

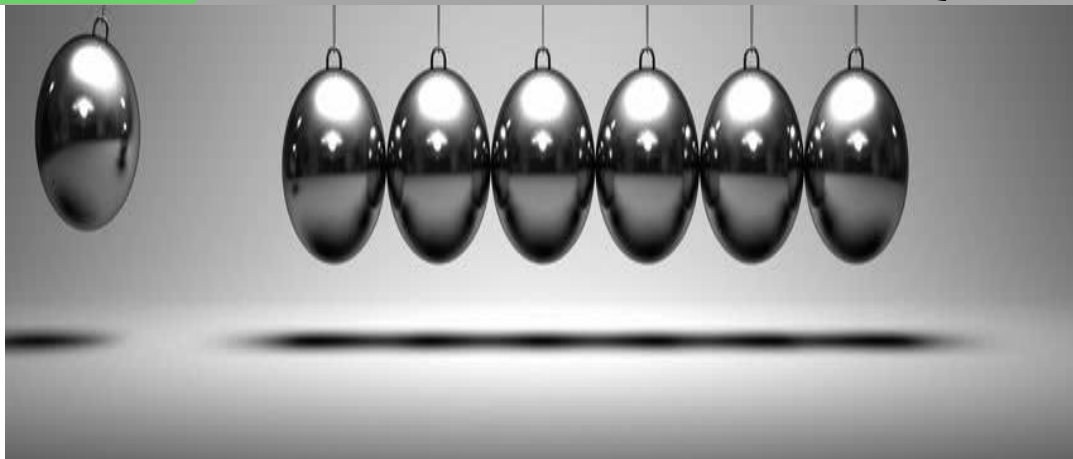
**BANGLADESH BANK**

Central Bank of Bangladesh



Macroprudential  
Supervision of  
Financial System

# Bangladesh Systemic Risk Dashboard (BSRD)



**Financial Stability Department**

June 2017

**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 2017

## Chief Advisor

Shitangshu Kumar Sur Chowdhury, Deputy Governor

## Advisors

1. Md. Sohrawardy, Executive Director
2. Dr. Md. Kabir Ahmed, General Manager
3. Mohammad Jamal Uddin, Deputy General Manager

## Contributors

1. Md. Ala Uddin, Joint Director
2. Farzana Islam, Joint Director
3. Mohammad Arif Hasan, Deputy Director
4. Gazi Arafat Ali, Deputy Director

## Data Support

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

---

*This dashboard has been prepared taking into account the data available up to June 2017 unless stated otherwise.*



## Table of Contents

List of acronyms .....	v
<b>Bangladesh Systemic Risk Dashboard: An Overview .....</b>	<b>vii</b>
<b>1. Macro risk .....</b>	<b>1</b>
1.1 Current and forecasted real GDP growth.....	1
1.2 Current account balance-to-GDP ratio.....	1
1.3 Aggregate debt-to-GDP ratio.....	2
1.4 Government debt-to-GDP ratio .....	2
1.5 Government deficit-to-GDP ratio .....	3
1.6 Household debt-to-gross disposable national income ratio .....	3
1.7 NFC debt-to-GDP ratio .....	4
<b>2. Credit risk.....</b>	<b>5</b>
2.1 Annual growth rate of banks' loans to households .....	5
2.2 Annual growth rate of NBDCs' loans to households .....	5
2.3 Annual growth rate of banks' loans to non-financial corporation (NFC) .....	6
2.4 Annual growth rate of NBDCs' loans to non-financial corporation (NFC).....	6
2.5 Provision maintenance ratio of banks .....	7
2.6 Provision maintenance ratio of FIs .....	7
2.7 Changes in banks' interest rates for housing loans .....	8
<b>3. Funding and liquidity risk.....</b>	<b>9</b>
3.1 Bangladesh Bank's liquidity support to banks.....	9
3.2 Advance-to-deposit ratio .....	9
3.3 Maturity profile of banks' outstanding debt securities .....	10
3.4 Subordinated debt .....	11
<b>4. Market risk.....</b>	<b>12</b>
4.1 Price/earnings ratio of equity indices .....	12
4.2 Equity indices.....	12
4.3 Weighted average call money market rates .....	13
4.4 Scheduled banks' weighted average interest rate on deposits and advances.....	14
4.5 Weighted average exchange rate (BDT/USD) .....	14

<b>5. Profitability and solvency risk .....</b>	<b>15</b>
5.1 Banks' profitability indicators .....	15
5.2 Banks' solvency indicators.....	16
5.3 FIs' profitability indicators .....	17
5.4 FIs' solvency indicators.....	18
<b>6. Inter-linkages .....</b>	<b>19</b>
6.1 Annual growth rate of banks' credit (gross) to government.....	19
6.2 Annual growth rate of NBDCs' credit (gross) to government.....	19
6.3 Annual growth rate of banks' loans to Housing sector .....	20
6.4 Annual growth rate of FIs' loans to Housing sector .....	20
6.5 Banks' loans to counterpart sectors .....	21
6.6 NBDCs' loans to counterpart sectors .....	21
6.7 Banks' cross-border claims.....	22
6.8 NBDCs' cross-border claims.....	22
<b>Annex to Bangladesh Systemic Risk Dashboard.....</b>	<b>23</b>

## 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

**Real GDP growth continues to rise in fiscal year (FY) 2017.** Real GDP growth rate increased to 7.2 percent in FY17, which was higher than IMF forecast of 6.9 percent for FY17 (indicator 1.1). The real GDP growth rate forecasted by IMF for FY18 is 7.0 percent.

