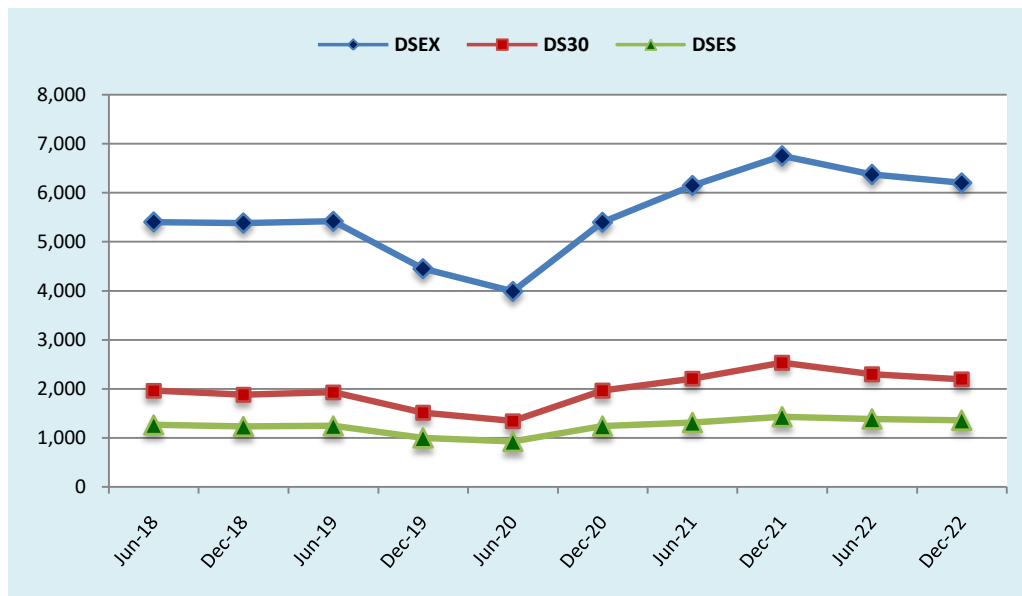
Source: DSE Website.

DSEX, the key DSE index, declined at the end of December 2022 compared to the end of June 2022. Other equity indexes-DSE30 and DSES-also demonstrated similar trend.

4.2 Price/earnings (P/E) ratio
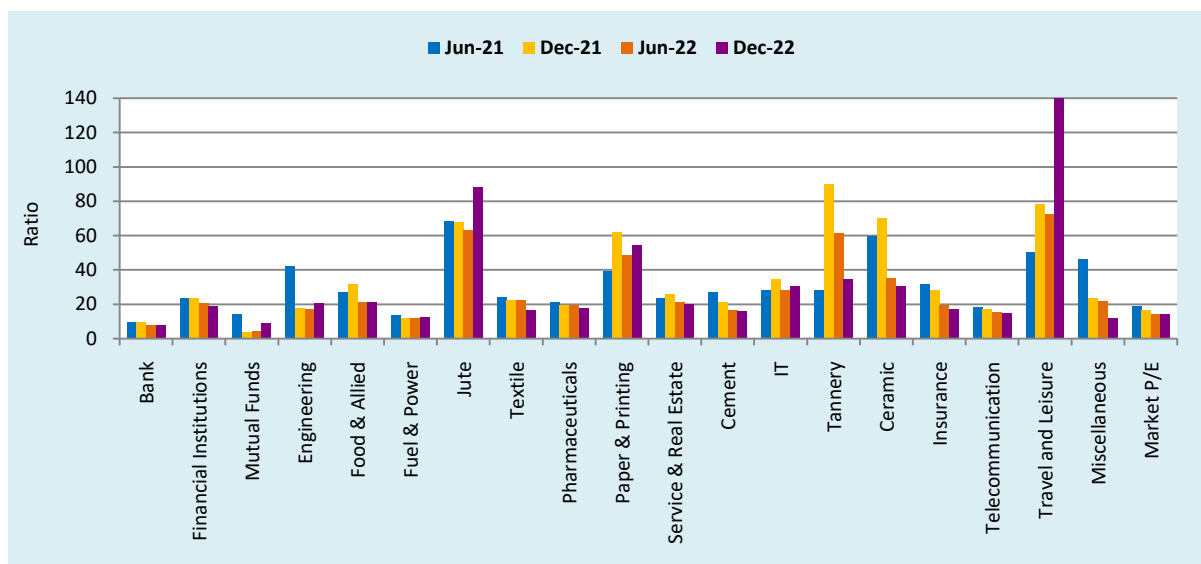
Source: DSE Website.

The P/E ratio for 63 percent of the listed sectors dropped in the review period compared the preceding period. Likewise, the market P/E ratio as a whole slightly declined to 14.11 at end-December 2022, from 14.44 at end-June 2022 and fell notably from 16.29 at end-December 2021.

4. Market risk–cont'd.

4.3 Weighted average call money market rates
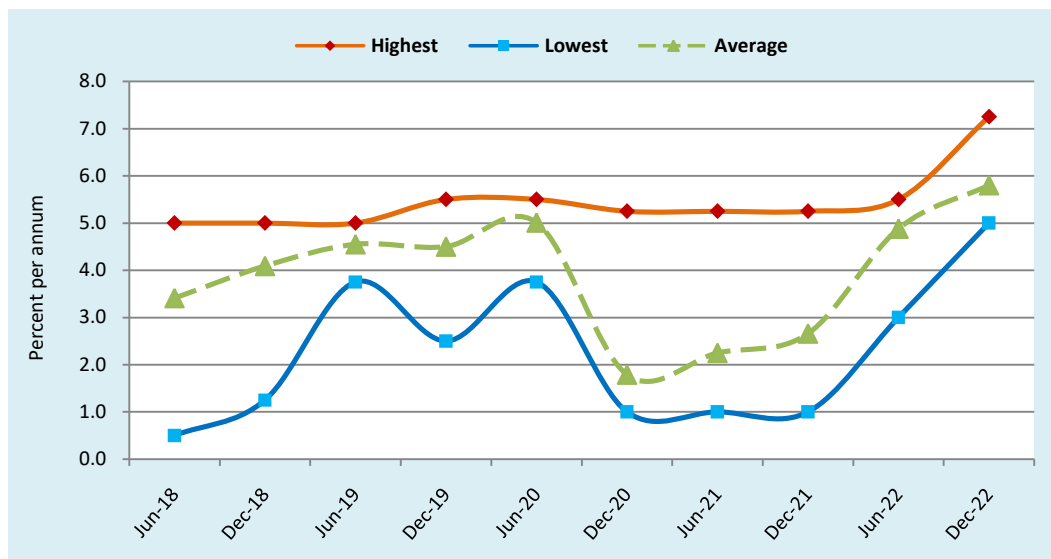
Source: Monthly Economic Trends, Statistics Department, BB.

Since December 2020 weighted average call money borrowing rate has been increasing gradually. It increased further at end-December 2022 compared to that of end-June 2022.

4.4 Scheduled banks' weighted average interest rate on deposits and advances
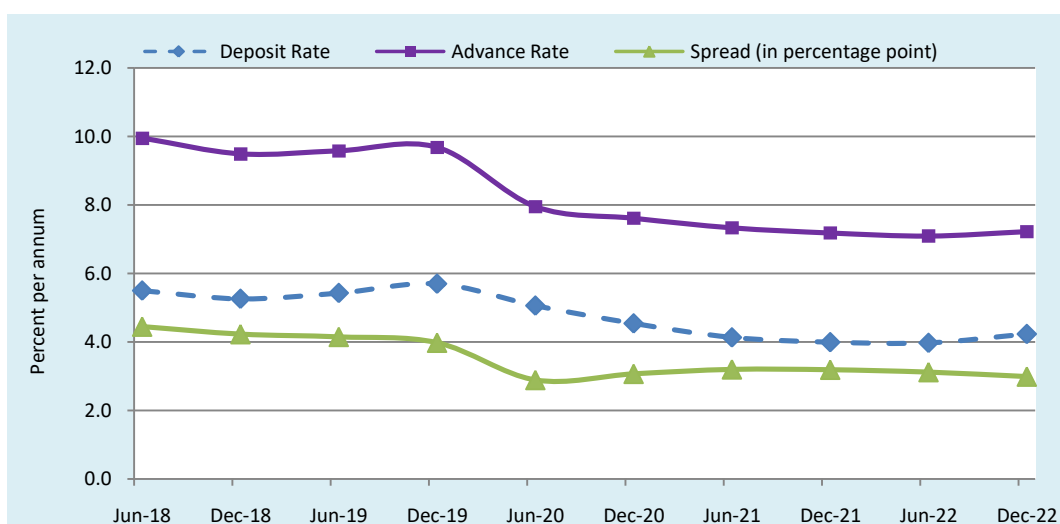
Source: Monthly Economic Trends, Statistics Department, BB.

