

BANGLADESH BANK

Central Bank of Bangladesh



Macro
Prudential
Supervision
of Financial
System

Bangladesh Systemic Risk Dashboard (BSRD)

Financial Stability Department
June 2022

DISCLAIMER: The risk dashboard is a set of quantitative indicators and not an early-warning system. The indicators should not be treated as the basis for any mechanical form of inference.

Bangladesh Systemic Risk Dashboard (BSRD)

June 2022

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- This dashboard is based on data and information available as of June 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
DBU	Domestic Banking Unit
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
IMF	International Monetary Fund
LCR	Liquidity Coverage Ratio
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
ROA	Return on Assets
ROE	Return on Equity
RWA	Risk-weighted Assets
SCBs	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

The economy of Bangladesh has started to overcome the hurdles of the COVID-19 pandemic and has, once again, reached over 7.0 percent GDP growth. In FY22 real GDP growth rate was 7.25 percent. In alignment with the enhanced economic activities, the import payment went up, and partly due to that the current account deficit widened in the first half of 2022. Likewise, the aggregate debt-to-GDP ratio, government debt-to-GDP ratio, and government deficit-to-GDP ratio increased in FY22 compared to those of FY21. Two other macroeconomic indicators such as household debt-to-gross disposable national income ratio and NFC debt-to-GDP ratio declined during the first half of 2022 compared to the preceding period.

The annual growth rate of banks' loans to households showed a rising trend from July 2020 to June 2022 after a significant fall during the first half of 2020. Besides, the annual growth rate of banks' loans to private NFC escalated during the review period compared to that of the preceding period. However, the NBDCs' loan growth in these two sectors was not so prominent. The provision maintenance ratio of both banks and FIs were around 84.5 percent at end-June 2022 while the ADR of banks was nearly 75 percent as a whole in this period.

Despite taking liquidity support of BDT 1716.31 billion from Bangladesh Bank under the arrangement of assured liquidity facility, Repo, and special Repo facilities, banks maintained both the LCR and the NSFR well above the required level during the first half of 2022. 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-June 2022. On the other hand, treasury bills with remaining maturities up to 91 days remained the largest in terms of volume. Besides, the outstanding of Special-purpose Treasury Bonds (SPTB) of different maturities was BDT 61.6 billion and Shari'ah-based SUKUK bond was BDT 180.0 billion at the end of the review period.

Equity indices of DSE, the prime bourse of Bangladesh, moved downward and the market P/E ratio as well declined during the first half of 2022 compared to the preceding period. The average call money borrowing rate increased while the weighted average interest rate on banks' advances and deposits declined in the review period. The value of BDT against USD observed a sharp depreciation during this period.

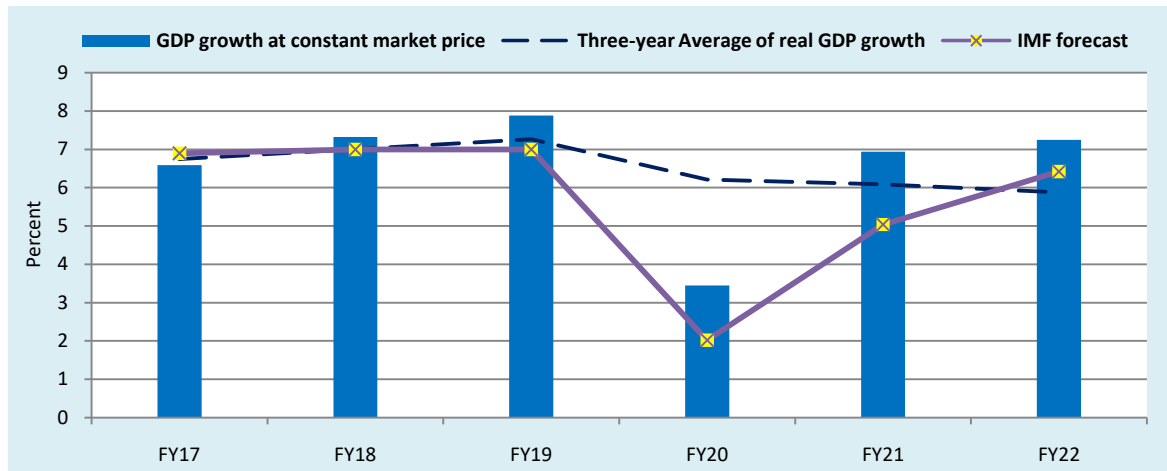
Though banks' gross NPL ratio went up at end-June 2022 compared to that of end-December 2021, the profitability indices (i.e. ROA and ROE) and the Tier-1 capital to RWA ratio accelerated during the first half of 2022. However, in FIs sector, the NPL ratio increased during the review period which resulted in a further negative profit as a whole and a downward movement of Tier-1 capital to RWA ratio.

Annualized growth of banks' credit to the government sector and residential housing sector accelerated while the same to commercial housing sector decelerated during the first half of 2022 compared to those of the preceding period. Loans of both banks and NBDCs to counterpart sectors increased during this period. In both cases, NFCs occupied the lion's share. Banks' cross-border claims increased during this period, though it was still very negligible in comparison with the volume of their assets.

Assets to nominal GDP ratio for the domestic banks, foreign banks, and FIs subsided at end-June 2022 compared to the position of the preceding period. The leverage ratio (as per Basel-III accord) of banks increased a bit and it was well above the required level. On the other side, the leverage ratio (assets to capital) of FIs soared during the review period.

1. Macro risk

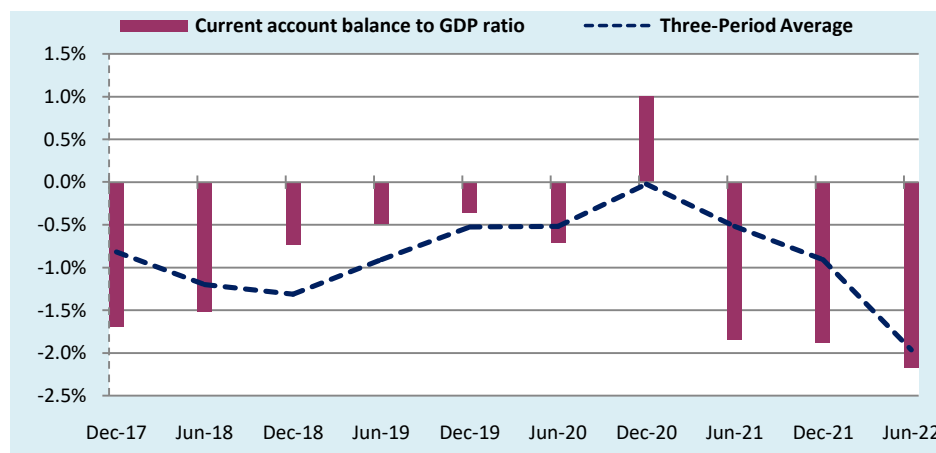
1.1 Current and forecasted real GDP growth



Notes: 1) The base year is 2015-16. 2) GDP growth at constant market price for FY21 is revised and it is provisional for FY22. 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 2022.

Real GDP growth was recorded at 7.25 percent in FY22 as per the new base year of 2015-16. As the economic activities were regaining their momentum, contrary to the COVID-19 pandemic-induced slowdown, the growth rate increased in FY22 compared to the previous fiscal year,. It is also noteworthy that the growth rate surpassed the IMF forecast during the last couple of fiscal years.

1.2 Current account balance-to-GDP ratio

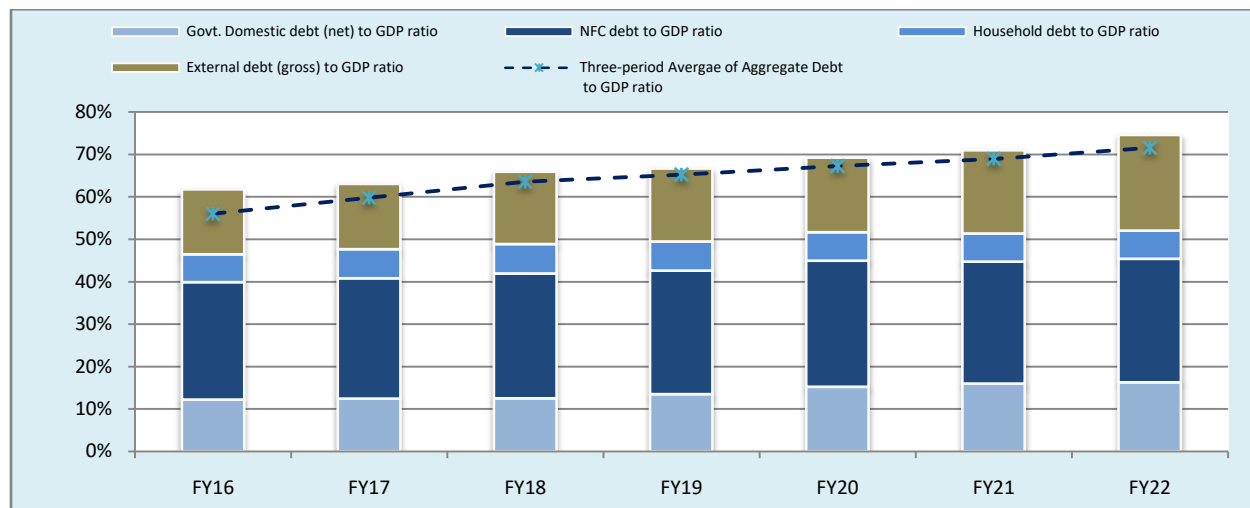


Note: 1) data is revised for Dec-21. 2) Provisional data is used for Jun-2022. 3) As half yearly GDP is not calculated in Bangladesh, June based GDP data is used for December in calculating the desired ratio.
Source: Monthly Economic Trends, Statistics Department, BB.

The chart shows that the current account deficit balance-to-GDP ratio widened in the first half of 2022 than that of the second half of 2021.

1. Macro risk-Cont'd.

1.3 Aggregate debt-to-GDP ratio

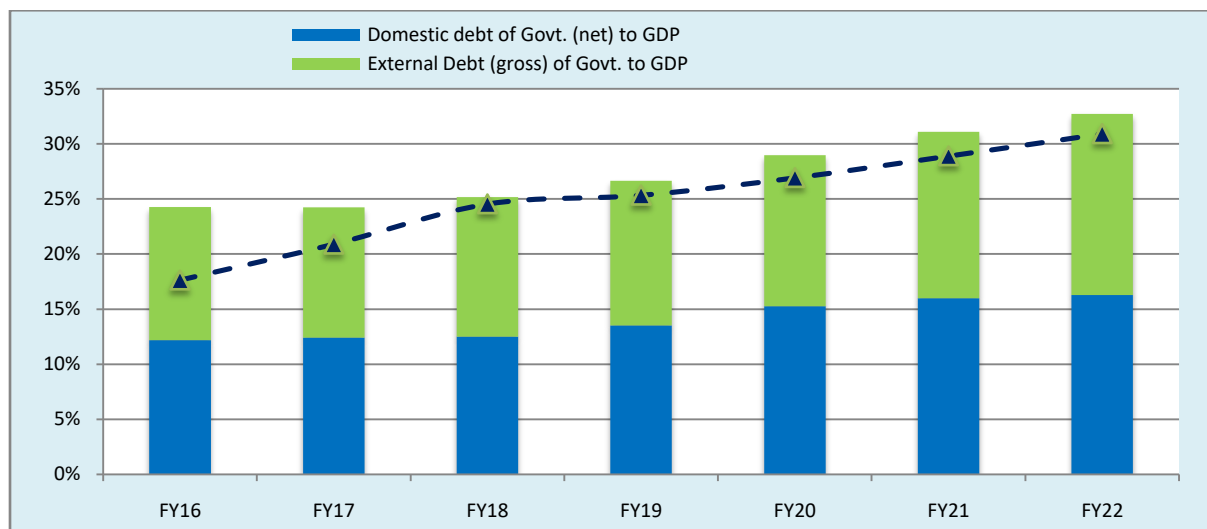


Notes: 1) Because of unavailability of half yearly data of GDP, aggregate debt-to-GDP ratio is shown only for fiscal years. 2) Aggregate debt includes both domestic and external debt position. 3) Domestic debt refers to the claims on government (net), households, and non-financial corporation (NFC) by depository corporations. 4) FY21 data is revised.

Sources: Monthly Economic Trends, Statistics Department, BB; National Summary Data Page (NSDP), BB.

As a continuation of steady growth trend, aggregate debt-to-GDP ratio recorded a slight increase in FY22 compared to that of FY21. Debts of non-financial corporation remained the major constituent of aggregate debt.