**Aggregate debt-to-GDP ratio increased slightly** (indicator 1.3). **Domestic government debt constitutes a major portion of aggregate government debt including external debt. Private NFCs' debt comprises 98.6 percent of total NFCs' debt and it decreased in June 2017.**

**Current account balance-to-GDP ratio was negative in July-December 2016 and January- June 2017.** Government deficit-to-GDP ratio, both including and excluding grants, decreased in FY17. Household debt to gross disposable national income decreased slightly in June 2017 compared to the position of December 2016.

## 2. Credit risk

**Growth rate of bank lending to households increased while the same to NFCs decreased.** In June 2017, the growth rate of lending by banks to households was higher while the same to NFCs was lower compared to the growth rates in December 2016 (indicators 2.1 and 2.3). On the other hand, the growth rate of lending by non-bank depository corporations (NBDCs) to both households and NFCs increased in June 2017 compared to the growth rates in December 2016 (indicators 2.2 and 2.4).

Provision maintenance ratios of banks recorded minor decrease in December 2016 (indicators 2.5 ). Provision maintenance ratio of FIs slightly increased in June 2017 compared to December 2016 (indicator 2.6).

An overall net easing in banks' interest rates of housing sector loans was observed in June 2017 (indicators 2.7).

## 3. Funding and liquidity risk

**Assured liquidity support of Bangladesh Bank was rarely used by banks since December 2015.** Special repo showed a decreasing trend since June 2016 and became nil in December 2016 and June 2017, implying that market had enough liquidity (indicators 3.1). Advance-to-deposit ratio (ADR) remained stable over the last few years. ADRs of private commercial banks (PCBs) and specialized banks (SBs) were higher than the industry average (indicators 3.2).

**Treasury bonds with residual maturity over 5 and up to 10 years and treasury bills with residual maturity up to 91 days were the largest in terms of volume in June 2017 (indicators 3.3a and 3.3b).** Subordinated debt showed an increasing trend since 2014 and continued this trend till June 2017 (indicators 3.4).

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

**Equity indices slightly improved in the first half of 2017 (indicators 4.2).** Average call money borrowing and lending rates and spread between banks' lending and borrowing rates remained almost stable in June 2017 (indicators 4.3 and 4.4). Exchange rate depreciated slightly in June 2017 when compared with end-December 2016 position (indicators 4.5).

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

**Banks' profitability, measured by ROE and ROA (indicators 5.1a and 5.1b), remained broadly stable despite showing slight decrease in June 2017.** Cost-to-income ratio remained stable. Proportion of net interest income in total operating income showed upward trend at end June 2017. (indicators 5.1c and 5.1d).

Though the ratio of Tier-1 capital to total risk-weighted assets declined in June 2017, it was well above the regulatory requirement of 6.0 percent (indicator 5.2a). Ratio of non-performing loans and advances to total loans and advances remained mostly stable with a minor increase in June 2017 (indicator 5.2b).

**FIs' profitability, measured by ROE and ROA (indicators 5.3a and 5.3b), remained broadly stable with moderate increase in June 2017.** FIs' cost-to-income ratio went down slightly in June 2017 implying better cost efficiency (indicator 5.3c). FIs' net interest income to total operating income ratio also declined slightly in June 2017 which implies decline of their income from interest earning assets (indicator 5.3d).

Ratio of Tier-1 capital to total risk-weighted assets slightly declined in June 2017; still it was well above the minimum regulatory requirement (indicator 5.4a). Ratio of non-performing loans and advances to total loans and advances went up in June 2017 (indicator 5.4b).

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

**Government borrowings from banking sector showed declining trend (indicators 6.1).**

Banks' loan growth in residential housing sector demonstrated an upward trend. On the other hand, loan growth in commercial housing sector experienced a slowdown at the end of June 2017 (indicators 6.3a and 6.3b). A slight rise in the growth rate of FIs' loans to housing sector was observed since June 2017. (indicators 6.4).

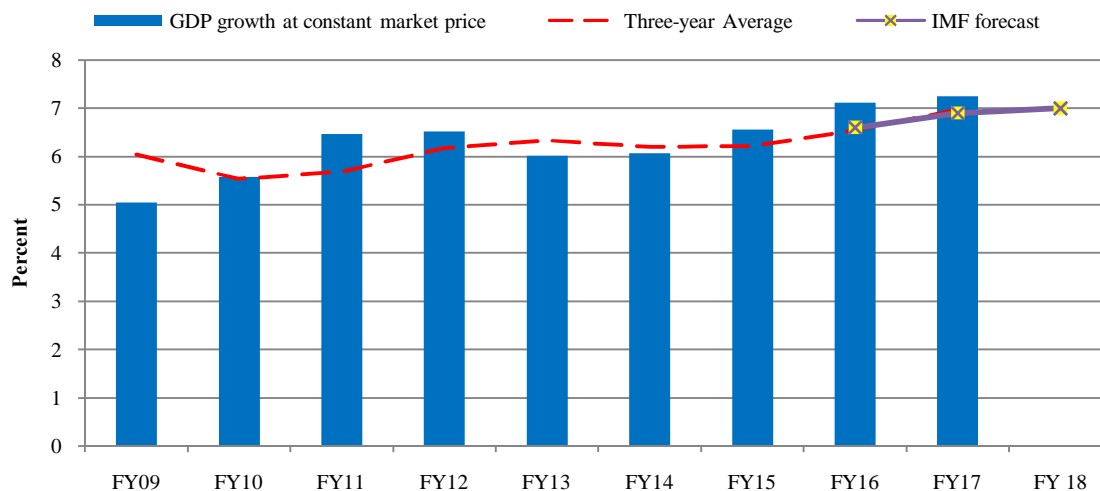
Increase in banks' exposure to its major public and private counterparts has been mainly led by NFCs accounting for more than sixty percent of total bank loans (indicators 6.5). Banks' cross-border claims are increasing but it makes up only around 1 percent of total assets of the banking sector.