After December 2019, there was a downward trend in the weighted average interest rate on deposits and advances except an increase in the last quarter of 2022. Likewise, the spread shrank by 13 basis points in the second half of 2022 compared to the first half.

4. Market risk–cont'd.

4.5 Weighted average exchange rate (USD/BDT)
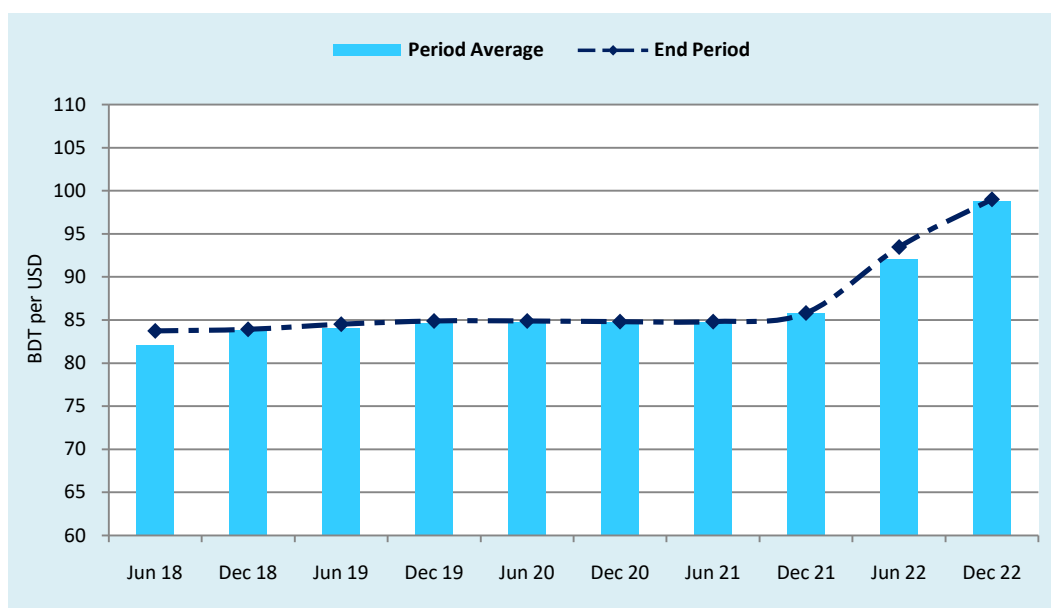
Source: Monthly Economic Trends, Statistics Department, BB.

Unlike the stable trend in the preceding several years; Bangladeshi Taka depreciated notably against the US Dollar during 2022, owing largely to volatility in global economy, slow growth in FDI inflow and wage earners' remittances.

5. Profitability and solvency risk

5.1 Banks' profitability indicators

a. Return on equity (ROE)
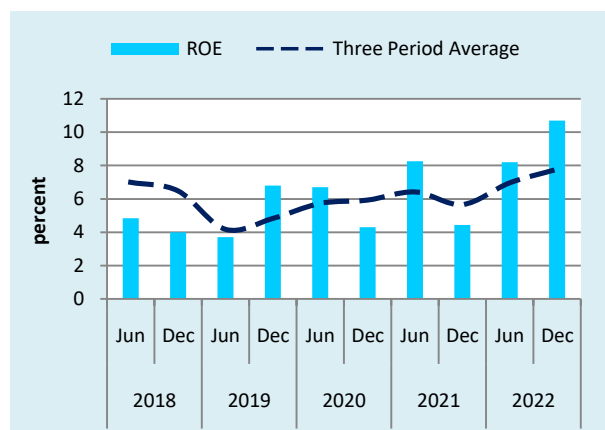
Note: Ratios of June period are annualized.
Source: DOS, BB; Computation: FSD, BB.

b. Return on assets (ROA)
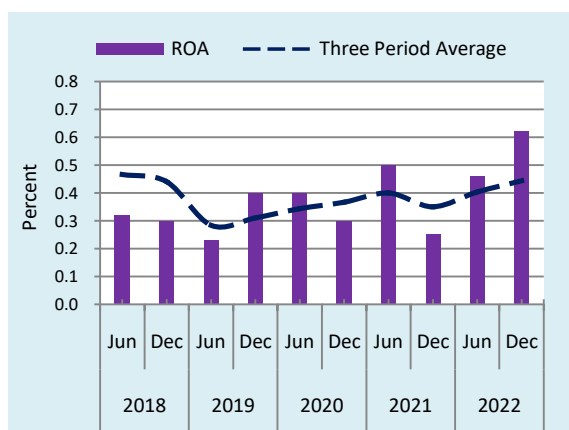
Note: Ratios of June period are annualized.
Source: DOS, BB; Computation: FSD, BB

Banks' ROE and ROA demonstrated an increase in the second half of the year compared to the first half, reaching their peaks during the past five years.

c. Cost-to-income ratio
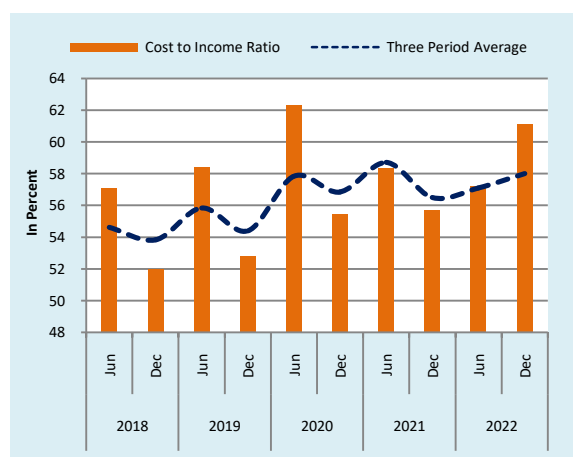
Note: Ratio of operating expenses and operating income
Source: DOS, BB; Computation: FSD, BB.

d. Net interest income to total operating income ratio
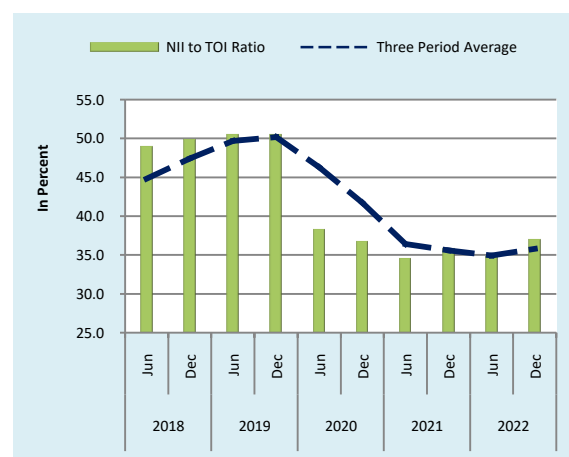
Note: Ratio of net interest income and total operating income.
Source: DOS, BB; Computation: FSD, BB.

Compared to the position of January-June 2022, banks' cost-to-income ratio increased during July-December 2022. Banks' net interest income to total operating income ratio increased during the same period as well.

5. Profitability and solvency risk–cont'd.

5.2 Banks' solvency indicators

a. Tier-1 to RWA ratio
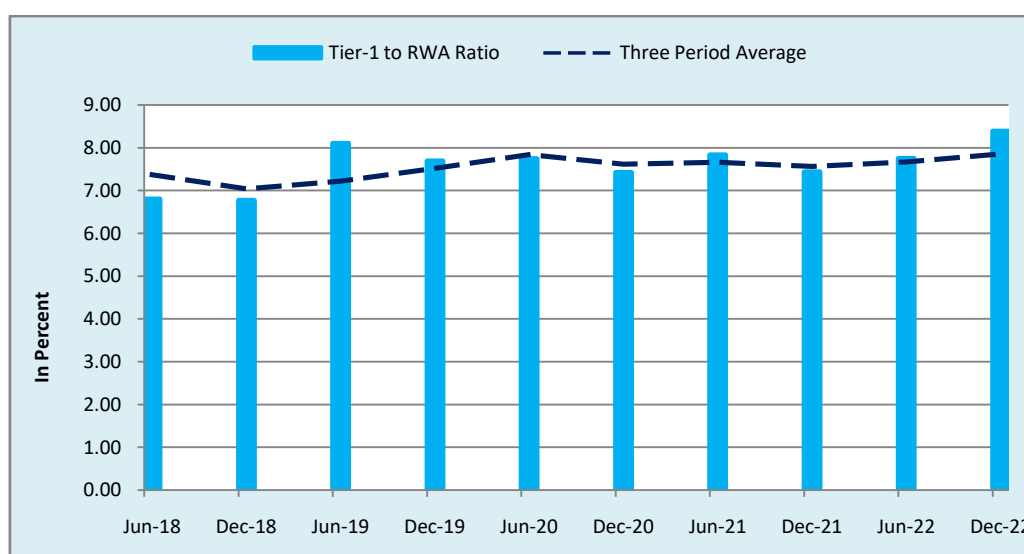
Note: Ratio of Tier-1 capital to total risk-weighted assets.
Source: DOS, BB.

