BANGLADESH BANK
Central Bank of Bangladesh

Bangladesh Systemic Risk Dashboard (BSRD)

Financial Stability Department
December 2021

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December 2021

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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 December, 2021, 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
IMF	International Monetary Fund
NBDC	Non-bank Depository Corporation
NFCs	Non-financial Corporations
NII	Net Interest Income
NPL	Non-performing Loan
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

Despite different extents of COVID-19 waves, sufficient inoculation and other supporting initiatives of the government have driven the momentum of the real GDP growth rate of Bangladesh in FY21. In this line, the demand for raw materials imported for the industrial sector of the country went up again as the COVID-19 shock faded away, resulting the current account deficit widened further in the second half of 2021. The aggregate debt-to-GDP ratio, government debt-to-GDP ratio, and government deficit-to-GDP ratio increased in FY21 compared to that of FY20. Two other macroeconomic indicators such as household debt-to-gross disposable national income ratio and NFC debt-to-GDP ratio expanded during the second half of 2021.

The annual growth rate of banks' loans to households shows a rising trend during July 2020 to December 2021 following a sharp fall in the first half of 2020. Besides, the annual growth of banks' loans to private NFC escalated in December 2021 compared to that of the preceding period. However, the NBDCs' loan growth in these two sectors was nearly stagnant. The provision maintenance ratio of banks and FIs were around 82 percent and 85 percent respectively at end-December 2021 while the ADR of banks was near 73 percent as a whole in this period.

In terms of liquidity proficiency, banks maintained both the LCR and NSFR well above the required level; however, during July-December 2021 banks took liquidity support of around BDT 6.0 billion from Bangladesh Bank under special repo facilities. 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 2021. On the other side, 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 130.0 billion at end-December 2021.

Equity indices of DSE, the prime bourse of Bangladesh, accelerated and the market P/E ratio declined a bit during the second half of 2021 compared to the preceding period. The average call money borrowing rate increased slightly while the weighted average interest rate on banks' advances and deposits declined at end-December 2021. The value of BDT against USD depreciated during this period.

The profitability of banks decelerated during the second half of 2021. Banks' gross NPL ratio went up slightly at end-December 2021 compared to that of end-June 2021. As a consequence, the Tier-1 capital to RWA ratio shrank a bit in this period. In FIs, the NPL ratio went alarmingly up during the period which resulted in a negative profit as a whole and a downward movement of Tier-1 capital to RWA ratio for this sector.

Annualized growth of banks' credit to the government sector and commercial housing sector decelerated while the same to residential housing sector accelerated during the second half of 2021 compared to that of the first half. Banks' loan to counterpart sectors increased during this period, however, NBDCs' loans to the same sectors decreased. In both cases, NFCs occupied the lion's share. Banks' cross-border claims increased a bit during this period, though it was still very negligible in comparison to the volume of their assets.

Both the domestic and foreign banks' assets to nominal GDP ratio surged, while this ratio for FIs subsided at end-December 2021 compared to the position of the preceding period. Though the leverage ratio (as per Basel-III accord) of banks decreased a bit, it was still 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
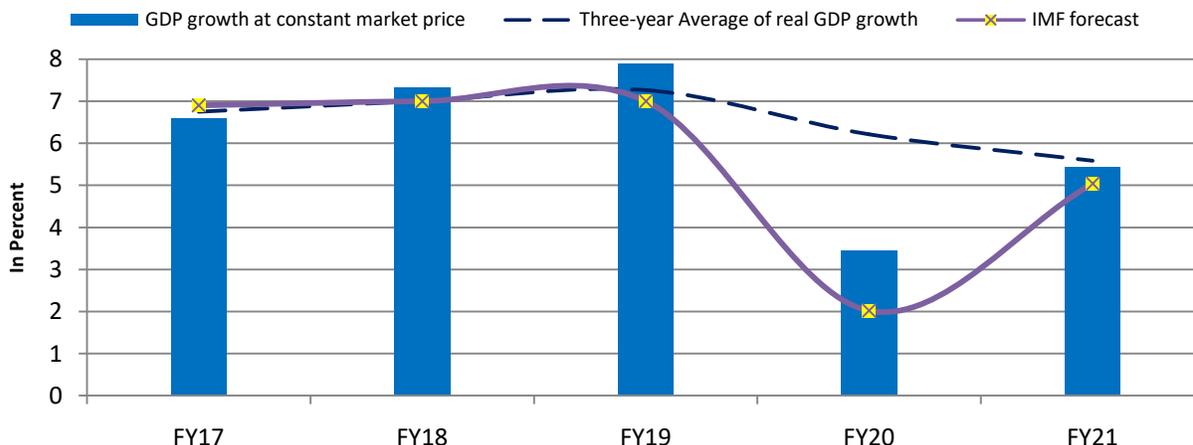
Source: Monthly Economic Trends, Statistics Department, BB; IMF's World Economic Outlook Database, April, 2021.
Notes: GDP data is taken as per new base year 2015-16. As half yearly GDP is not calculated in Bangladesh, GDP growth is shown for only fiscal years.

Real GDP growth was recorded 5.43 per cent in FY21 as per the new base year of 2015-16. Previously the base year was 2005-06. The growth rate increased in FY21 compared to the previous fiscal year as businesses and productions were resuming gradually to their normal states, in contrary to the COVID-19 pandemic induced slowdown in economic activities in 2020. However, the growth surpassed the IMF forecast for both FY20 and FY21.

1.2 Current account balance-to-GDP ratio
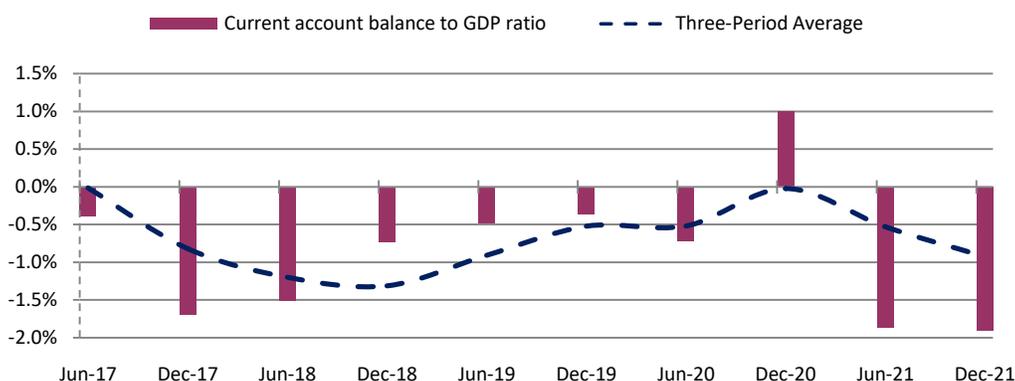
Source: Monthly Economic Trends, Statistics Department, BB.
Note: Data of December, 2021 is provisional value. As half yearly GDP is not calculated in Bangladesh, June based GDP data is used for December in calculating December based current account balance-to-GDP ratio.

The chart shows that current account balance-to-GDP ratio was usually negative except in December 2020 (due to COVID-19's shock). When the business regained its momentum after primary shock of COVID-19, the ratio became negative again during 2021.

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1. Macro risk–Cont'd.

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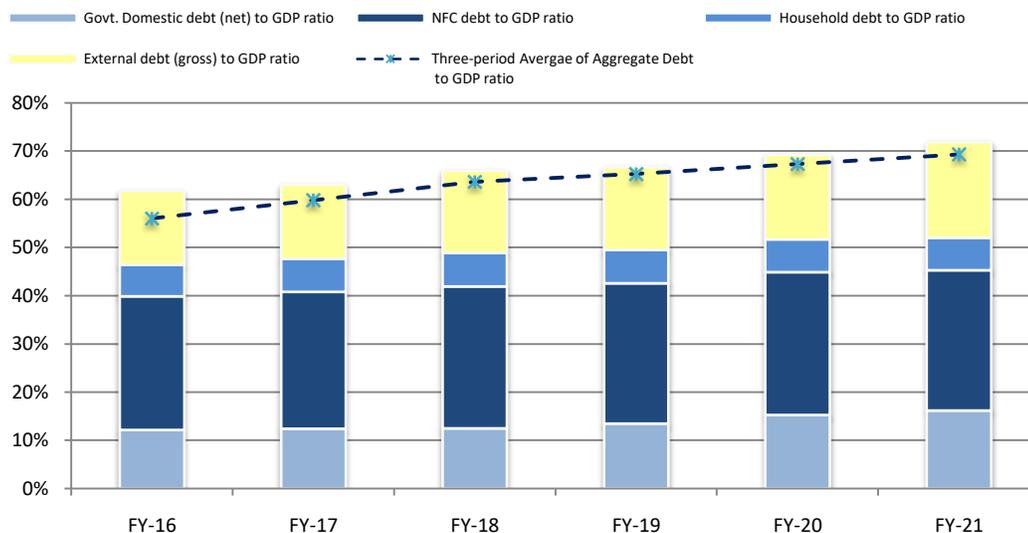
Sources: Monthly Economic Trends, Statistics Department, BB; National Summary Data Page (NSDP), BB.
Notes: 1) Because of unavailability of half yearly data of GDP, aggregate debt-to-GDP ratio is shown only for fiscal years. 2) Aggregate debt includes both domestic and external debt position. 3) Domestic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

Aggregate debt-to-GDP ratio recorded a slight increase in FY21 compared to that of FY20. Debts of non-financial corporation remained the major constituent of aggregate debt.

1.4 Government debt-to-GDP ratio
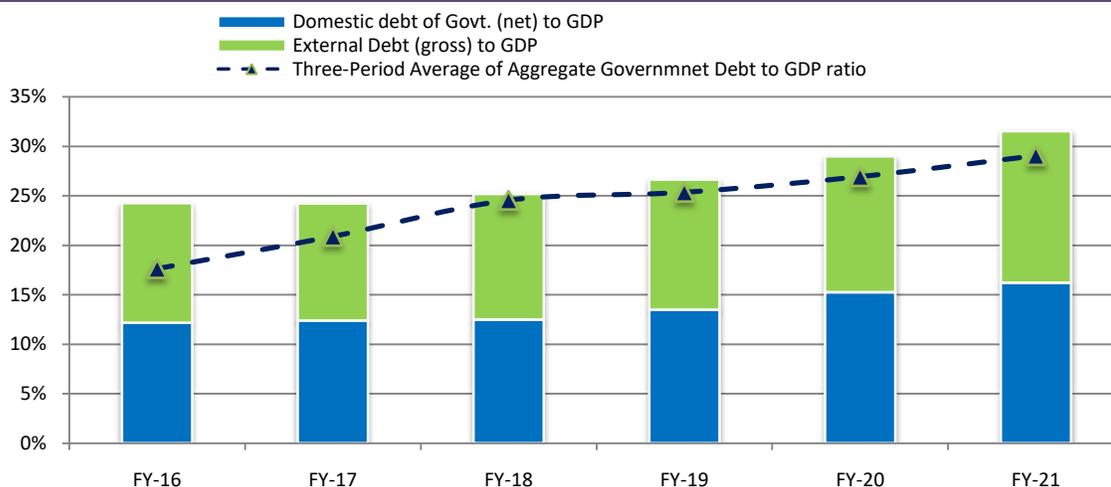

Source: Monthly Economic Trends, Statistics Department, BB; National Summary Data Page (NSDP), BB.
Notes: Because of unavailability of half yearly data of GDP, government debt-to-GDP ratio is shown only for fiscal years.