NFCs' borrowing is the major contributor in NBDCs' increasing loan portfolio closely followed by an increasing loan exposure to households (indicators 6.6). Government borrowing from NBDCs was negligible (indicator 6.2).



# 1. Macro risk

## 1.1 Current and forecasted real GDP growth



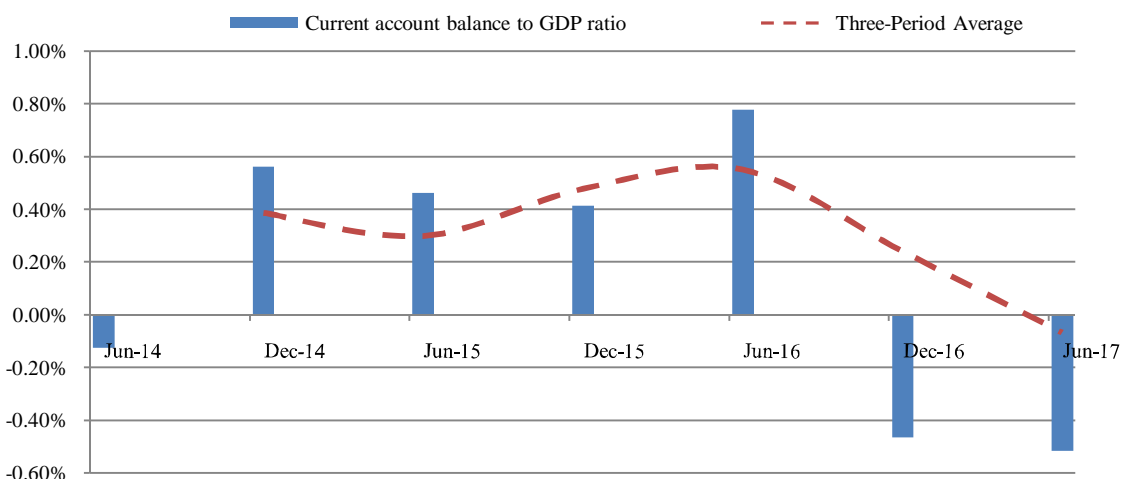
Source: Statistics Department and IMF World Economic Outlook, April, 2017.

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

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 2017 (FY17).*

## 1.2 Current account balance-to-GDP ratio



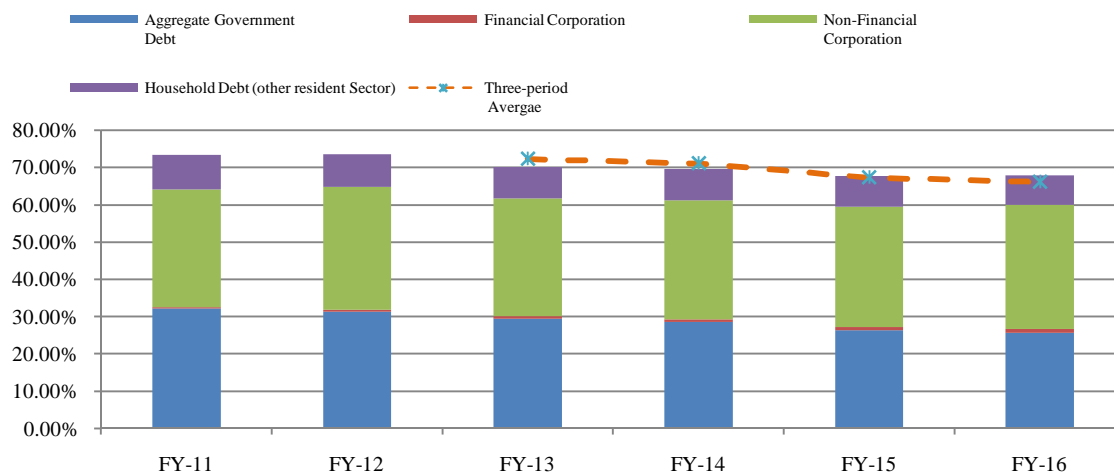
Sources: Monthly Economic Trends, BB.

Notes: 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 was negative since December 2016.*

# 1. Macro risk-Cont'd.

## 1.3 Aggregate debt-to-GDP ratio

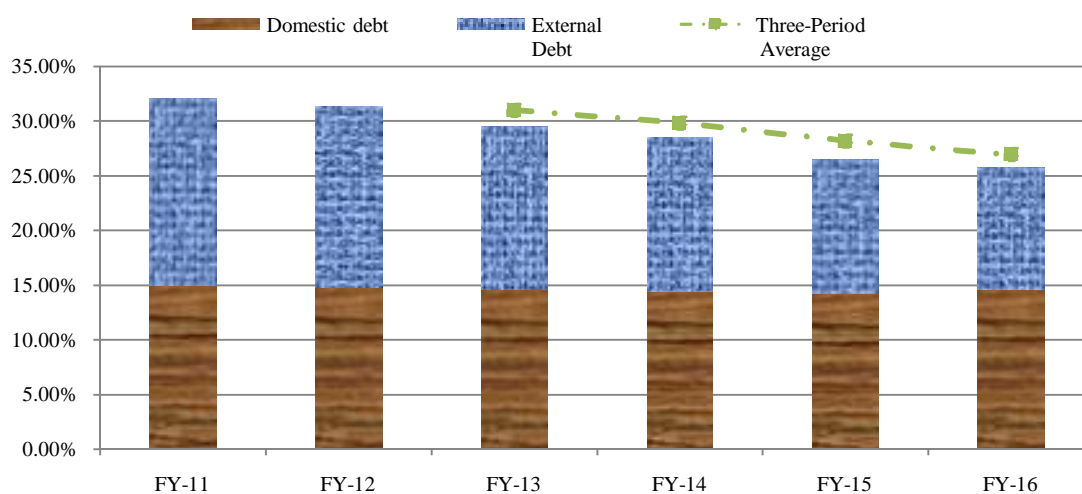


Sources: ERD, Ministry of finance and monthly economic trends of BB (various issues).

