

**BANGLADESH BANK**

Central Bank of Bangladesh



Macroprudential  
Supervision of  
Financial System

# Bangladesh Systemic Risk Dashboard (BSRD)



**Financial Stability Department**  
June 2018

**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 2018

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4. Department of Off-site Supervision
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*This dashboard has been prepared taking into account the data available up to June 2018 unless stated otherwise.*



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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
ERD	Economic Relations Division
FCBs	Foreign Commercial Banks
FIs	Financial Institutions
FSD	Financial Stability Department
FY	Financial Year
GDP	Gross Domestic Product
IMF	International Monetary Fund
MA	Moving Average
NBDC	Non-bank Depository Corporation
NFCs	Non-financial Corporations
NII	Net Interest Income
NPL	Non-performing Loan
PCBs	Private Commercial Banks
P/E ratio	Price to 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





# Bangladesh Systemic Risk Dashboard: An Overview

## 1. Macro risk

In the fiscal year (FY) 2017-18, real GDP growth rate (indicator 1.1) continued the uptrend and increased to 7.9 percent, which was higher than the IMF forecast of 7.0 percent for the same period. The growth rate was recorded at 7.3 percent in FY17. Current account balance-to-GDP ratio (indicator 1.2) dropped further into negative in FY18 compared to FY17 due to widening current account deficit.

Aggregate debt-to-GDP ratio (indicator 1.3) decreased slightly in FY18 though nonfinancial corporation (NFC) and household debt, as percentage of GDP, increased marginally during the period. Decrease in external debt of Government, as percentage of GDP, led to a decline in Government debt-to-GDP ratio (indicator 1.4) in FY18. During the same period, a notable increase was observed in government deficit (indicator 1.5) and reached almost 5 percent of GDP.

Financial burden of households, measured by household debt-to-gross disposable national income ratio (indicator 1.6) decreased during the second half of FY18 compared to the first half of FY18, but recorded an increase when compared to the corresponding period of FY17. A similar trend was observed in NFC debt-to-GDP ratio (indicator 1.7) during the second half of FY18.

## 2. Credit risk

Growth of loans to households by both banks (indicator 2.1) and non-bank depository corporations (NBDCs) (indicator 2.2) remained downtrend since June 2017, which recorded further decline at the end of June 2018. Similarly, growth of loans to NFCs by both banks (indicator 2.3) and NBDCs (indicator 2.4) slowed down at the end of June 2018 compared to the end of December 2017.

Provision maintenance ratio (indicator 2.5) of banks improved compared to end-December 2017, with slight deterioration compared to end-June 2017. The same ratio for financial institutions (FIs) (indicator 2.6), constituting the majority of the NBDCs, improved markedly at end-June 2018 to reach around 100 percent.

In terms of changes in banks' interest rates for housing loans (indicator 2.7), a net tightening was observed at end-June 2018, indicating a higher number of banks increased their interest rates compared to the number of banks decreasing their rates.

## 3. Funding and liquidity risk

Bangladesh Bank's liquidity support (indicator 3.1) to banks, in the form of assured liquidity support (ALS), exhibited a sharp decline while special repo operation was not exercised since December 2016. Led by a higher advance-to-deposit ratio (ADR) of domestic private commercial banks (PCBs), ADR of the banking industry (indicator 3.2) increased marginally at end-June 2018 compared to end-December 2017.

Maturity profile of banks' outstanding debt securities (indicator 3.3) demonstrates that treasury bonds with residual maturity over 2 and up to 5 years continued to make up the major share of the total value of treasury bonds outstanding while bonds with longer residual maturities remained low. Treasury bills with residual maturity up to 91 days constituted the largest amount among the treasury bills of varying maturities and demonstrated a sharp increase at end-June 2018 compared to end-December 2017. Besides, an upward trend in banks' funding through issuing subordinated debt (indicator 3.4) was evident.

#### **4. Market risk**

Equity indices (indicator 4.1) declined moderately at end-June 2018 compared to that of end-June 2017 and end-December 2017. Market P/E ratios slightly declined at end-June 2018. Average call money borrowing and lending rates (indicator 4.3) remained almost same compared with the position of end-December 2017. Weighted average interest rate on deposits and advances increased whereas their spread (indicator 4.4) remained unchanged. Exchange rate (indicator 4.5) depreciated slightly at end-June 2018 when compared with end-December 2017 position.

#### **5. Profitability and solvency risk**

Banks' profitability, measured by ROE and ROA (indicators 5.1a and 5.1b), declined slightly in June 2018 compared to June 2017 and declined moderately compared to December 2017. However, cost-to-income ratio (indicator 5.1c) increased slightly from the position of June 2017 and December 2017. Proportion of net interest income in total operating income (indicator 5.1d) maintained upward trend at end-June 2018.

The ratio of Tier-1 capital to total risk-weighted assets (indicator 5.2a) declined in June 2018 from the position of June 2017 and December 2017. Still the ratio was above regulatory requirement of 6.0 percent. Ratio of non-performing loans and advances to total loans and advances (indicator 5.2b) slightly increased at end-June 2018 when compared to end-June 2017 and end-December 2017 position.

FIs' profitability, measured by ROE and ROA (indicators 5.3a and 5.3b), also decreased slightly in June 2018 compared to June 2017, but declined moderately when compared with December 2017. FIs' cost-to-income ratio (indicator 5.3c) increased slightly at end-June 2018 from that of end-June 2017 and end-December 2017. Also, FIs' net interest income to total operating income ratio (indicator 5.3d) registered an increase from the position of end-December 2017.

FI's ratio of Tier-1 capital to total risk-weighted assets (indicator 5.4a) slightly declined in June 2018 compared to June 2017 and December 2017; still it was well above the minimum regulatory requirement. Ratio of non-performing loans and advances to total loans and advances (indicator 5.4b) increased moderately during the first half of 2018 and increased slightly from the position of June 2017.

#### **6. Inter-linkages**

Government borrowings from the banking sector (indicator 6.1) picked up during the first half of 2018 after sustaining negative growth since June 2016. Government borrowing from NBDCs (indicator 6.2) remained negligible.

Banks' loan growth in residential housing sector (indicator 6.3a) demonstrated a decline at end-June 2018 compared to the preceding period while loan growth in commercial housing sector (indicator 6.3b) showed an increase during the same period. Growth of FIs' loans to housing sector (indicator 6.4) slowed down further at end-June 2018.

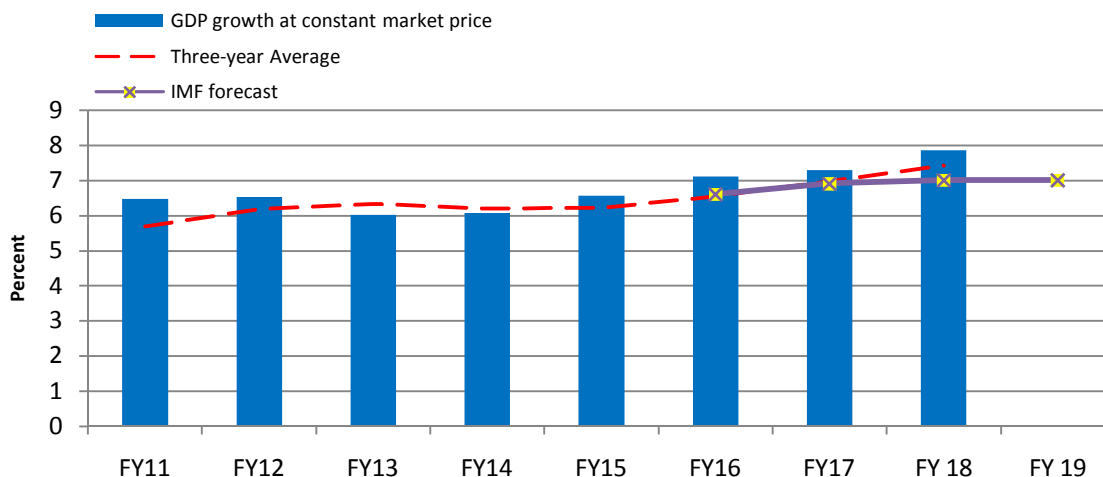
An increasing trend was observed in banks' exposure to its major public and private counterparts (indicator 6.5), in which NFCs accounted for more than seventy percent. Similarly, NFCs' borrowing continued to dominate the increasing loan portfolio of NBDCs (indicator 6.6). Banks' cross-border claims (indicator 6.7) remained low at end-June 2018, accounting for less than one percent of total assets of the banking sector. NBDCs' cross-border claims (indicator 6.8) were negligible at end-June 2018.

## **7. Structural Risk**

Aggregate assets of both domestic banks and foreign banks, and financial institutions, as percentages of nominal GDP (indicators 7.1 and 7.3), recorded minor decline at end-June 2018 compared to end-June 2017. However, an upward movement was observed in the leverage ratio of both banking sector and FIs sector (indicators 7.2 and 7.4).

# 1. Macro risk

## 1.1 Current and forecasted real GDP growth



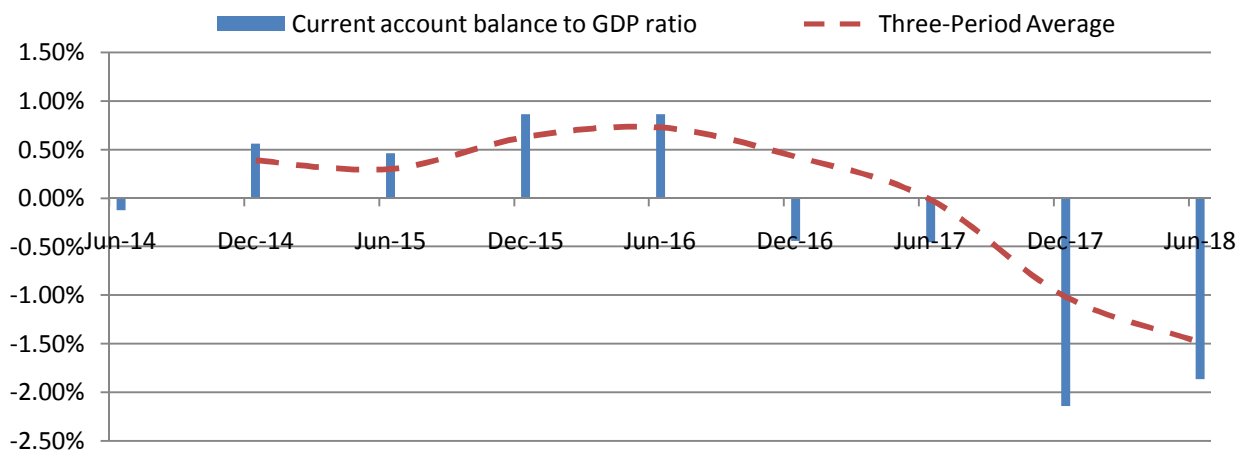
Source: Statistics Department and IMF's World Economic Outlook, April, 2018.

Notes: 1. As half yearly GDP is not calculated in Bangladesh, GDP growth is shown for only financial years.

2. Dotted line represents three-year moving average of GDP growth rate.

*Real GDP growth showed an increasing trend, surpassing the IMF forecast for the fiscal year 2018 (FY18).*

## 1.2 Current account balance-to-GDP ratio



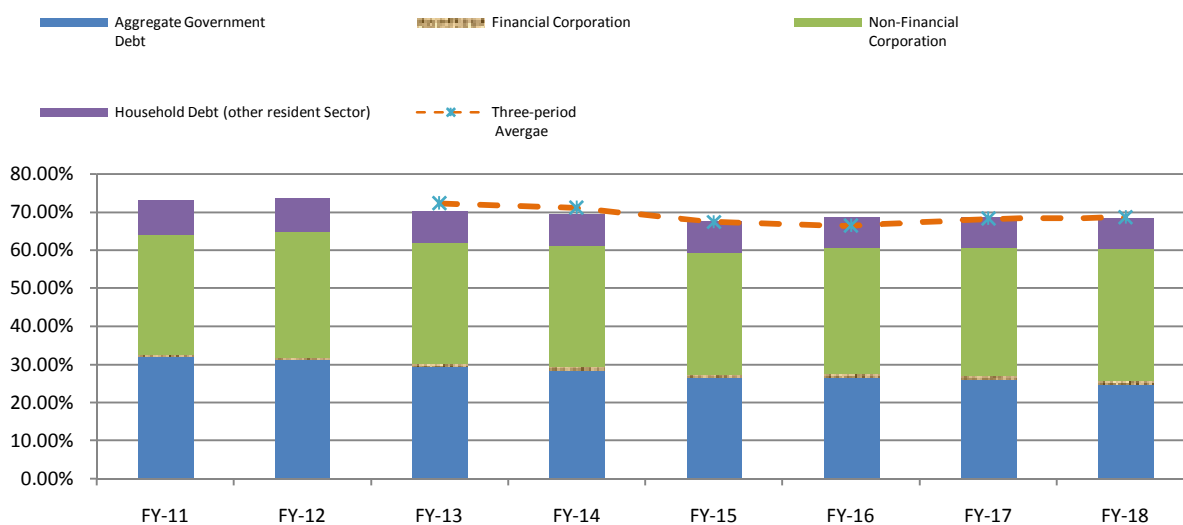
Sources: Monthly Economic Trends, BB.

Note: As half yearly GDP is not calculated in Bangladesh, June based GDP data is used as a proxy for December in calculating current account balance-to-GDP ratio.