Government debt-to-GDP ratio increased slightly in FY21 compared to that of FY20 due to increase in both the government's borrowing from the domestic and the external sources.

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1. Macro risk–Cont'd.

1.5 Government deficit-to-GDP ratio

Legend:
- Govt Deficit to GDP Ratio (Excluding grants)
- Govt Deficit to GDP Ratio (Including grants)
- Three-Period Average (Excluding grants)
- Three-Period Average (Including grants)

[Bar chart showing Government deficit-to-GDP ratio from FY16 to FY21, with y-axis ranging from 0% to 7%. Bars for each fiscal year show deficit excluding grants (dark blue) and including grants (light blue), with trend lines for three-period averages.]

Source: Monthly Report on Fiscal Position, June-2021 issue, Ministry of Finance, Government of Bangladesh.
Notes: Because of unavailability of half yearly data of GDP, government deficit-to-GDP ratio is shown for fiscal years only. For FY20 and FY21, GDP is considered as per new base year 2015-16.

Government deficit-to-GDP ratio, both including and excluding grants, increased in FY21 compared to the preceding fiscal year.

1.6 Household debt-to-gross disposable national income ratio

Legend:
- Household Debt to Disposable GNI
- Three-Period Average

[Bar chart showing Household Debt to Disposable GNI from Jun-16 to Dec-21, with y-axis ranging from 3% to 8%. Bars represent the household debt ratio with a dashed line showing the three-period average.]
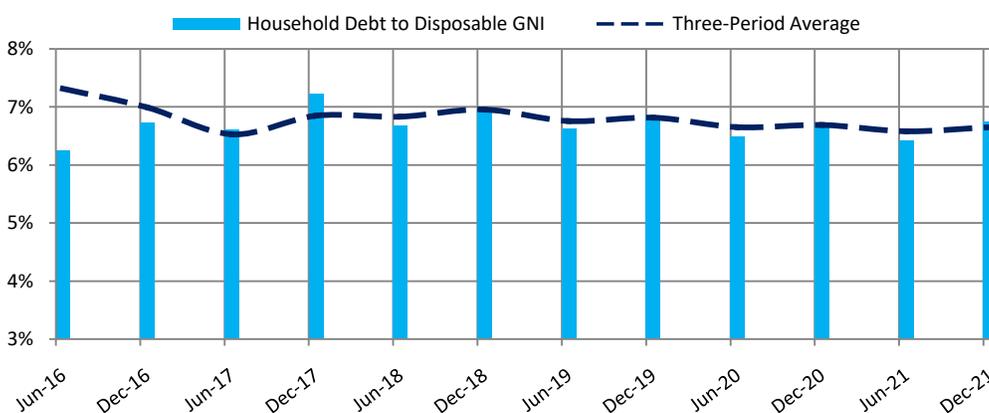
Sources: Monthly Economic Trends, Statistics Department, BB.
Notes: 1) December 2021 based data is provisional. 2) As half yearly disposable GNI is not calculated in Bangladesh, June based data of disposable GNI is used for December in calculating household debt-to-disposable GNI ratio.

Household debt-to-gross disposable national income increased in December 2021 compared to June 2021. The ratio also slightly increased compared to the end-December 2020.

1. Macro risk–Cont'd.

## 1.7 Non-financial Corporation (NFC) debt-to-GDP ratio
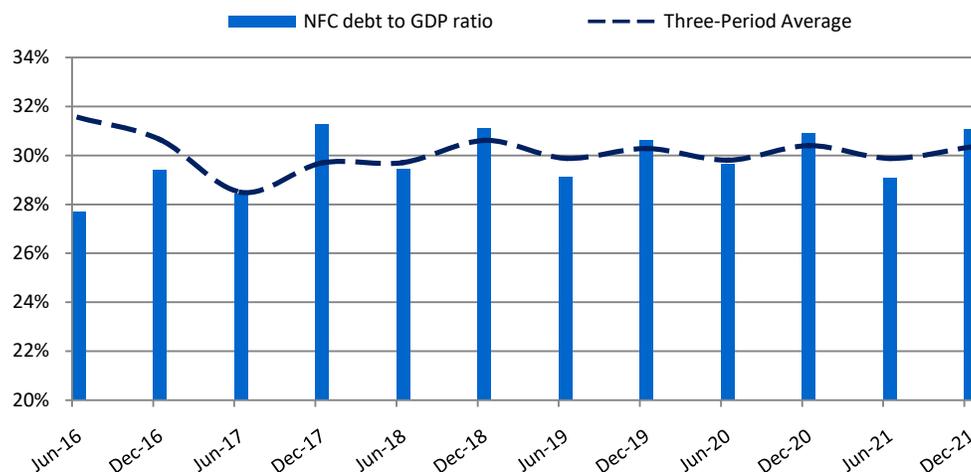
Sources: Monthly Economic Trends, Statistics Department, BB.

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

NFCs' debt-to-GDP ratio increased at end-December 2021 compared to June 2021 position. The ratio also slightly increased compared to end-December 2020. 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
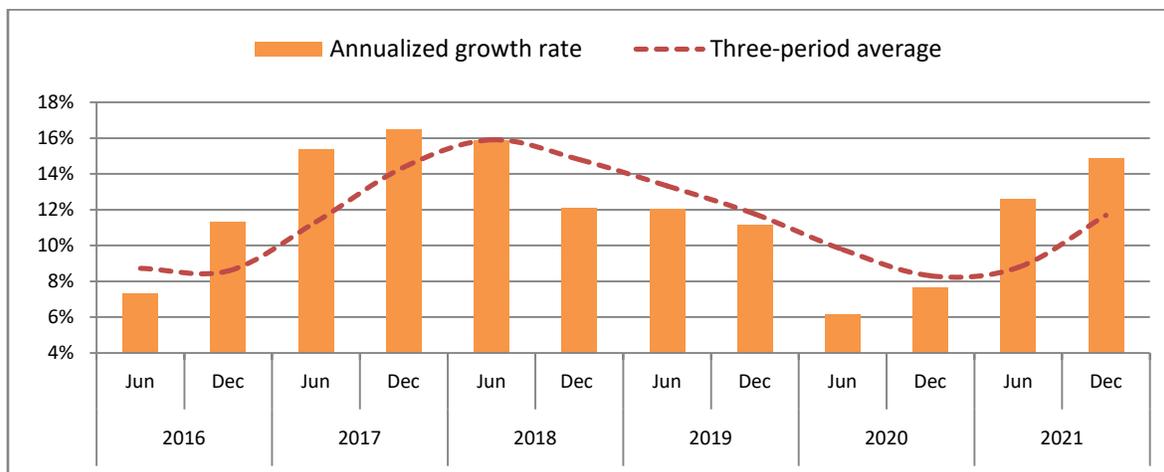
Source: Statistics Department, BB.
Notes: Loans refer to outstanding loans and advances extended to domestic households (individuals) excluding bills.

In contrast with an overall downward trend in banks' credit growth to household sector since December 2017, a steady growth trend was recorded during 2020 and 2021.

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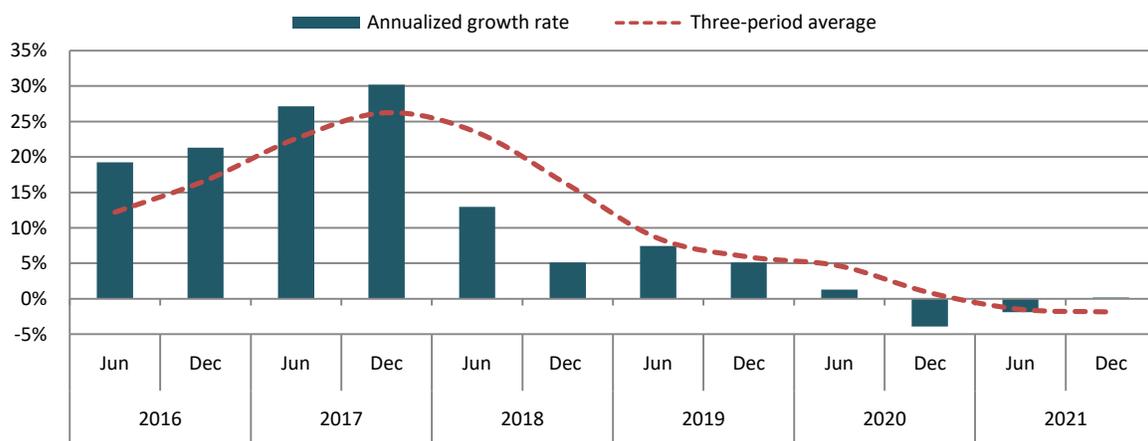
Source: Statistics Department, BB.
Notes: NBDCs include deposit taking FIs[1], Ansar-VDP Unnayan Bank, Karmasangsthan Bank, Grameen Bank and Bangladesh Samabaya Bank.

Non-bank depository corporations' (NBDC) loan growth to household sector showed a downward trend since December 2017. The growth declined further at end-December 2020 and turned into negative. It improved a bit at the end of June 2021 compared to that of end-December 2020. The growth rate stood at near zero percent at end-December 2021.

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[1]FIs refer to non-bank financial institutions. Out of 34 FIs, 29 are deposit taking FIs.

2. Credit risk–Cont'd.

2.3 Growth of banks' loans to private non-financial corporation (NFC)
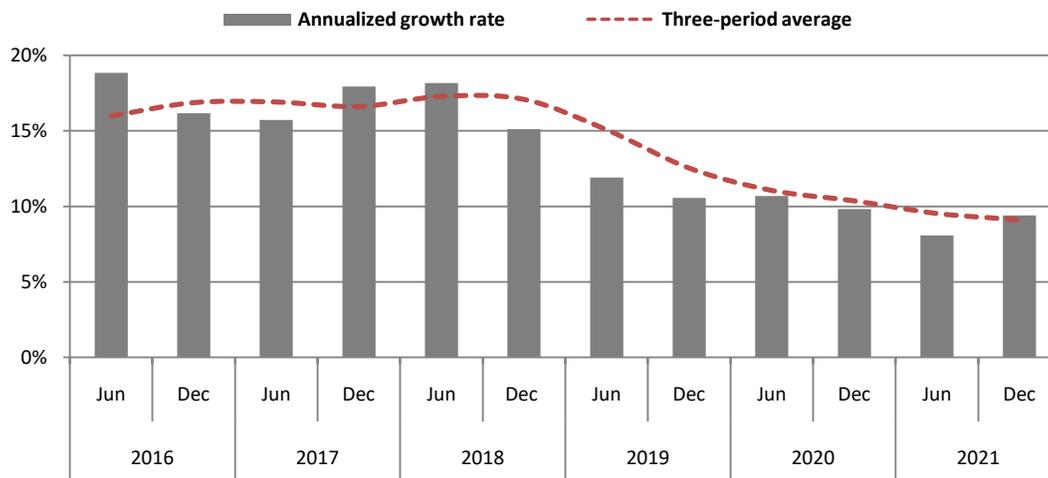
Source: Statistics Department, BB.
Notes: Loans refer to outstanding loans and advances extended to private NFCs excluding bills.

An overall downward trend in growth of private NFCs' loans was observed since June 2018. However, loan growth recorded a slight acceleration at end-December 2021 compared to that of the preceding period.