1.4 Government debt-to-GDP ratio



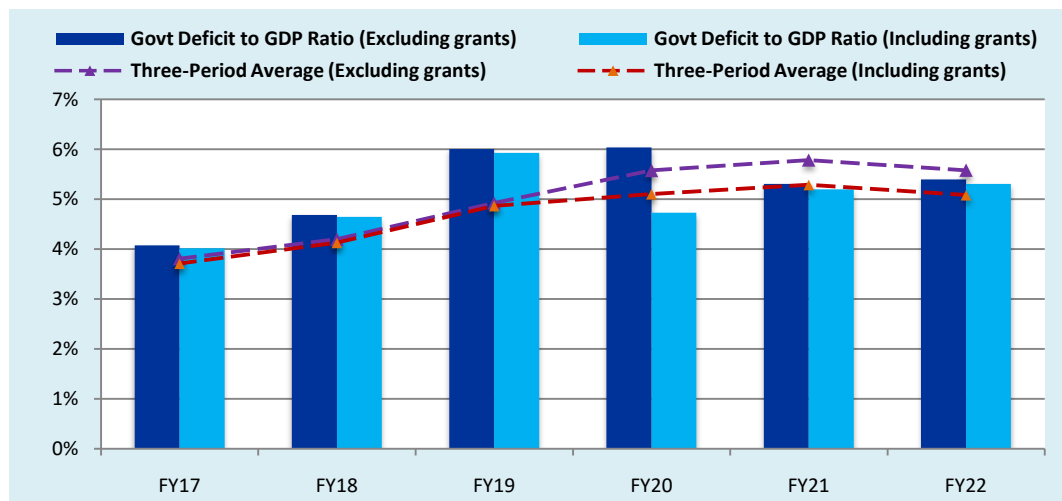
Notes: 1) Because of unavailability of half yearly data of GDP, the ratio is shown only for fiscal years.

Source: Monthly Economic Trends, Statistics Department, BB; National Summary Data Page (NSDP), BB.

Government debt-to-GDP ratio increased in FY22 compared to that of FY21. The chart shows a steady upward trend since FY18.

1. Macro risk-Cont'd.

1.5 Government deficit-to-GDP ratio

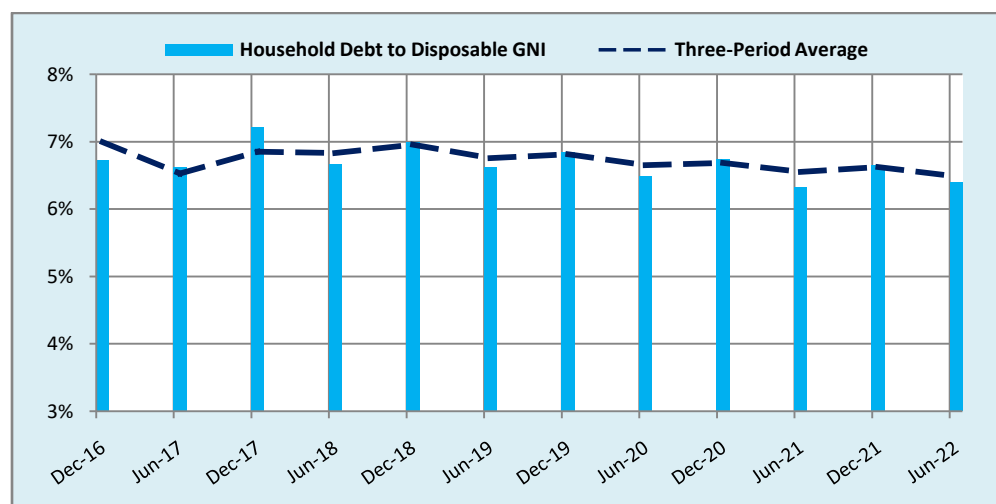


Notes: 1) Because of unavailability of half yearly data of GDP, government deficit-to-GDP ratio is shown for fiscal years only. 2) For FY20, FY21 and FY22, GDP is considered as per new base year 2015-16. 3) FY21 is revised.

Source: Monthly Report on Fiscal Position, February-2022 issue, Ministry of Finance, Government of Bangladesh.

Government deficit-to-GDP ratio, both including and excluding grants, increased in FY22 compared to the preceding fiscal year.

1.6 Household debt-to-gross disposable national income ratio



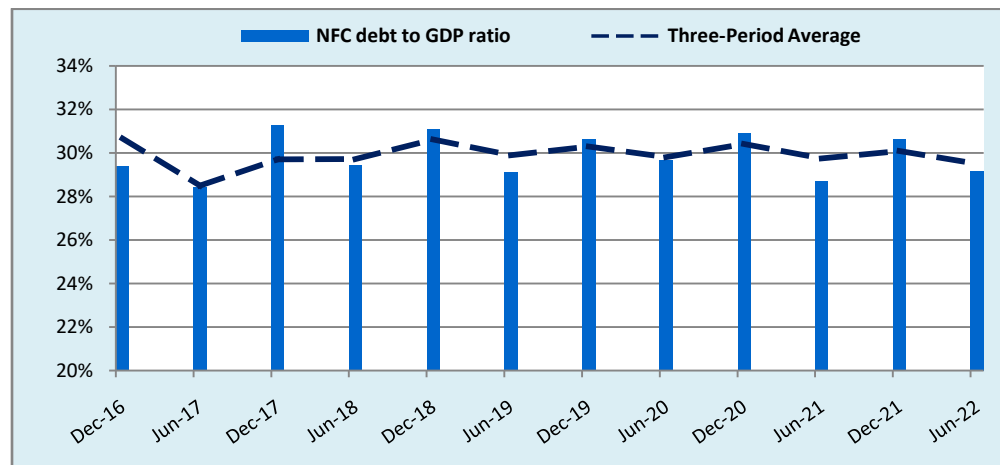
Notes: 1) June-22 based data is provisional. 2) Dec-21 based data is revised. 3) As half yearly disposable GNI is not calculated in Bangladesh, June based data of disposable GNI is used for December in calculating the ratio.

Sources: Monthly Economic Trends, Statistics Department, BB.

Household debt-to-gross disposable national income ratio declined in June 2022 compared to December 2021. However, the ratio slightly increased compared to end-June 2021.

1. Macro risk-Cont'd.

1.7 Non-financial Corporation (NFC) debt-to-GDP ratio



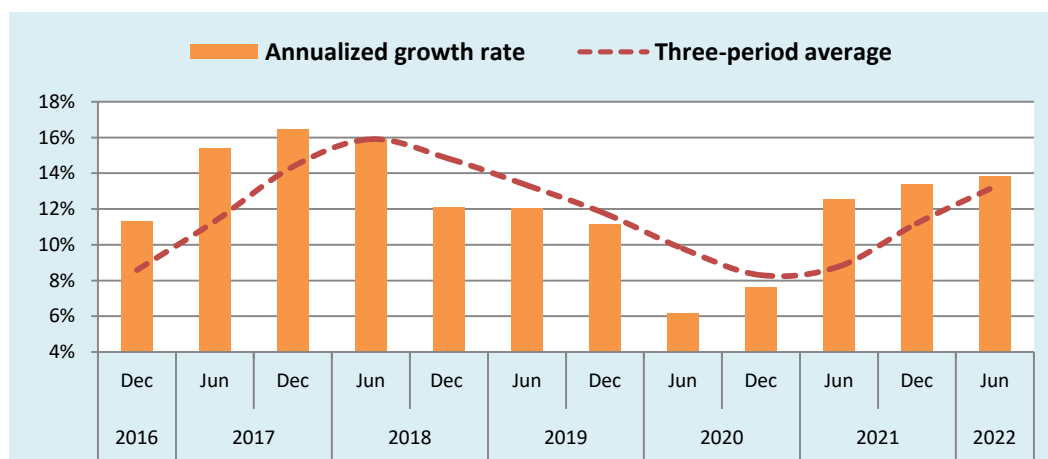
Notes: 1) June-22 based data is provisional. 2) Dec-21 based data is revised. 3) NFC debt includes debts of both public and private NFCs. 4) As half yearly GDP is not calculated in Bangladesh, June based GDP data is used for December in calculating the ratio.

Sources: Monthly Economic Trends, Statistics Department, BB.

NFCs' debt-to-GDP ratio decreased at end June 2022 compared to end-December 2021 position. However, the ratio increased compared to end-June 2021. Here, it is noteworthy that private NFCs' debt comprises major portion of aggregate NFCs' debt.

2. Credit risk

2.1 Annual Growth rate of banks' loans to households



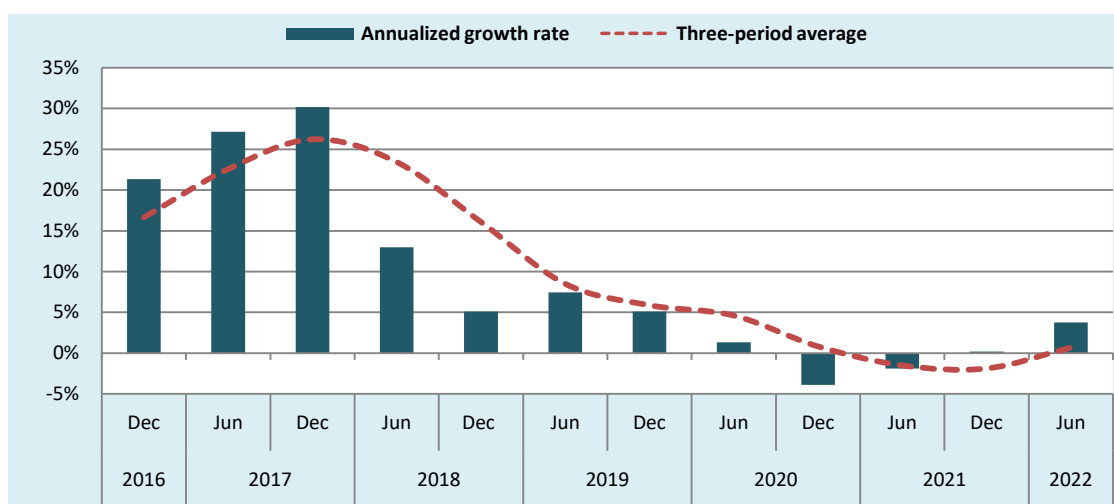
Notes: 1) Loans refer to outstanding loans and advances extended to domestic households (individuals) excluding bills.

2) Dec-2021 data is revised.

Source: Statistics Department, BB.

In contrast with an overall downward trend in banks' credit growth to household sector since December 2017, an upward growth trend was recorded during FY21 and FY22.

2.2 Annual Growth rate of NBDCs' loans to households



Notes: NBDCs include deposit taking FIs¹, Ansar-VDP Unnayan Bank, Karmasangsthan Bank, Grameen Bank and Bangladesh Samabaya Bank.

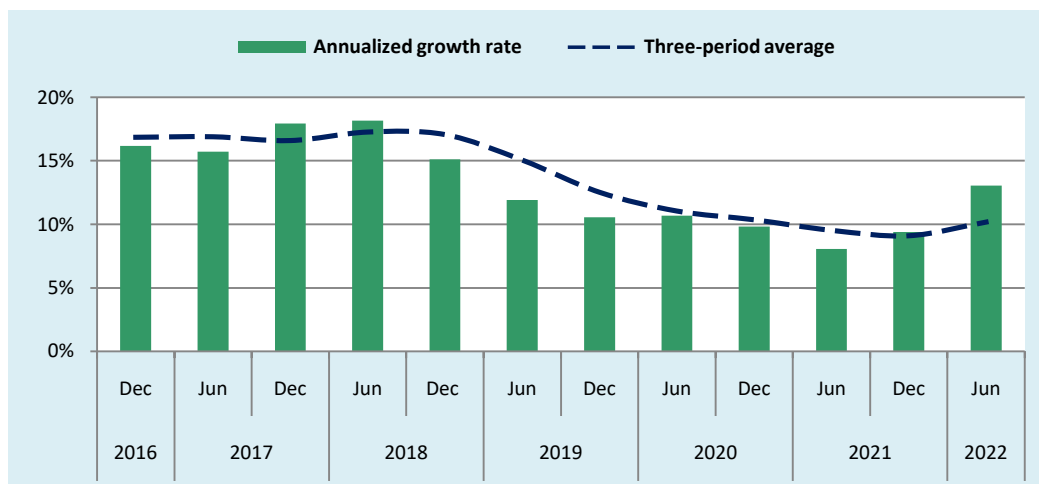
Source: Statistics Department, BB.

Non-bank depository corporations' (NBDC) loan growth to household sector showed a downward trend since December 2017 and the growth became negative at end-December 2020 and end-June 2021. However, it depicted a positive trend at the end of June 2022.