*Current account balance-to-GDP ratio showed a fluctuating trend. Though the ratio was positive up to June 2016, it became negative since December 2016.*

# 1. Macro risk-Cont'd.

## 1.3 Aggregate debt-to-GDP ratio



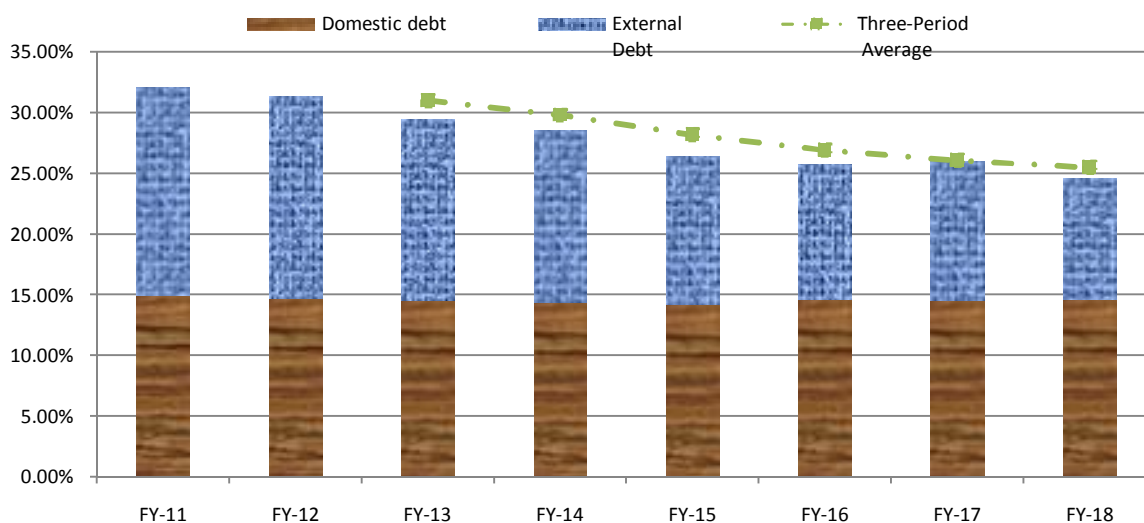
Sources: Bangladesh Economic Review, Ministry of Finance; Monthly Economic Trends, BB (various issues).

Note: Aggregate debt refers to the claims on government, households, financial and non-financial corporation by depository corporations. Government debt includes both domestic and external debt.

As External Debt for FY-18 is not published yet, External Debt for FY-17 is used for FY-18.

*Aggregate debt-to-GDP ratio recorded slight decrease in FY18 compared to that of FY17. Debts of non-financial corporations and government are the major constituents of aggregate debt.*

## 1.4 Government debt-to-GDP ratio

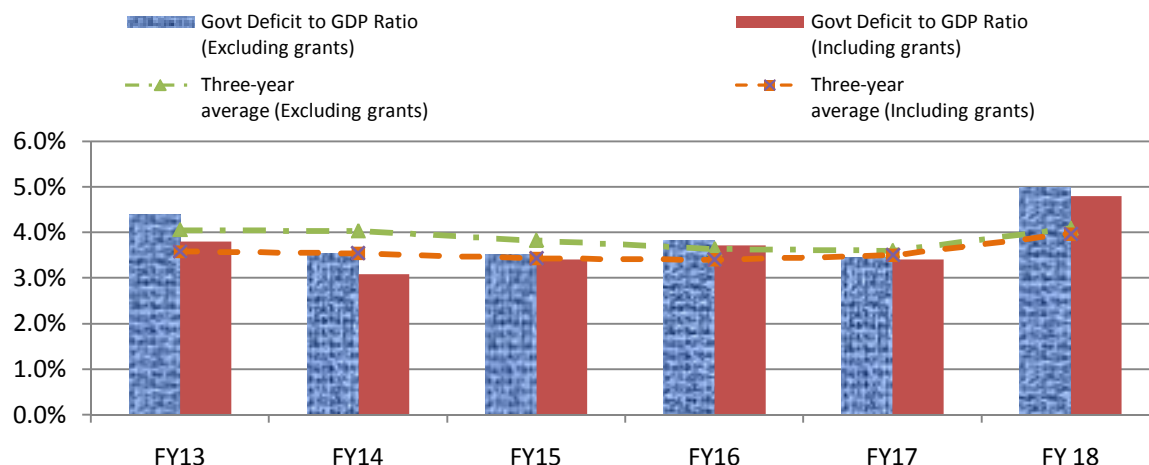


Sources: Bangladesh Economic Review, Ministry of Finance; Monthly Economic Trends, BB.

*Domestic government debt constitutes major portion of aggregate government debt. Government debt-to-GDP ratio decreased in FY18 compared to that in FY17.*

# 1. Macro risk-Cont'd.

## 1.5 Government deficit-to-GDP ratio



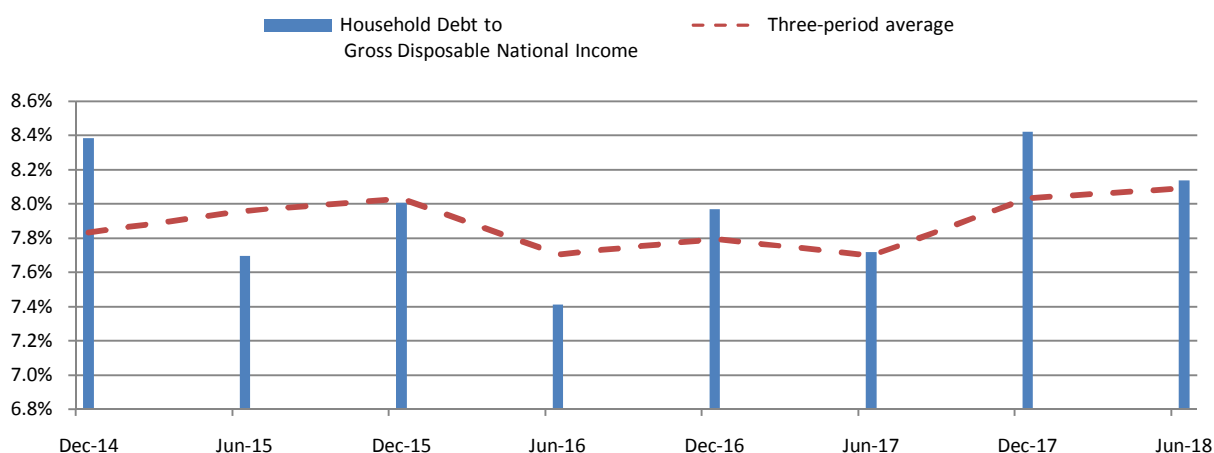
Source: Monthly Report on Fiscal Position, March'2018, Government of Bangladesh and various prior issues.

Notes: Because of unavailability of half yearly data of both government deficit and GDP, government deficit-to-GDP ratio is shown for financial years only. Actual figures of government deficit are used here.

Budget Deficit (excluding grants and including grants) for FY 18 is estimated.

*Government deficit-to-GDP ratio, both including and excluding grants, increased in FY18 compared to the preceding fiscal year.*

## 1.6 Household debt-to-gross disposable national income ratio



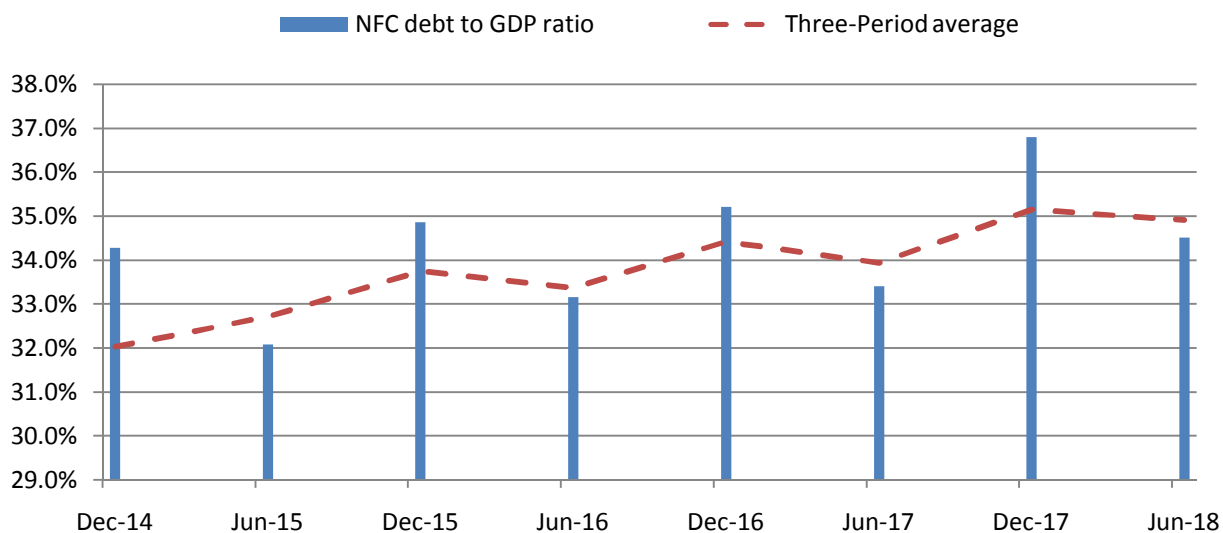
Sources: Monthly Economic Trends, BB (various issues).

Notes: As half yearly gross disposable national income is not calculated in Bangladesh, June based data of gross disposable national income is used for both June and December in calculating household debt-to-gross disposable national income ratio. Dotted line represents three-period moving average of household debt-to-gross disposable national income ratio.

*Household debt-to-gross disposable national income decreased in June 2018 compared to that of December 2018. However, compared to end-June 2017 the ratio slightly increased.*

## 1. Macro risk-Cont'd.

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



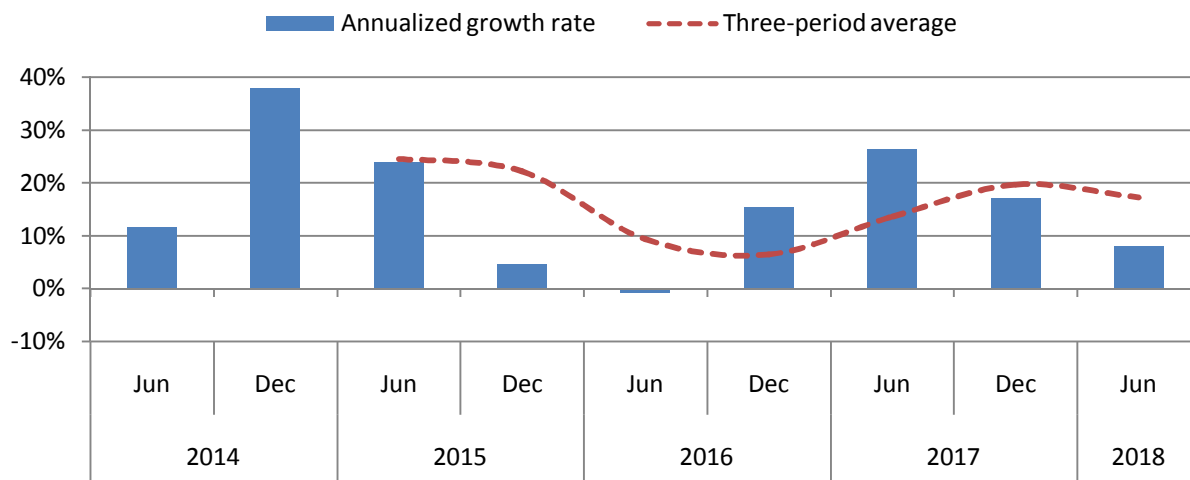
Sources: Monthly Economic Trends, BB (various issues).

Notes: NFC debt includes debts of both public and private NFCs. Dotted line represents three-period moving average of NFC debt-to-GDP ratio. As half yearly GDP is not calculated in Bangladesh, June based GDP data is used as a proxy for December in calculating the ratio.

*Private non-financial corporations' (NFCs) debt comprises major portion of aggregate NFCs debt. NFC debt-to-GDP ratio decreased by 2.3 percentage points in end-June 2018 compared to the end-December 2017 position and increased by 1.1 percentage points from that of end-June 2017.*

## 2. Credit risk

### 2.1 Annual growth rate of banks' loans to households

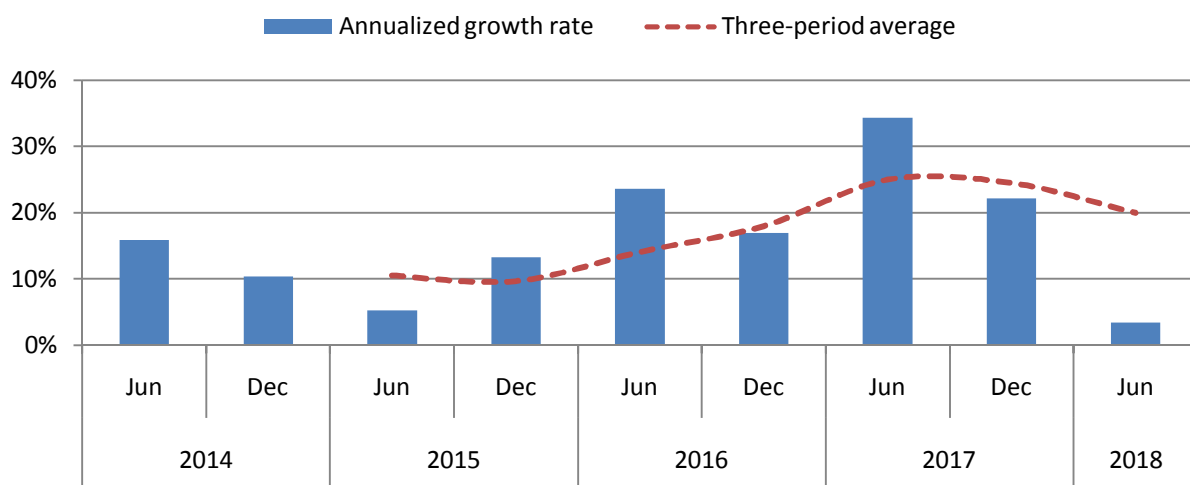


Source: Statistics Department, BB.