Note: As external government debt for FY17 is not available yet, aggregate debt-to-GDP ratio is shown up to FY16. 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.

*Aggregate debt-to-GDP ratio increased slightly in FY16 compared to FY15. Debts of non-financial corporations and government are major part of aggregate debt. Government debt-to-GDP ratio decreased and non financial corporation debt-to-GDP ratio increased in FY16 with respect to FY15.*

## 1.4 Government debt-to-GDP ratio



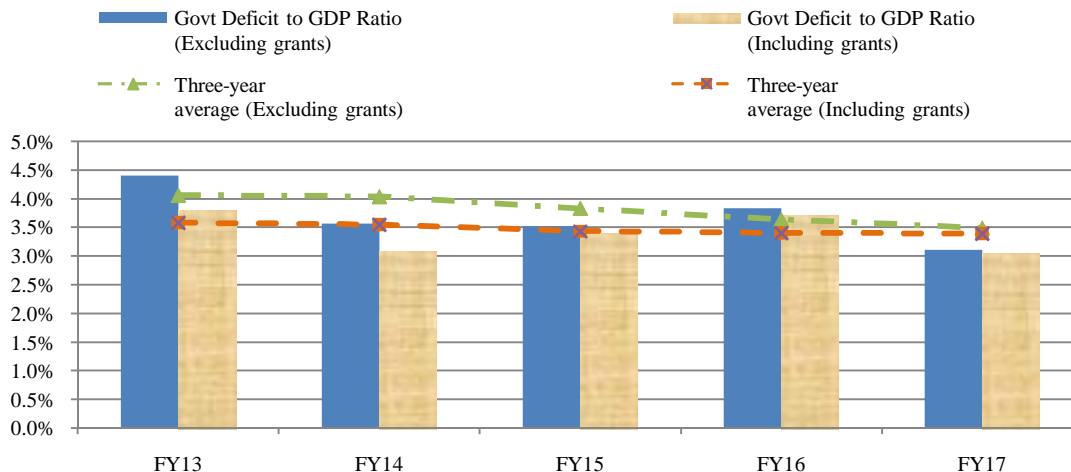
Sources: ERD, Ministry of finance and monthly economic trends, BB.

Note: As external government debt for FY17 is not available yet, government debt-to-GDP ratio is shown up to FY16.

*Domestic government debt constitutes major portion of government debt. Government debt-to-GDP ratio slightly decreased in FY16 compared to FY15.*

# 1. Macro risk-Cont'd.

## 1.5 Government deficit-to-GDP ratio

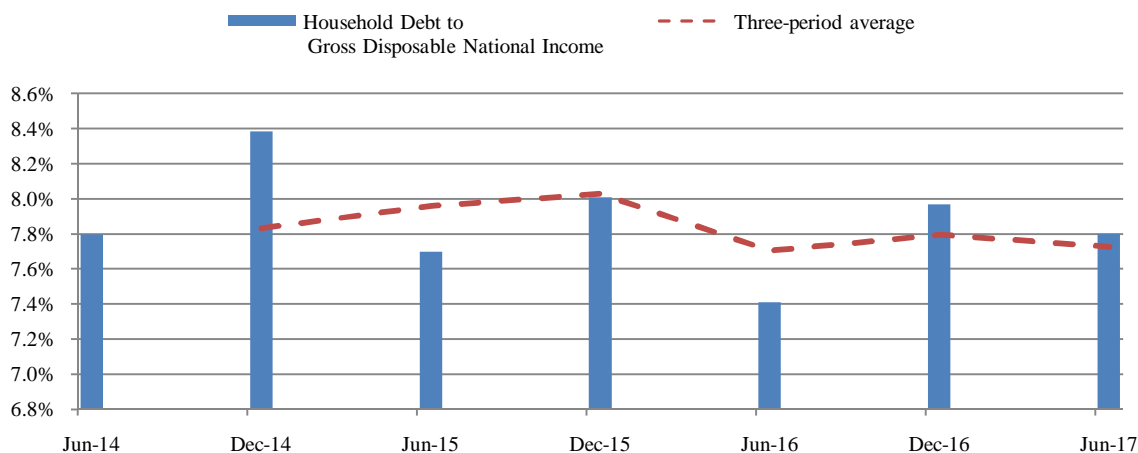


Sources: Monthly Report on Fiscal Position, (various issues).

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.