Banks' Tier-1 capital to total risk-weighted assets ratio increased slightly at end-December 2022 from the position of end-June 2022 and stood at 8.39 percent; it remained well above the regulatory requirement of 6.0 percent.

b. Gross non-performing loan (NPL) ratio
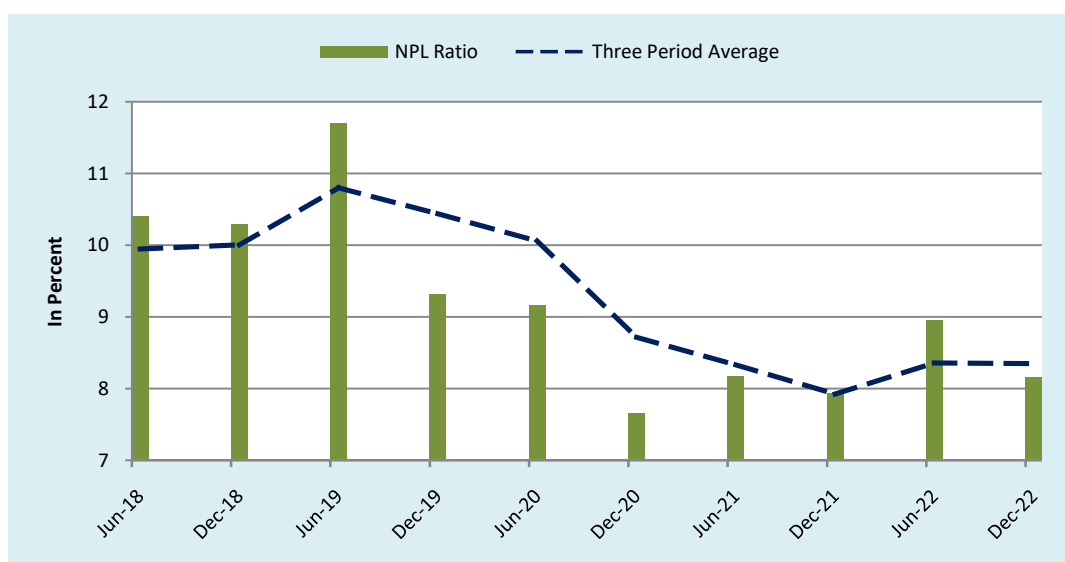
Note: Data up to September 2020 contains information without OBU.
Source: BRPD, BB.

At end-December 2022, banks' gross NPL ratio rose slightly in comparison with that of end-December 2021; however, compared to end-June 2022 the ratio declined significantly.

5. Profitability and solvency risk–cont'd.

5.3 FIs' profitability indicators

a. Return on equity (ROE)
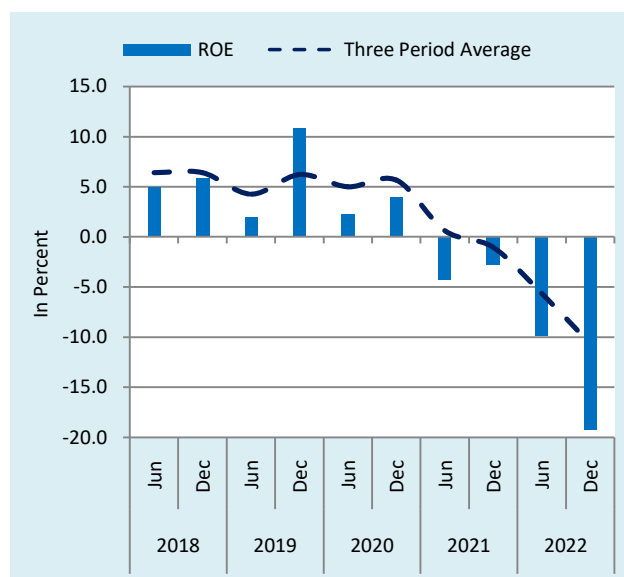
Note: Data for Jun-22 and Dec-22 are provisional.
Source: DFIM, BB.

b. Return on assets (ROA)
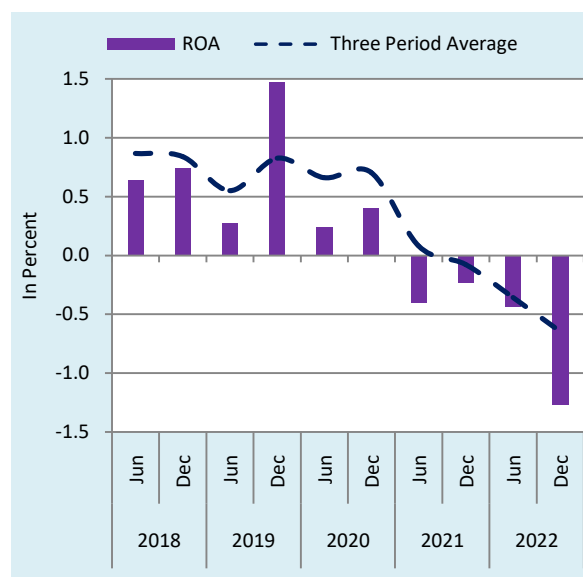
Note: Data for Jun-22 and Dec-22 are provisional.
Source: DFIM, BB.

During July-December 2022, FIs' ROE and ROA declined further compared to those of the preceding period.

c. Cost-to-income ratio
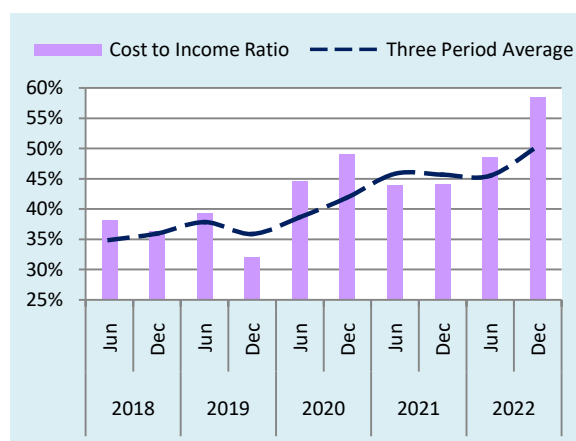
Note: 1) Cost to income ratio refers to ratio of operating expenses and operating income. 2) Jun-22 and Dec-22 data are provisional.
Source: DFIM, BB.

d. Net interest income (NII) to total operating income (TOI) ratio
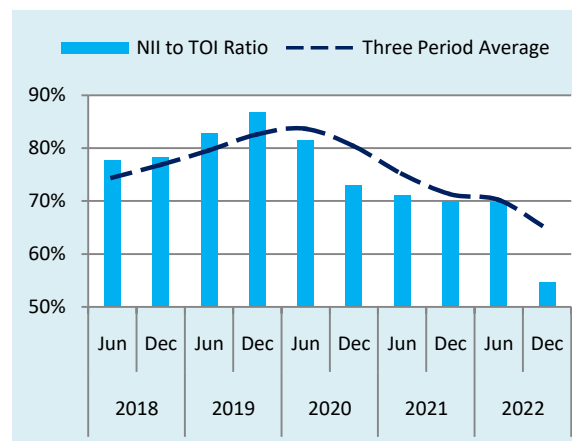
Note: 1) Ratio of net interest income and total operating income. 2) Jun-22 and Dec-22 data are provisional.
Source: 1) DFIM, BB.

FIs' cost-to-income ratio increased while net interest income to total operating income ratio decreased at end-December 2022 compared to those of the previous period.

5. Profitability and solvency risk–cont'd.

5.4 FIs' solvency indicators

a. Tier-1 to RWA ratio
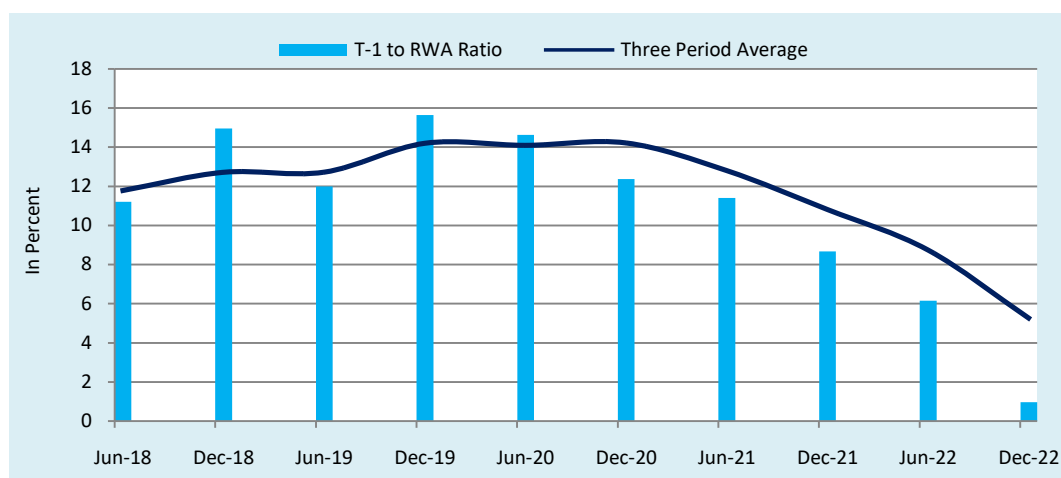
Note: 1) Ratio of Tier-1 (core) capital to total risk-weighted assets; 2) Data for June-22 are revised and for December-22 are provisional. 3) June-2022 data are exclusive of People's Leasing and Financial Services Limited's Tier-1 ratio figure.
Source: DFIM, BB.