Notes: December 2017 data have been revised. Data for June 2018 are provisional. Loans refer to outstanding loans and advances extended to domestic households (individuals) excluding bills.

*Banks' credit growth to household sector slowed down further at the end of June 2018. A downward trend in growth is observed since June 2017.*

### 2.2 Annual growth rate of NBDCs' loans to households



Source: Statistics Department, BB.

Notes: NBDCs include FIs<sup>1</sup>, Ansar-VDP Unnayan Bank, Karma Sangsthan Bank, and Bangladesh Samabaya Bank Ltd.

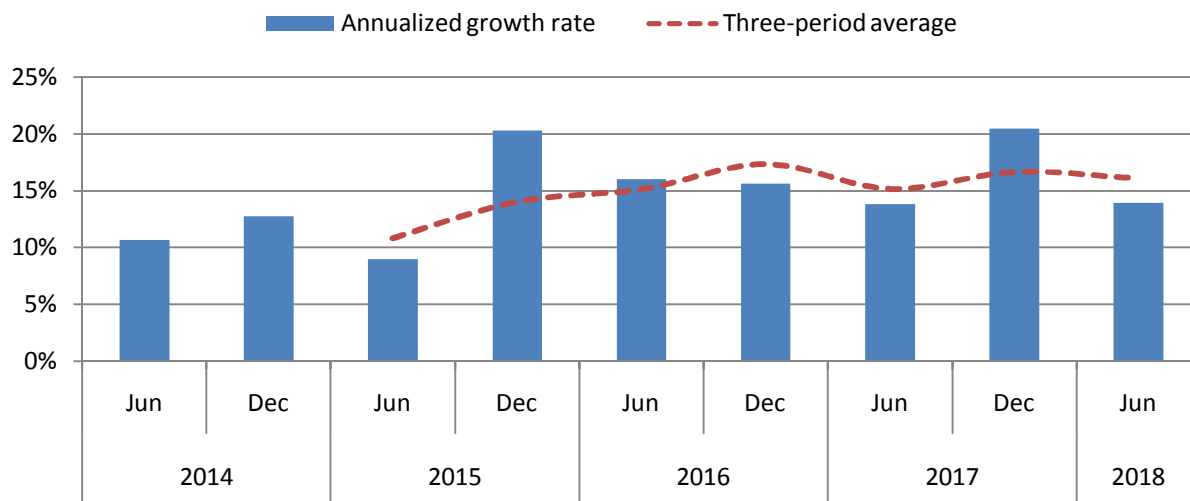
*NBDCs' credit growth to household sector also maintained a downward trend since June 2017.*

<sup>1</sup> FIs refer to non-bank financial institutions.



## 2. Credit risk-Cont'd.

### 2.3 Annual growth rate of banks' loans to non-financial corporation (NFC)

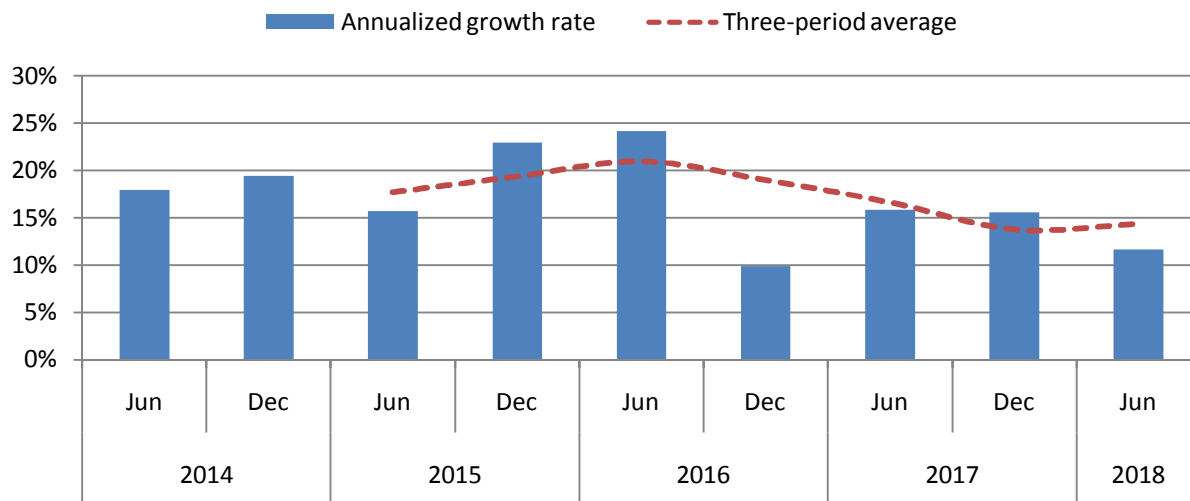


Source: Statistics Department, BB.

Notes: Data for June 2018 are provisional. Loans refer to outstanding loans and advances extended to private NFCs excluding bills.

*Banks' credit growth to private NFCs registered a slowdown at the end of June 2018 after recording a strong growth in December 2017.*

### 2.4 Annual growth rate of NBDCs' loans to non-financial corporation (NFC)



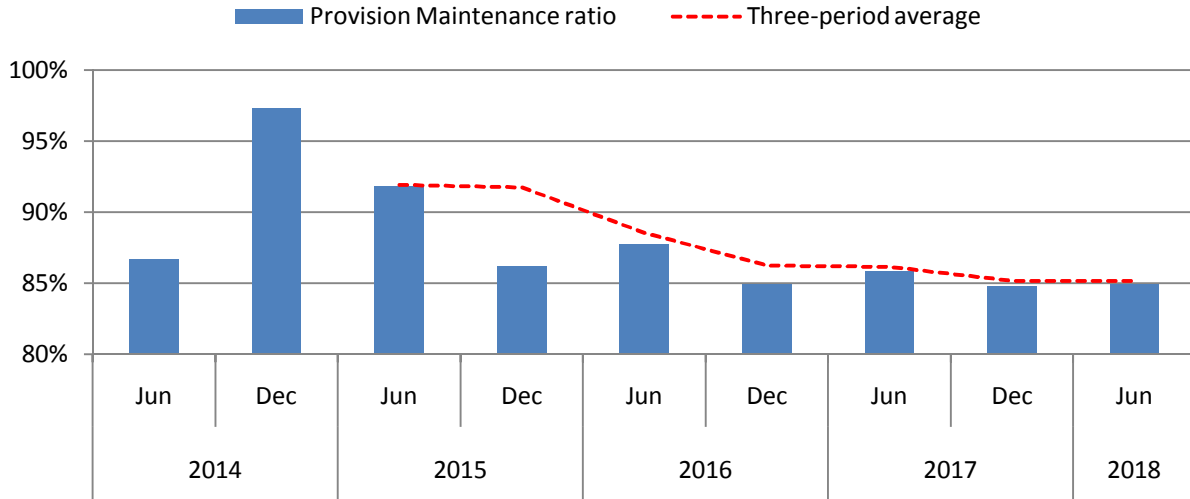
Source: Statistics Department, BB.

Notes: NFC refers to private NFCs only. NBDCs include FIs, Ansar-VDP Unnayan Bank, Karma Sangsthan Bank, and Bangladesh Samabaya Bank Ltd.

*Growth rate of NBDCs' loans to private NFCs also declined in the first half of 2018 compared to end-June 2017 and end-December 2017.*

## 2. Credit risk-Cont'd.

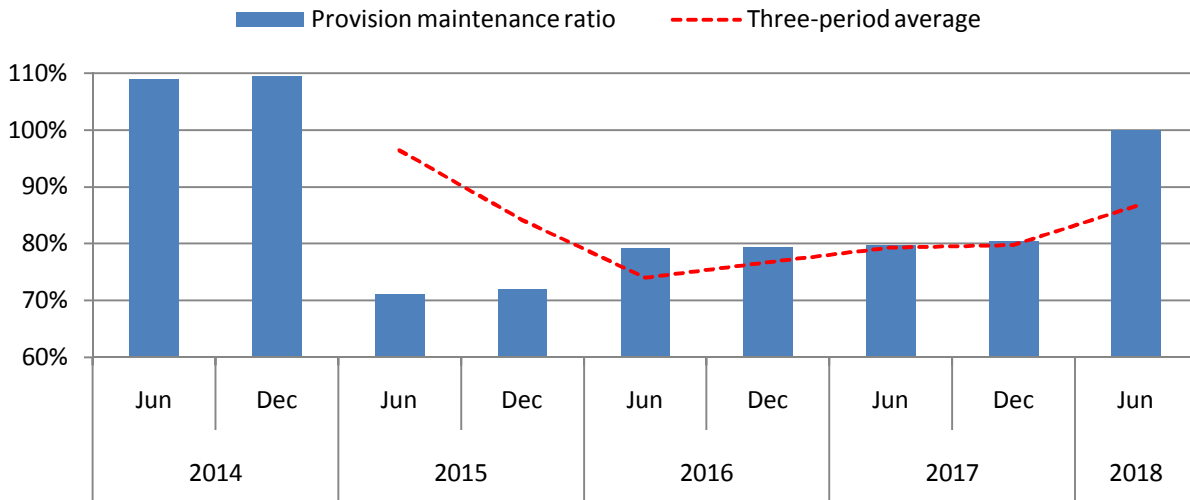
### 2.5 Provision maintenance ratio of banks



Source: BRPD, BB.

*Banks' maintained provision, as a percentage of required provision, recorded a minor increase at end-June 2018 compared to end-December 2017 and a minor decrease from end-June 2017.*

### 2.6 Provision maintenance ratio of FIs



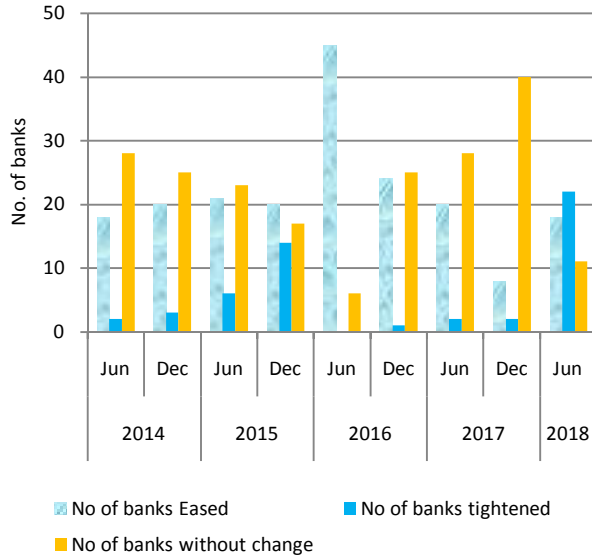
Source: DFIM, BB.

*FIs' provision maintenance ratio witnessed a sharp rise in June 2018 from that of end-June 2017 and end-December 2017 and stood at around 100 percent.*

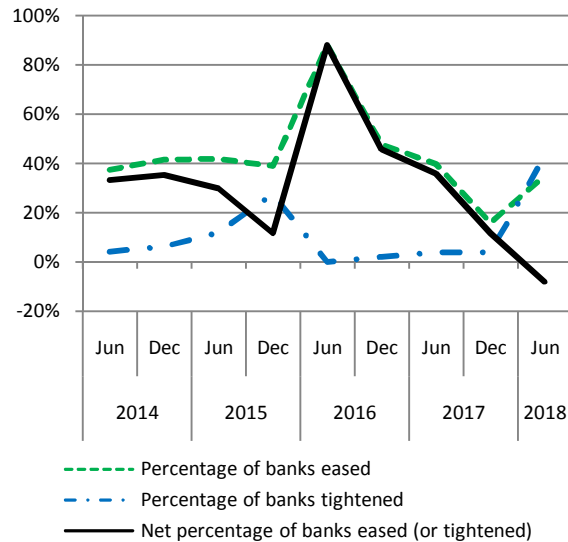
## 2. Credit risk-Cont'd.

### 2.7 Changes in banks' interest rates for housing loans

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



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



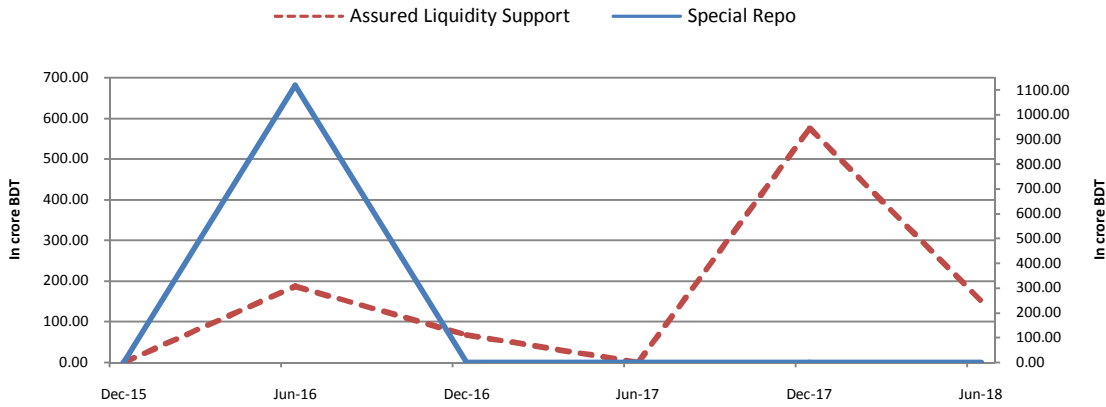
Source: Scheduled bank lending rate, Bangladesh Bank website (<https://www.bb.org.bd/fnansys/interestlending.php>).