2.4 Growth of NBDCs' loans to private non-financial corporation (NFC)
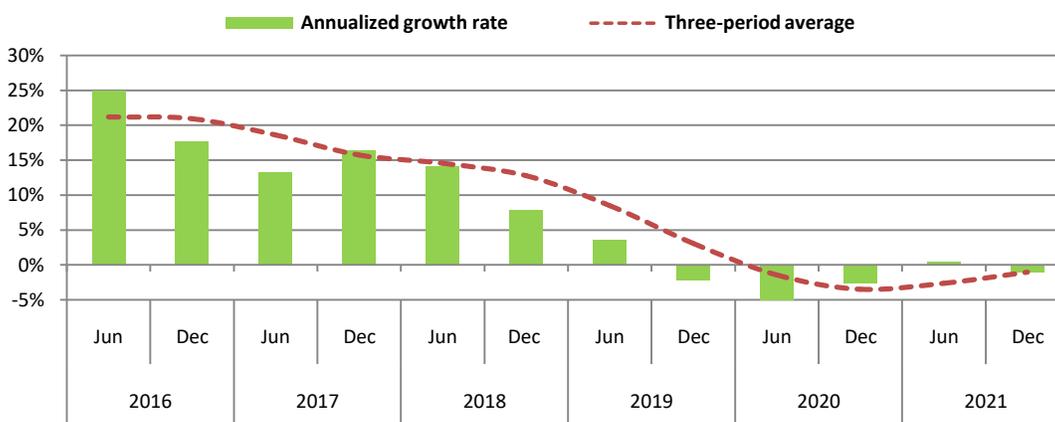
Source: Statistics Department, BB.
Notes: NFC refers to private NFCs only. NBDCs include deposit taking FIs, Ansar-VDP Unnayan Bank, Karmasangsthan Bank, Grameen Bank and Bangladesh Samabaya Bank.

The chart shows an overall downward trend in NBDCs' loan growth to private NFCs and it was nearly zero level in the review period.

2. Credit risk–Cont'd.

2.5 Provision maintenance ratio of banks

Provision Maintenance Ratio(%)   **- - - Three Period Average (%)**
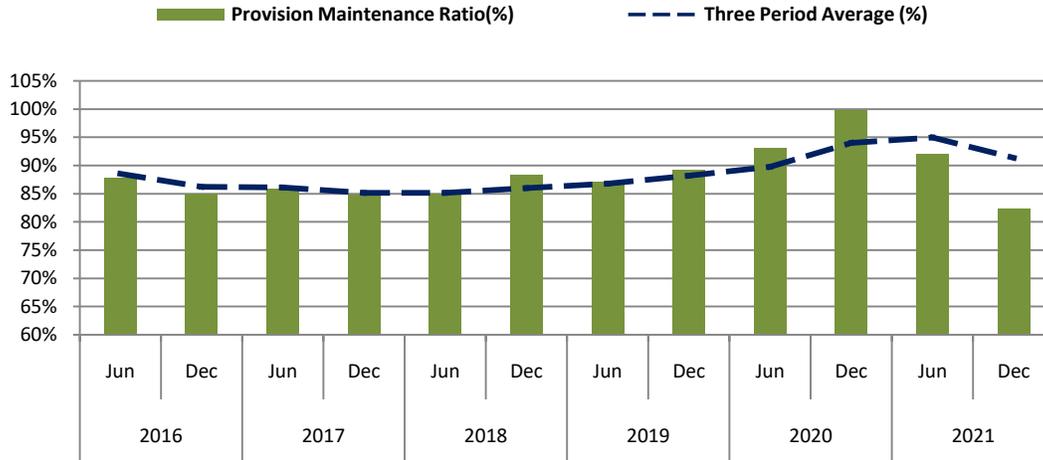
Source: BRPD, BB.
Notes: Provision maintenance ratio refers to maintained provision as a percentage of required provision.

Banks' provision maintenance ratio recorded a decreasing trend during 2021 and at end-December 2021 recorded a further decrease compared to that of end-June 2021.

2.6 Provision maintenance ratio of FIs

Provision Maintenance Ratio(%)   **- - - Three Period Average (%)**
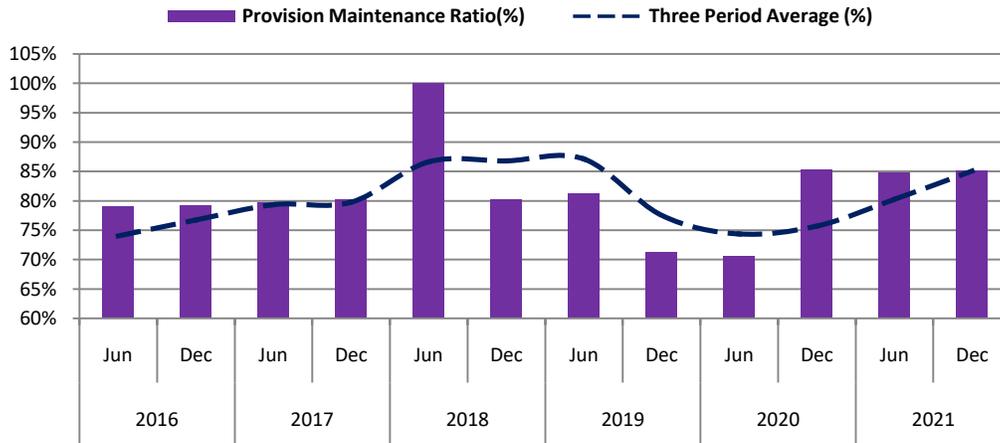
Source: DFIM, BB.
Notes: Data for December 2021 is un-audited.

FIs' provision maintenance ratio witnessed almost a stable state during end-December 2020 to end-December 2021.

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
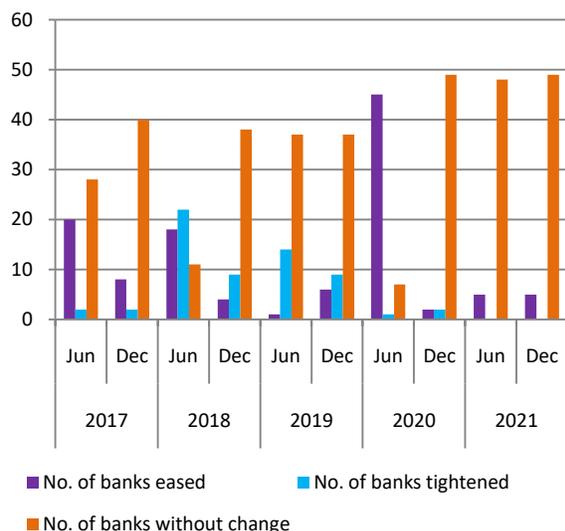
Legend (chart a):
- ■ No. of banks eased
- ■ No. of banks tightened
- ■ No. of banks without change

Legend (chart b):
- – – Percentage of banks eased
- – – Percentage of banks tightened
- —— Net percentage of banks eased (or tightened)
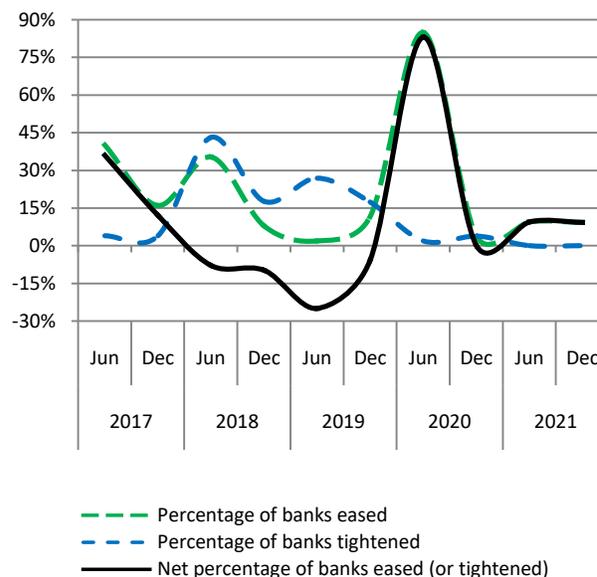
Source: Scheduled bank lending rate, Bangladesh Bank website
(https://www.bb.org.bd/en/index.php/financialactivity/interestlending).

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").

In December 2021, 9.3 percent banks eased the interest rates of housing loans while no bank 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
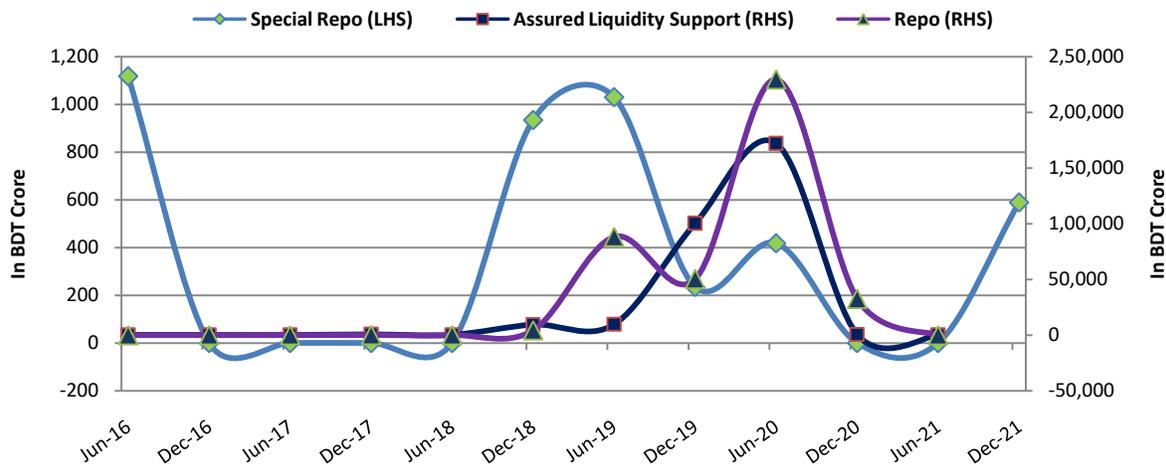
Source: DMD, BB.

Assured liquidity support, special repo and repo to banks decreased significantly during the second half of 2020 and no bank availed any funding support under these three facilities during the first half of 2021. However, during the second half of 2021 banks availed BDT 589 crore under special repo.

## 3.2 Banks' advance-to-deposit ratio
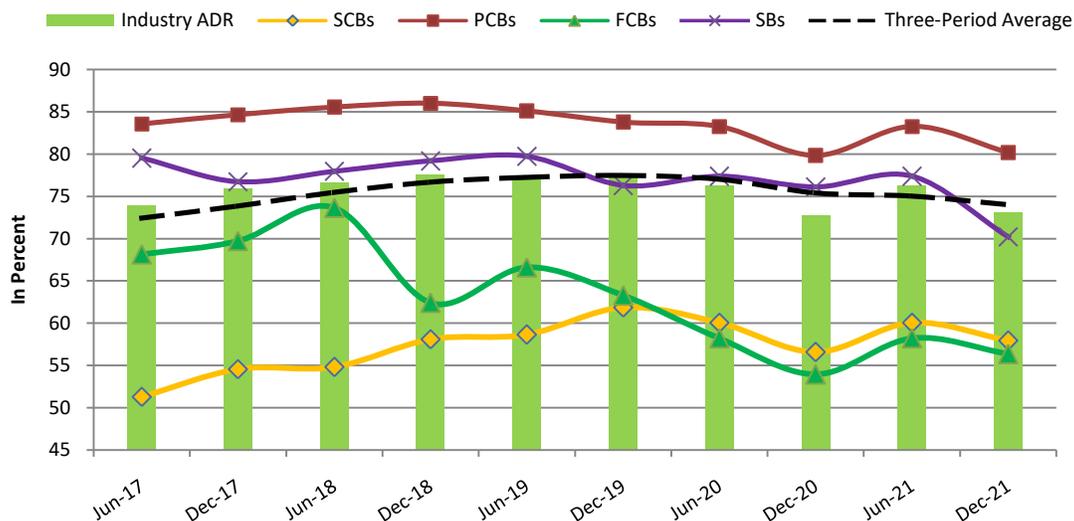
Source: DOS, BB.

To the contrary of a downward move in December 2020 due to COVID-19 pandemic, in June 2021 the industry ADR regained the position where it was in June 2020. However, in December 2021 again it decreased around three percentage points. ADR of PCBs was higher than the industry average whereas ADRs of FCBs and SCBs were significantly lower.