¹FIs 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 corporation (NFC)

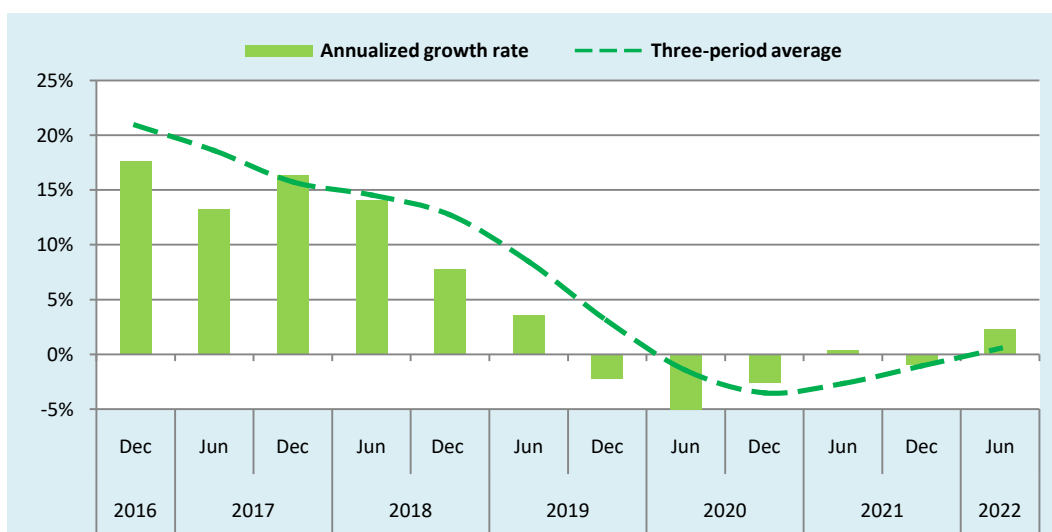


Notes: Loans refer to outstanding loans and advances extended to private NFCs excluding bills.

Source: Statistics Department, BB.

The growth of private NFCs' loans recorded an upward trend during FY22 after an overall downward trend observed since June 2018.

2.4 Growth of NBDCs' loans to private non-financial corporation (NFC)



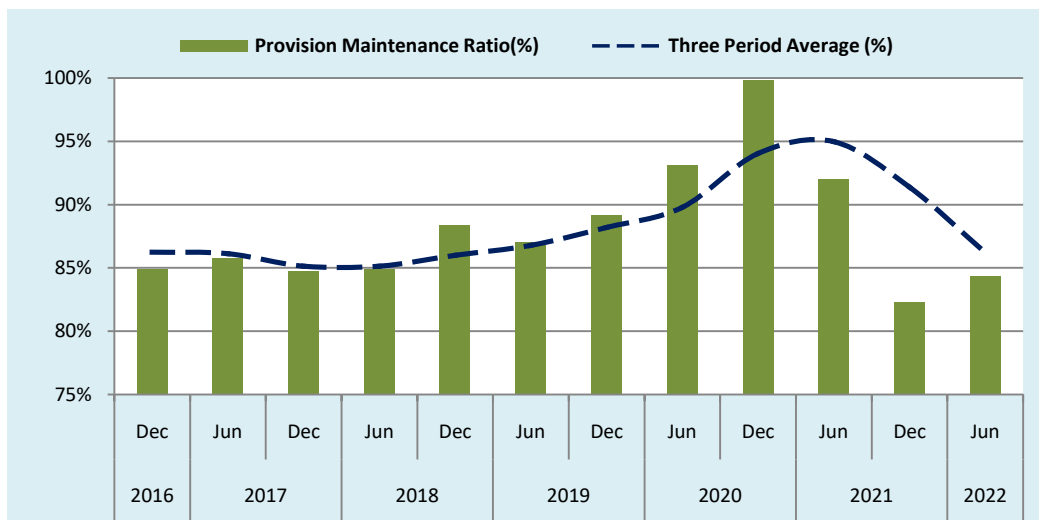
Notes: NFC refers to private NFCs only. NBDCs include deposit taking FIs, Ansar-VDP Unnayan Bank, Karmasangsthan Bank, Grameen Bank and Bangladesh Samabaya Bank.

Source: Statistics Department, BB.

Contrary to the downward and negative growth in the last couple of periods, the NBDCs' loans to private NFCs recorded positive growth in the review period.

2. Credit risk-Cont'd.

2.5 Provision maintenance ratio of banks

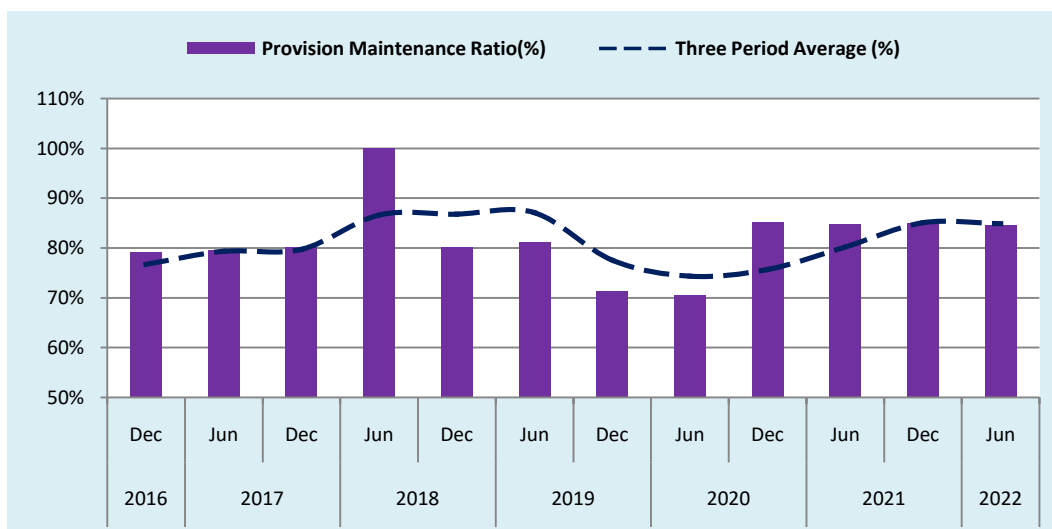


Notes: Provision maintenance ratio refers to maintained provision as a percentage of required provision.

Source: BRPD, BB.

Banks' provision maintenance ratio increased at end-June 2022 compared to that of end-December 2021 and stood at 84.36 percent.

2.6 Provision maintenance ratio of FIs



Notes: Data for December 2021 and June 2022 are un-audited.

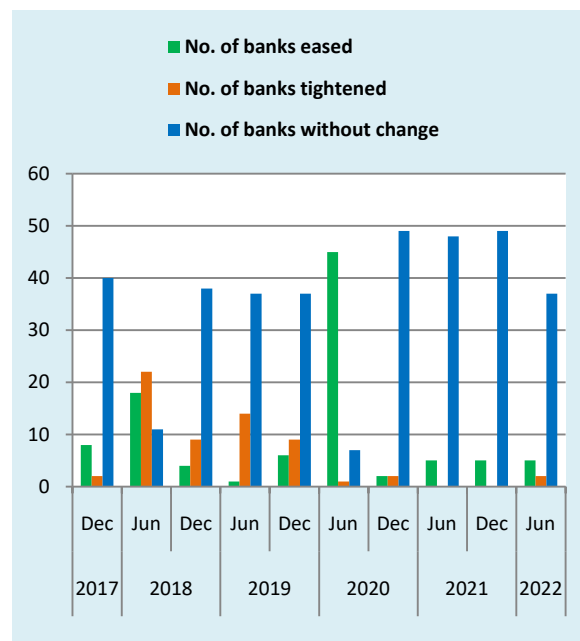
Source: DFIM, BB.

FIs' provision maintenance ratio witnessed almost a stable state during end-December 2020 to end-June 2022.

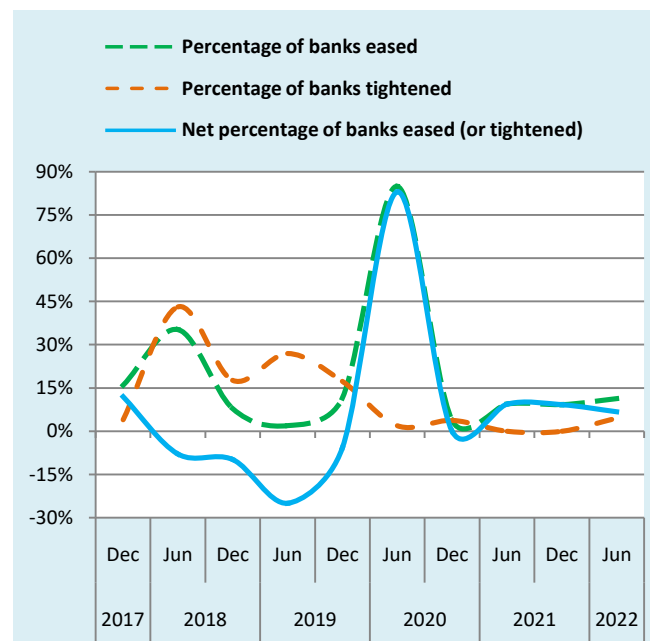
2. Credit risk–Cont'd.

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



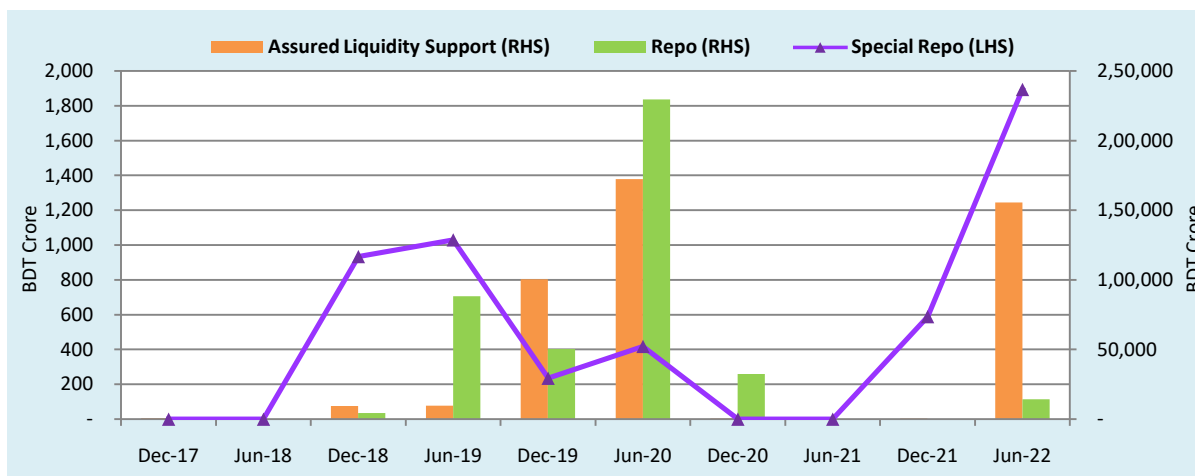
Notes: Changes in banks' announced interest rate for housing loans have been used as a proxy for changes in banks' credit standards. Net percentage change is the difference between the share of banks reporting that interest rates have been eased (decreased) and the share of banks reporting that they 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 January to June 2022, 11.4 percent of 44 respondent scheduled banks eased the interest rates of housing loans while 4.5 percent of banks tightened the same; the remaining banks kept their rates unchanged during the same period. Hence, after netting off, a net easing was observed during this period.

3. Funding and liquidity risk

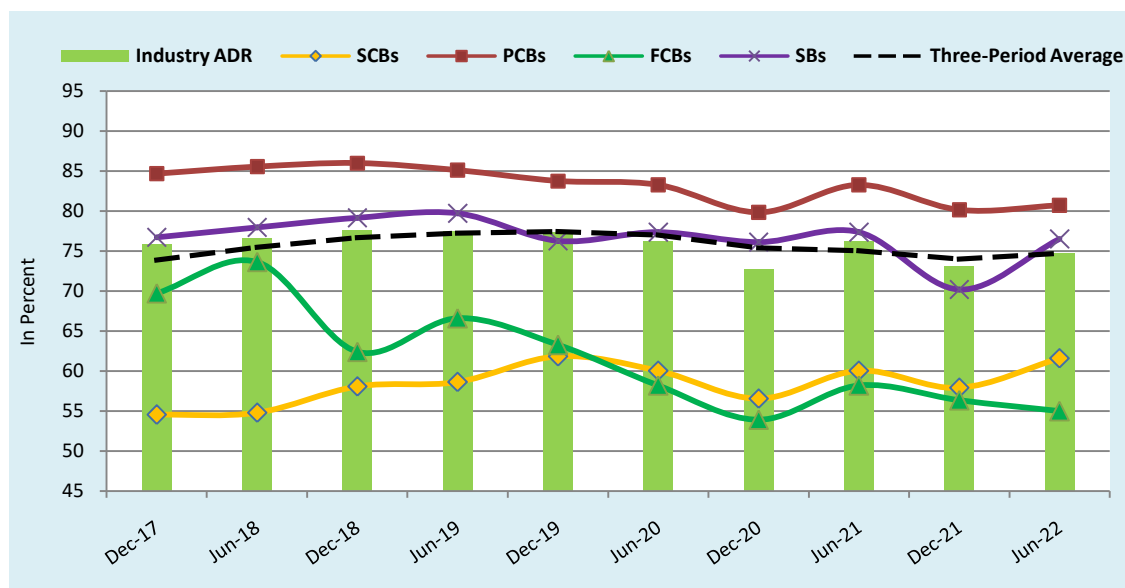
3.1 Bangladesh Bank's liquidity support to banks



Source: DMD, BB.

Liquidity support of Bangladesh Bank in the form of Assured Liquidity Support and Special Repo increased significantly during the first half of 2022 compared to those of the preceding three periods.