At end-December 2022, the FIs' Tier-1 to RWA ratio stood at 0.97 percent, including People's Leasing and Financial Services Limited. However, The ratio would jump to 6.20 percent, if People's Leasing and Financial Services Limited was excluded from FIs list.

b. Gross non-performing loan (NPL) ratio
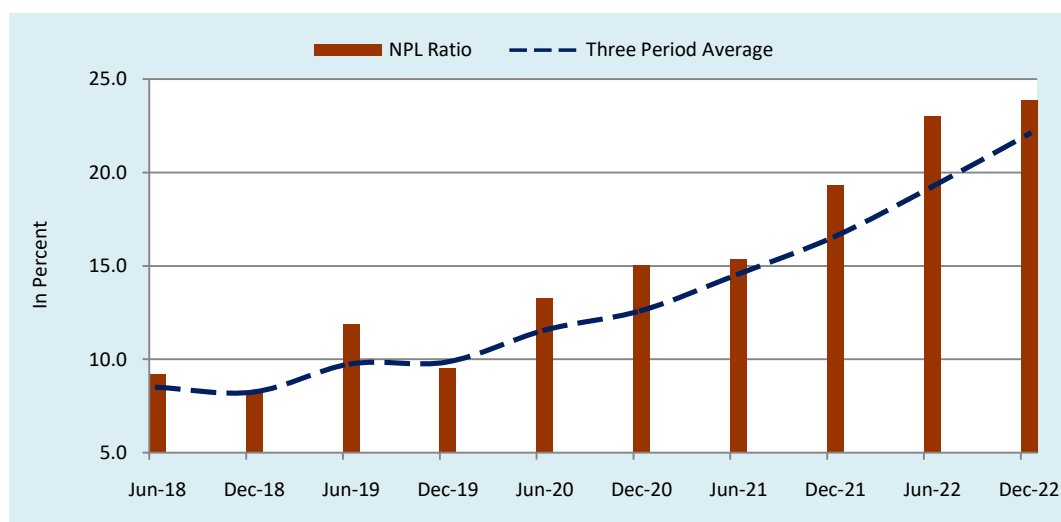
Note: 1) Ratio of non-performing loans and leases to total loans and leases. 2) Data for Jun-22 and Dec-22 are provisional.
Source: DFIM, BB.

The chart exhibits a continued upward trend for FIs' gross NPL ratio. In the review period, the ratio jumped further and reached to 23.88 percent, which was much higher for an industry involved with financial intermediation.

6. Inter-linkages

6.1 Growth of banks' credit (gross) to Government
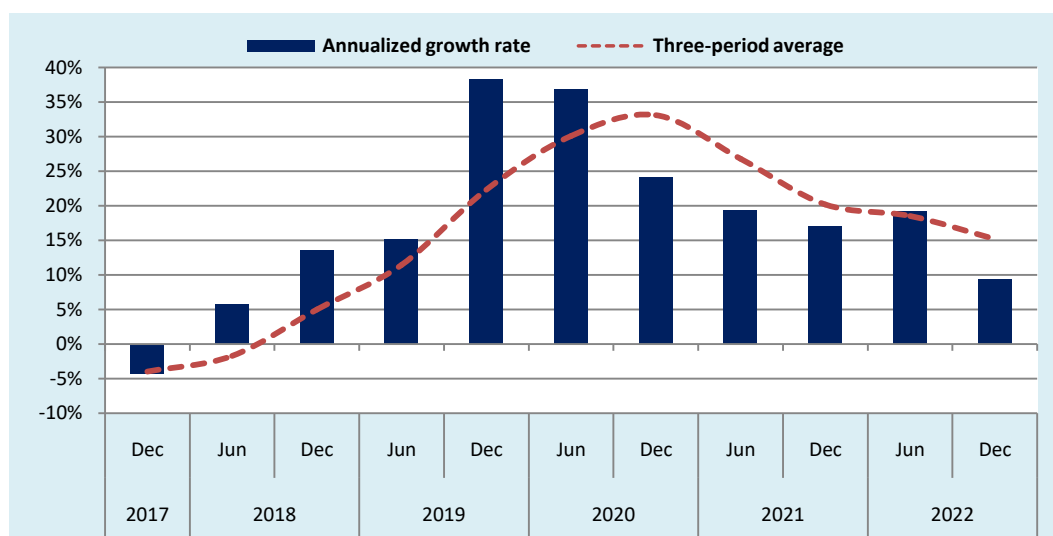
Notes: Credit extended to the Government refers to gross amount.
Source: Statistics Department, Bangladesh Bank.

The growth rate of Government borrowings from the banking sector recorded a declining trend after December 2019. Following this trend, the growth declined further at end-December 2022 compared to the previous period.

6.2 Growth of NBDCs' credit (gross) to Government
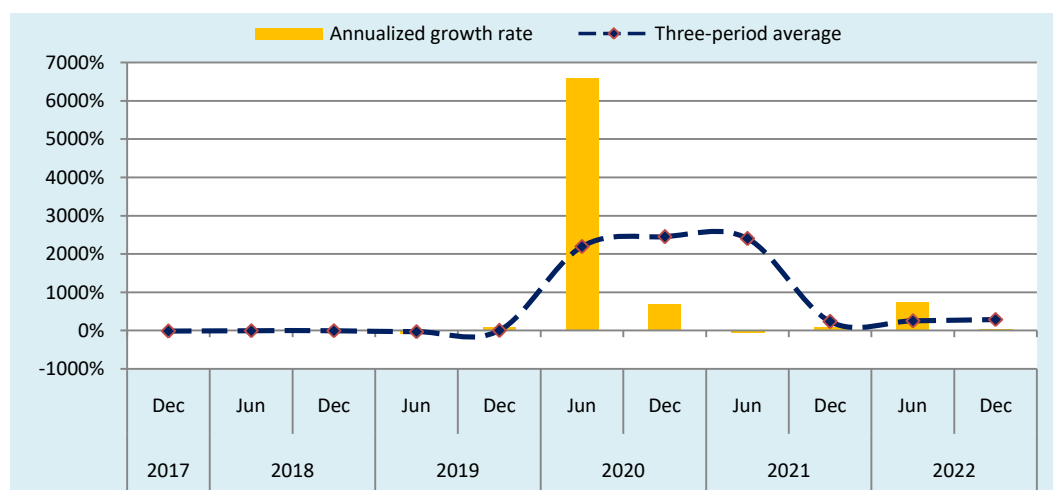
Notes: NBDCs include deposit taking FIs, Ansar-VDP Unnayan Bank, Karmasangsthan Bank, Grameen Bank, and Bangladesh Samabaya Bank.
Source: Statistics Department, Bangladesh Bank.

Government borrowings from the NBDCs, though remained very low compared to the same from the banking sector, witnessed a sluggish growth after June 2020.