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 June 2018, 35.3 percent banks eased the interest rates of housing loans while 43.1 percent banks tightened the same; 21.6 percent banks kept their rates unchanged during the same period. Hence, after netting off the impacts of easing, an overall net tightening is observed in June 2018.*

### 3. Funding and liquidity risk

#### 3.1 Bangladesh Bank's liquidity support to banks

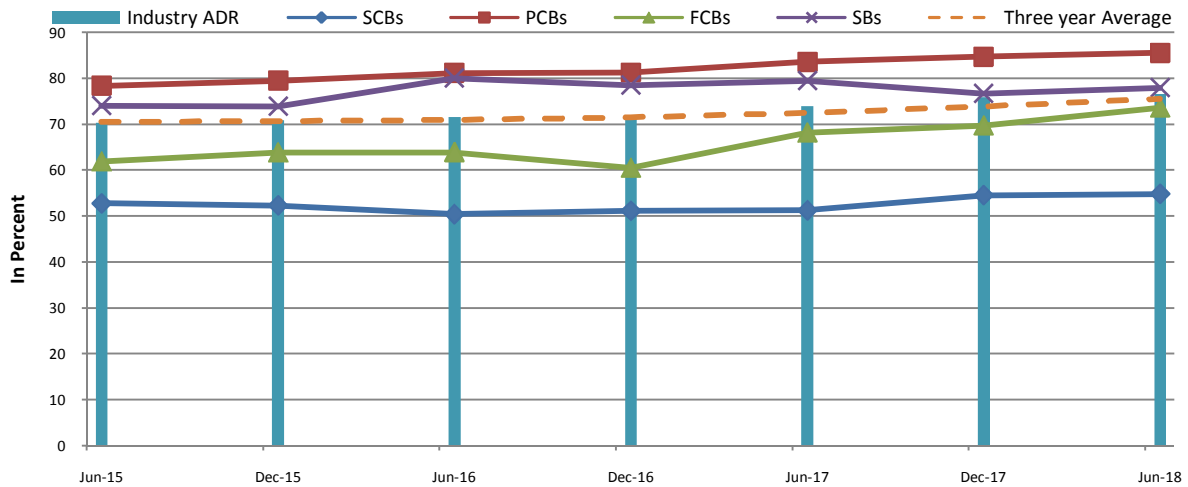


Source: DMD, BB.

Note: LHS represents Assured Liquidity Support & RHS Special Repo.

Assured liquidity support decreased significantly in June 2018 from that of end-December 2017 and increased compared to end-June 2017. Special repo showed a decreasing trend since June 2016 and was nil since December 2016.

#### 3.2 Advance-to-deposit ratio



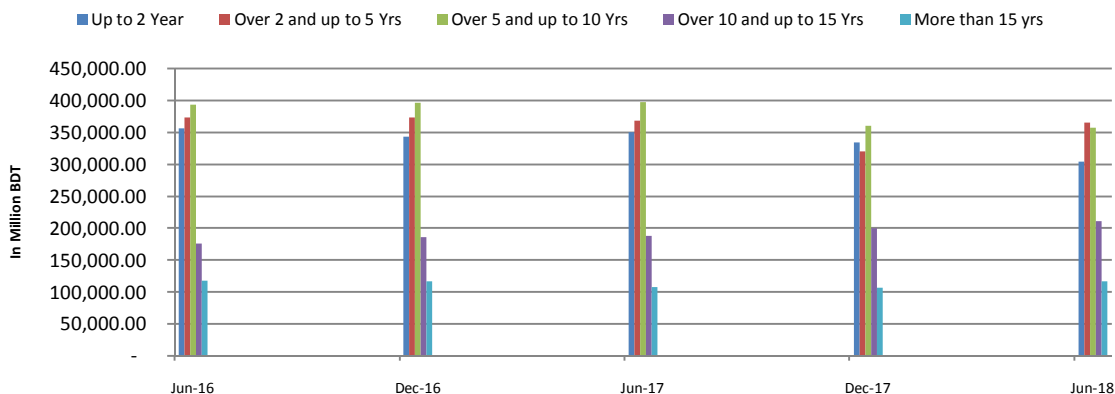
Source: DOS, BB.

Advance-to-deposit ratio (ADR) increased slightly in June 2018, after remaining mostly stable over the last few years. ADRs of PCBs and SBs were higher than the industry average whereas ADRs of FCBs and SCBs were lower.

### 3. Funding and liquidity risk-cont'd.

#### 3.3 Maturity profile of banks' outstanding debt securities

##### a. Treasury Bond

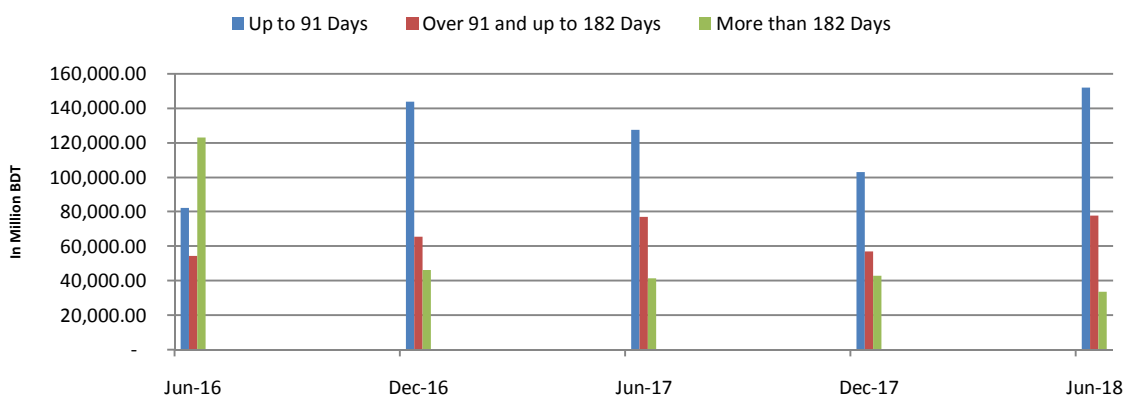


Source: DMD, BB.

Notes: The maturity profile refers to the residual maturity of long-term and short-term debt securities issued by Government of Bangladesh. Banks' long-term debt includes government treasury bond with a maturity of more than 12 months. Data are based on amounts outstanding at the end of the corresponding year or month.

*Treasury bonds with remaining maturity over 2 to 5 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 2018. Treasury bonds with remaining maturities upto 2 years and over 5 to 10 years decreased in June 2018 compared to June 2017 and December 2017.*

##### b. Treasury Bill



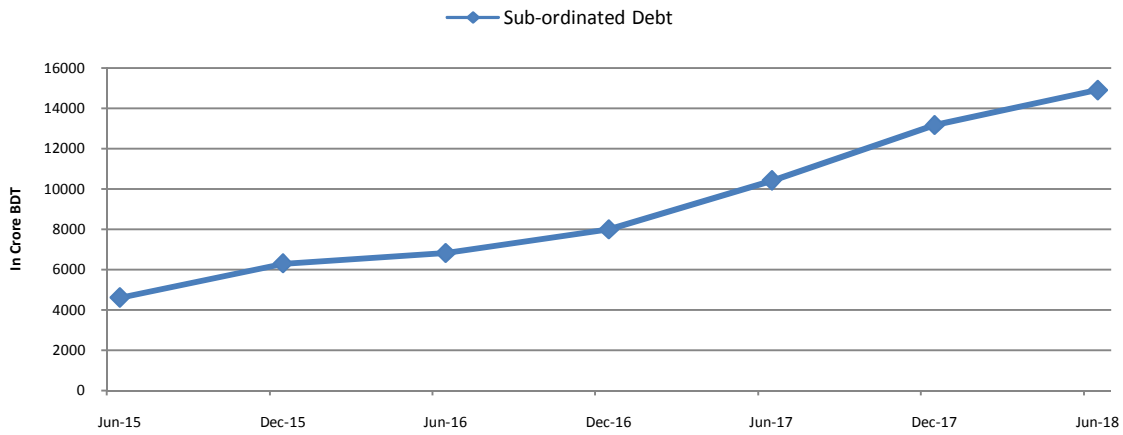
Source: DMD, BB.

Notes: Banks' 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.

*Treasury bills with remaining maturity of up to 91 days are the largest in terms of volume and recorded increase from December 2017. The same with remaining maturity of more than 182 days are the smallest and decreased from both June 2017 and December 2017. However, Treasury bills with remaining maturity over 91 days and up to 182 days increased in June 2018 compared to December 2017 but remained mostly unchanged compared to June 2017.*

### 3. Funding and liquidity risk-cont'd.

#### 3.4 Subordinated debt



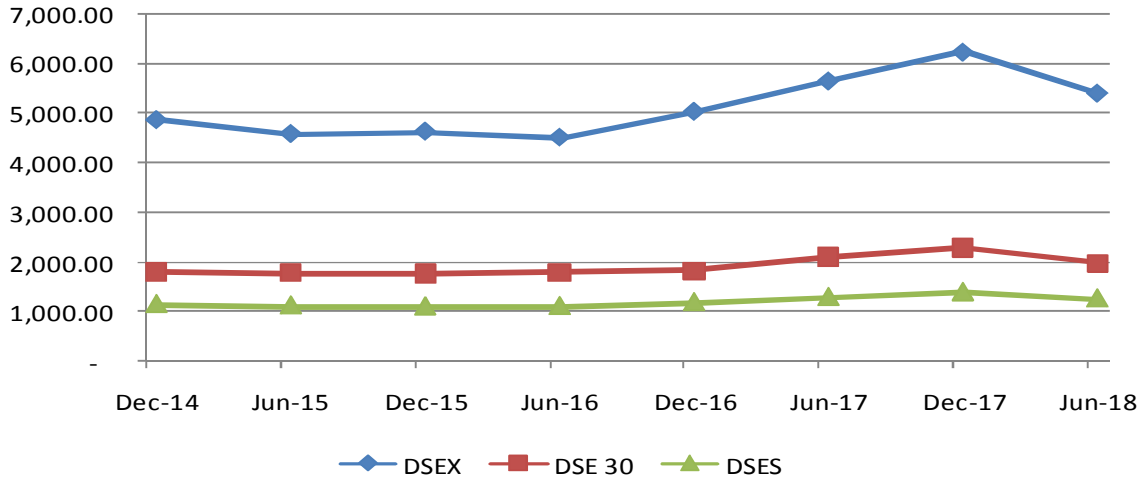
Source: DOS, BB.

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, showed an increasing trend since 2015. Such increase contributes to the overall capital base of the banking sector.*

## 4. Market risk

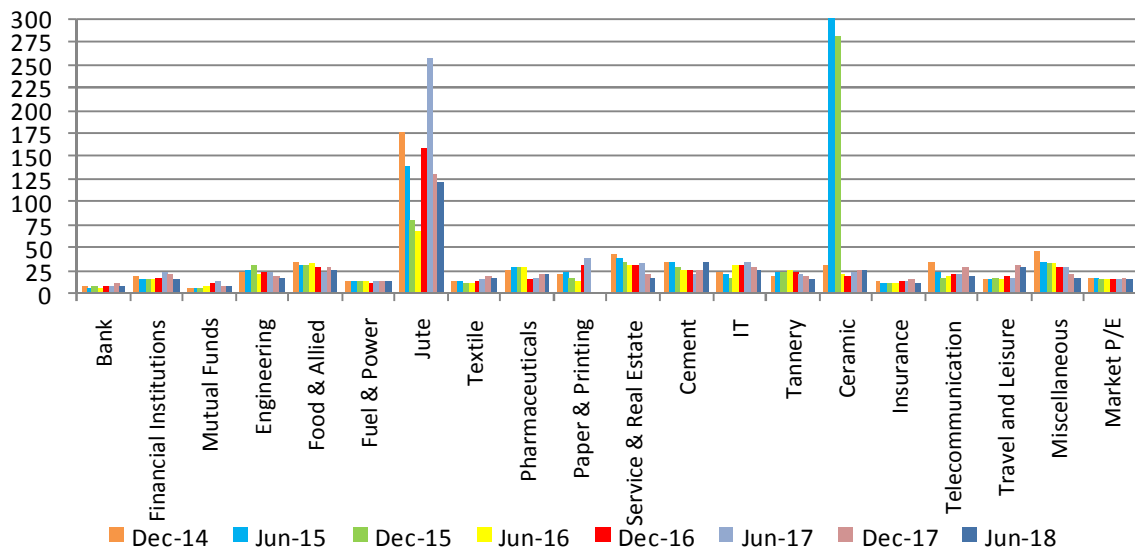
### 4.1 Equity indices



Source: DSE Website.

*DSEX, the major DSE index, declined moderately at end-June 2018 compared to that of end-June 2017 and end-December 2017. Other equity indices also declined in the first half of 2018.*

### 4.2 Price/earnings ratio of equity indices



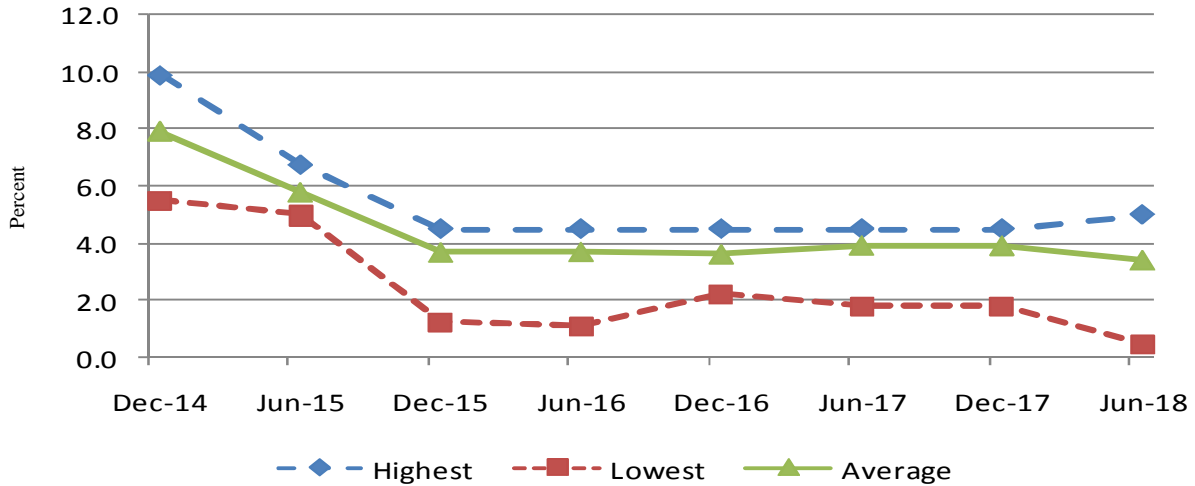
Source: DSE Website.