3.2 Banks' advance-to-deposit ratio



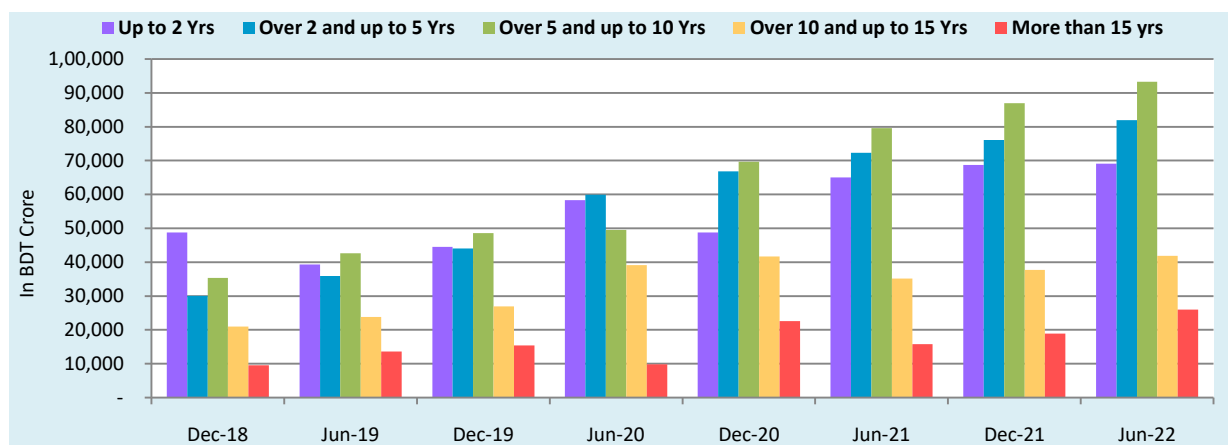
Source: DOS, BB.

The industry ADR increased at end-June 2022 compared to that of end-Dec 2021, however, decreased compared to end-June 2021. ADR of PCBs was higher than the industry average whereas ADRs of FCBs and SCBs were significantly lower.

3. Funding and liquidity risk-cont'd.

3.3 Maturity profile of government's outstanding debt securities

a. Treasury Bond

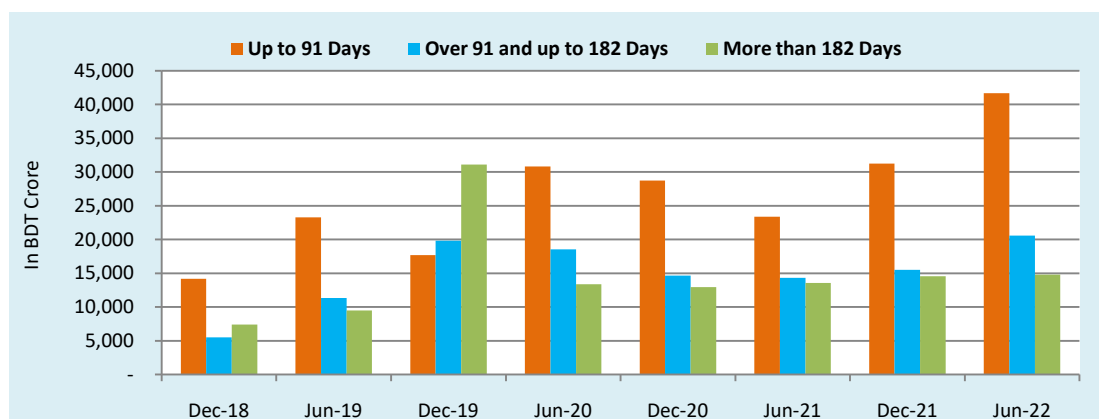


Notes: The maturity profile refers to the residual maturity of long-term and short-term debt securities issued by Government of Bangladesh. Long-term debt securities include government Treasury bond with a maturity of more than 12 months. Data are based on amounts outstanding at the end of the corresponding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

Source: DMD, BB.

Treasury bonds with 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-June 2022. The outstanding of all the treasury bonds increased at end-June 2022 compared to the position of end-December 2021. Besides, there were also special purpose treasury bonds (SPTB) of different maturities amounting to BDT 61.64 billion and Shari'ah based SUKUK bond of BDT 180.00 billion as of end-June 2022.

b. Treasury Bill



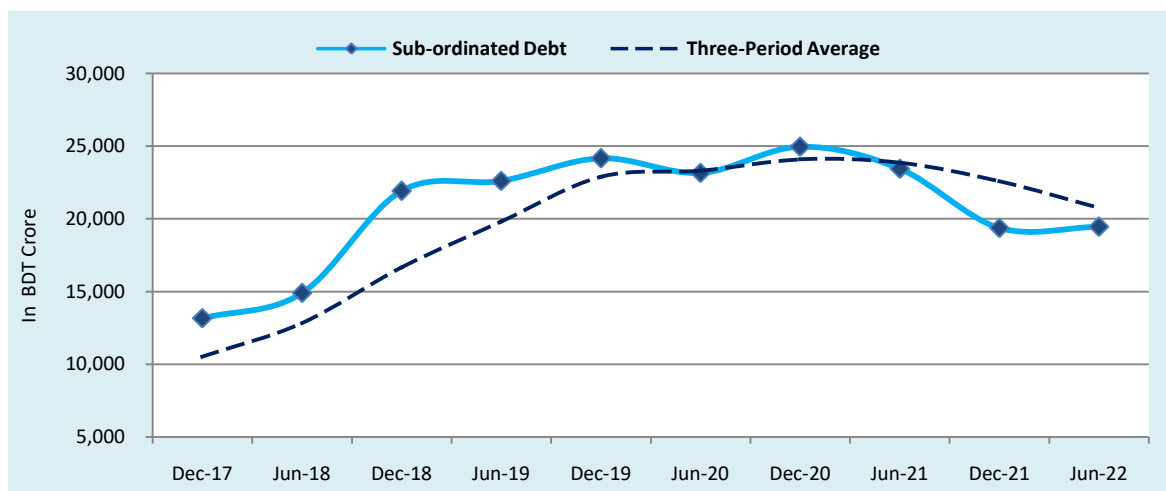
Notes: Short-term debt securities include government Treasury bill with a maximum maturity of 12 months. Data are based on amounts outstanding at the end of the corresponding period.

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 increased at end-June 2022 compared to the position of end-December 2021.

3. Funding and liquidity risk-cont'd.

3.4 Subordinated debt

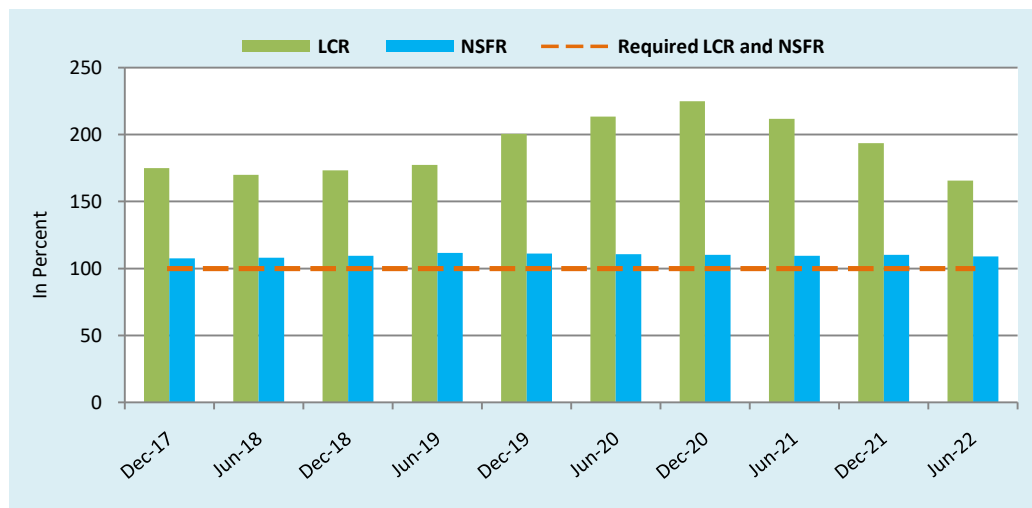


Note: Subordinated debts are eligible to be included as Tier-2 Capital for calculating the regulatory capital as per BASEL III Capital Framework.

Source: DOS, BB.

Subordinated debt, issued by banks, recorded a slight increase at end-June 2022 compared to that of end-December 2021.

3.5 Banks' LCR and NSFR



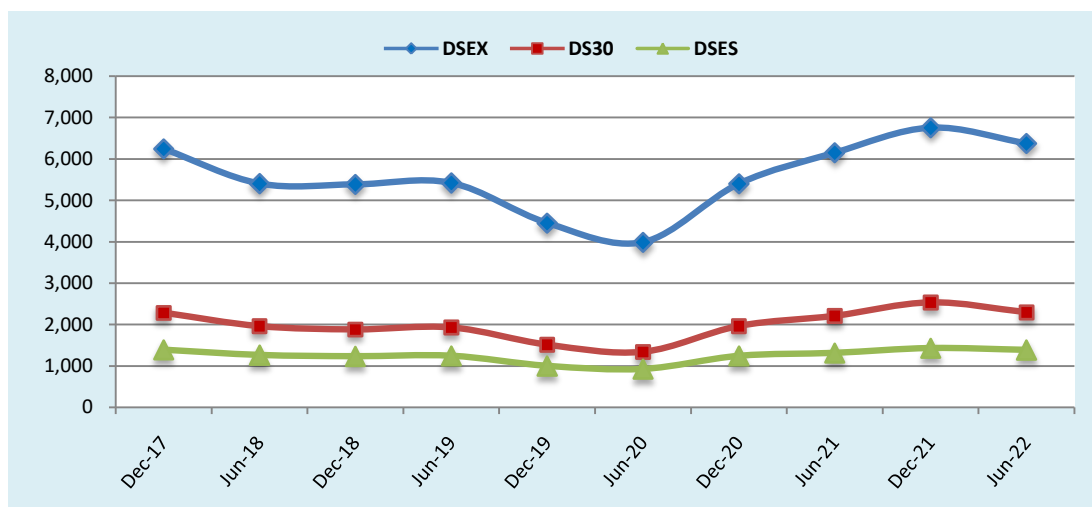
Note: BDBL, BKB, PKB and RAKUB are exempted from maintaining LCR and NSFR. Requirement for LCR is equal or greater than 100 percent and for NSFR, it is above 100 percent in Bangladesh.

Source: DOS, BB.

During FY21 and FY22, the LCR depicted a downward trend, though it was still far above the requirement in the review period. The NSFR, another measure of banks' liquidity, continued its stable position of around 110 percent against the benchmark of 'above 100 percent'.

4. Market risk

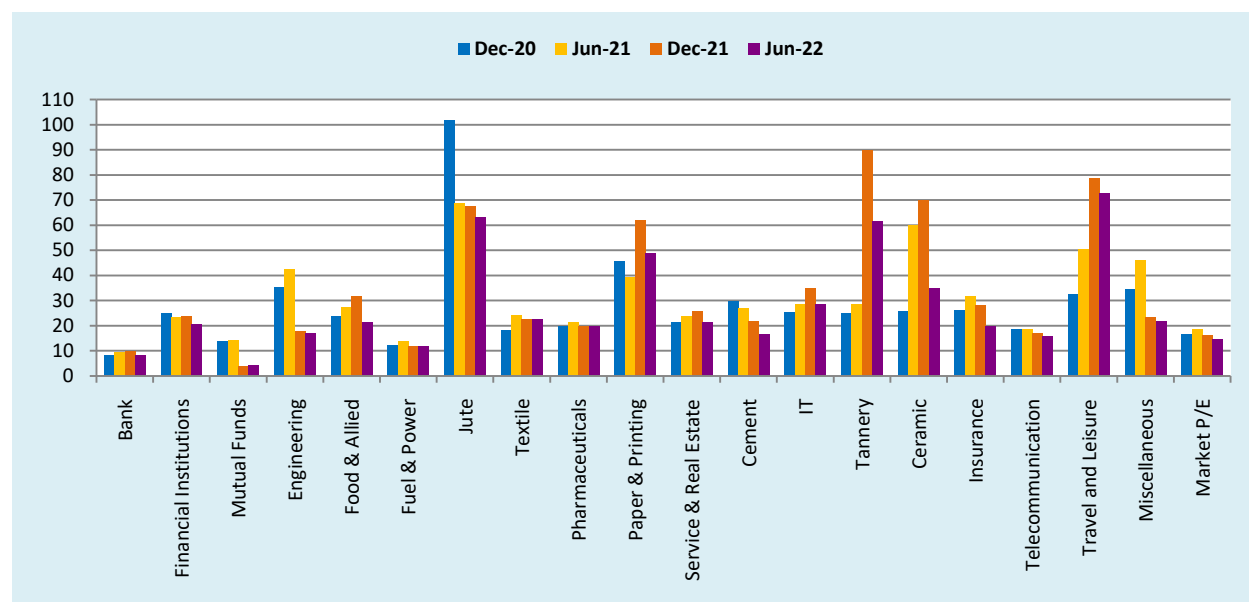
4.1 Equity indices



Source: DSE Website.