6. Inter-linkages– Cont'd.

6.3 Growth of banks' loans to housing sector

a. Loans to residential housing
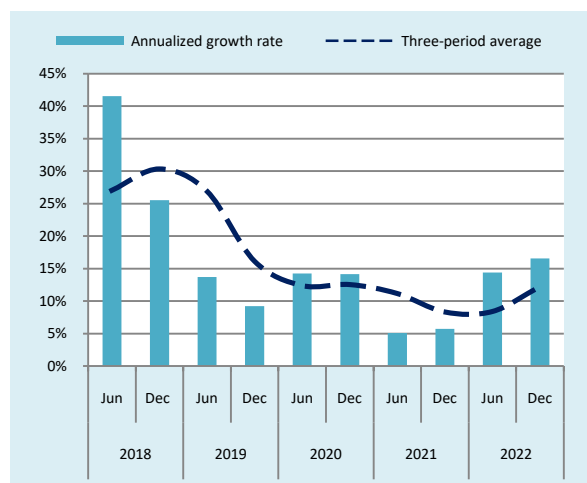
b. Loans to commercial housing
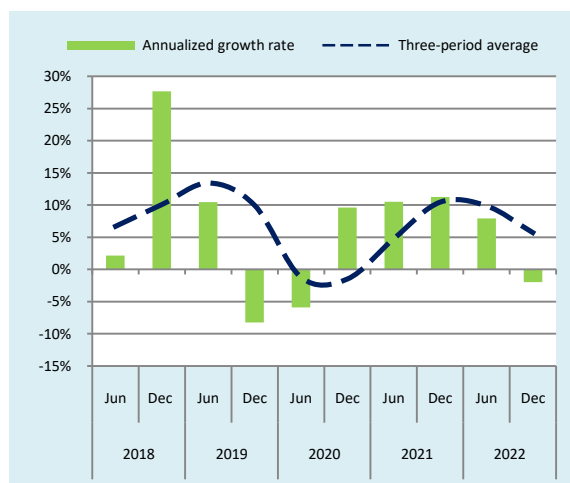
Notes: Data for Jun-22 and Dec-22 are provisional. 2) Loans refer to outstanding loans and advances excluding bills. 3) Loans to residential housing refer to loans extended to domestic households for house/flat/land purchase and repair/renovation/extension. 4) Loans to commercial housing refer to loans extended to commercial developers/contractors. 5) Jun-22 data is revised.
Source: Statistics Department, Bangladesh Bank.

Loan growth in the residential housing sector increased in the second half of 2022 compared to the preceding period. However, loan growth in the commercial housing sector, which had been volatile in recent years, plummeted at the end of December 2022, posting a negative growth.

6.4 Growth of FIs' loans to housing sector
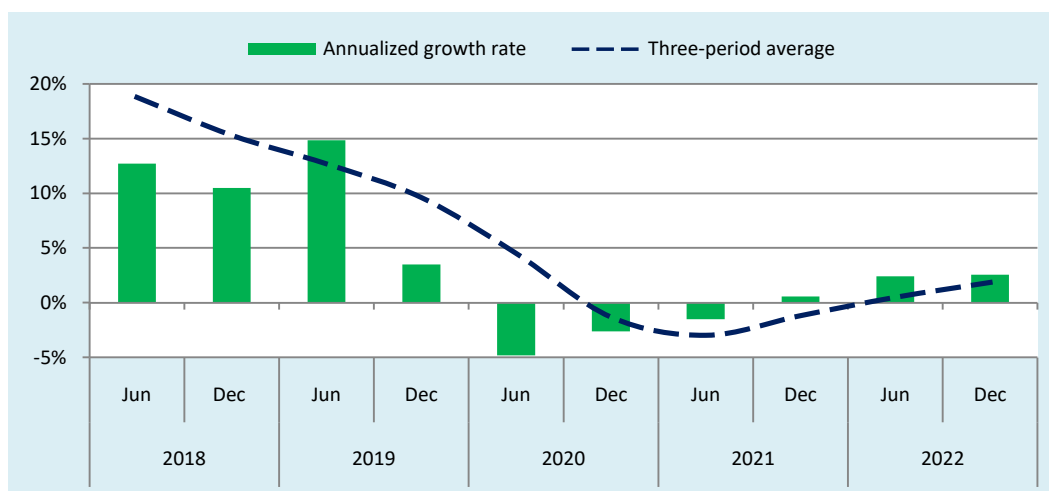
Notes: Data for Jun-22 and Dec-22 are unaudited.
Source: DFIM, Bangladesh Bank.

From June 2020 to June 2021, the growth of FIs' loans to the housing sector showed negative values, but it progressively improved and showed a positive growth by the end of December 2022.

6. Inter-linkages– Cont'd.

6.5 Banks' loans to counterpart sectors

■ Households ■ NFCs ■ Government
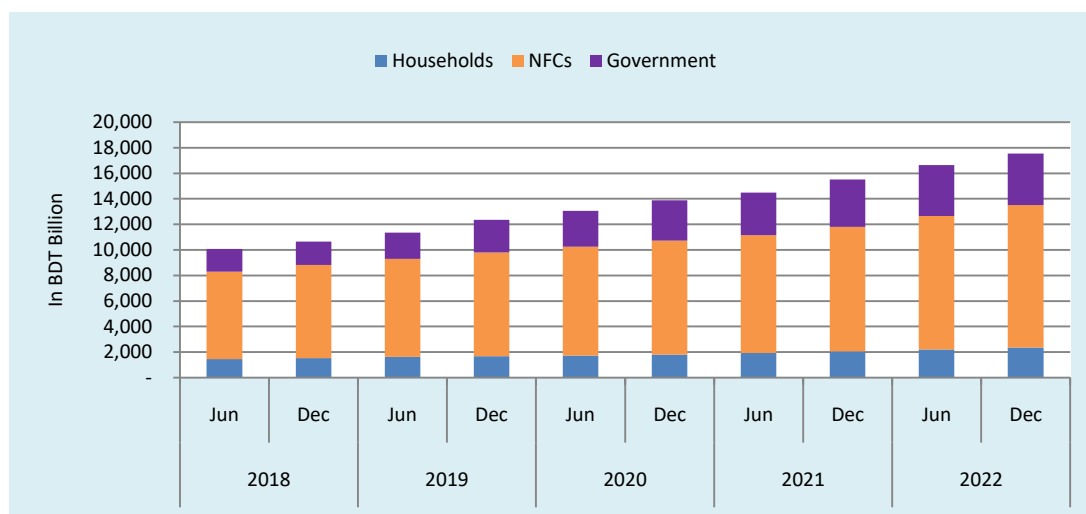
Notes: Loans extended to households and NFCs refer to outstanding loans and advances excluding bills. Loans to Government refer to gross amount.
Source: Statistics Department, Bangladesh Bank.

Banks' exposures to their major public and private counterparts, headed mostly by private NFCs, continued to rise.

6.6 NBDCs' loans to counterpart sectors

■ Households ■ NFCs ■ Government
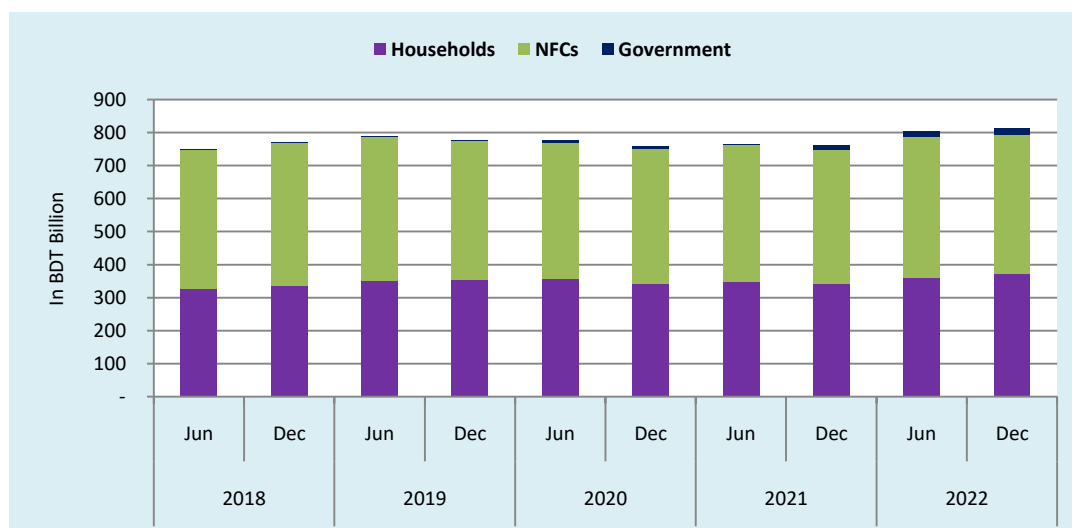
Notes: Loans to Government refer to gross amount. NBDCs include deposit taking FIs, Ansar-VDP Unnayan Bank, Karmasangsthan Bank, Grameen Bank and Bangladesh Samabaya Bank.
**Source:** Statistics Department, Bangladesh Bank.

The chart exhibits an overall rise in the loan portfolio of NBDCs at end-December 2022 compared to the previous period, largely due to increased exposure to households and the Government.