*P/E ratio of all listed sectors remained broadly stable. However, market P/E ratios slightly declined at end-June 2018.*

## 4. Market risk-cont'd.

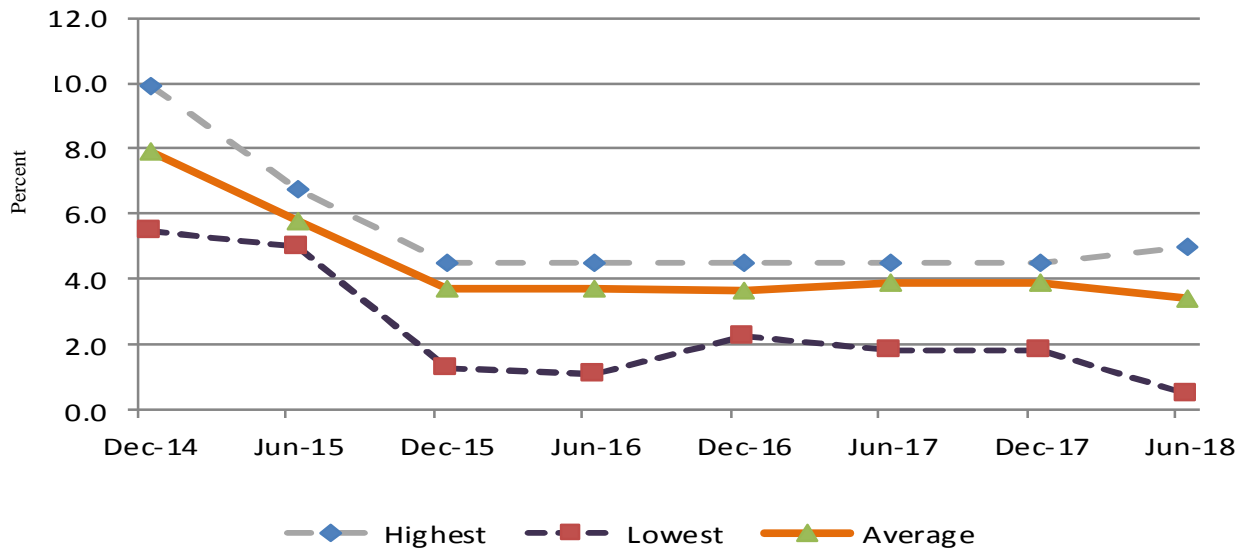
### 4.3 Weighted average call money market rates

#### a. Borrowing rate



Source: Statistics Department, BB.

#### b. Lending rate



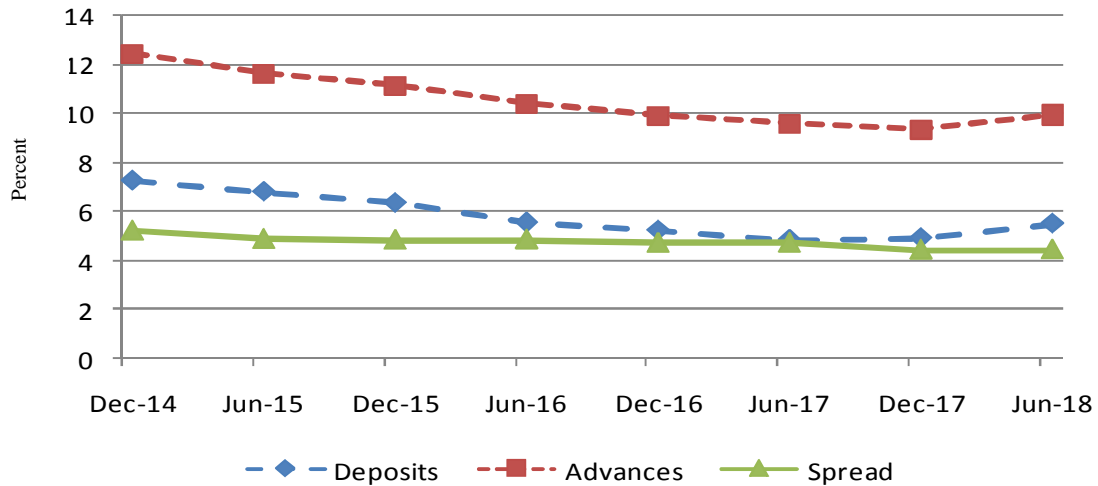
Source: Statistics Department, BB.

*Average call money borrowing and lending rates remained broadly stable during the first half of 2018 indicating no significant stress on liquidity management.*



## 4. Market risk-cont'd.

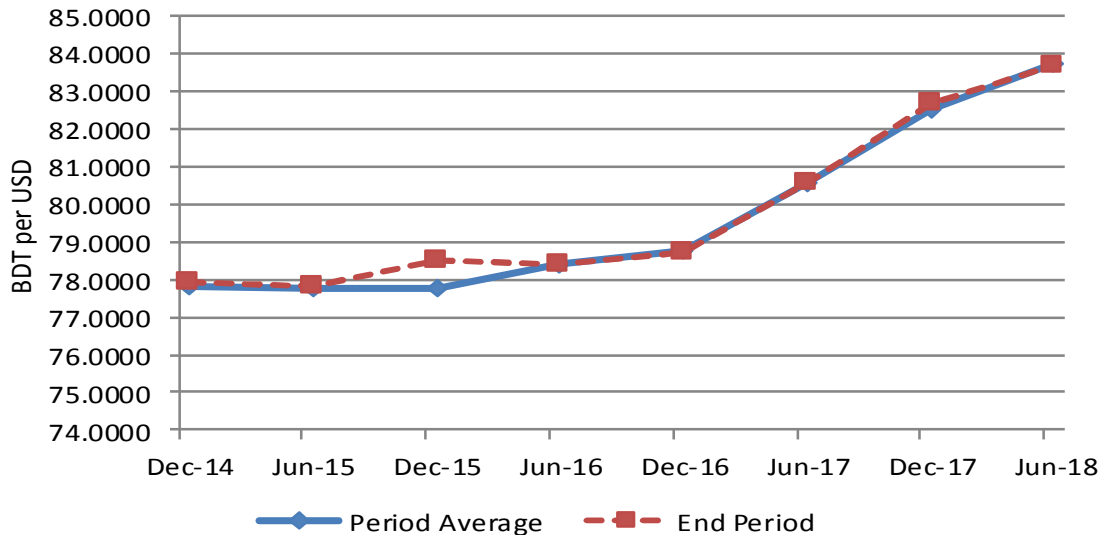
### 4.4 Scheduled banks' weighted average interest rate on deposits and advances



Source: Statistics Department, BB.

*Weighted average interest rate on advances and deposits slightly increased in the first half of 2018 compared to end-June 2017 and end-December 2017. However, the spread remained mostly unchanged.*

### 4.5 Weighted average exchange rate (BDT/USD)



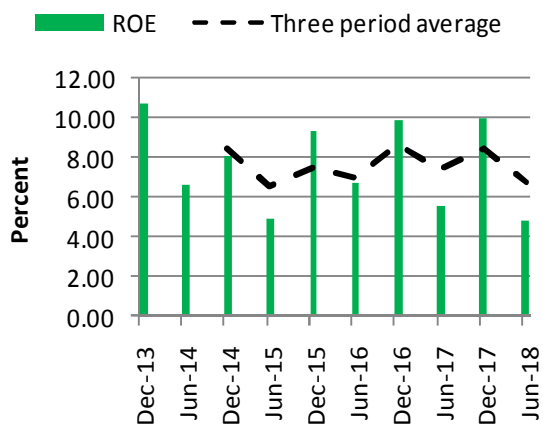
Source: Statistics Department, BB.

*BDT depreciated slightly against USD at end-June 2018 compared to the position of end-June 2017 and end-December 2017.*

## 5. Profitability and solvency risk

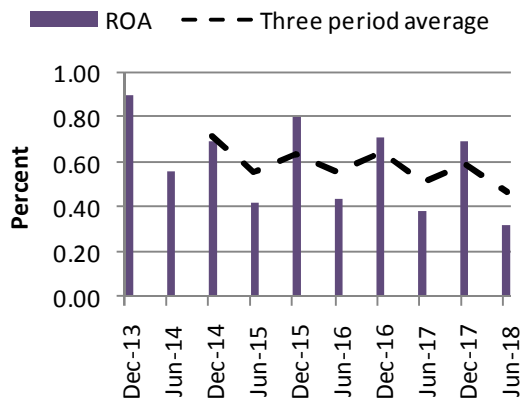
### 5.1 Banks' profitability indicators

#### a. Return on equity (ROE)



Source: Scheduled Banks; Computation: Financial Stability Department, BB.  
Note: End-June ratios are annualized.

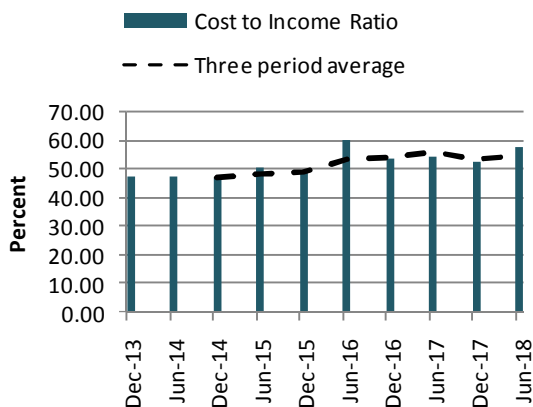
#### b. Return on assets (ROA)



Source: Scheduled Banks; Computation: Financial Stability Department, BB.  
Note: End-June ratios are annualized.

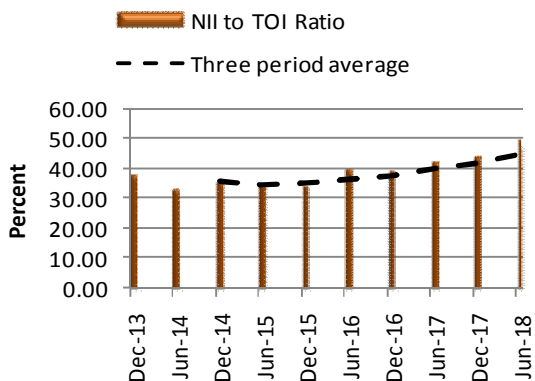
*Both ROE and ROA declined slightly in June 2018 compared to June 2017 and declined moderately compared to December 2017.*

#### c. Cost-to-income ratio



Source: Scheduled Banks; Computation: Financial Stability Department, BB.  
Note: Ratio between operating expenses and total income.

#### d. Net interest income to total operating income ratio



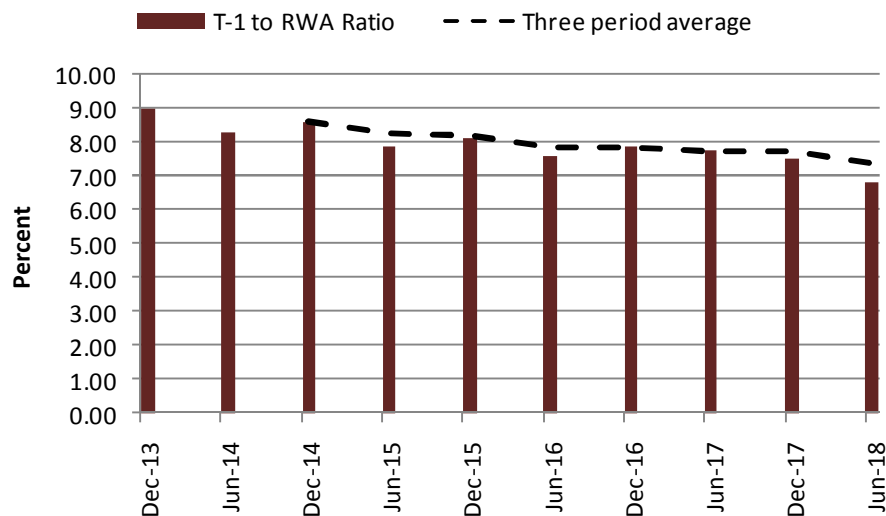
Source: Scheduled Banks; Computation: Financial Stability Department, BB.  
Note: Ratio between net interest income and total income.