*Government deficit-to-GDP ratio, both including and excluding grants, decreased in FY17 compared to the preceding fiscal year.*

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



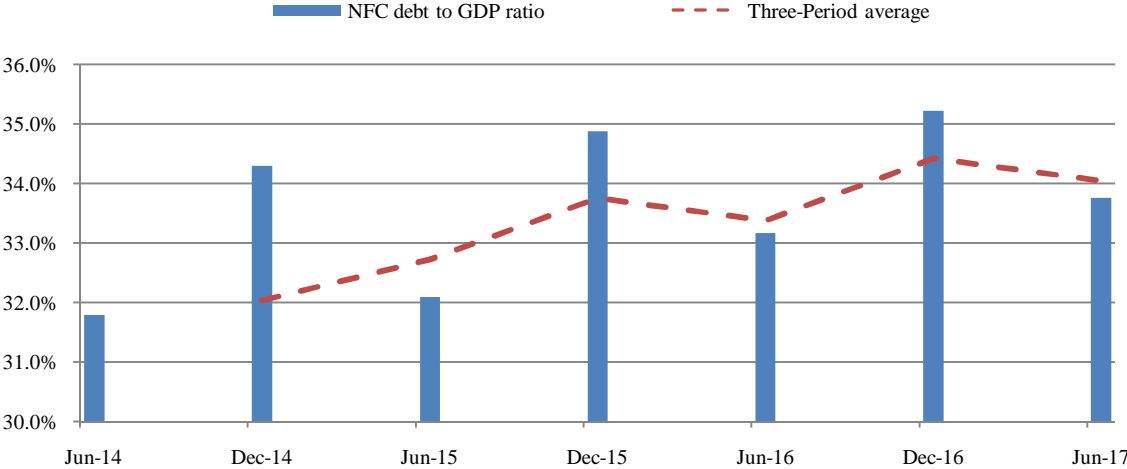
Sources: Monthly Economic Trends, BB (various issues).

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 2017 compared to that of December 2016.*

# 1. Macro risk – Cont'd.

## 1.7 NFC debt-to-GDP ratio



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

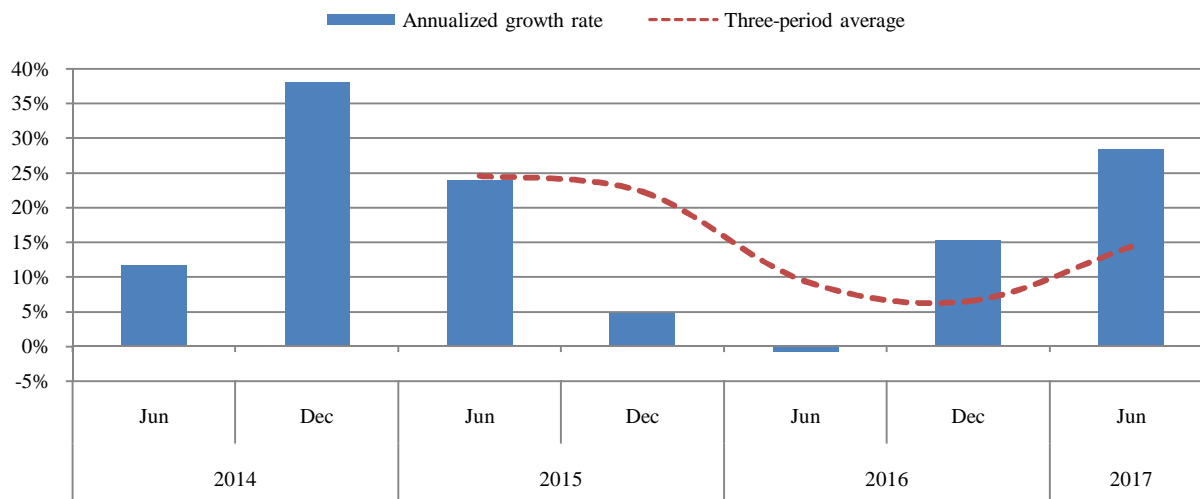
Notes: NFC debt includes debts of both public and private NFCs. Dotted line represents three-period moving average of NFC debt-to-GDP ratio.

*Private non-financial corporations' (NFCs) debt comprises major portion of aggregate NFCs debt. NFC debt-to-GDP ratio decreased by 1.5 percentage points in June 2017 compared to the end-December 2016 position.*



## 2. Credit risk

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

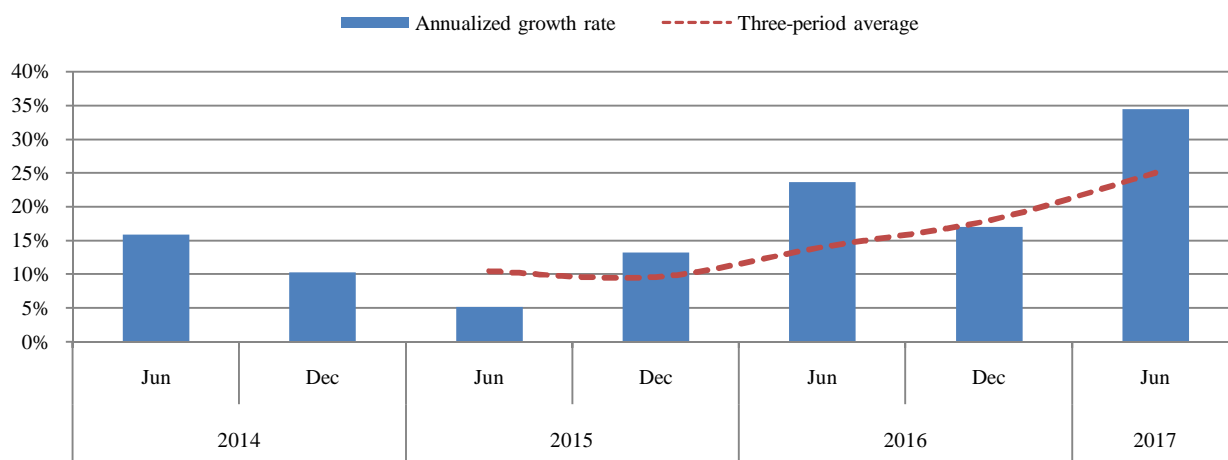


Source: Statistics Department, BB.