6. Inter-linkages– Cont'd.

6.7 Banks' cross-border claim
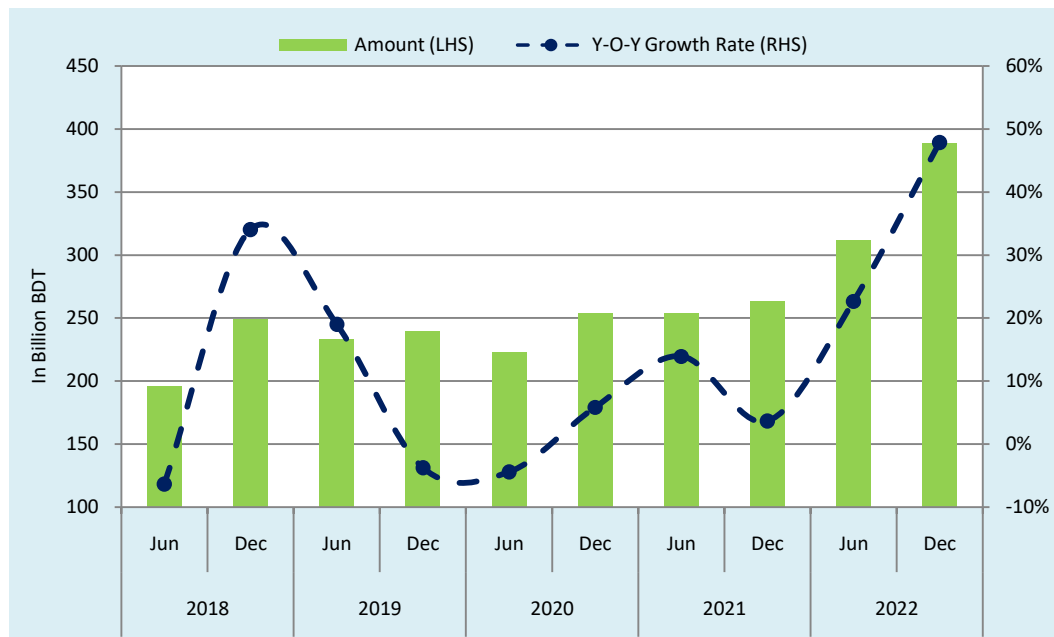
Notes: Cross-border claim includes foreign currency notes in hand, balances with banks abroad, bilateral trade credits, wage earners' balance abroad, foreign bills, foreign direct investment, portfolio investment.
Source: Statistics Department, Bangladesh Bank.

Cross-border claims by banks grew notably at end-December 2022 compared to the position at the end of June 2022 and December 2021.

7. Structural risk

7.1 Banking sector size
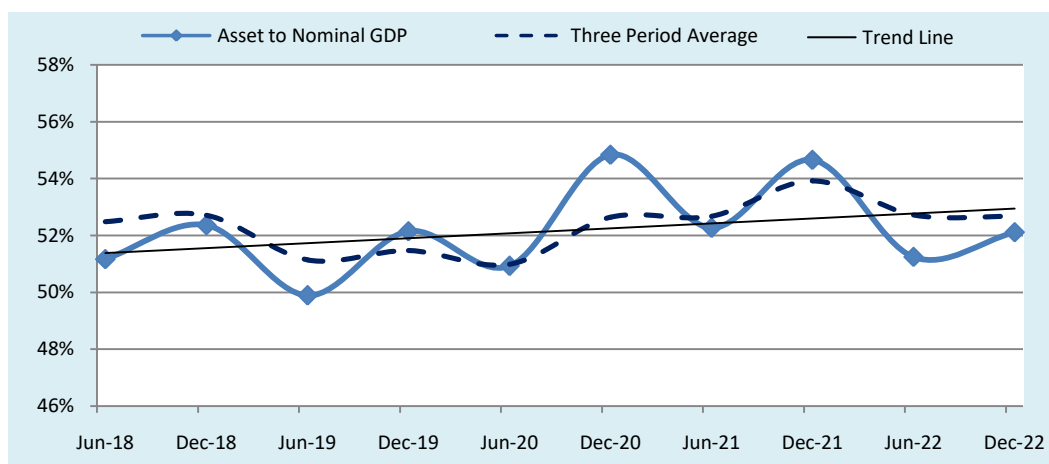
a. Domestic Banks

Note: 1) Ratio of domestic banks' total assets to Nominal GDP. As half yearly GDP is not calculated in Bangladesh, June based GDP data is used for December in calculating this ratio. 2) June-22 data is revised.
Source: DOS, BB and Monthly Economic Trends, BB; computation: FSD, BB.

The ratio of domestic banks' total assets to nominal GDP, which has been hovering around 52 percent since 2018, recorded an increase at end-December 2022 compared to the position at end-June 2022.

b. Foreign Banks
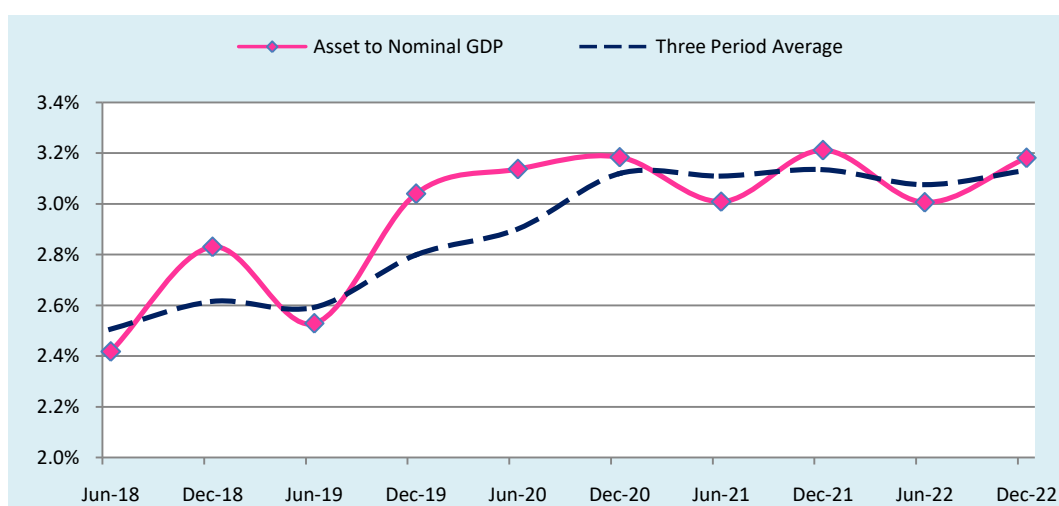
Note: 1) Ratio of foreign banks' total assets to Nominal GDP. As half yearly GDP is not calculated in Bangladesh, June based GDP data is used for December in calculating this ratio. 2) June-22 data is revised.
Source: DOS, BB and Monthly Economic Trends, BB; computation: FSD, BB.

Foreign banks' total assets to nominal GDP ratio increased at end-December 2022 compared to the position at end-June 2022.

7. Structural risk–cont'd.

7.2 Banking sector leverage ratio
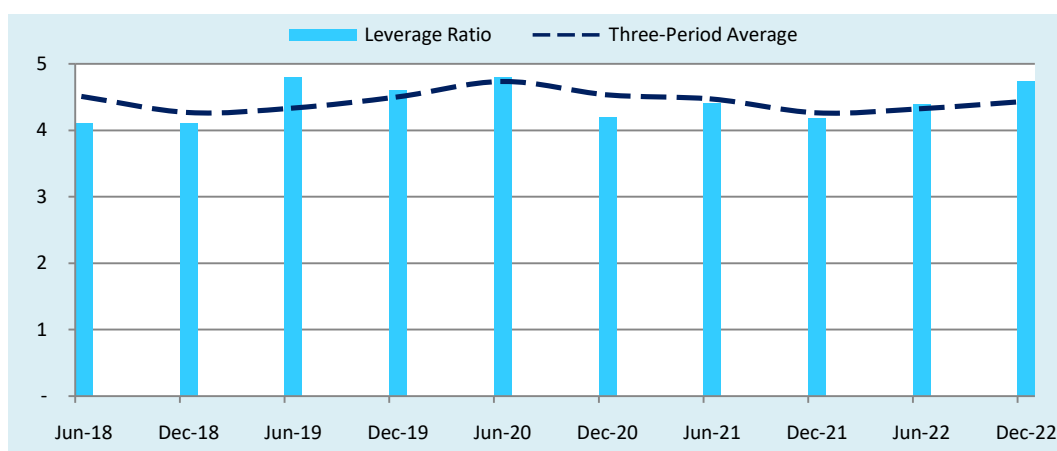
Note: Leverage ratio is defined as the ratio of Tier-1 capital after required deduction to total exposure after required deduction, in line with Basel III.
Source: DOS, BB.

Banking sector's leverage ratio increased at end-December 2022 compared to the position of previous period and stood at 4.74 percent against the regulatory requirement of 3.0 percent for 2022.