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3. Funding and liquidity risk–cont'd.

3.3 Maturity profile of government's outstanding debt securities

a. Treasury Bond
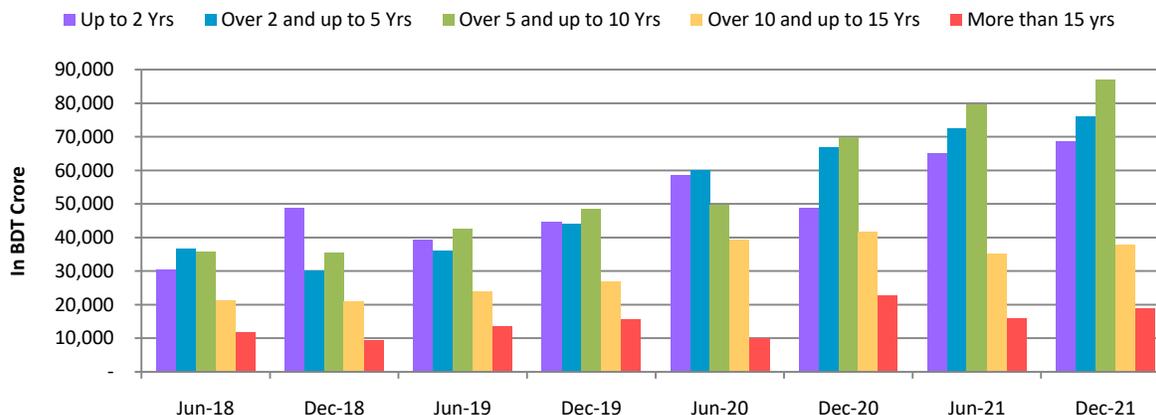
Source: DMD, BB.

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.

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-December 2021. The outstanding of all the treasury bonds increased at end-December 2021 compared to the position of end-June 2021. Besides, there were also special purpose treasury bonds (SPTB) of different maturities amounting to BDT 6164.34 crore and Shari'ah based SUKUK bond of BDT 13000 crore as of end-December 2021.

b. Treasury Bill
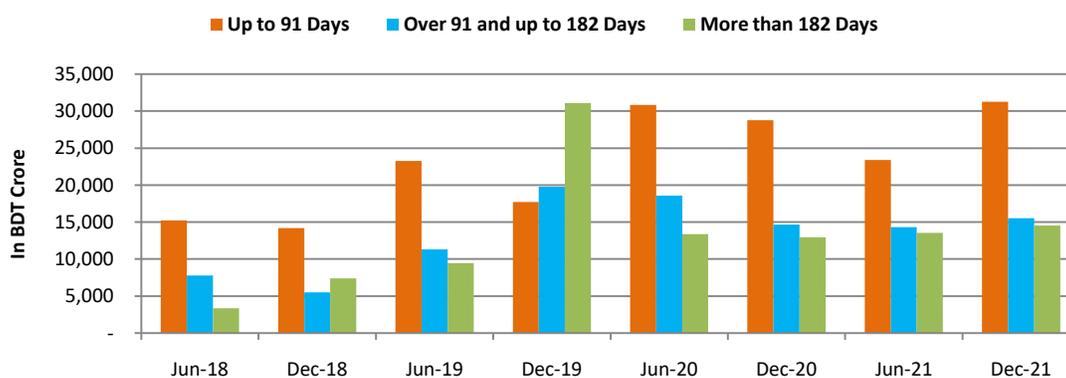
Source: DMD, BB.

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.

Treasury bills with remaining maturities up to 91 days remained the largest in terms of volume. T-bills with remaining maturities up to 91 days increased while other two types T-bills also increased narrowly in the second half compared to the first half of 2021.

3. Funding and liquidity risk–cont'd.

3.4 Subordinated debt
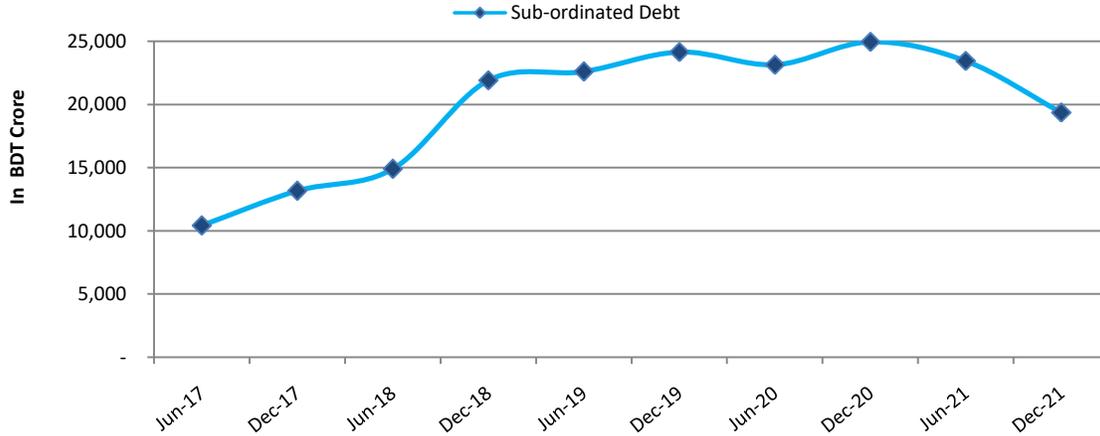
Source: DOS, BB.

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

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

3.5 Banks' LCR and NSFR
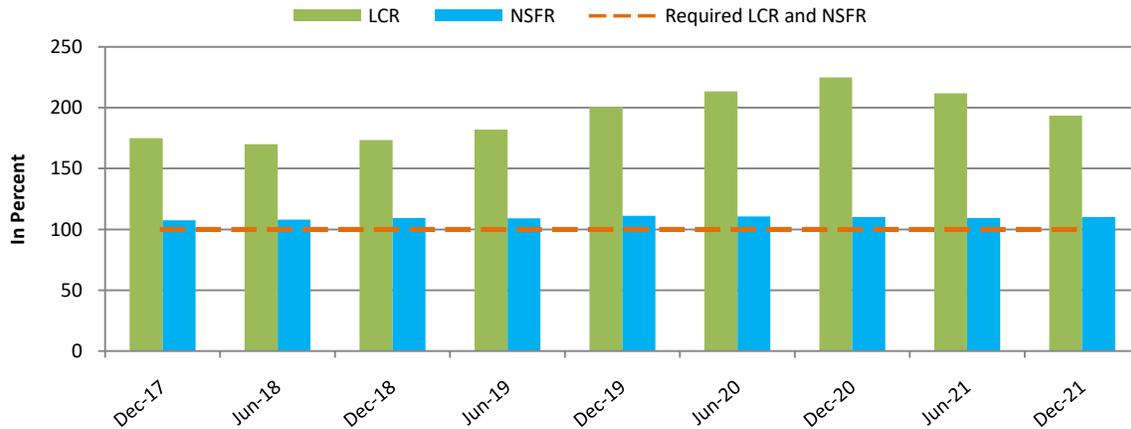
Source: DOS, BB.

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

The chart shows an upward trend in LCR, though in 2021 it moved a bit downward. However, LCR is still far above of the requirement. On the other side, up to end-December 2021 NSFR maintained a stable position of around 110% against the requirement of 'above 100%'.

4. Market risk

4.1 Equity indices
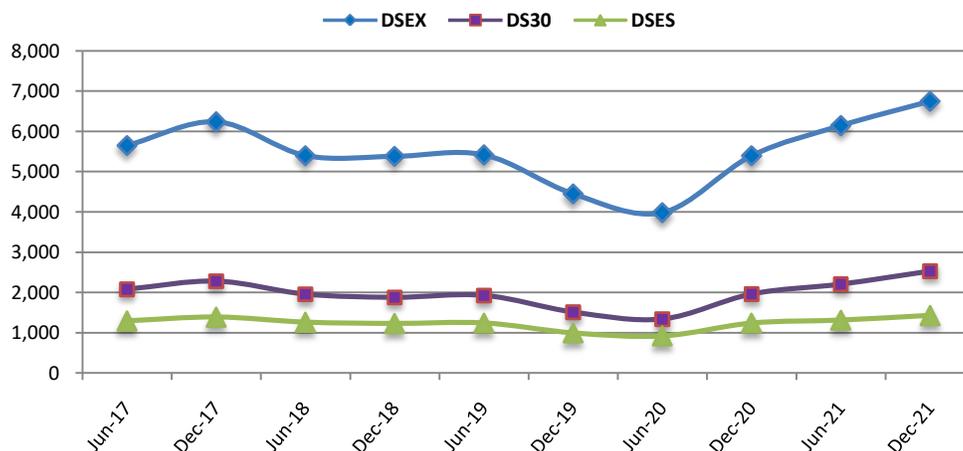
Source: DSE Website.

DSEX, the major DSE index, recorded an increasing trend since June 2020. It increased at end-December 2021 compared to the position of end-June 2021. Following the same pattern, other equity indices DS30 and DSES also increased in the review period.

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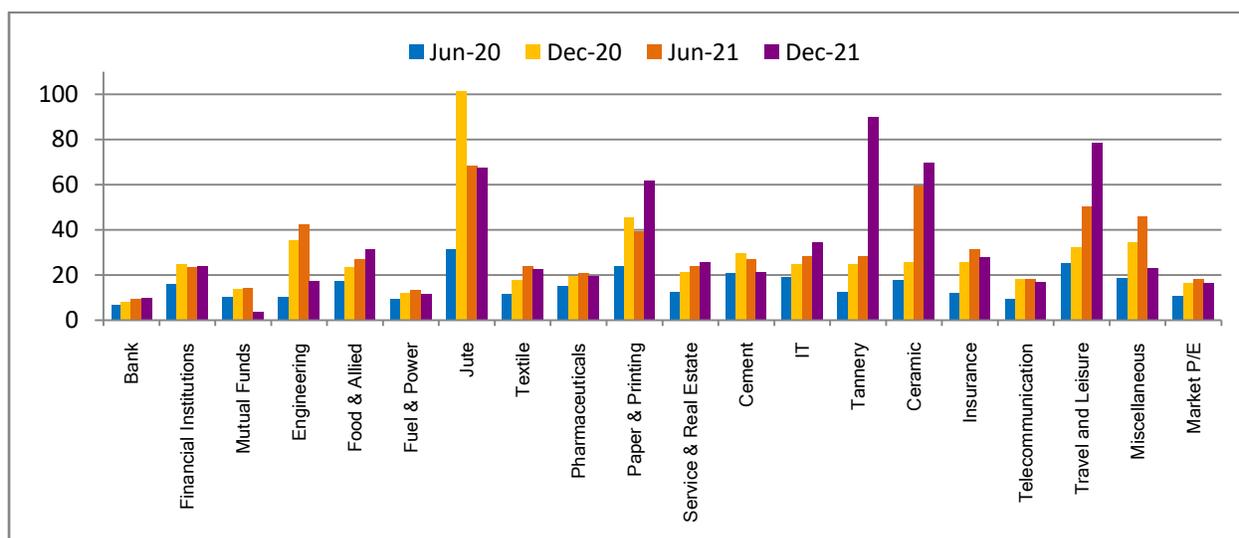
Source: DSE Website.