Notes: Data for December 2016 and June 2017 are provisional. Loans refer to outstanding loans and advances extended to domestic households (individual customers) excluding bills.

*Growth rate of banks' loans to household sector demonstrates an increasing trend since June 2016.*

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



Source: Statistics Department, BB.

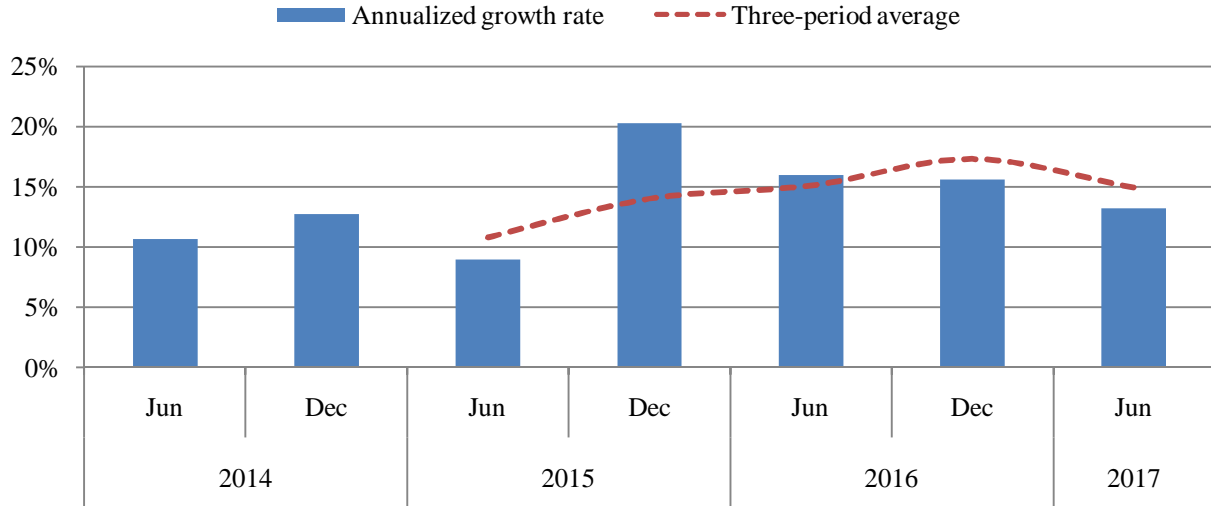
Notes: NBDCs include depository FIs, Grameen Bank, Ansar-VDP Unnayan Bank, Karma Sangsthan Bank, Probashi Kallyan Bank, central cooperative bank, and exclude non-depository FIs<sup>1</sup>.

*An overall upward trend is observed in the growth rate of NBDCs' loans to household sector.*

<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)

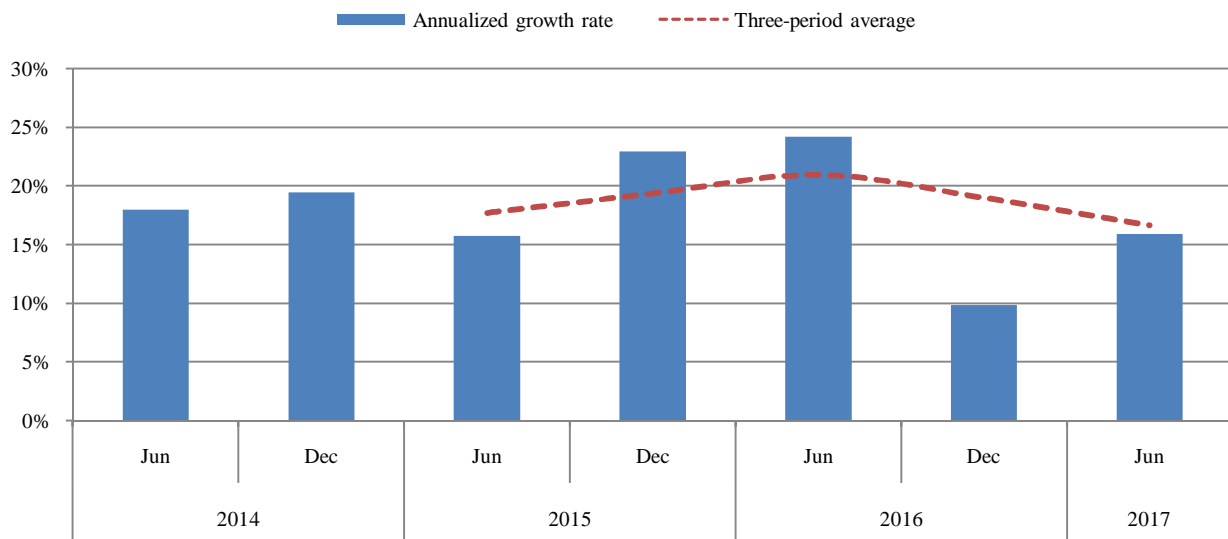


Source: Statistics Department, BB.

Notes: Data for December 2016 and June 2017 are provisional. Loans refer to outstanding loans and advances extended to private NFCs excluding bills.