7.3 Financial institutions (FIs) sector size

FIs' assets to nominal GDP
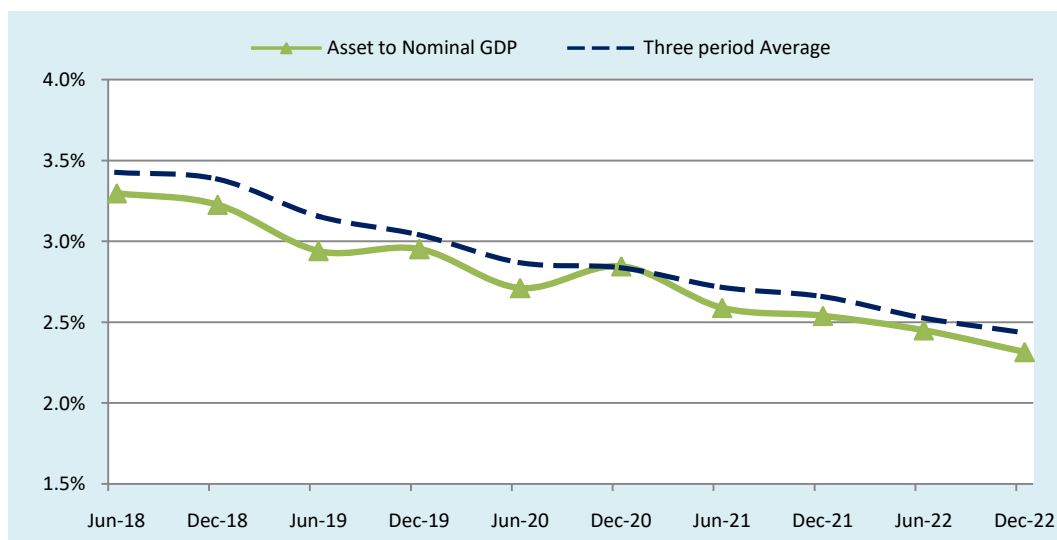
Note: As half yearly GDP is not calculated in Bangladesh, June based GDP data is used for December in calculating this indicator. June-22 data is revised.
Source: DFIM, BB.

Financial institutions' assets to nominal GDP ratio showed a declining trend since 2018. It decreased further at end-December 2022 compared to that of the preceding period.

7. Structural risk–cont'd.

7.4 Financial institutions (FIs) sector leverage
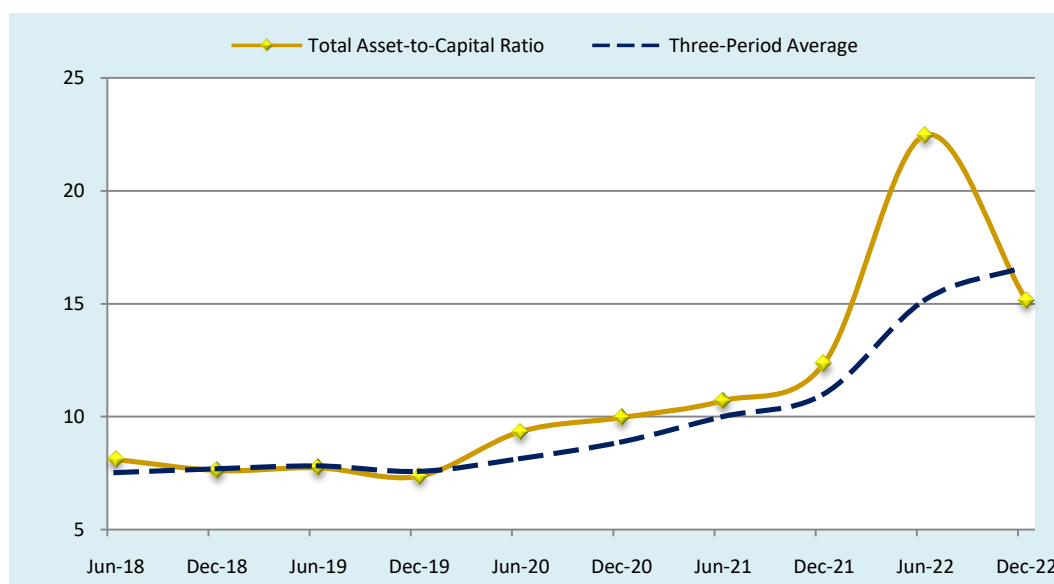
Note: For the FIs sector, leverage ratio is calculated as the total assets to total capital (as per the book of affairs).
Source: DFIM, BB.

Financial institutions' leverage, defined as total asset-to-capital ratio had exhibited an upward trend since December 2019. The ratio stepped up significantly in the first half of 2022; however, it declined considerably in the second half of the year.

Annex to Bangladesh Systemic Risk Dashboard

1. Macro risk:

1.1 Current and forecasted real GDP growth

Sources: Monthly Economic Trends, Bangladesh Bank and World Economic Outlook Database, IMF.

Current real GDP growth is the latest actual financial year-on-year growth at constant market price. Average of three periods is the three-year moving average of GDP growth rate. Forecasted real GDP growth rate is taken from IMF's World Economic Outlook Database, April, 2023.

1.2 Current account balance-to-GDP ratio

Sources: Monthly Economic Trends, BB.

Current account balance represents the sum of the 6 months' current account balances. GDP is at current market price. Average of three periods is the three-period moving average of current account balance-to-GDP ratio.

1.3 Aggregate Debt-to-GDP ratio

Sources: Monthly Economic Trends, BB and National Summary Data Page (NSDP)-Bangladesh (in BB website).

The aggregate debt as a percentage of GDP represents the sum of the debt-to-GDP ratio of non-financial corporations (NFCs), Government (net), households and external debt (gross).

1.4 Government debt-to-GDP ratio

Sources: Monthly Economic Trends, BB and National Summary Data Page (NSDP)-Bangladesh (in BB website).

Government debt includes both Government's domestic debt and external debt. Average of three periods represents three-period moving average of the Government debt-to-GDP ratio.

1.5 Government deficit-to-GDP ratio

Sources: Monthly Report on Fiscal Position, Ministry of Finance, Government of Bangladesh.

The Government deficit-to-GDP ratio is shown as both deficits excluding grants and including grants to nominal GDP.

1.6 Household debt-to-gross national disposable income ratio

Sources: Monthly Economic Trends, BB.

Claims on other resident sector have been classified as Household's debts. The resident sector has been classified according to the IMF's Monetary and Financial Statistics Manual (MFSM). Claims on resident sector exclude BB and ODCs (other depository corporations). Household debt-to-gross national disposable income ratio represents resident sector loans as a ratio of gross disposable national income over the financial year.

1.7 NFC debt-to-GDP ratio

Sources: Monthly Economic Trends, BB.

Debts of both public non-financial corporations and private non-financial corporations are considered for deriving non-financial corporations' debt. Public non-financial corporations are corporations owned or controlled by the Government that produce goods or services for sale to the public at a significant market price whereas private non-financial corporations encompass corporations and quasi corporations engaging primarily in the production of goods and non-financial services for sale to the public at a significant market price (profit motive).

2. Credit Risk:

2.1 Annual growth rate of banks' loans to households

Source: Statistics Department, Bangladesh Bank.

It refers to loans extended by banks to domestic households (individual customers); it excludes bills purchased and discounted.

2.2 Annual growth rate of NBDCs' loans to households

Source: Statistics Department, Bangladesh Bank.

It refers to loans extended by non-bank depository corporations (NBDCs) to domestic households; NBDCs include depository financial institutions (FIs), Ansar-VDP Unnayan Bank, Karmasangsthan Bank, Grameen Bank and Bangladesh Samabaya Bank.

2.3 Annual growth rate of banks' loans to private NFCs

Source: Statistics Department, Bangladesh Bank.

It refers to loans extended by banks to private non-financial corporations (NFCs); it excludes bills discounted and purchased.

2.4 Annual growth rate of NBDCs' loans to private NFCs

Source: Statistics Department, Bangladesh Bank.

It refers to loans extended by NBDCs to private NFCs.

2.5 Provision maintenance ratio of banks

Source: Banking Regulation and Policy Department, Bangladesh Bank.

It refers to the ratio of loan-loss provision maintained by banks against their required provision.

2.6 Provision maintenance ratio of FIs

Source: Department of Financial Institutions and Market, Bangladesh Bank. June-2022 based data was taken from FIs and the calculation was done by FSD, BB.

It refers to the ratio of loan-loss provision, maintained by FIs, against their required provision.

2.7 Changes in banks' interest rates for housing loans

Source: Monthly Economic Trends, Statistics Department, BB. Bangladesh Bank website (https://www.bb.org.bd/en/index.php/financialactivity/interestlending).

It refers to the net percentage change in credit standards for housing loans by banks; changes in banks' announced interest rate for housing loans have been used as a proxy for changes in banks' credit standards; net percentage change is the difference between the share of banks reporting that interest rates have been tightened (increased) and the share of banks reporting that they have been eased (decreased).

3. Funding and liquidity risk:

3.1 Bangladesh Bank's liquidity support to banks

Sources: Debt Management Department, BB.