*Cost-to-income ratio increased slightly from the position of June 2017 and December 2017. The proportion of net interest income in total operating income continued the upward trend at end-June 2018.*

## 5. Profitability and solvency risk-cont'd.

### 5.2 Banks' solvency indicators

#### a. Tier-1 to RWA ratio

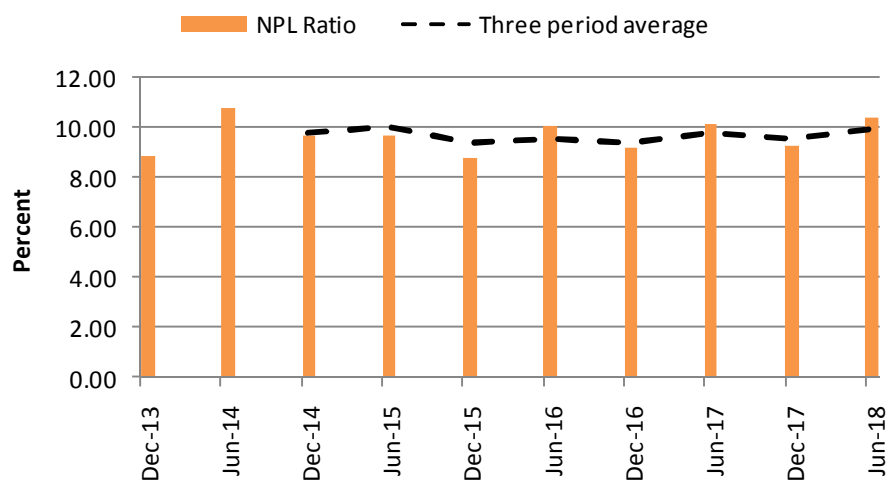


Source: DOS, BB.

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

*Tier-1 capital ratio slightly decreased in June 2018 from the position of June 2017 and December 2017, but remained above the regulatory requirement.*

#### b. Gross non-performing loan (NPL) ratio



Source: BRPD, BB.

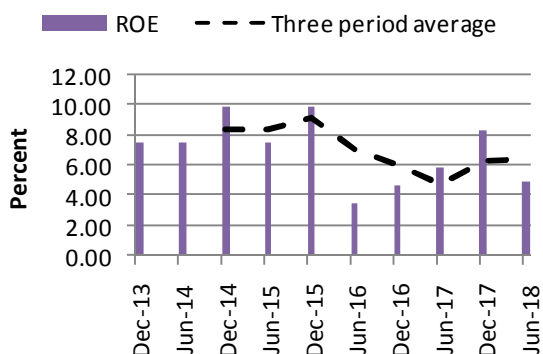
Note: Ratio of non-performing loans & advances to total loans & advances.

*The gross NPL ratio increased slightly in end-June 2018 compared to end-June 2017 and end-December 2017.*

## 5. Profitability and solvency risk-cont'd.

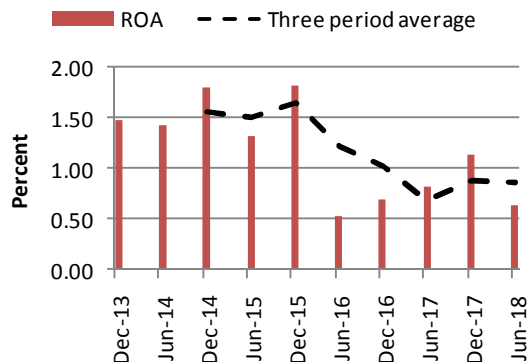
### 5.3 FIs' profitability indicators

#### a. Return on equity (ROE)



Source: DFIM, BB.  
Note: End-June ratios are annualized.

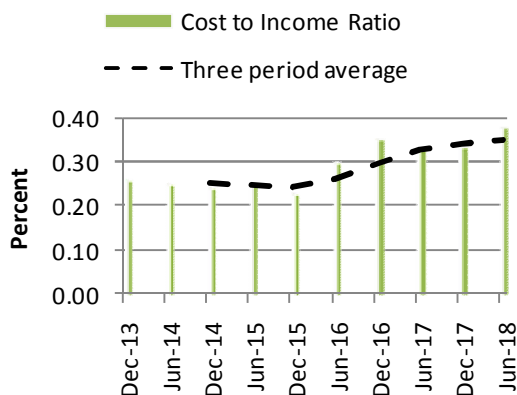
#### b. Return on assets (ROA)



Source: DFIM, BB.  
Note: End-June ratios are annualized.

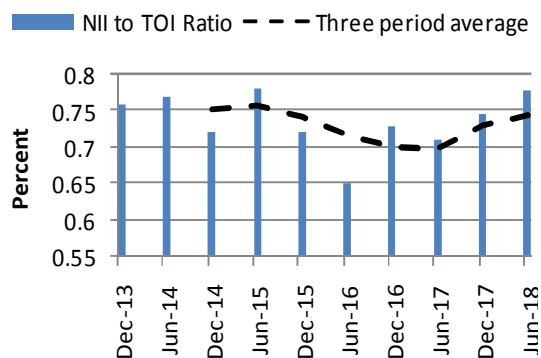
*FIs' ROE and ROA declined slightly in June 2018 compared to June 2017 but declined moderately when compared with December 2017.*

#### c. Cost-to-income ratio



Source: DFIM, BB.  
Note: Ratio between operating expenses and total income.

#### d. Net interest income to total operating income ratio



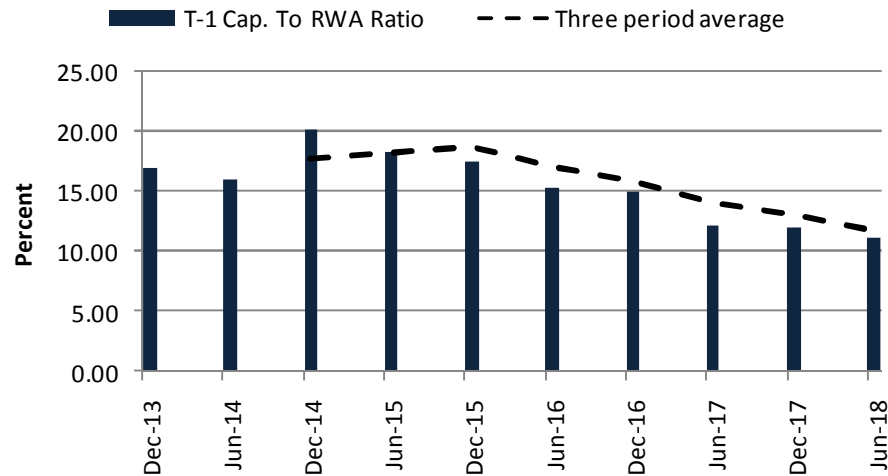
Source: DFIM, BB.  
Note: Ratio between net interest income and total operating income.

*FIs' cost-to-income ratio increased slightly at end-June 2018 from that of end-June 2017 and end-December 2017. The proportion of net interest income in total operating income maintained the upward trend at end-June 2018.*

## 5. Profitability and solvency risk-cont'd.

### 5.4 FIs' solvency indicators

#### a. Tier-1 to RWA ratio

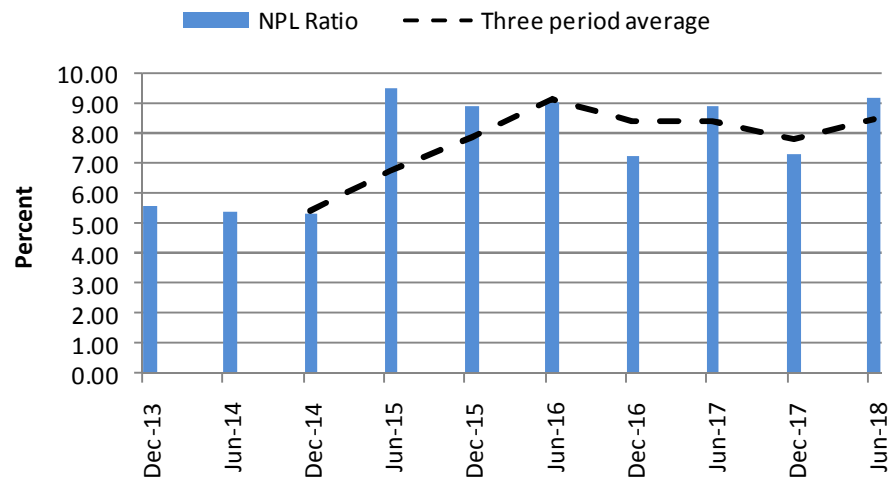


Source: DFIM, BB.

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

*Though the ratio declined in June 2018 compared to June 2017 and December 2017, but it was well above the regulatory requirement.*

#### b. Gross non-performing loan (NPL) ratio



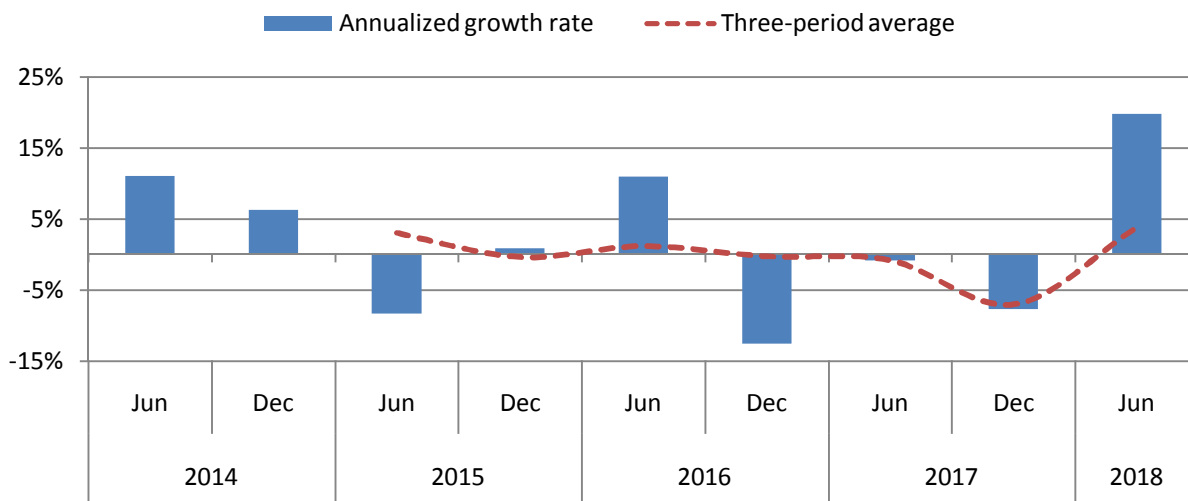
Source: DFIM, BB

Note: Ratio of non-performing loans & leases to total loans & leases.

*The ratio increased moderately at end-June 2018 compared to end-December 2017 position and increased slightly from the position of June 2017.*

## 6. Inter-linkages

### 6.1 Annual growth rate of banks' credit (gross) to government

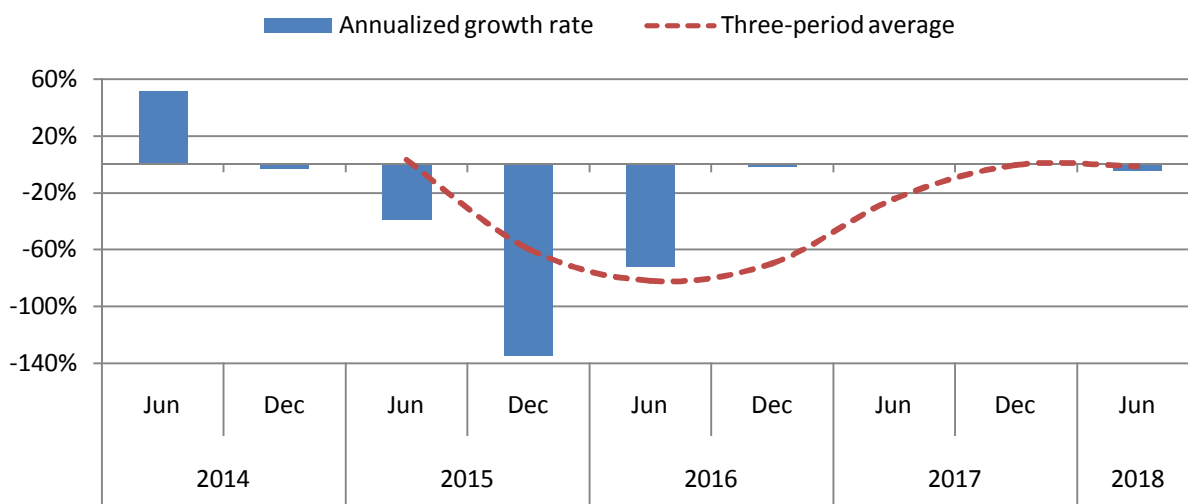


Source: Statistics Department, Bangladesh Bank.

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

*Growth in government borrowings from the banking sector picked up in June 2018 after remaining subdued since June 2016.*

### 6.2 Annual growth rate of NBDCs' credit (gross) to government



Source: Statistics Department, Bangladesh Bank.

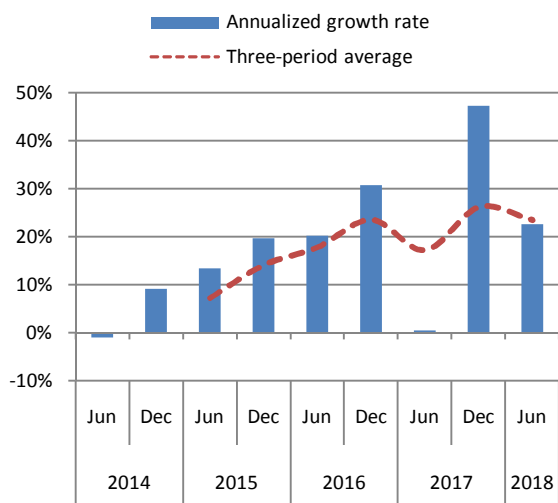
Notes: NBDCs include FIs, Ansar-VDP Unnayan Bank, Karma Sangsthan Bank, and Bangladesh Samabaya Bank Ltd.