*Growth rate of banks' loans to private NFCs dropped slightly in June 2017 after posting more than 15 percent growth since June 2015.*

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



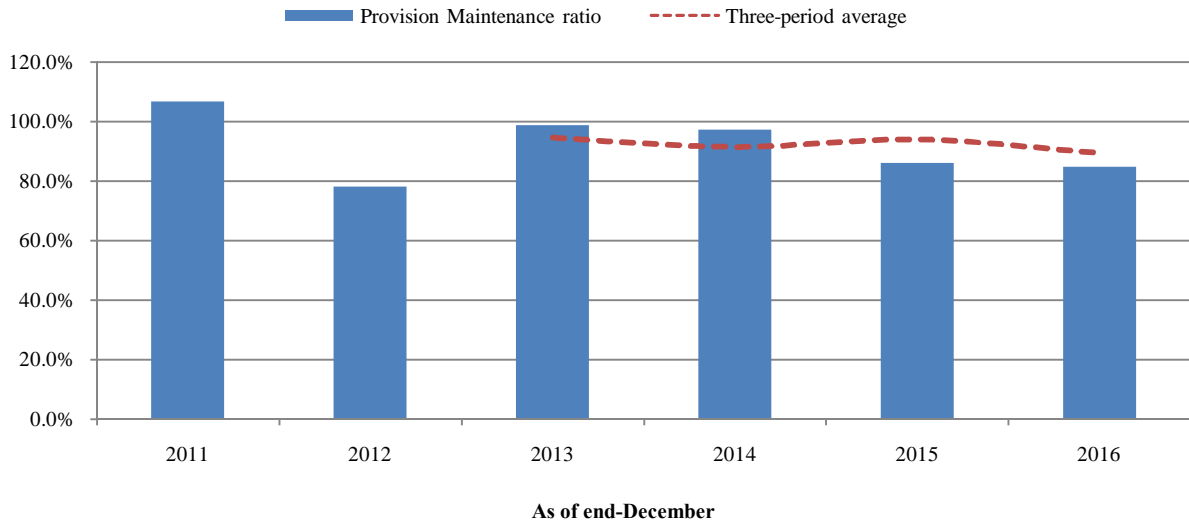
Source: Statistics Department, BB.

Notes: NFC refers to private NFCs only. NBDCs include depository FIs, Grameen Bank, Ansar-VDP Unnayan Bank, Karma Sangsthan Bank, Probashi Kallyan Bank, central cooperative bank, and exclude non-depository FIs.

*Growth rate of NBDCs' loans to private NFCs picked up in June 2017 after a decline in December 2016.*

## 2. Credit risk- Cont'd.

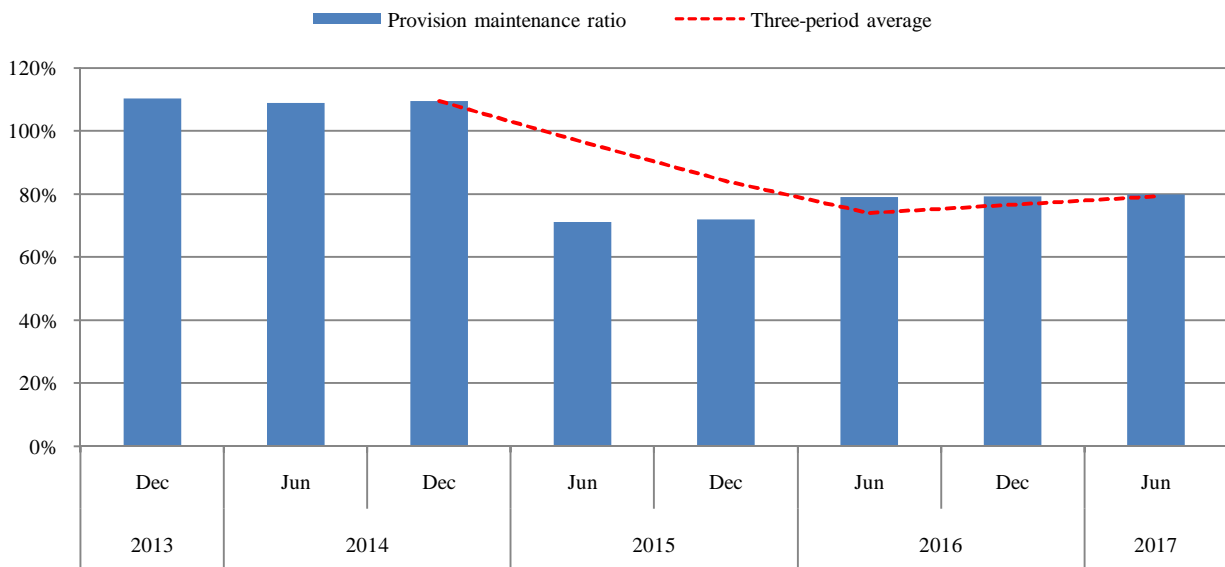
### 2.5 Provision maintenance ratio of banks



Source: BRPD, BB.

*Banks' maintained provision as a percentage of required provision recorded minor decrease at end-December 2016 compared to that of end-December 2015.*

### 2.6 Provision maintenance ratio of FIs



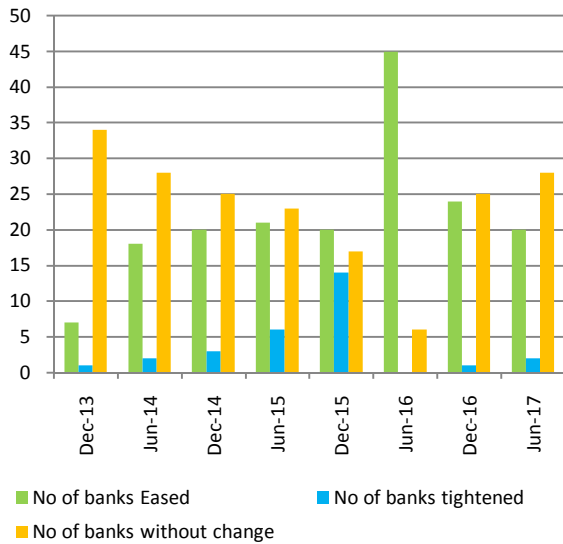
Source: DFIM, BB.