DSEX, the major DSE index, decreased at end-June 2022 compared to that of end-December 2021. Following the same pattern, other equity indices, DS30 and DSES, also decreased in the review period.

4.2 Price/earnings (P/E) ratio

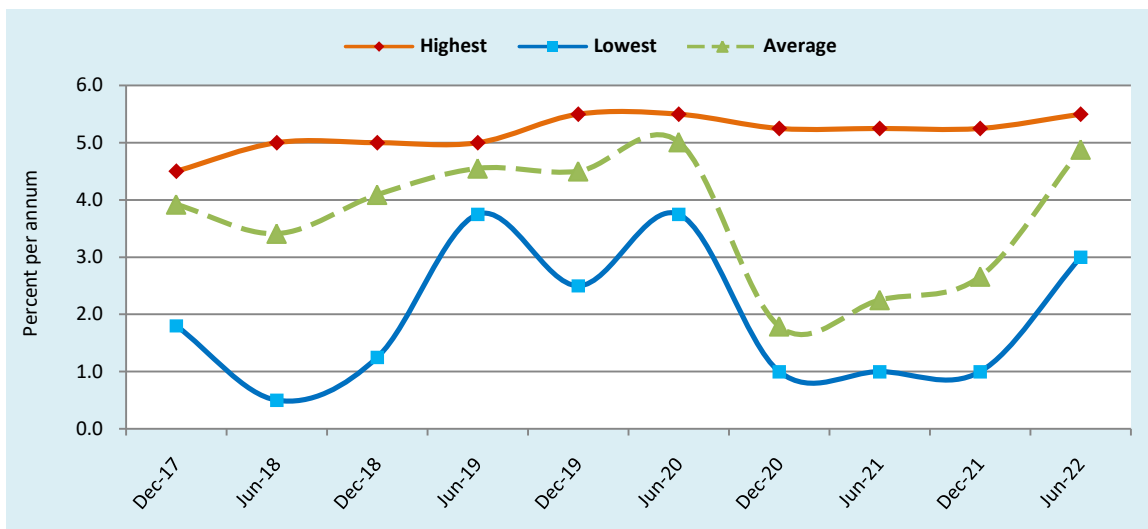


Source: DSE Website.

P/E ratio of most of the listed sectors decreased at end-June 2022 compared to end-December 2021. In this line, Market P/E ratio as a whole decreased and stood at 14.44 at end-June 2022, which was 16.29 at end-December 2021 and 18.50 at end-June 2021.

4. Market risk-cont'd.

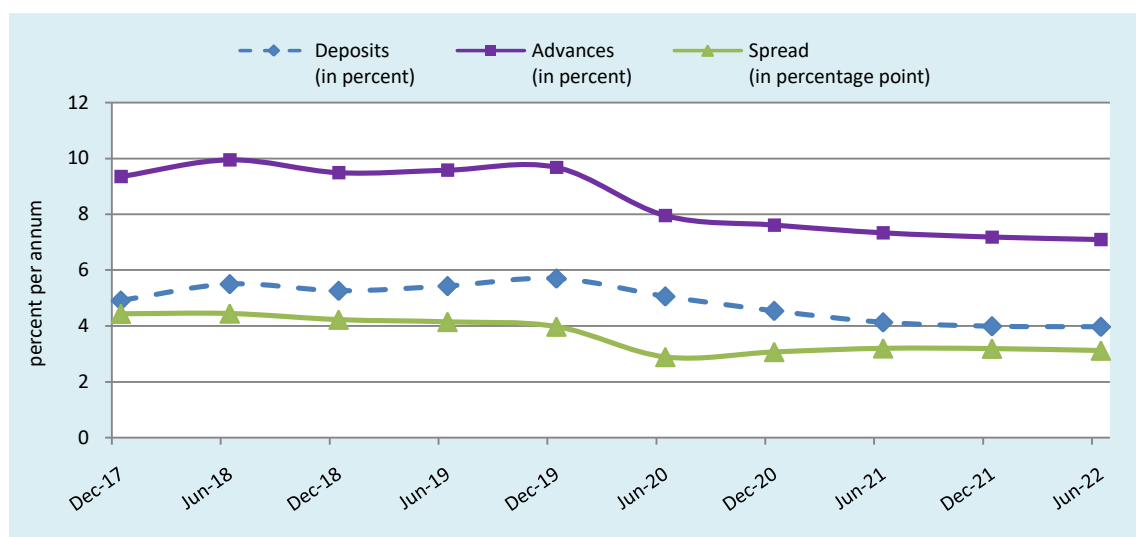
4.3 Weighted average call money market rates



Source: Monthly Economic Trends, Statistics Department, BB.

Weighted average call money borrowing rate increased at end-June 2022 compared to that of end-December 2021. Note that, it has been increasing gradually since December 2020.

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

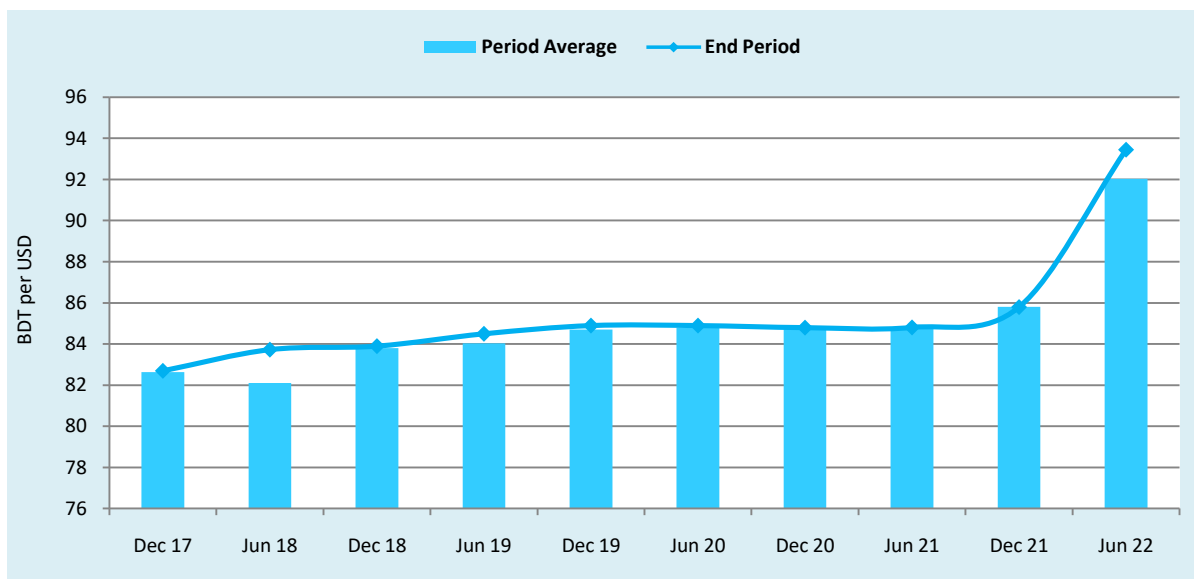


Source: Monthly Economic Trends, Statistics Department, BB.

Weighted average interest rate on deposits and advances recorded declining trend since December 2019. The spread decreased by 7 basis points during the first half of 2022 compared to the position of second half of 2021.

4. Market risk-cont'd.

4.5 Weighted average exchange rate (BDT/USD)



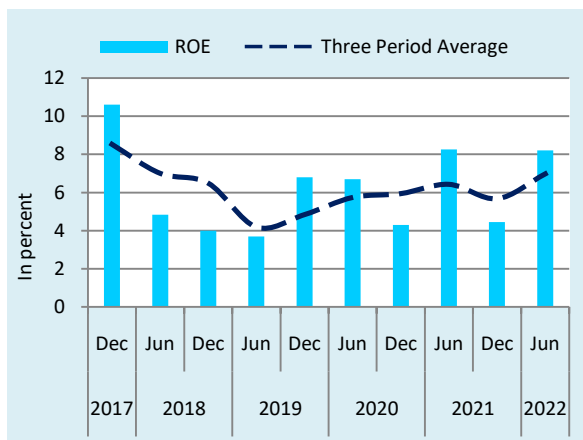
Source: Monthly Economic Trends, Statistics Department, BB.

On contrary to a stable trend in the preceding couple of periods, the value of BDT against USD depreciated significantly during the first half of 2022 due to higher demand for the greenback for settling import-payment obligations.

5. Profitability and solvency risk

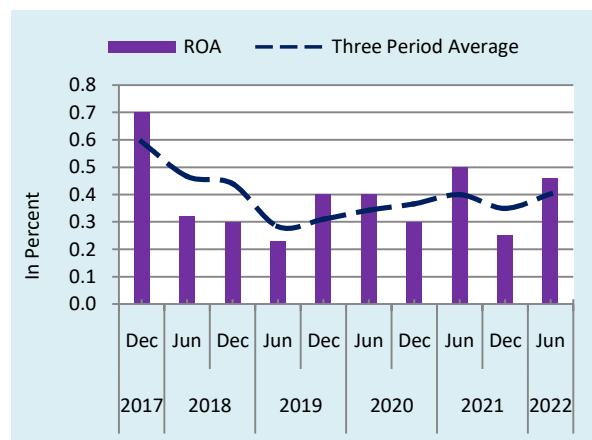
5.1 Banks' profitability indicators

a. Return on equity (ROE)



Note: Ratios of June period are annualized.
Source: DOS, BB; Computation: FSD, BB.

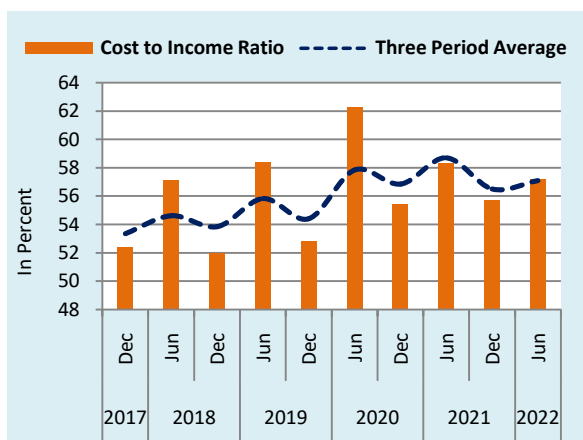
b. Return on assets (ROA)



Note: Ratios of June period are annualized.
Source: DOS, BB; Computation: FSD, BB

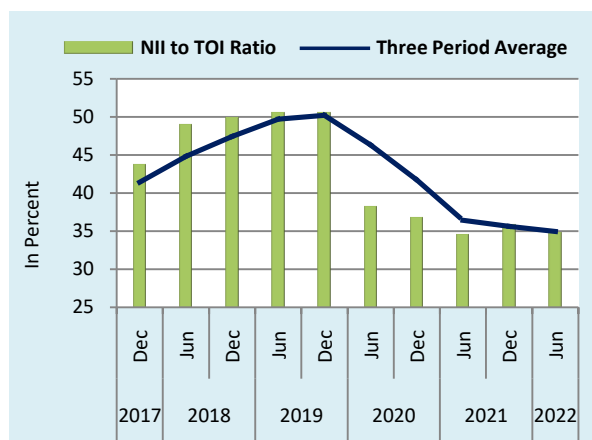
Both ROE and ROA of banks increased during the first half of 2022 compared to the position of second half of 2021. However, compared to the position of first half of 2021 both ratios decreased slightly.

c. Cost-to-income ratio



Note: Ratio between operating expenses and operating income.
Source: DOS, BB; Computation: FSD, BB.

d. Net interest income to total operating income ratio



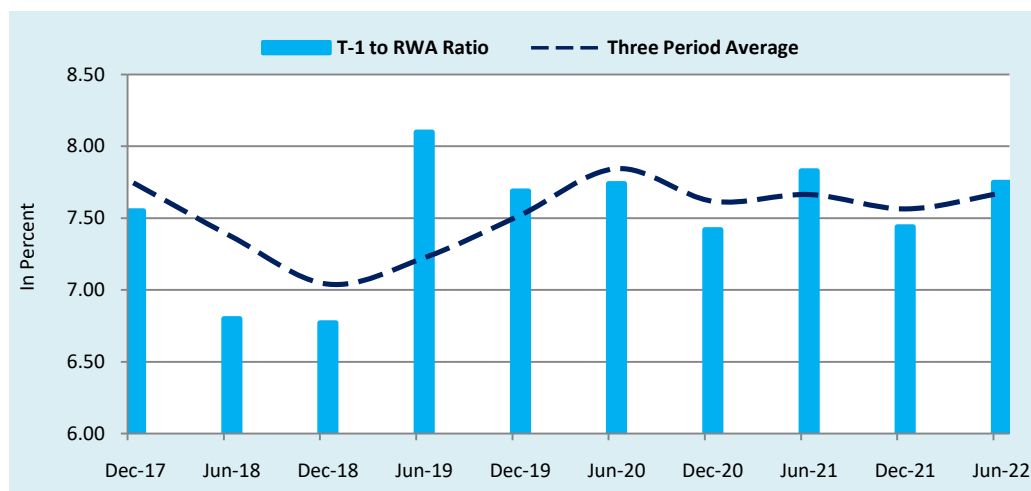
Note: Ratio between net interest income and total operating income.
Source: DOS, BB; Computation: FSD, BB.