*Government borrowings from the NBDCs was negative since December 2014 and remained negligible at end-June 2018.*

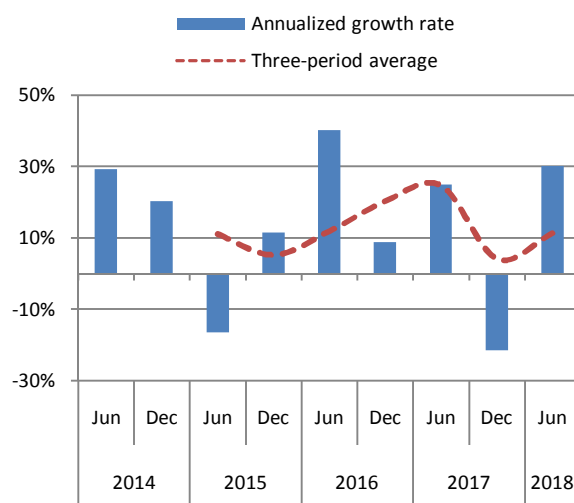
## 6. Inter-linkages- Cont'd.

### 6.3 Annual growth rate of banks' loans to Housing sector

#### a. Loans to residential housing



#### b. Loans to commercial housing

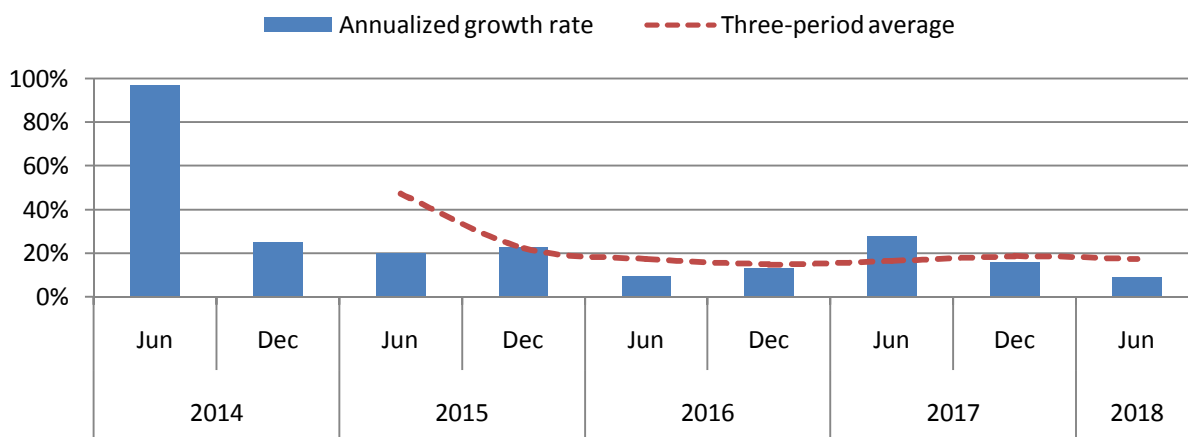


Source: Statistics Department, Bangladesh Bank.

Notes: Data for June 2018 are provisional. 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 notable increase in June 2018 compared to June 2017. However, compared to December 2017 it decreased significantly. Loan growth in commercial housing sector, which remained volatile during the last few years, picked up in June 2018.*

### 6.4 Annual growth rate of FIs' loans to Housing sector



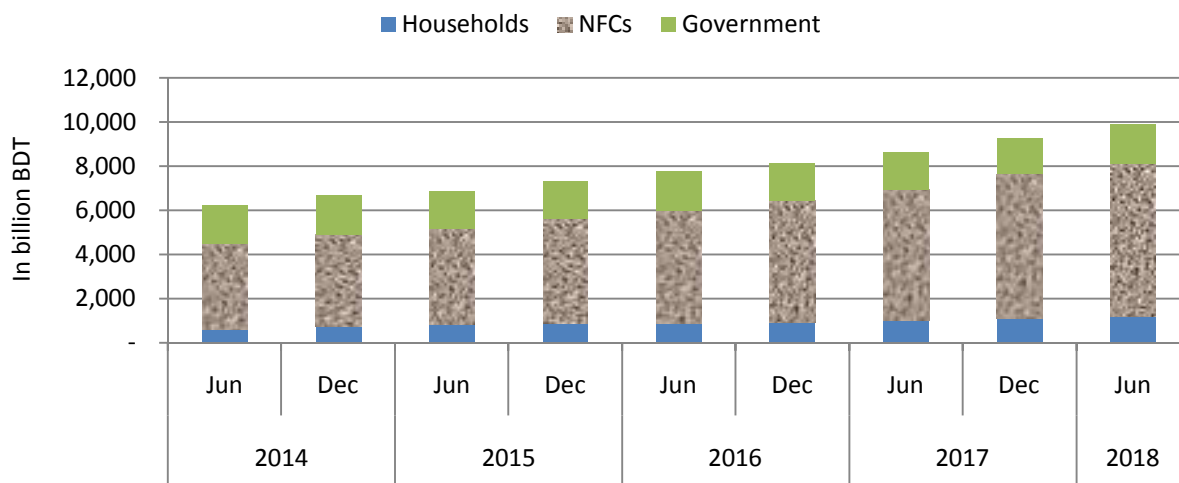
Source: DFIM, Bangladesh Bank.

Notes: Loans to housing sector refer to loans extended by FIs for both residential and commercial housing purposes.

*Growth of FIs' loans to housing sector, which remained low since December 2014, recorded further decline in the first half of 2018.*

## 6. Inter-linkages- Cont'd.

### 6.5 Banks' loans to counterpart sectors

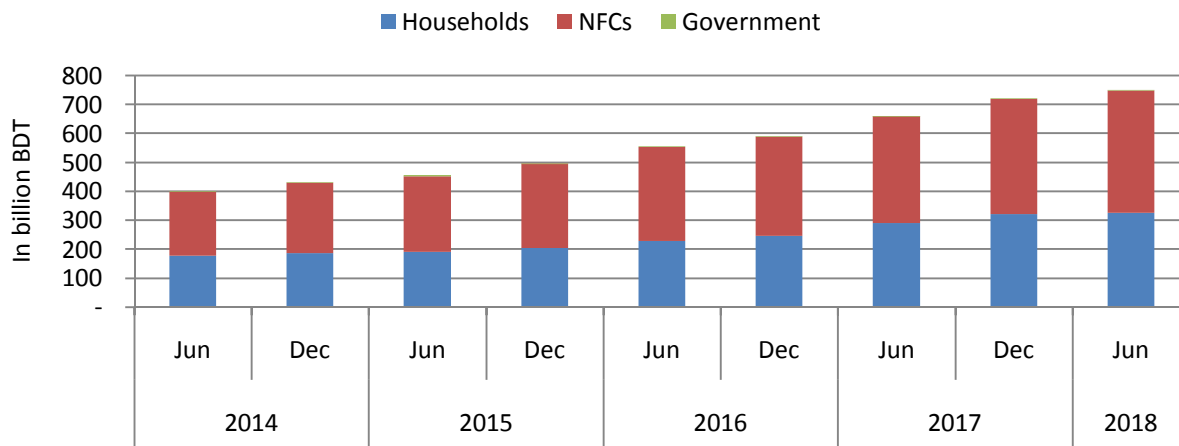


Source: Statistics Department, Bangladesh Bank.

Notes: Data of households and NFCs for June 2018 are provisional. Loans extended to households and NFCs refer to outstanding loans and advances excluding bills. Loans to government refer to gross amount.

*Banks' exposure to its major public and private counterparts continued its increasing trend during the first half of 2018; private NFCs accounted for around seventy percent of total bank loans during this period.*

### 6.6 NBDCs' loans to counterpart sectors



Source: Statistics Department, Bangladesh Bank.

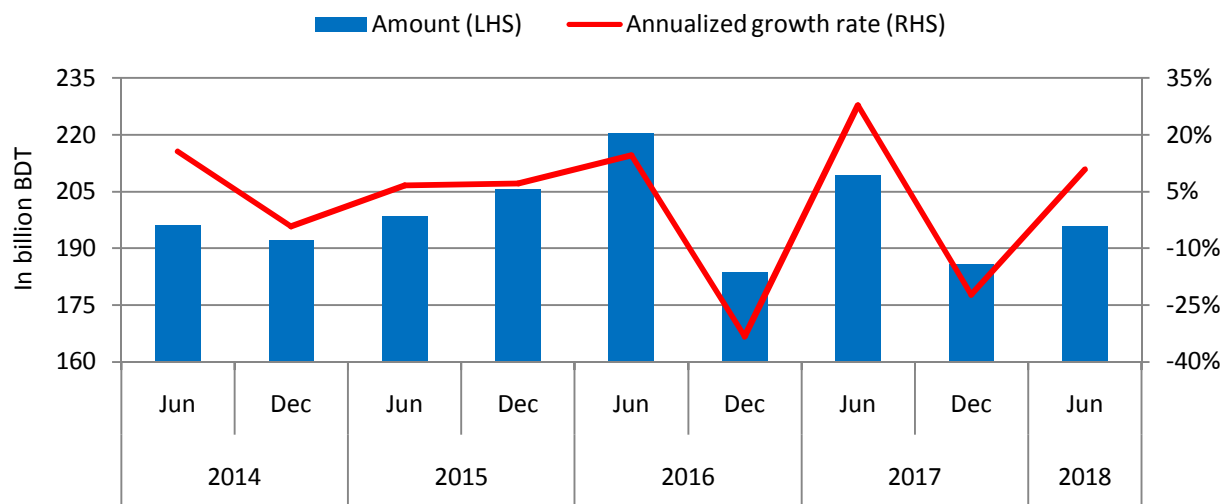
Notes: Loans to government refer to gross amount. NBDCs include FIs, Ansar-VDP Unnayan Bank, Karma Sangsthan Bank, and Bangladesh Samabaya Bank Ltd.

*Increased exposure to NFCs and households led the increase in NBDCs' loan portfolio in which the government borrowing remained negligible.*



## 6. Inter-linkages- Cont'd.

### 6.7 Banks' cross-border claims

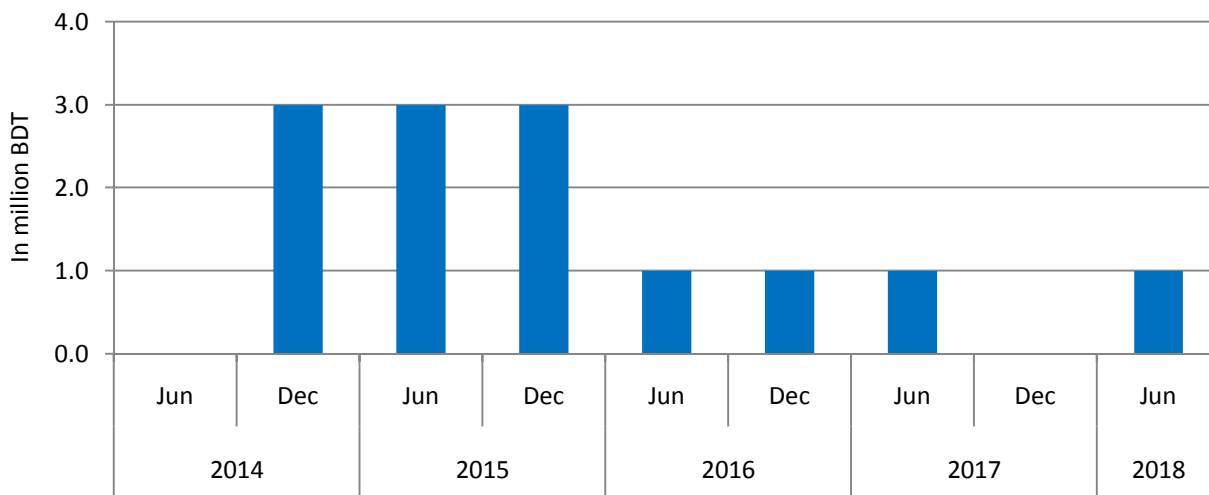


Source: Statistics Department, Bangladesh Bank.

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 accounts for less than one percent of total assets of the banking sector. It increased moderately at end-June 2018 compared to end-December 2017; however, compared to end-June 2017 it decreased moderately.*

### 6.8 NBDCs' cross-border claims



Source: Statistics Department, Bangladesh Bank.

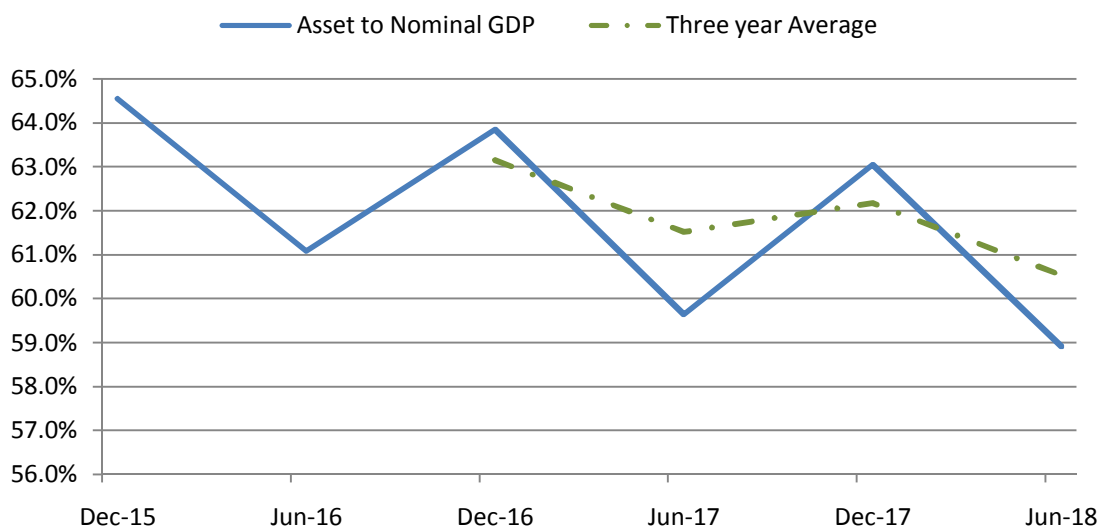
Notes: Claims include only foreign currency notes in hand. No other claims have been generated yet. NBDCs include FIs, Ansar-VDP Unnayan Bank, Karma Sangsthan Bank, and Bangladesh Samabaya Bank Ltd.