P/E ratio of almost half of the listed sectors increased while for rest of the sectors it decreased at end-December 2021 compared to end-June 2021. However, Market P/E ratio as a whole decreased a bit and stood at 16.29 at end-December 2021, which was 18.50 at end-June 2021 and 16.53 at end- December 2020.

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4. Market risk–cont'd.

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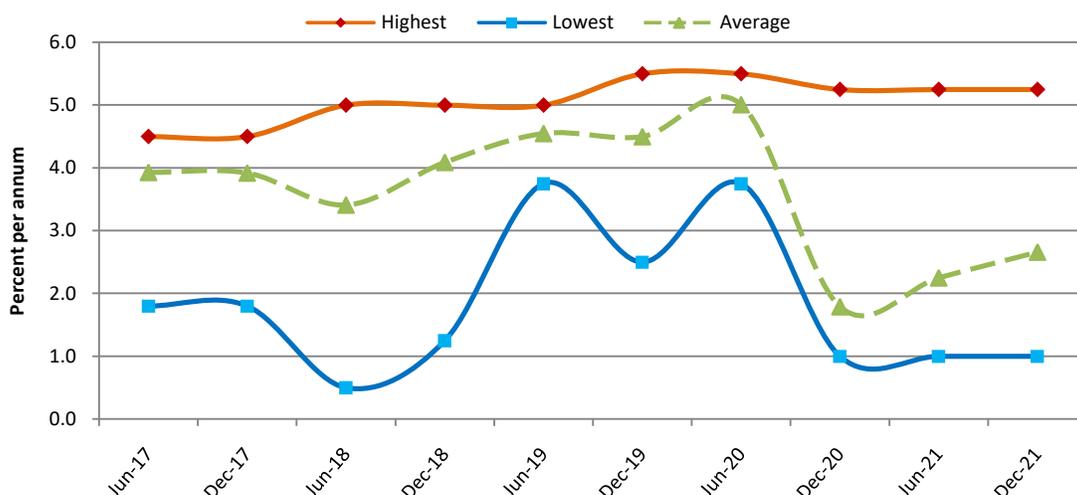
Source: Monthly Economic Trends, Statistics Department, BB.

Weighted average call money borrowing rate increased slightly at end-December 2021 compared to that of end-June 2021. It is noteworthy that it decreased significantly during second half of 2020.

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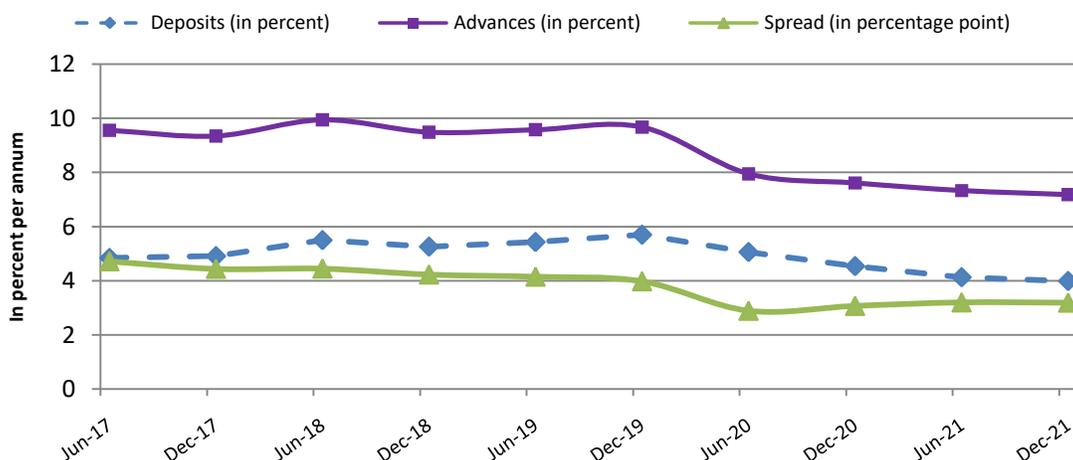
Source: Monthly Economic Trends, Statistics Department, BB.

Weighted average interest rate on advances and deposits recorded declining trends since December 2019. The spread increased 13 basis points during first half of 2021 while decreased by 1 basis point during second half of 2021.

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4. Market risk–cont'd.

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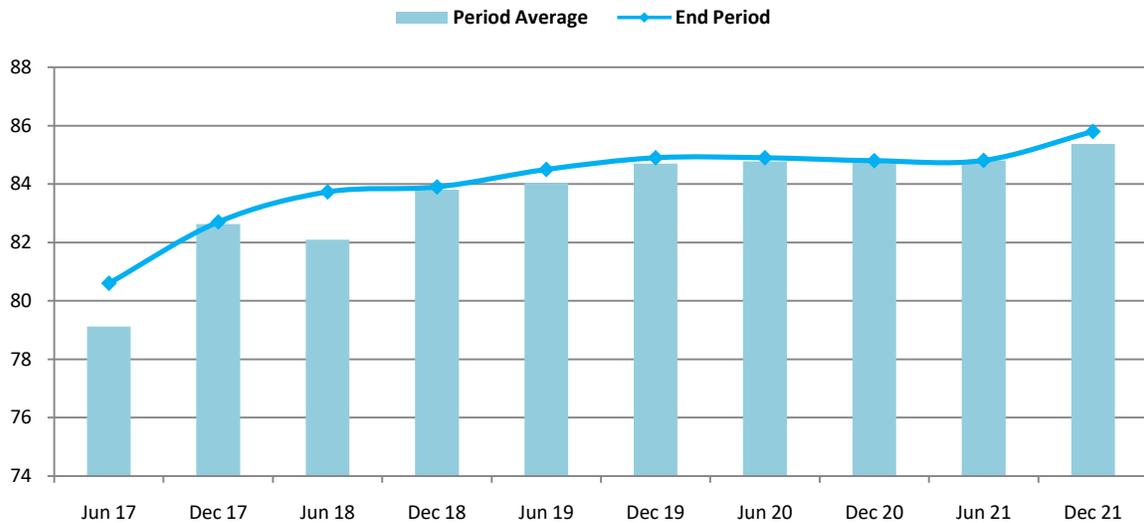
Source: Monthly Economic Trends, Statistics Department, BB.

The value of BDT against USD depicted a stable trend since second half of 2019. However, BDT depreciated 99 basis points against USD at end-December 2021 compared to the position of end-June 2021.

5. Profitability and solvency risk

5.1 Banks' profitability indicators

a. Return on equity (ROE)
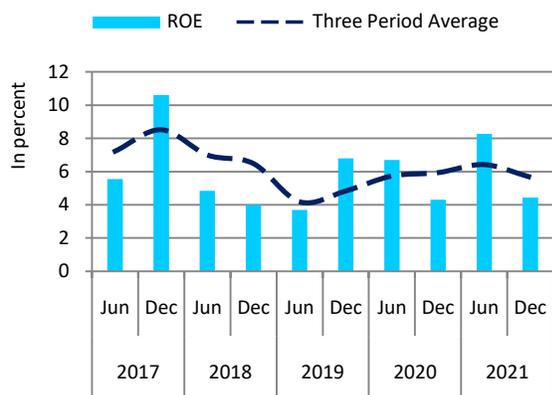
Source: DOS, BB; Computation: FSD, BB.
     BB Quarterly for June/21 and December/21
Note: Ratios of June period are annualized.

b. Return on assets (ROA)
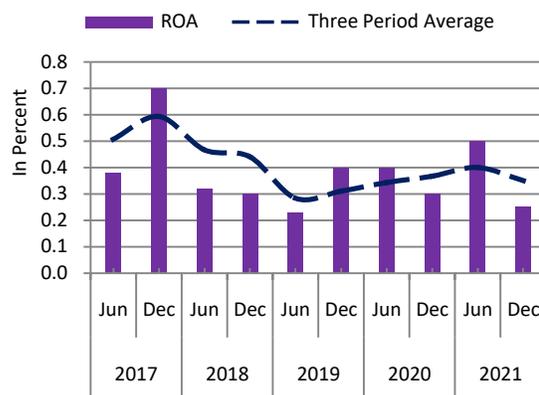
Source: DOS,   BB; Computation: FSD, BB.
     BB Quarterly for June/21 and December/21
Note: Ratios of June period are annualized.

Both ROE and ROA of banks decreased during the second half of 2021 compared to the position of first half of 2021. However, compared to the position of December 2020, ROE increased a bit while ROA Decreased in December 2021.

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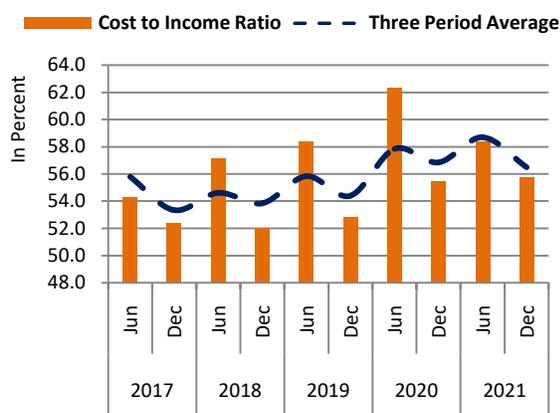
Source: DOS, BB; Computation: FSD, BB.
Note: Ratio between operating expenses and operating income.

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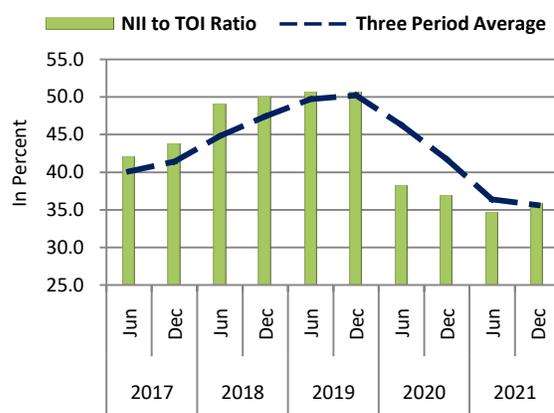
Source: DOS, BB; Computation: FSD, BB.
Note: Ratio between net interest income and total operating income.

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

5. Profitability and solvency risk–cont'd.

5.2 Banks' solvency indicators

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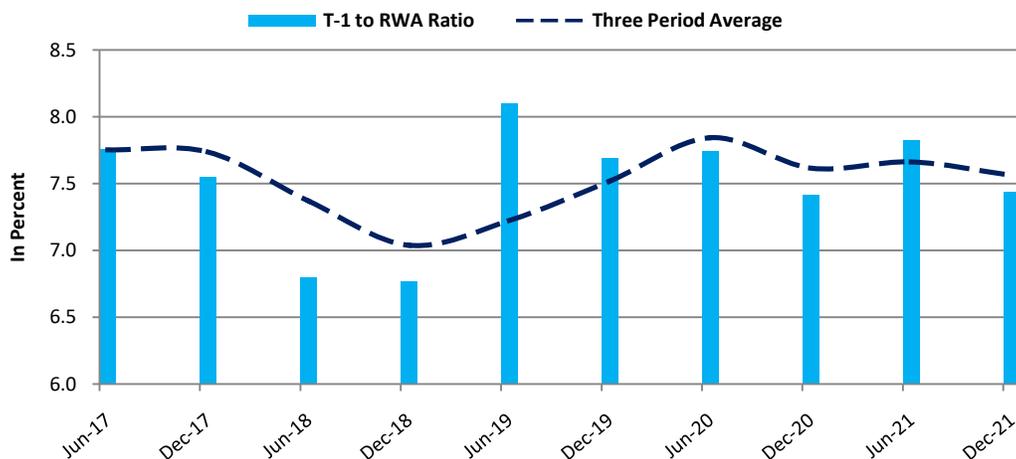
Source: DOS, BB.
Note: Ratio of Tier-1 capital to total risk-weighted assets.