Compared to the position of July-December 2021, banks' cost-to-income ratio increased during January-June 2022. On the other hand, banks' net interest income to total operating income ratio decreased during the same period.

5. Profitability and solvency risk-cont'd.

5.2 Banks' solvency indicators

a. Tier-1 to RWA ratio

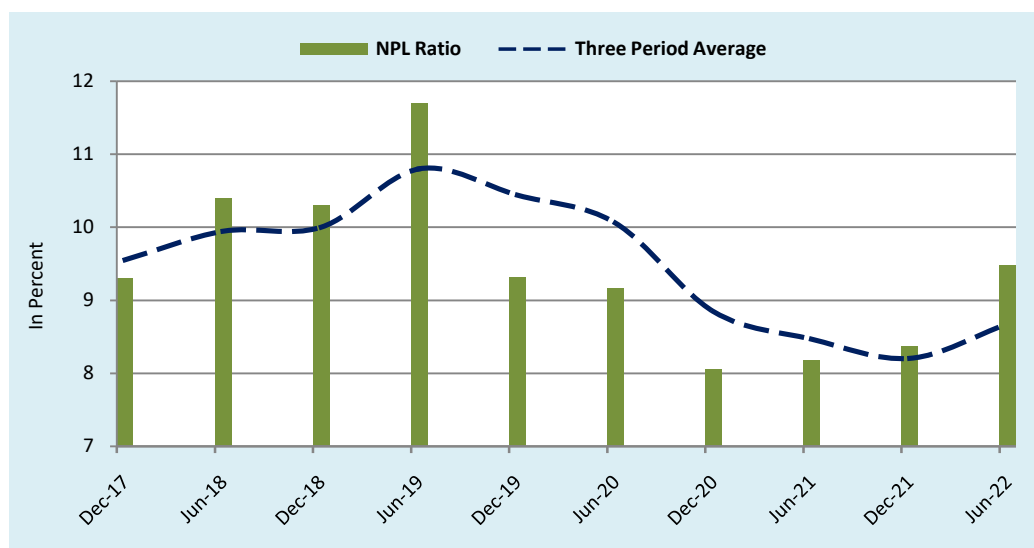


Note: Ratio of Tier-1 capital to total risk-weighted assets.

Source: DOS, BB.

Banks' Tier-1 capital to total risk-weighted assets ratio increased at end-June 2022 from the position of end-December 2021 and stood at 7.75 percent which was well above the regulatory requirement of 6.0 percent.

b. Gross non-performing loan (NPL) ratio



Note: Ratio of total non-performing loans & advances to total loans & advances (DBU only).

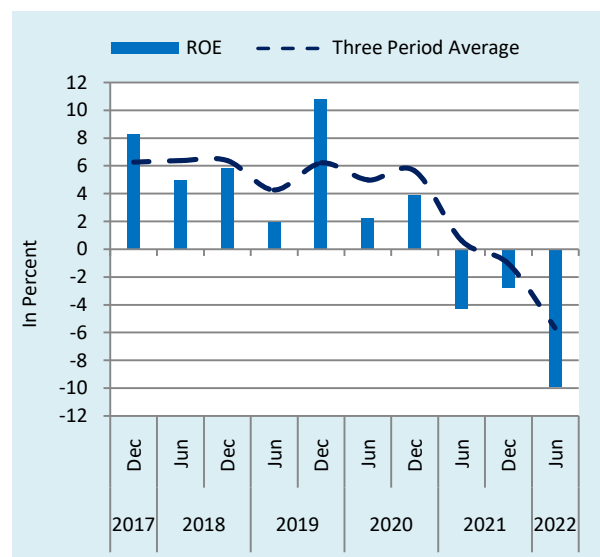
Source: BRPD, BB.

The gross NPL ratio has been increasing since December 2020. It increased further at end-June 2022 compared to the position of end-December 2021 and stood at 9.48 percent.

5. Profitability and solvency risk-cont'd.

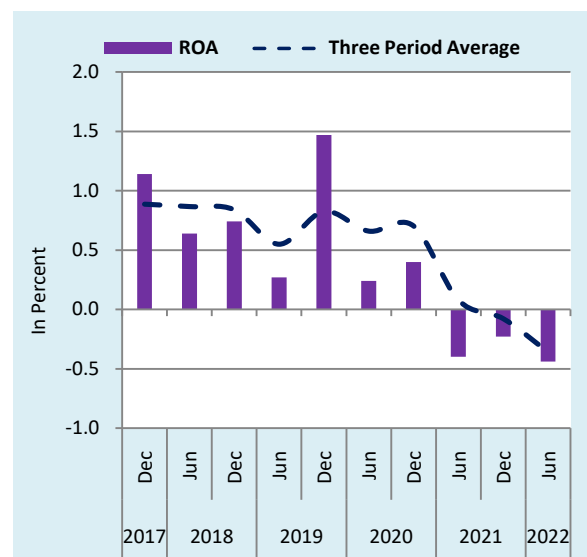
5.3 FIs' profitability indicators

a. Return on equity (ROE)



Note: Data for Dec-2021 and Jun-2022 are provisional.
Source: DFIM, BB.

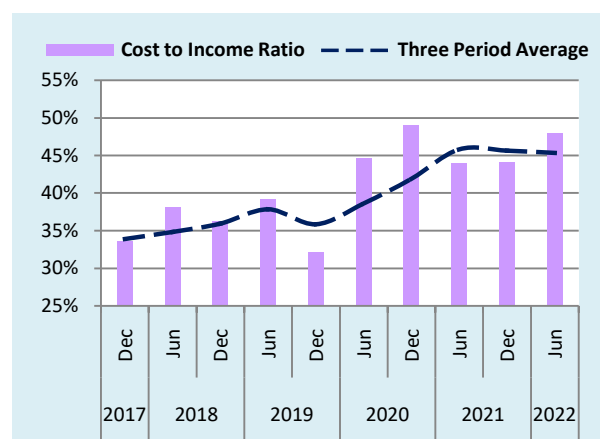
b. Return on assets (ROA)



Note: Data for Dec-2021 and Jun-2022 are provisional.
Source: DFIM, BB.

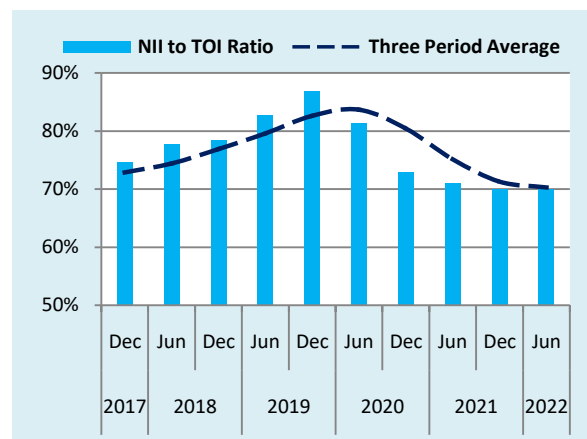
FIs' ROE and ROA trend-line for the first time fell substantially during January-June 2021 and marked in the negative territory. Both the ratios deteriorated further in the review period compared to the preceding period.

c. Cost-to-income ratio



Note: 1) Cost to income ratio refers to ratio between operating expenses and operating income. 2) Dec-2021 and Jun-2022 data are provisional.
Source: DFIM, BB.

d. Net interest income to total operating income ratio



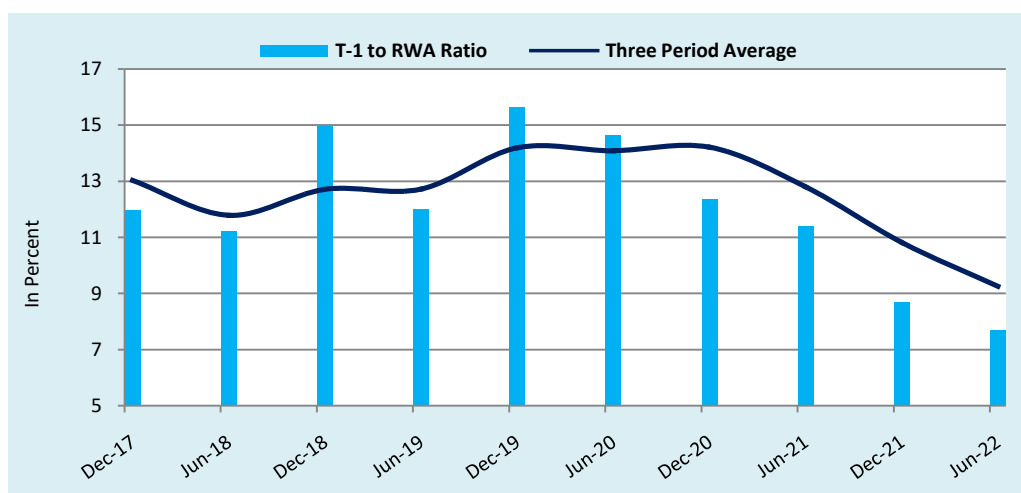
Note: 1) Ratio between net interest income and total operating income. 2) Dec-2021 and Jun-2022 data are provisional.
Source: 1) DFIM, BB.

FIs' cost-to-income ratio increased while net interest income to total operating income ratio remained almost same at end-June 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

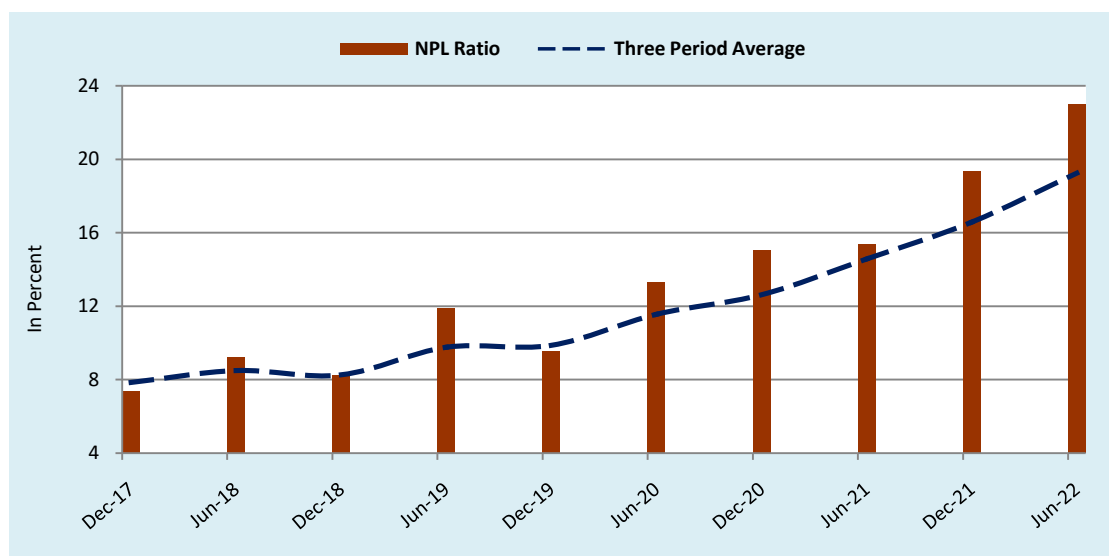


Note: 1) Ratio of Tier-1 (core) capital to total risk-weighted assets. 2) Dec-21 revised & Jun-22 provisional.

Source: DFIM, BB.

Though FIs' Tier-1 to RWA ratio has been declining gradually since December 2019, it was still above the regulatory requirement of 5.0 percent at end-June 2022.

b. Gross non-performing loan (NPL) ratio



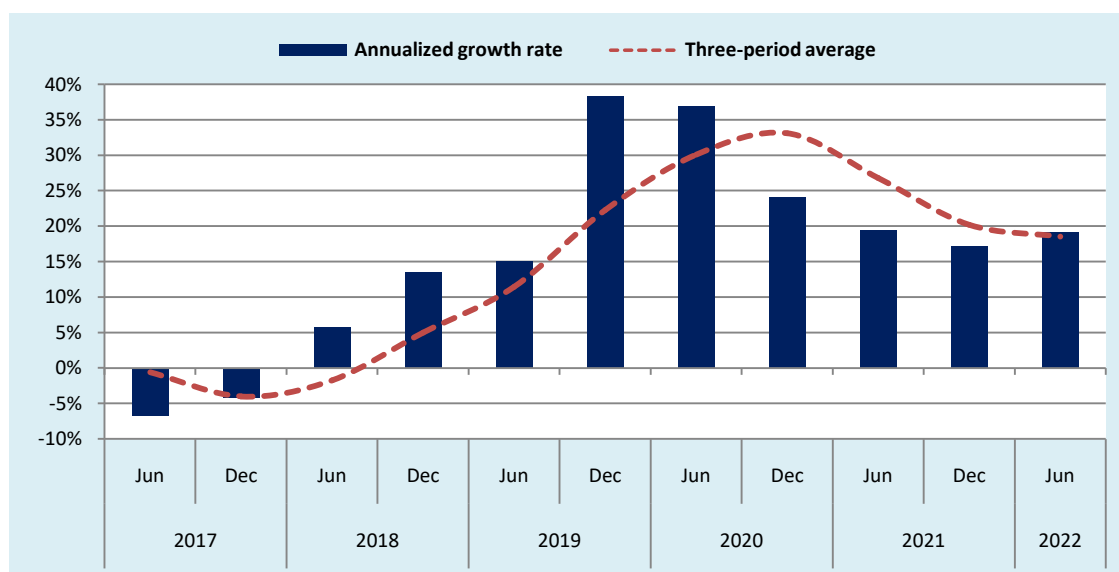
Note: 1) Ratio of non-performing loans and leases to total loans and leases. 2) Data for December 2021 and June 2022 are provisional.