*NBDCs' cross-border claims were insignificant at the end of June 2018.*

## 7. Structural risk

### 7.1 Banking sector size

#### a. Domestic Bank

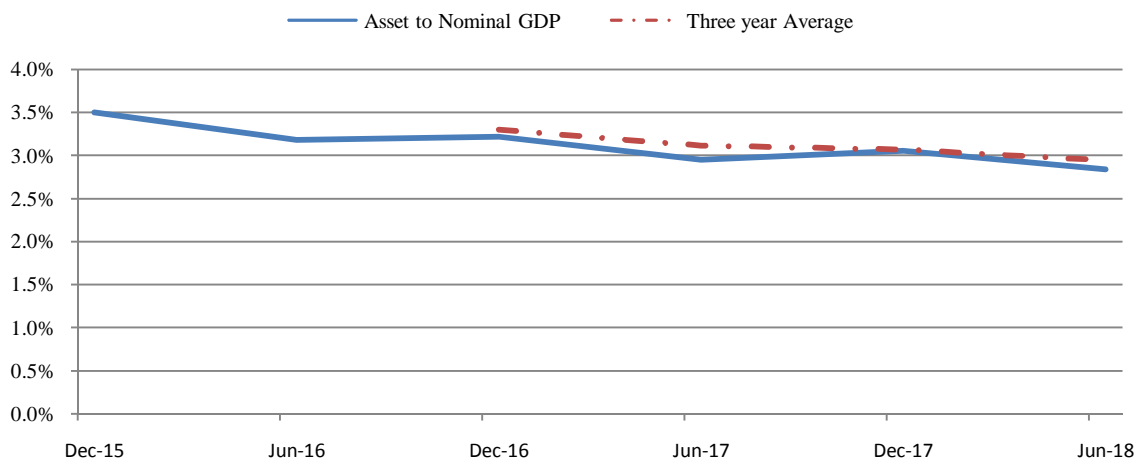


Source: Compilation (Aggregate B/S account of the domestic banks) FSD, BB; Monthly Economic Trends, BB.

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 as a proxy for December in calculating this ratio.

*Domestic banks' total assets to nominal GDP ratio, fluctuating over time, decreased slightly in June 2018 compared to the June 2017.*

#### b. Foreign Bank



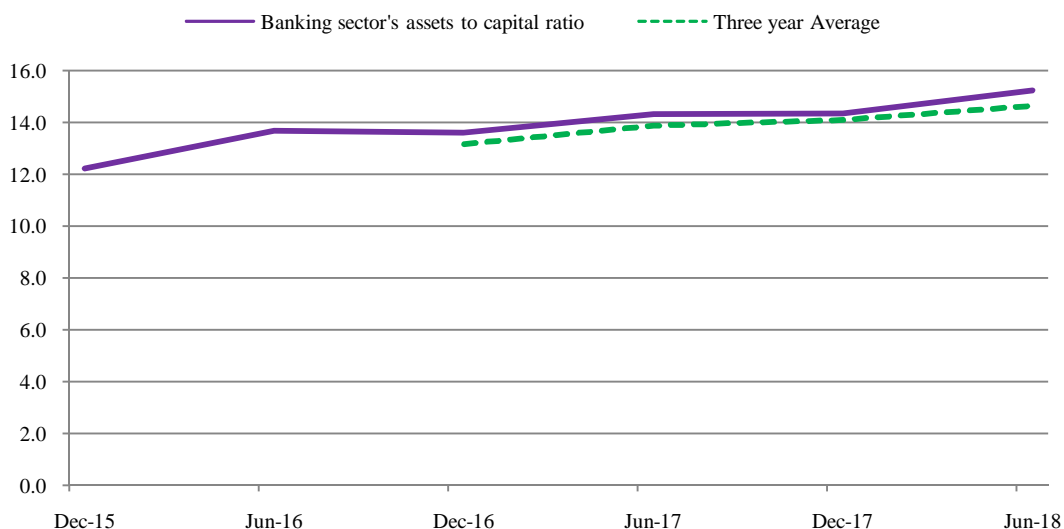
Source: Compilation (Aggregate B/S account of the foreign banks) FSD, BB; Monthly Economic Trends, BB

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 as a proxy for December in calculating this ratio.

*Foreign banks' total assets to nominal GDP showed decreasing trend since December 2015. Though the ratio increased slightly in December 2017, compared to June 2017, it again decreased in June 2018.*

## 7. Structural risk-cont'd.

### 7.2 Banking Sector Leverage



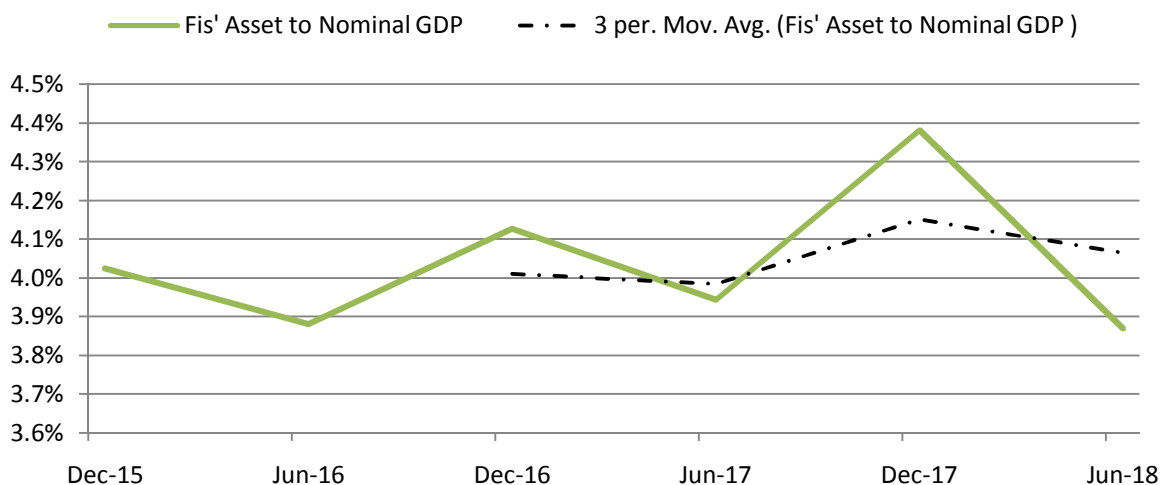
Source: Compilation (Aggregate B/S account of the domestic banking industry) FSD, BB.

Note: Leverage ratio is defined as total asset of the banking sector to capital ratio.

*Banking sector's total assets to capital ratio showed increasing trend during the last few years; the ratio increased notably in June 2018 compared to December 2017.*

### 7.3 Financial Institutions (FIs) Sector Size

#### FIs' assets to nominal GDP



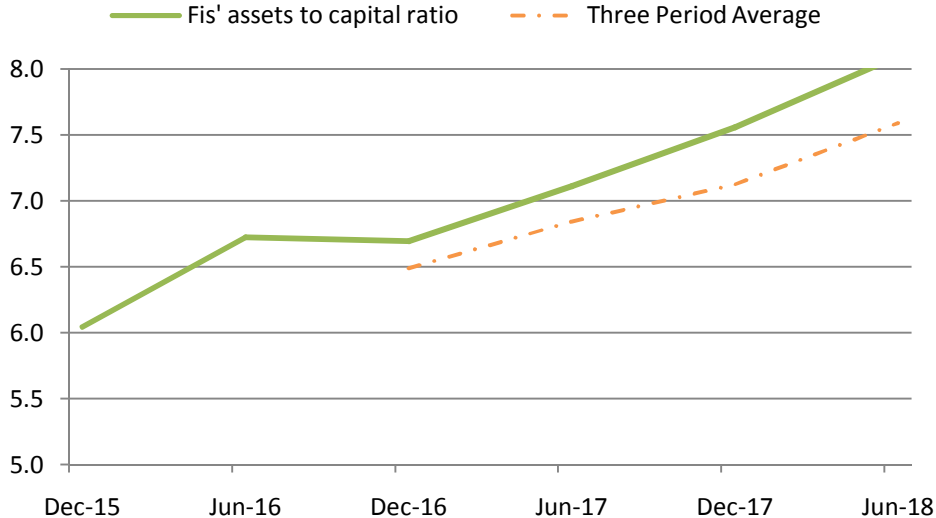
Source: FIs, Compilation, FSD, BB.

Note: Ratio of total asset of financial institutions to nominal GDP. As half yearly GDP is not calculated in Bangladesh, June based GDP data is used as a proxy for December in calculating this indicator.

*Financial institutions' assets to nominal GDP, fluctuating over time, decreased slightly in June 2018 compared to June 2017 and December 2017.*

# 7. Structural risk-cont'd.

## 7.4 Financial Institutions Sector Leverage



Source: FIs; Compilation, FSD, BB.  
Note: Leverage ratio is defined as the total asset of the FIs sector to capital ratio.

*Financial institutions' total assets to capital ratio showed a rising trend over the last couple of years with exception in June 2016.*

### 1. Macro risk:

#### 1.1 Current and forecasted real GDP growth

Sources: Statistics Department, Bangladesh Bank and IMF World Economic Outlook Update, April 2018.

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 Update, April 2018.

#### 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: ERD, Ministry of Finance and Monthly Economic Trends of BB (various issues).

The aggregate debt as percentage of GDP represents the sum of the debt-to-GDP ratio of Financial, Non-Financial Corporations, Government, as well as households sectors (other resident sector).

#### 1.4 Government debt-to-GDP ratio

Sources: ERD, Ministry of Finance; and Monthly Economic Trends of BB (various issues).

Government debt includes both domestic government debt and local authorities and external debt. Local authorities include City Corporations, Zilla Parishad, Municipalities, Thana/Upazila Parishad, Union Parishad, Gram Parishad and Other Local Bodies. The dotted line 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 (various issues), 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 income ratio**

Sources: Monthly Economic Trends, BB.

Claims on other resident sector has 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 income ratio represents resident sector loans as a ratio of gross disposable 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 financial institutions (FIs), Ansar-VDP Unnayan Bank, Karma Sangsthan Bank, and Bangladesh Samabaya Bank.

## **2.3 Annual growth rate of banks' loans to 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 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. Mentionable that this ratio is calculated on yearly basis.

## **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 as 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 assured liquidity support and special repo. Assured liquidity support is given against the government securities holding by the banks issued within last 60 days. Special repo is given upon request to BB when there is a possibility of shortfall in CRR.

## **3.2 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 banks' 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. Banks' long-term debt includes government Treasury bond with a maturity of more than 12 months. Banks' 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 bank. It implies that the claims of the subordinated debt holders will be junior to the claims of the depositors and the other creditors.

## **4. Market risk:**

### **4.1 Price/earnings ratio of equity indices**

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

The indices used are for 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 and Leisure, Miscellaneous and Market P/E.

### **4.2 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 Shari'ah-compliant securities and products.

### **4.3 Weighted average call money market rates**

Source: Statistics Department, 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: Statistics Department, BB.

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

### **4.5 Weighted average exchange rate (BDT/USD)**

Source: Statistics Department, 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: Scheduled Banks; computation: Financial Stability Department, BB.

The indicator is based on the ratio between profit/loss for the period and total equity. End-June ratios are annualised.

#### **b. Return on assets (ROA)**

Source: Scheduled Banks; computation: Financial Stability Department, BB.

The indicator is based on ratio between profit/loss for the year and total assets. End-June ratios are annualised.

#### **c. Cost to income ratio**

Source: Scheduled Banks; computation: Financial Stability Department, BB.

The indicator is based on the ratio between operating expenses and total income. End-June ratios are annualised.

#### **d. Net interest income to total operating income ratio**

Source: Scheduled Banks; computation: Financial Stability Department, BB.

The indicator is based on the ratio between net interest income and total operating income. End-June ratios are annualised.

### **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 exposure amount.

#### **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 Markets, BB.

The indicator is based on the ratio between profit/loss after tax and provision for the period and total equity. End-June ratios are annualised.

#### **b. Return on assets (ROA)**

Source: Department of Financial Institutions and Markets, BB.

The indicator is based on ratio between profit/loss after tax and provision for the year and total assets. End-June ratios are annualised.

#### **c. Cost to income ratio**

Source: Department of Financial Institutions and Markets, BB.

The indicator is based on the ratio between operating expenses and total income. End-June ratios are annualised.

#### **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 net interest income and total operating income. End-June ratios are annualised.

### **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 and total risk exposure amount.

#### **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 advances to total loans and advances.

## **6. Inter-linkages:**

### **6.1 Annual growth rate of banks' credit (gross) to Government**

Source: Statistics Department, Bangladesh Bank.

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

### **6.2 Annual growth rate of NBDCs' credit (gross) to Government**

Source: Statistics Department, Bangladesh Bank.

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

### **6.3 Annual growth rate 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 Annual growth rate of FIs' loans to housing sector**

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

It refers to 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](http://www.bis.org/statistics/consbankstatsguide_old.pdf).

### **6.8 NBDCs' cross-border claims**

Source: Statistics Department, Bangladesh Bank.

Cross-border claims of NBDCs include only foreign currency notes in hand.

## **7. Structural risk:**

### **7.1 Banking sector size**

#### **a. Domestic Bank**

Source: Scheduled Banks; 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 Bank**

Source: Scheduled Banks; 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**

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

The indicator is based on the ratio between total assets of the banking sector and its capital.

### **7.3 FI sector size**

Source: Financial Institutions; computation: Financial Stability Department, BB.

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

### **7.4 FI sector leverage**

Source: Department of Financial Institutions and Markets, BB and Financial Institutions; computation: Financial Stability Department, BB.

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

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