Banks' Tier-1 capital ratio decreased at end-December 2021 from the position of end-June 2021. However, it remained well above of the regulatory requirement of 6.0 percent.

b. Gross non-performing loan (NPL) ratio
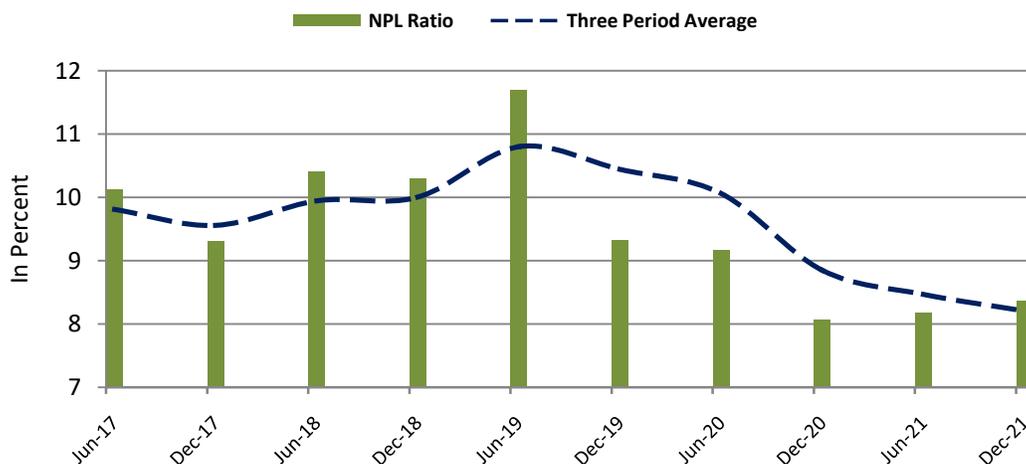
Source: BRPD, BB.
Note: Ratio of total non-performing loans & advances to total loans & advances.

Since the second half of 2019 the gross NPL ratio came down to the single digit. It increased very slightly during 2021 and at end-December 2021 stood at 8.37 percent.

5. Profitability and solvency risk–cont'd.

5.3 FIs' profitability indicators

a. Return on equity (ROE)
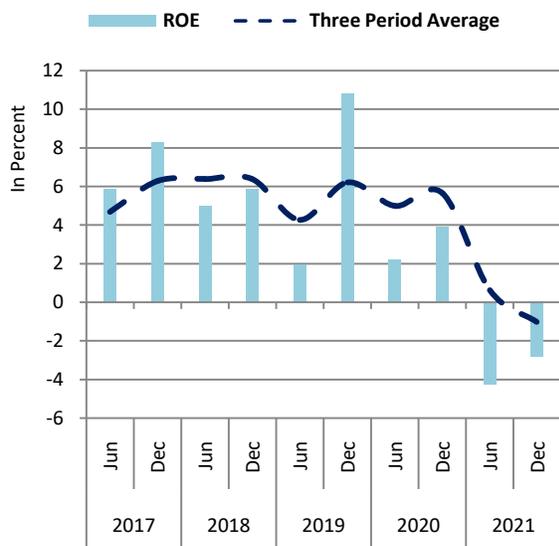
Source: DFIM, BB.
Note: Data for December 2021 is provisional.

b. Return on assets (ROA)
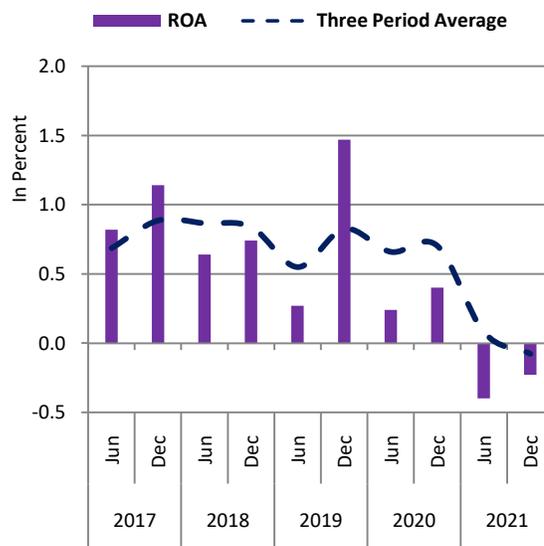
Source: DFIM, BB.
Note: Data for December 2021 is provisional.

FIs' ROE and ROA decreased significantly during January-June 2021 compared to July-December 2020 and marked in the negative territory. In July-December 2021, both the ratios improved, but still these were remained in the negative territory.

c. Cost-to-income ratio
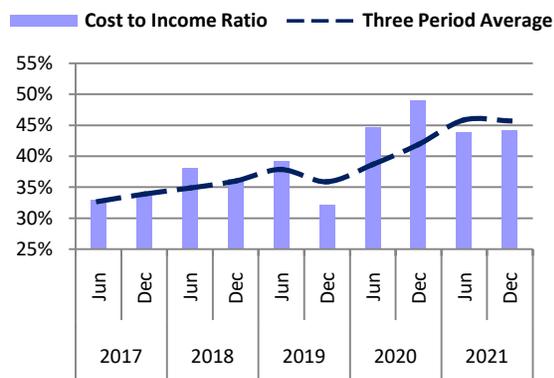
Source: DFIM, BB.
Note: Cost to income ratio refers to ratio between operating expenses and total income. Data for December 2021 is provisional.

d. Net interest income to total operating income ratio
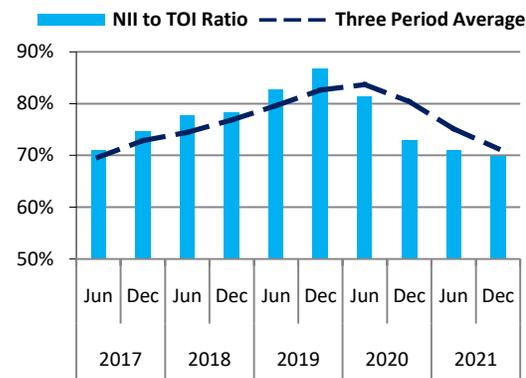
Source: DFIM, BB.
Note: Ratio between net interest income and total operating income. Data for December 2021 is provisional.

FIs' cost-to-income ratio increased slightly while net interest income to total operating income ratio decreased narrowly at end-December 2021 compared to that of the previous period.

5. Profitability and solvency risk–cont'd.

5.4 FIs' solvency indicators
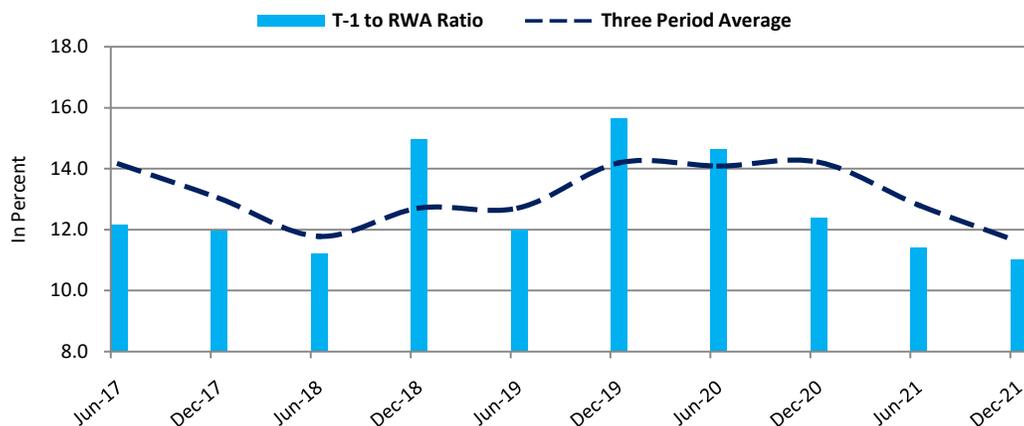
a. Tier-1 to RWA ratio

Source: DFIM, BB.
Note: Ratio of Tier-1 (core) capital to total risk-weighted assets. Data for December 2021 is provisional.

Though FIs' Tier-1 to RWA ratio was declining gradually from December 2019, it was well above the regulatory requirement of 5.0 percent at end-December 2021.

b. Gross non-performing loan (NPL) ratio
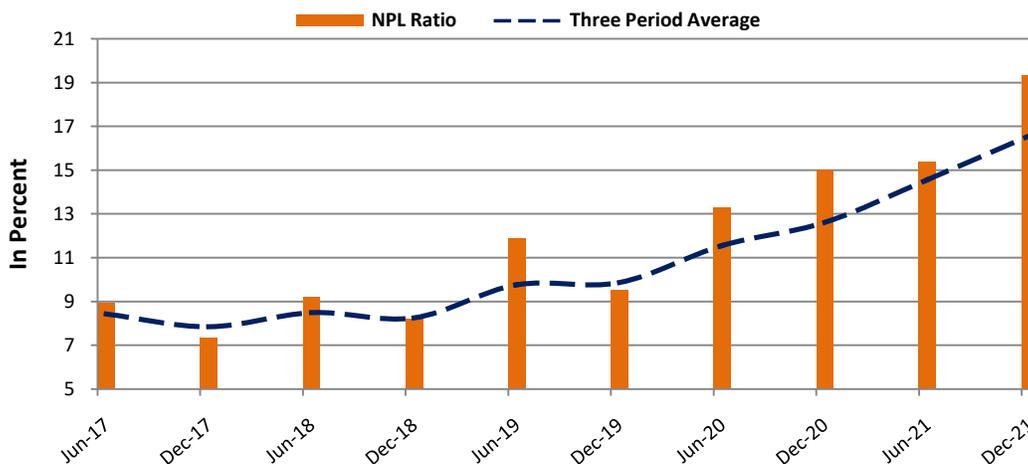
Source: DFIM, BB
Note: Ratio of non-performing loans and leases to total loans and leases. Data for december 2021 is provisional.

Gross NPL ratio of FIs increased sharply at end-December 2021 compared to that position of end-June 2021. NPL showed an increasing trend during 2020 and 2021.