Source: DFIM, BB.

The chart displays an upward trend with some minor fluctuation for the gross NPL ratio of FIs from December 2017 to June 2022. The ratio stood at 22.99 percent at end-June 2022 compared to 19.33 percent at end-December 2021 which is notably high for an industry involved with financial intermediation.

6. Inter-linkages

6.1 Growth of banks' credit (gross) to government

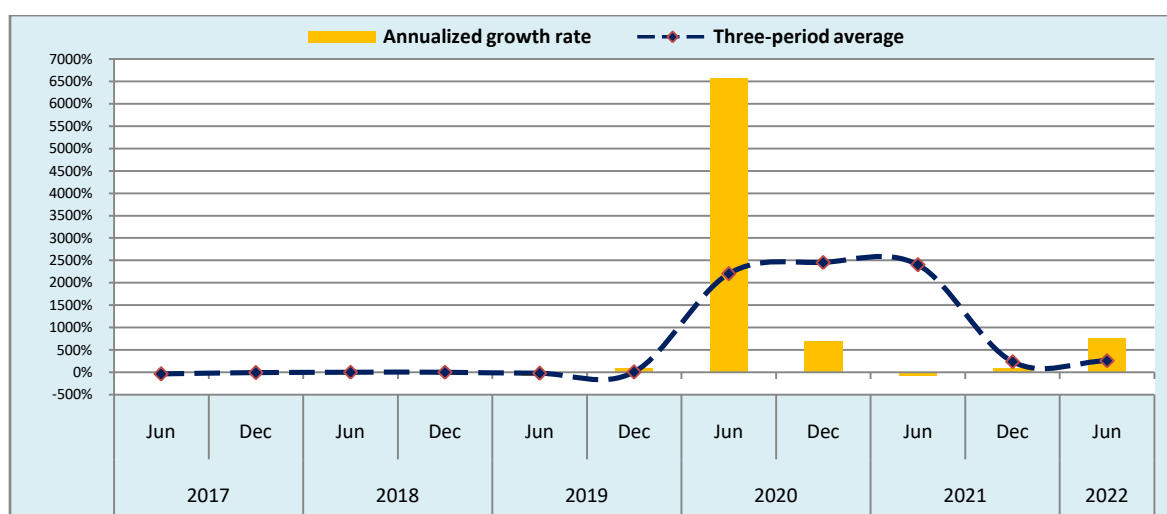


Notes: Credit extended to the government refers to gross amount.

Source: Statistics Department, Bangladesh Bank.

Government borrowings' growth rate from the banking sector registered a declining trend after end-December 2019. However, it increased slightly at end-June 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.

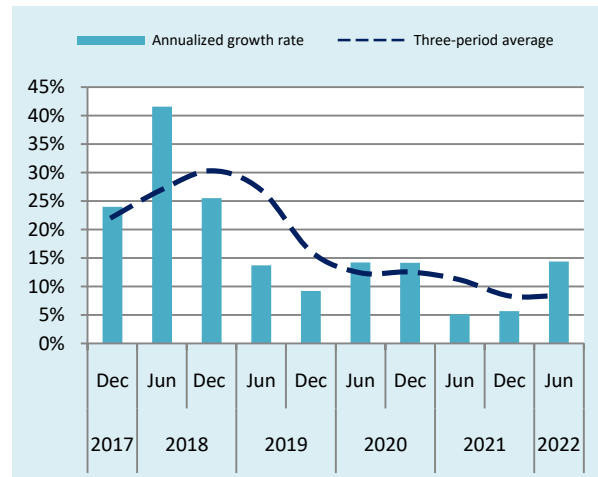
Source: Statistics Department, Bangladesh Bank.

Government borrowings from the NBDCs, though remained very low compared to the same from the banking sector, witnessed a positive growth at end-June 2022 compared to the preceding period.

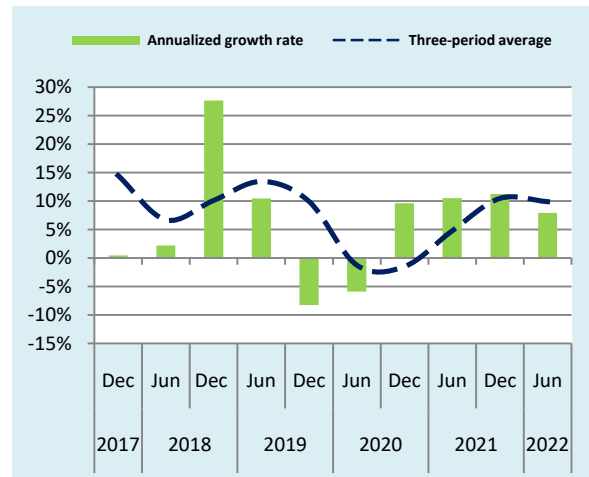
6. Inter-linkages- Cont'd.

6.3 Growth of banks' loans to housing sector

a. Loans to residential housing



b. Loans to commercial housing

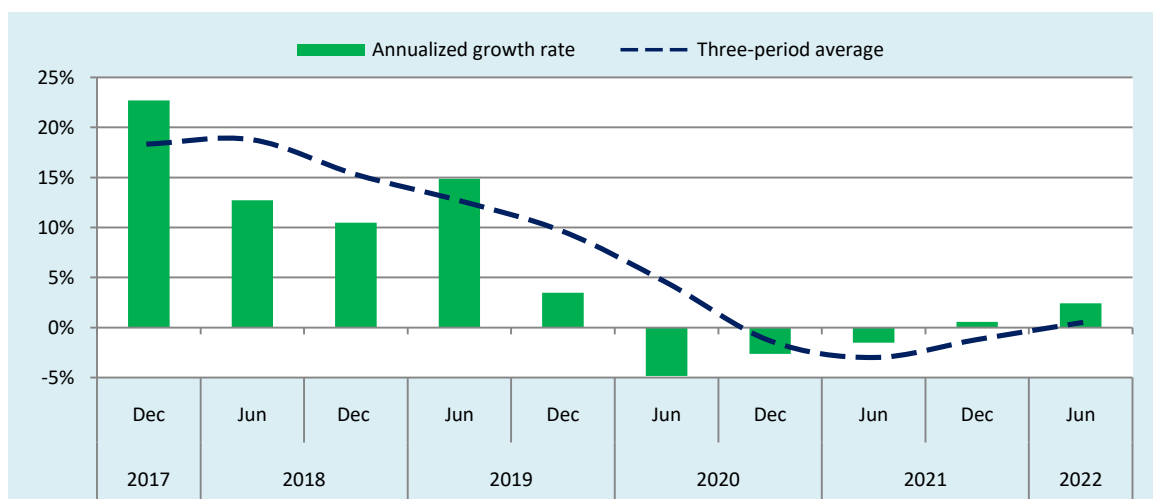


Notes: Data for Dec-2021 and Jun-2022 are unaudited. Loans refer to outstanding loans and advances excluding bills. Loans to residential housing refer to loans extended to domestic households for house/flat/land purchase and repair/renovation/extension. Loans to commercial housing refer to loans extended to commercial developers/ contractors. Dec-2021 data is revised.

Source: Statistics Department, Bangladesh Bank

Loan growth in residential housing sector recorded an increase during the first half of 2022 compared to the preceding period. Loan growth in commercial housing sector, which remained volatile during the last couple of years, went slightly down at end-June 2022 compared to the preceding period.

6.4 Growth of FIs' loans to housing sector



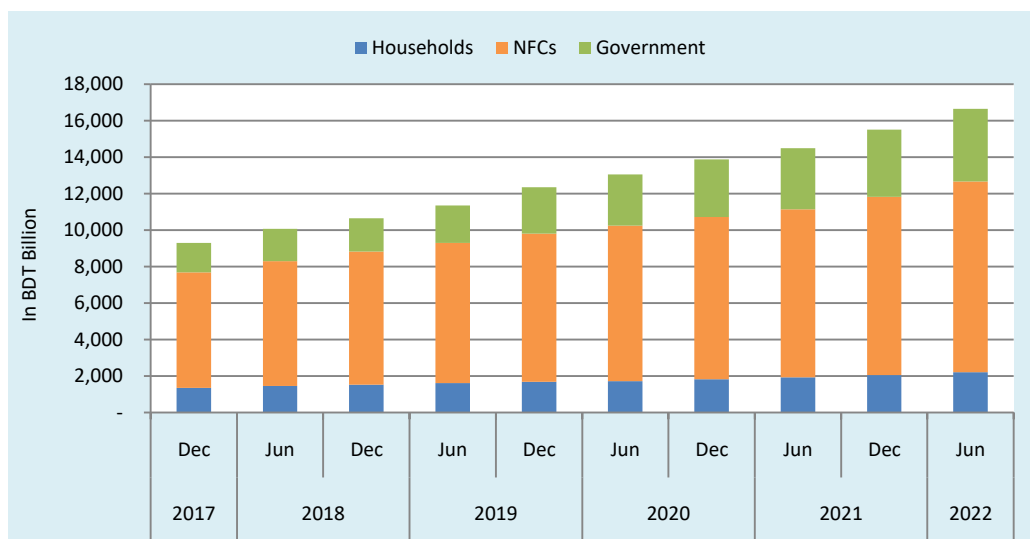
Notes: Data for December-2021 is unaudited.

Source: DFIM, Bangladesh Bank.

Though the growth of FIs' loans to housing sector depicted negative values from end-June 2020 to end-June 2021, it uplifted gradually then and recorded a positive growth at end-June 2022.

6. Inter-linkages- Cont'd.

6.5 Banks' loans to counterpart sectors

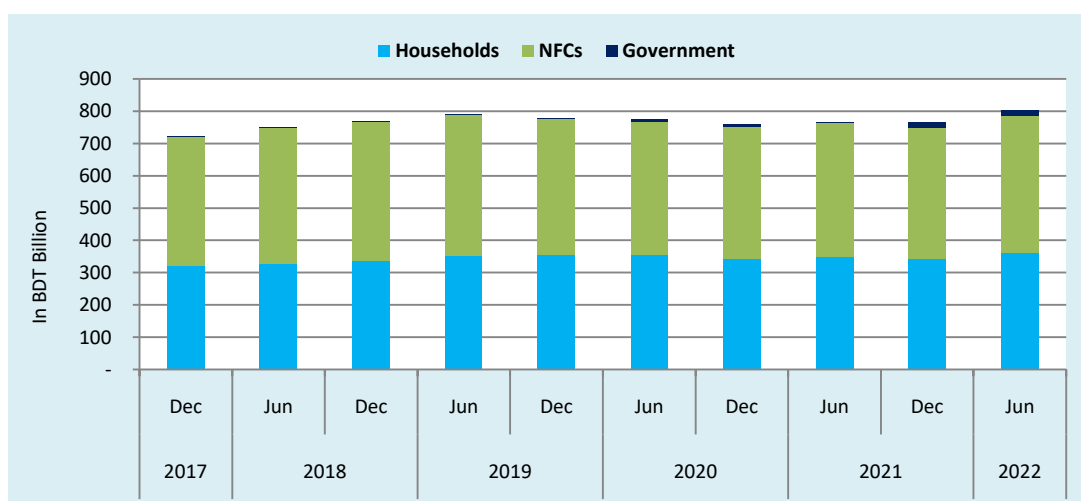


Notes: Loans extended to households and NFCs refer to outstanding loans and advances excluding bills. Loans to government refer to gross amount.

Source: Statistics Department, Bangladesh Bank.

Banks' exposures to its major public and private counterparts, led largely by private NFCs, continued its increasing trend.