Bangladesh Bank's liquidity support comprises Repo, assured liquidity support and special repo. Repo facilities are provided on an overnight (one-day) or 7, 14 and 28-day basis to the banks and NBFIs to resolve the temporary liquidity problem as well as to increase the money supply in the economy. BB also provides ALS facilities to the PDs against govt. securities received from the auction up to 60 days from the date of issuance for the same purpose. Furthermore, BB provides a special liquidity facility under the Special Repo for special purposes.

3.2 Banks' advance-to-deposit ratio

Sources: Department of Off-site Supervision, BB.

It refers to the ratio between total outstanding loans and total deposits of bank clusters/banking industry.

3.3 Maturity profile of govt.'s outstanding debt securities (treasury bills, treasury bonds)

Sources: Debt Management Department, BB.

The maturity profile refers to the residual maturity of long-term and short-term debt securities issued by the Government of Bangladesh. Long-term debt includes Government Treasury bond with a maturity of more than 12 months. Short-term debt includes Government Treasury bill with a maximum maturity of 12 months. Data are based on amounts outstanding at the end of the corresponding year or month.

3.4 Subordinated debt

Sources: Department of Off-site Supervision, BB.

The subordinated debt refers to the debt instruments which will be subordinated to deposits and other liabilities of the banks. It implies that the claims of the subordinated debt holders will be junior to the claims of the depositors and the other creditors.

3.5 Banks' LCR and NSFR

Sources: Department of Off-site Supervision, BB.

LCR refers to liquidity coverage ratio while NSFR refers to net stable funding ratio. These two liquidity indicators were introduced in Bangladesh in 2015 under Basel III framework. The minimum standard for LCR is greater than or equal to 100 percent and for NSFR it is greater than 100 percent.

4. Market risk:

4.1 Equity indices

Sources: Dhaka Stock Exchange Website (http://www.dsebd.org)

The equity indices displayed are DSEX, DSE30 and DSES. DSEX is considered as the benchmark general index of the market as it shows the exact price movement of the listed companies. As for DSE30, 30 companies based on profitability, market capitalization and share size were selected while the companies are changed every six months on the basis of performance. DSES index is launched for people and institutions willing to invest in Shariah-compliant securities and products.

4.2 Price/earnings ratio

Sources: Dhaka Stock Exchange Website (http://www.dsebd.org).

This ratio refers to the ratio between market price per share and earnings per share. Sectoral P/E ratio includes P/E ratio of Banks, Financial Institutions, Mutual Funds, Engineering, Food & Allied, Fuel & Power, Jute, Textile, Pharmaceuticals, Paper & Printing, Service & Real Estate, Cement, IT, Tannery, Ceramic, Insurance, Telecommunication, Travel & Leisure and Miscellaneous along with Market P/E.

4.3 Weighted average call money market rates

Source: Monthly Economic Trends, BB.

The indicators reflect the nature of money market and include rate charged against exposures of scheduled banks and FIs with one another.

4.4 Scheduled banks' weighted average interest rate on deposits and advances

Source: Monthly Economic Trends, BB.

The indicators reflect the condition of scheduled banks and show the difference between average rate received from advances and average rate paid on deposits.

4.5 Weighted average exchange rate (USD/BDT)

Source: Monthly Economic Trends, BB.

The indicator reflects the exchange rate movement in BDT per US Dollar.

5. Profitability and solvency risk:

5.1 Banks' profitability indicators

a. Return on equity (ROE)

Source: Department of Off-site Supervision, BB; computation: Financial Stability Department, BB; BB Quarterly.

The indicator is based on the ratio between profit/loss for the period and total equity. Ratios of June period are annualized.

b. Return on assets (ROA)

Source: Department of Off-site Supervision, BB; computation: Financial Stability Department, BB; BB Quarterly.

The indicator is based on ratio between profit/loss for the period and total assets. Ratios of June period are annualized.

c. Cost to income ratio

Source: Department of Off-site Supervision, BB; computation: Financial Stability Department, BB.

The indicator is based on the ratio between operating expenses and operating income.

d. Net interest income to total operating income ratio

Source: Department of Off-site Supervision, BB; computation: Financial Stability Department, BB.

The indicator is based on the ratio between net interest income and total operating income.

5.2 Banks' solvency indicators

a. Tier-1 capital to risk-weighted assets ratio

Source: Department of Off-site Supervision, BB.

The indicator is based on the ratio between Tier-1 capital and total risk-weighted assets.

b. Gross non-performing loan (NPL) ratio

Source: Banking Regulation and Policy Department, BB.

The indicator is based on the ratio between non-performing loans and advances to total outstanding loans and advances.

5.3 FIs' profitability indicators

a. Return on equity (ROE)

Source: Department of Financial Institutions and Market, BB.

The indicator is based on the ratio between profit/loss after tax and provision for the period and total equity at the end of the corresponding period.

b. Return on assets (ROA)

Source: Department of Financial Institutions and Market, BB.

The indicator is based on ratio between profit/loss after tax and provision for the period and total assets at the end of the corresponding period.

c. Cost to income ratio

Source: Department of Financial Institutions and Markets, BB.

The indicator is based on the ratio between FIs' operating expenses and operating income.

d. Net interest income to total operating income ratio

Source: Department of Financial Institutions and Markets, BB.

The indicator is based on the ratio between FIs' net interest income and total operating income.

5.4 FIs' solvency indicators

a. Tier-1 capital to risk-weighted assets ratio

Source: Department of Financial Institutions and Markets, BB.

The indicator is based on the ratio between Tier-1 capital (core capital) and total risk-weighted assets.

b. Gross non-performing loan (NPL) ratio

Source: Department of Financial Institutions and Markets, BB.

The indicator is based on the ratio between non-performing loans and leases to total loans and leases.

6. Inter-linkages:

6.1 Growth of banks' credit (gross) to Government

Source: Statistics Department, Bangladesh Bank.

It refers to the growth in gross loan amount extended by banks to the Government.

6.2 Growth of NBDCs' credit (gross) to Government

Source: Statistics Department, Bangladesh Bank.

It refers to the growth in gross loan amount extended by NBDCs to the Government.

6.3 Growth of banks' loans to housing sector

Source: Statistics Department, Bangladesh Bank.

Loans to residential housing refers to loans extended by banks for residential housing in urban and rural areas, house renovation/repairing/extension, flat and land purchase; loans to commercial housing refers to loans extended by banks for commercial building and housing by developers/contractors.

6.4 Growth of FIs' loans to housing sector

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

It refers to the growth in loans extended by FIs for both residential and commercial purposes.

6.5 Banks' loans to counterpart sector

Source: Statistics Department, Bangladesh Bank.

It refers to loans extended by banks to their three major institutional counterparts namely NFCs (both private and public), households and Government; it excludes bills discounted and purchased.

6.6 NBDCs' loans to counterpart sector

Source: Statistics Department, Bangladesh Bank.

It refers to loans extended by NBDCs to their three major institutional counterparts namely NFCs (both private and public), households and Government.

6.7 Banks' cross-border claims

Source: Statistics Department, Bangladesh Bank.

Cross-border claims of banks include foreign currency notes in hand, balances with banks abroad, bilateral trade credits, wage earners' balance abroad, foreign bills, foreign direct investments, portfolio investments and advances to non-residents; claims that are granted or extended to non-residents are referred to as cross-border claims on an "immediate borrower" basis i.e. claims allocated to the actual non-resident borrowers with whom the original risk lies; it differs from "ultimate risk" basis which refers to claims allocated to the non-resident guarantors (of the non-resident borrower) with whom the final risk lies. For more details, see "Guidelines to the international consolidated banking statistics" available at http://www.bis.org/statistics/consbankstatsguide_old.pdf.

7. Structural risk:

7.1 Banking sector size

a. Domestic Banks

Source: Department of Off-site Supervision, BB and Monthly Economic Trends, BB; computation: Financial Stability Department, BB.

The indicator is based on the ratio of total assets of domestic scheduled banks to nominal GDP; domestic scheduled banks include all scheduled banks except foreign commercial banks.

b. Foreign Banks

Source: Department of Off-site Supervision, BB and Monthly Economic Trends, BB; computation: Financial Stability Department, BB.

The indicator is based on the ratio of total assets of foreign commercial banks to nominal GDP.

7.2 Banking sector leverage ratio

Source: Department of Off-site Supervision, BB.

As per the Basel-III accord, this indicator is a ratio of Tier-1 capital after required deduction to total exposure after required deduction of the banking sector. In Bangladesh, up to 2022, the required leverage ratio is 3.0 percent.

7.3 FI sector size

Source: Monthly Economic Trends, Statistics Department, BB and DFIM, BB.

The indicator is based on the ratio of total assets of financial institutions (FIs) to nominal GDP.

7.4 FI sector leverage

Source: DFIM, BB.

The indicator is based on the ratio of total assets of the FIs sector over its capital.

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