6. Inter-linkages

6.1 Growth of banks' credit (gross) to government

Legend: Annualized growth rate — Three-period average
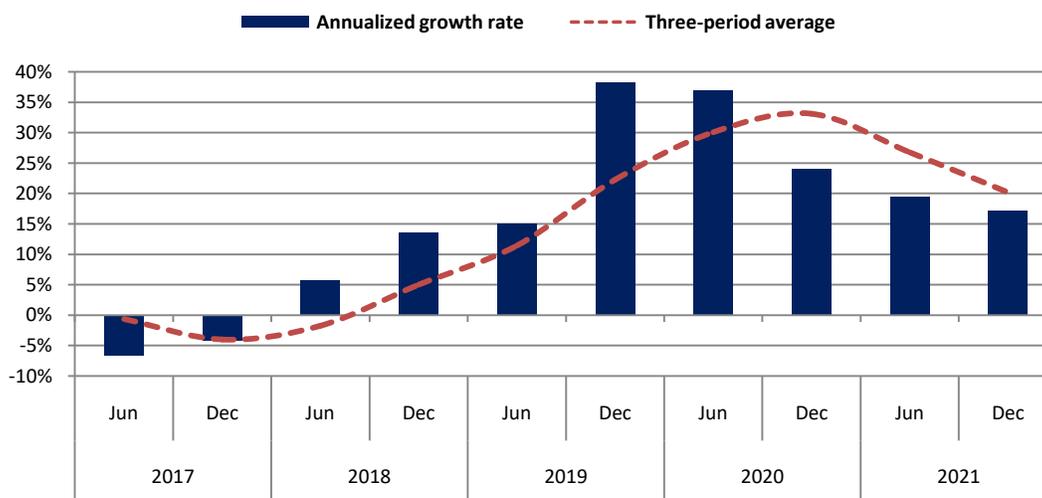
Source: Statistics Department, Bangladesh Bank.
Notes: Credit extended to the government refers to gross amount.

Government borrowings' growth rate from the banking sector registered a declining trend after end-December 2019. It decreased further at end-December 2021 compared to the previous period.

6.2 Growth of NBDCs' credit (gross) to government

Legend: Annualized growth rate — Three-period average
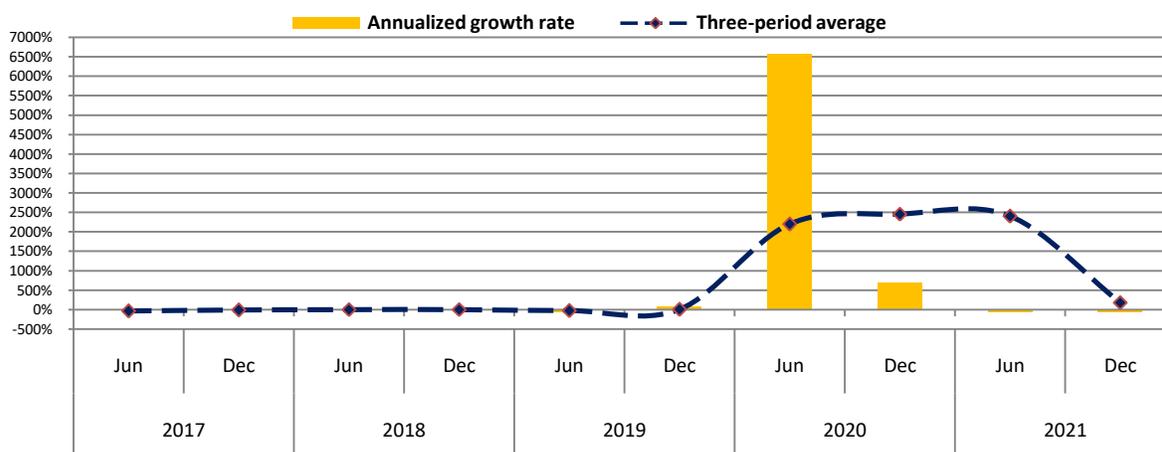
Source: Statistics Department, Bangladesh Bank.
Notes: NBDCs include deposit taking FIs, Ansar-VDP Unnayan Bank, Karmasangsthan Bank, Grameen Bank and Bangladesh Samabaya Bank.

Government borrowings from the NBDCs, though remained very low compared to the same from the banking system, witnessed a negative growth at end-December 2021 compared to the preceding period.

6. Inter-linkages– Cont'd.

6.3 Growth of banks' loans to housing sector

a. Loans to residential housing
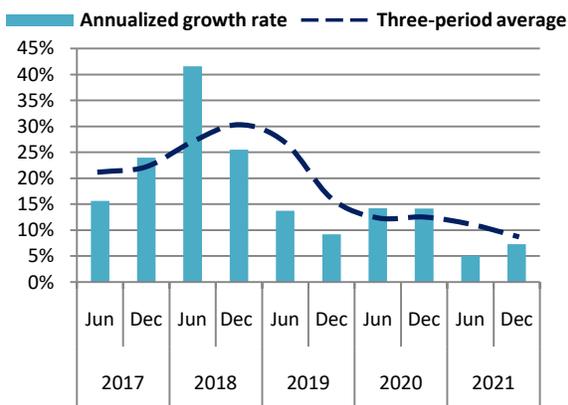
b. Loans to commercial housing
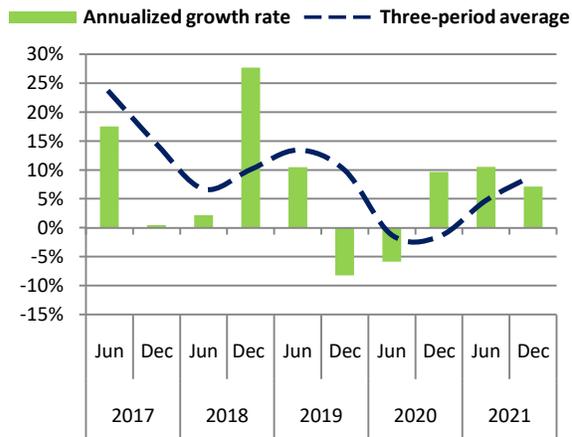
Source: Statistics Department, Bangladesh Bank.

Notes: Data for December 2021 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.

Loan growth in residential housing sector recorded an increase in December 2021 compared to the preceding period. Loan growth in commercial housing sector, which remained volatile during the last couple of years, went slightly down in December 2021 compare to the preceding period.

6.4 Growth of FIs' loans to housing sector
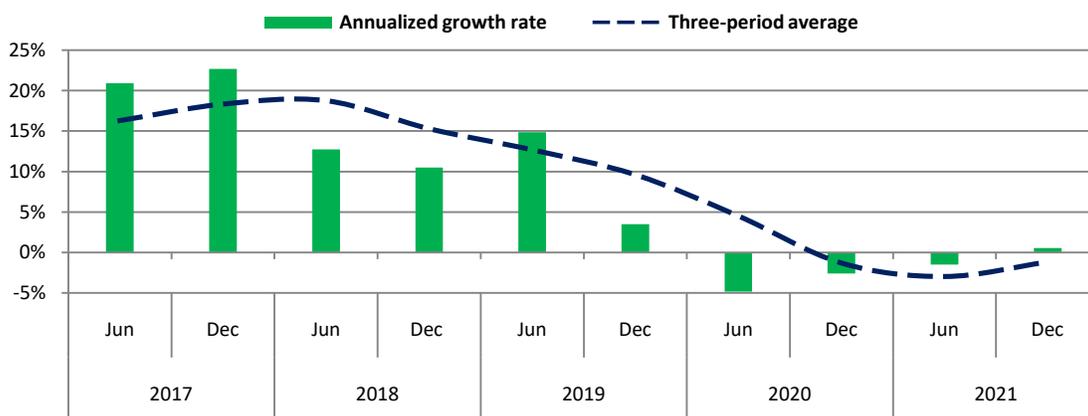
Source: DFIM, Bangladesh Bank.
Notes: Data for December 2021 are unaudited

Growth of FIs' loans to housing sector was depicting negative values during end-June 2020 to end-June 2021. However, it uplifted a bit during the second half of 2021 and clinched a positive growth.

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6. Inter-linkages– Cont'd.

6.5 Banks' loans to counterpart sectors
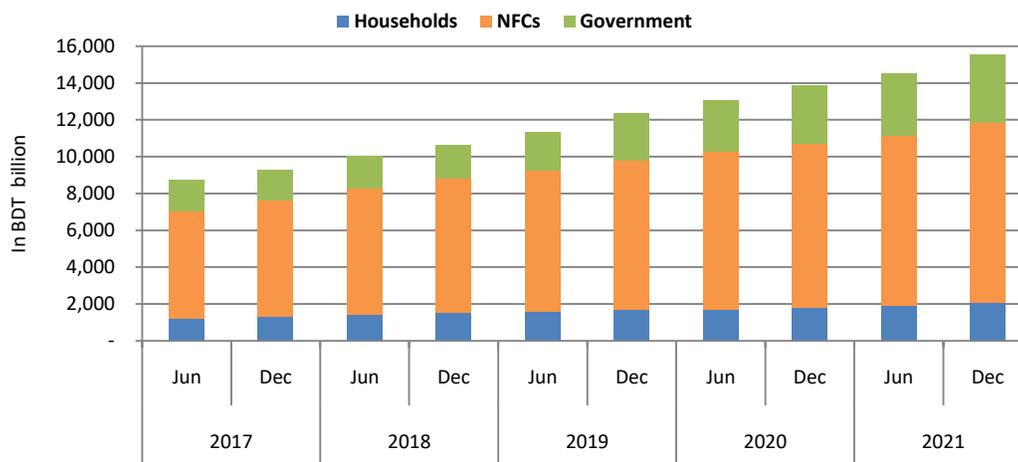
Source: Statistics Department, Bangladesh Bank.
Notes: Loans extended to households and NFCs refer to outstanding loans and advances excluding bills. Loans to government refer to gross amount.

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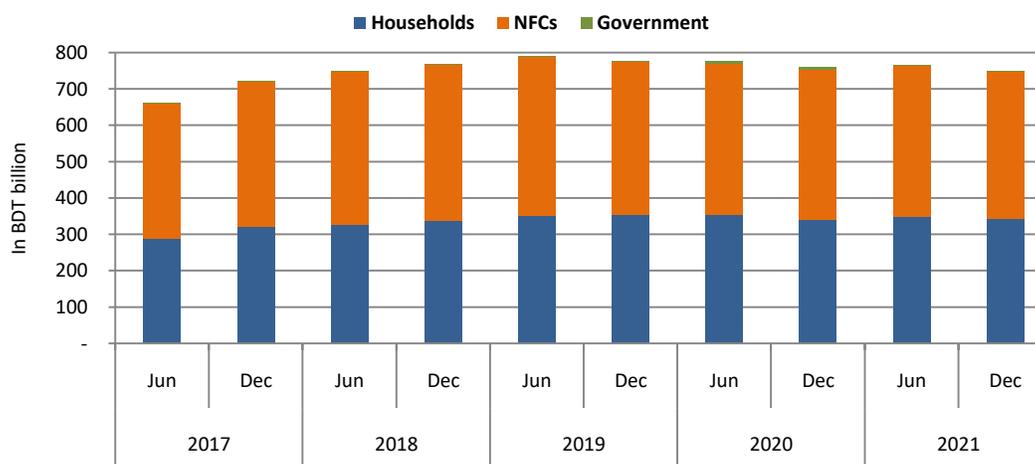
Source: Statistics Department, Bangladesh Bank.
Notes: Loans to government refer to gross amount. NBDCs include deposit taking FIs, Ansar-VDP Unnayan Bank, Karmasangsthan Bank, Grameen Bank and Bangladesh Samabaya Bank.

Decreased exposure to households, NFCs and Government led a total decrease in NBDCs' loan portfolio at end-December 2021 compared to the preceding period.