6.6 NBDCs' loans to counterpart sectors



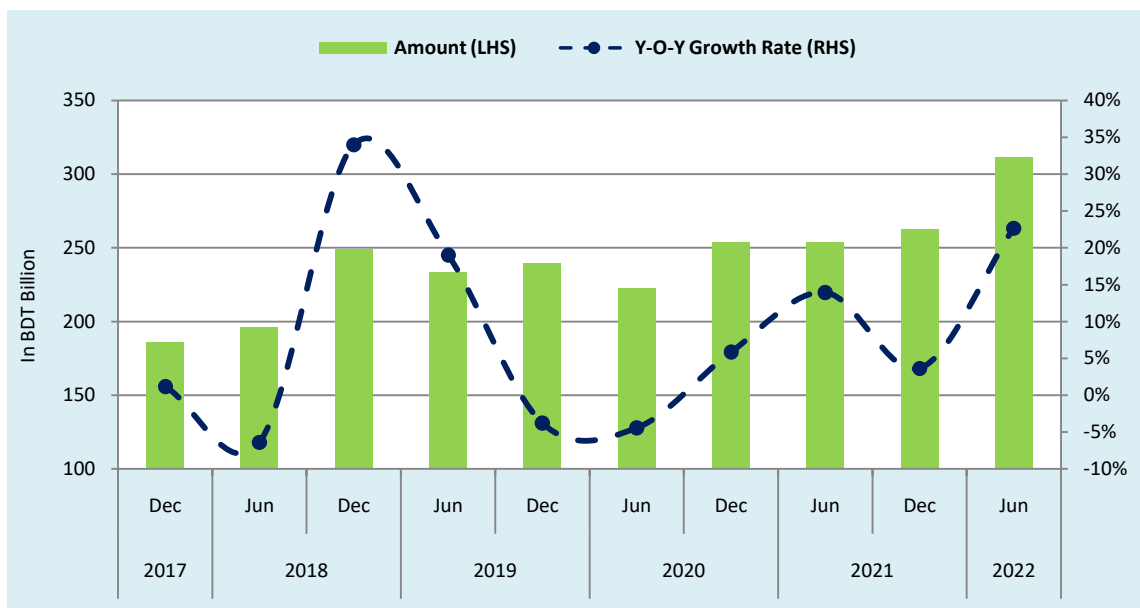
Notes: Loans to government refer to gross amount. NBDCs include deposit taking FIs, Ansar-VDP Unnayan Bank, Karmasangsthan Bank, Grameen Bank and Bangladesh Samabaya Bank.

Source: Statistics Department, Bangladesh Bank.

Increased exposure to households, NFCs and Government led to a total increase in NBDCs' loan portfolio at end-June 2022 compared to the preceding period.

6. Inter-linkages- Cont'd.

6.7 Banks' cross-border claims



Notes: Cross-border claims include foreign currency notes in hand, balances with banks abroad, bilateral trade credits, wage earners' balance abroad, foreign bills, foreign direct investment, portfolio investment.

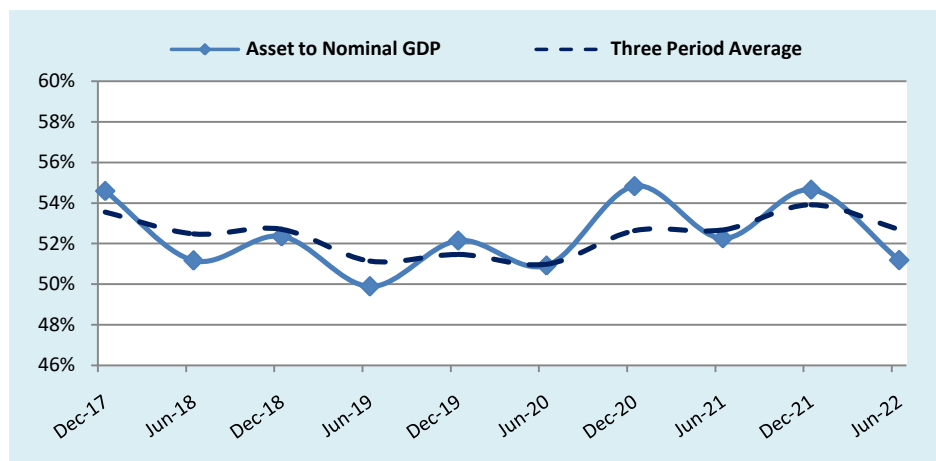
Source: Statistics Department, Bangladesh Bank.

Banks' cross-border claims increased at end-June 2022 compared to the position of end-December 2021 and notably remained low accounting for less than one percent of total assets of the banking sector.

7. Structural risk

7.1 Banking sector size

a. Domestic Banks

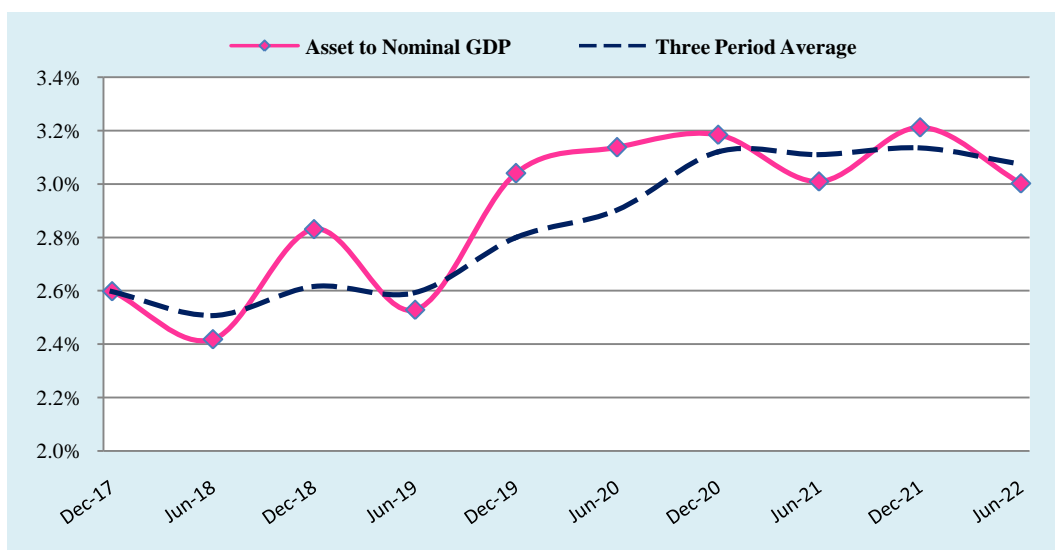


Note: Ratio of domestic banks' total assets to Nominal GDP. As half yearly GDP is not calculated in Bangladesh, June based GDP data is used for December in calculating this ratio. Dec-2021 data is revised.

Source: DOS, BB and Monthly Economic Trends, BB; computation: FSD, BB.

Domestic banks' total assets to nominal GDP ratio, fluctuating over time, decreased at end-June 2022 compared to the position at end-December 2021.

b. Foreign Banks



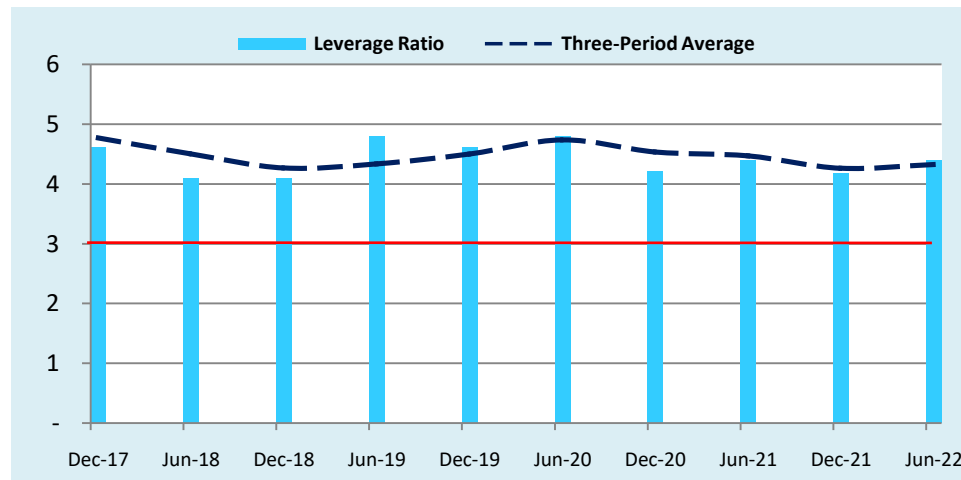
Note: Ratio of foreign banks' total assets to Nominal GDP. As half yearly GDP is not calculated in Bangladesh, June based GDP data is used for December in calculating this ratio. Dec-2021 data is revised.

Source: DOS, BB and Monthly Economic Trends, BB; computation: FSD, BB.

Foreign banks' total assets to nominal GDP ratio decreased at end-June 2022 compared to the position at end-December 2021.

7. Structural risk-cont'd.

7.2 Banking sector leverage ratio



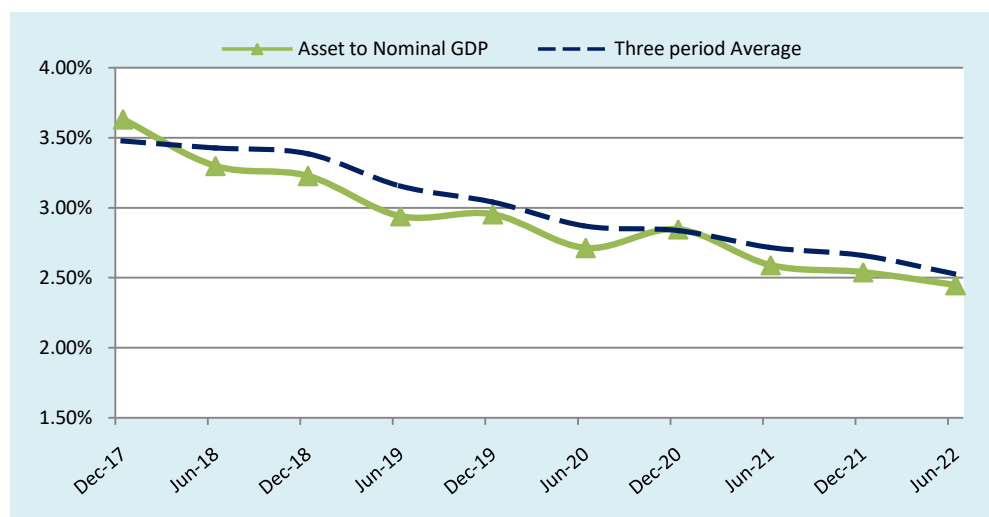
Note: Up to June-2021 issue of BSRD banking sector's assets to capital ratio was presented as leverage ratio. In Dec-2021 and Jun-222 issues, leverage ratio defined as the ratio of Tier-1 capital after required deduction to total exposure after required deduction in line with Basel-III is used.

Source: DOS, BB.

Banking sector's leverage ratio increased at end-June 2022 compared to the position of previous period and stood at 4.39 percent against the regulatory requirement of 3.0 percent.

7.3 Financial institutions (FIs) sector size

FIs' assets to nominal GDP



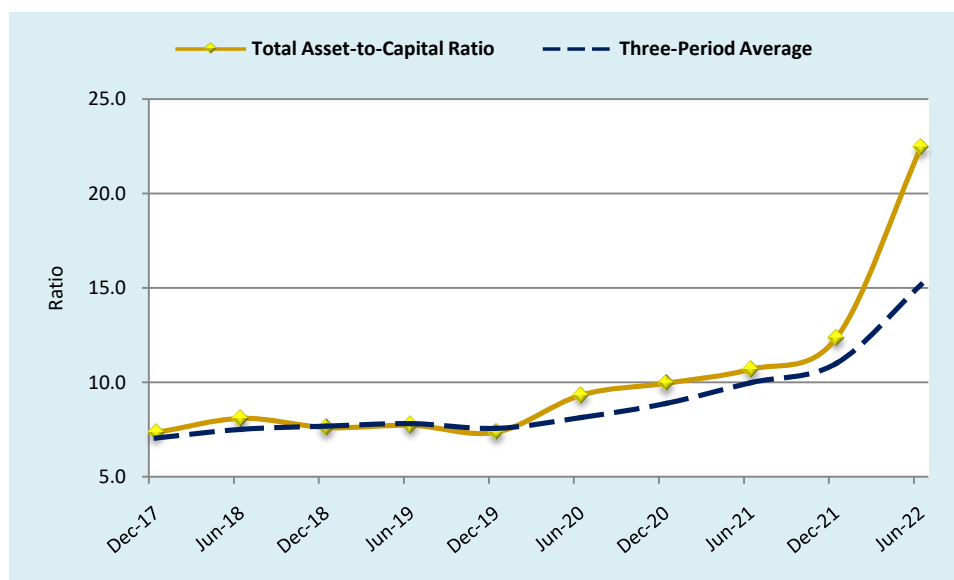
Note: As half yearly GDP is not calculated in Bangladesh, June based GDP data is used for December in calculating this indicator. Dec-2021 data is revised.

Source: DFIM, BB.

Financial institutions' assets to nominal GDP ratio showed a declining trend over the last couple of years. It decreased further at end-June 2022 compared to that of the preceding period.

7. Structural risk-cont'd.

7.4 Financial institutions (FIs) sector leverage



Note: Leverage ratio is defined as the total assets to total (balance sheet) capital ratio of the FIs sector.

Source: DFIM, BB.

Financial institutions' total asset-to-capital ratio showed an upward trend since December 2019. It jumped up sharply at end-June 2022 compared to the position of end-December 2021.

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, 2022.

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 disposable national 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 disposable

national 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 (BDT/USD)

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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