6. Inter-linkages– Cont'd.

6.7 Banks' cross-border claims

Amount (LHS) - - - **Y-O-Y Growth Rate (RHS)**
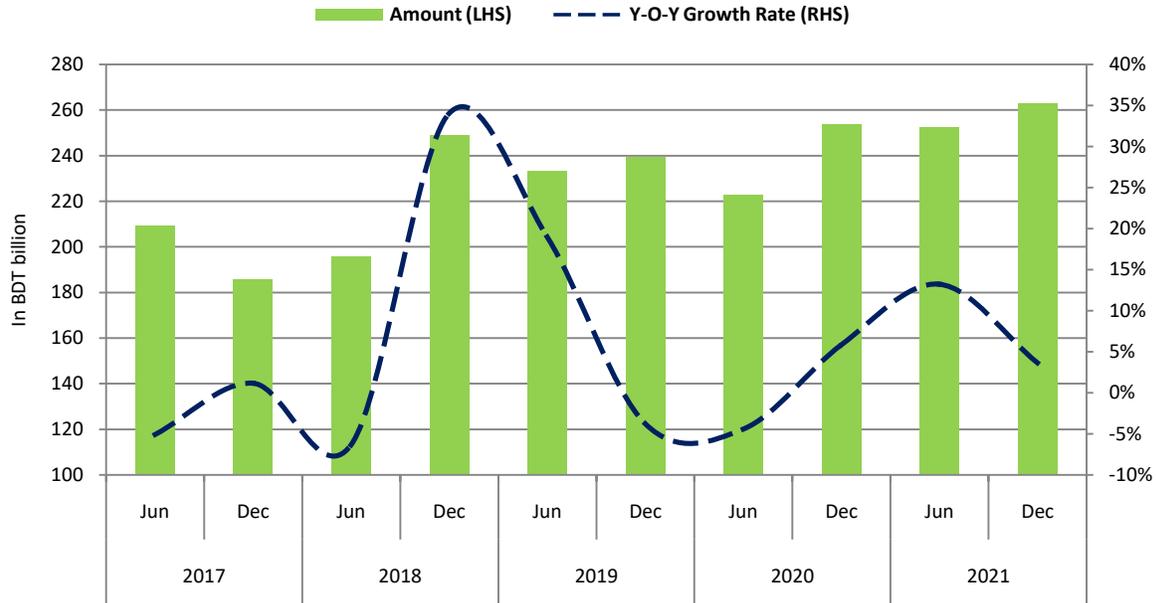
Source: Statistics Department, Bangladesh Bank.
Notes: Cross-border claims include foreign currency notes in hand, balances with banks abroad, bilateral trade credits, wage earners' balance abroad, foreign bills, foreign direct investment, portfolio investment.

Banks' cross-border claims increased at end-December 2021 compared to that of end-June 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
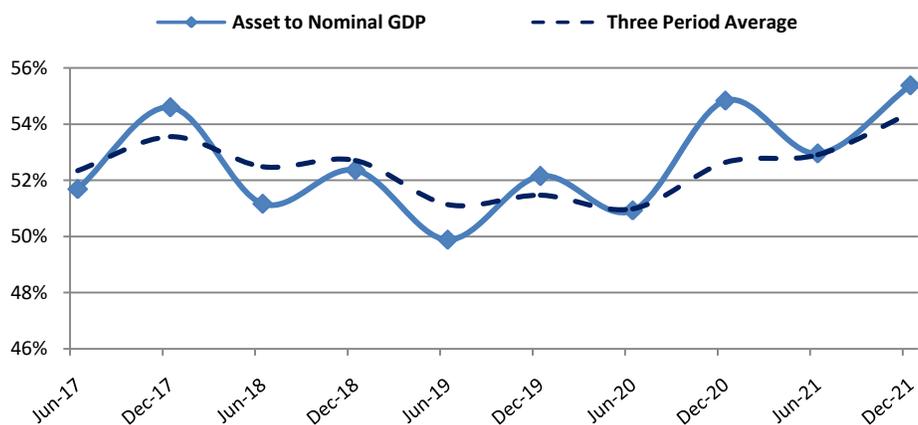
a. Domestic Banks

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

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

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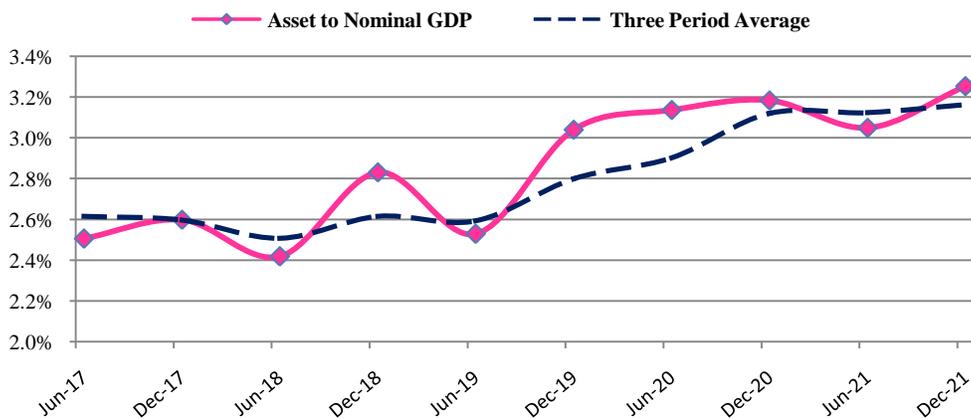
Source: DOS, BB and Monthly Economic Trends, BB; computation: FSD, BB.
Note: Ratio of foreign banks' total assets to Nominal GDP. As half yearly GDP is not calculated in Bangladesh, June based GDP data is used for December in calculating this ratio.

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

7. Structural risk–cont'd.

7.2 Banking sector leverage ratio

Leverage Ratio · · · · **Three-Period Average**
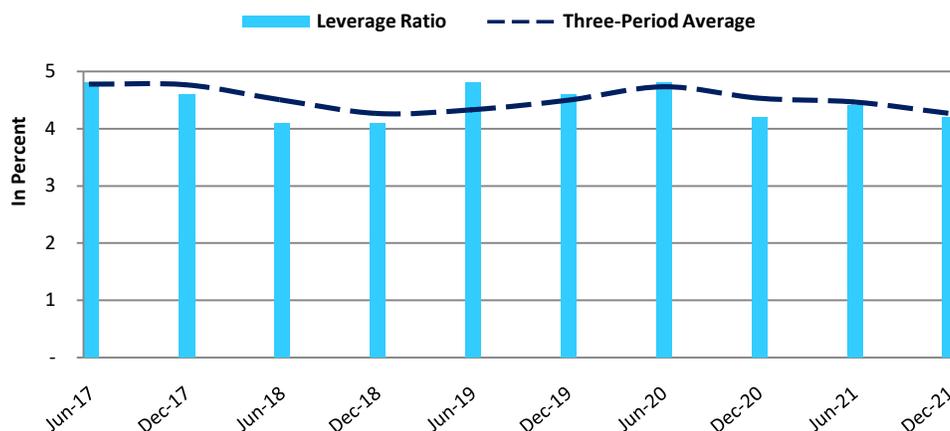
Source: DOS, BB.

Note: Up to June-2021 issue of BSRD banking sector's assets to capital ratio was presented as leverage ratio. In the current issue, Basel-III accorded leverage ratio defined as the ratio of Tier-1 capital to total exposure is placed.

Banking sector's leverage ratio decreased a bit at end-December 2021 compared to the position of end-June 2021, however, it recorded above 4.0 percent against the requirement of 3.0 percent up to 2021.

7.3 Financial institutions (FIs) sector size

FIs' assets to nominal GDP

Asset to Nominal GDP · · · · **Three period Average**
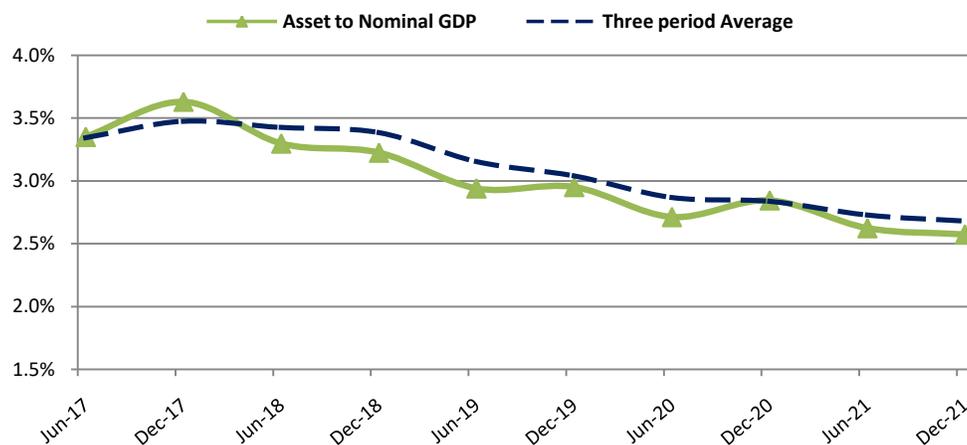
Source: DFIM, BB; computation: FSD, BB.

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

Financial institutions' assets to nominal GDP ratio decreased slightly in December 2021 compared to the position of June 2021.

7. Structural risk–cont'd.

7.4 Financial institutions (FIs) sector leverage

Total Asset-to-Capital Ratio — — — **Three-Period Average**
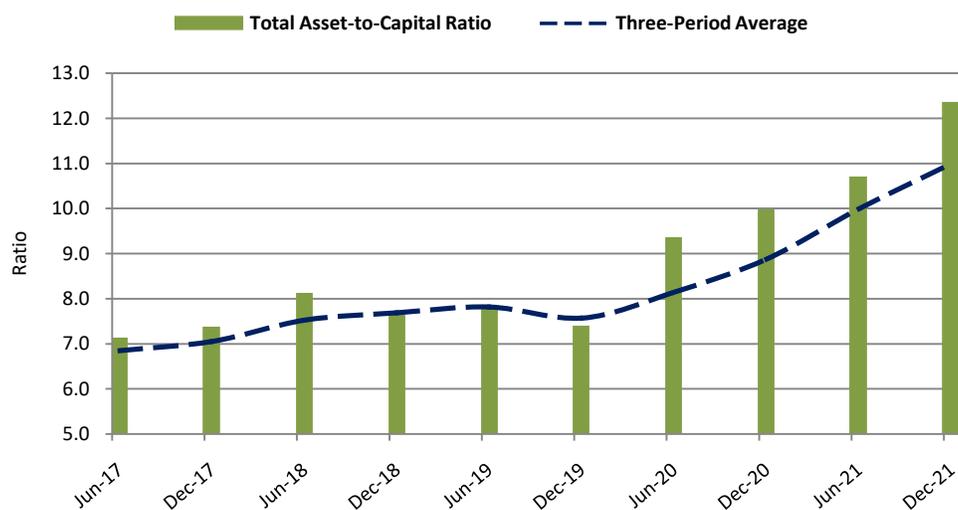
Source: DFIM, BB; computation: FSD, BB.

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

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

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, 2021.

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.

It refers to the ratio of loan-loss provision, maintained by FIs, against their required provision. Due to unavailability of data of all NBDCs, provision maintenance ratio of FIs was used, since FIs constitute the majority of NBDCs.

2.7 Changes in banks' interest rates for housing loans

Source: Bangladesh Bank website (https://www.bb.org.bd/fnansys/interestlending.php).

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, with the companies 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 of equity indices

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 assetsat 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; due to unavailability of data of all NBDCs, FIs' loans to housing sector was used as FIs constitute the majority of the NBDCs.

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.

The Basel-III accorded indicator which is a ratio of Tier-1 capital to total exposure of the banking sector. In Bangladesh up to 2021, the required leverage ratio is 3.0 percent.

7.3 FI sector size

Source: Financial Institutions (for June, December 2020 and June 2021) and DFIM, BB (for earlier periods); computation: FSD, BB.

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

7.4 FI sector leverage

Source: Financial Institutions (for June, December 2020 and June 2021) and DFIM, BB (for earlier periods); computation: FSD, BB.

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

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