*FIs' provision maintenance ratio demonstrated an upward trend since December 2015.*

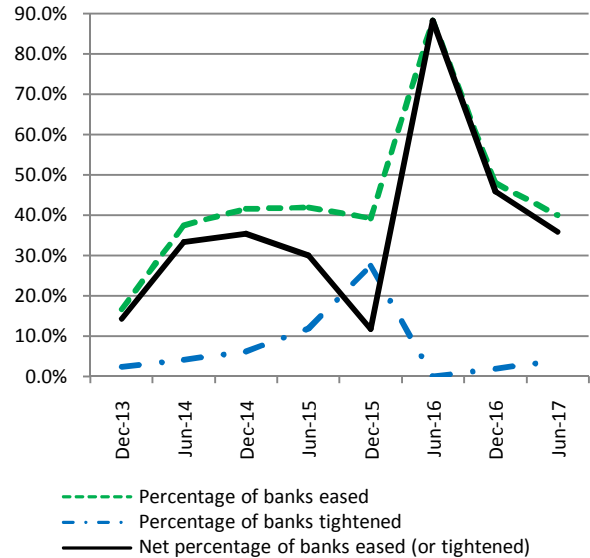
## 2. Credit risk- Cont'd.

### 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**



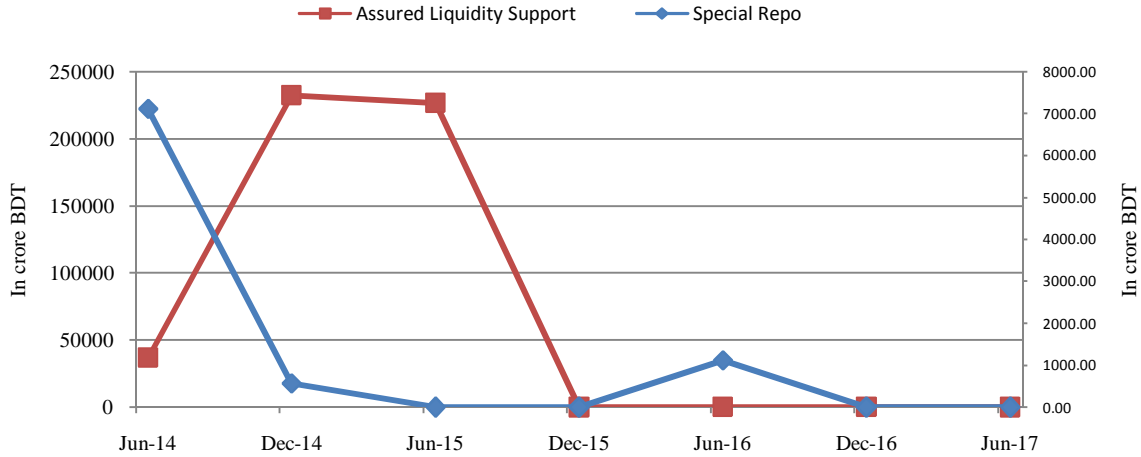
Source: Scheduled bank lending rate, Bangladesh Bank website (<https://www.bb.org.bd/fnansys/interestlending.php>).

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 2017, 40 percent banks eased the interest rates of loans to housing sector while 4 percent banks tightened the same; 56 percent banks kept their rates unchanged during the same period. Hence, after netting off the impacts of tightening, an overall net easing is observed in June 2017.*

### 3. Funding and liquidity risk

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

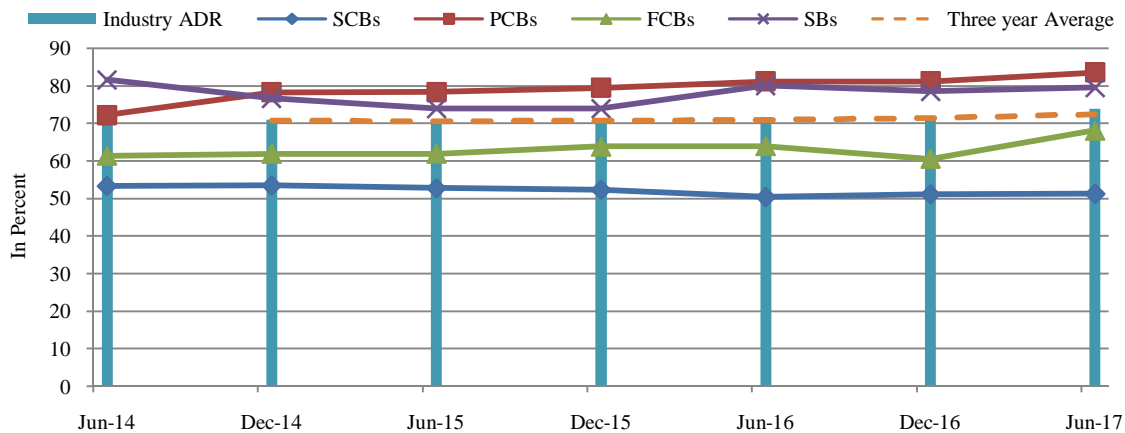


Source: DMD, BB.

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

*Assured liquidity support was rarely used by banks since December 2015. Special repo showed decreasing trend since June 2016 and was nil in December 2016 and June 2017. The trend portrays presence of ample liquidity in the money market.*

#### 3.2 Advance-to-deposit ratio



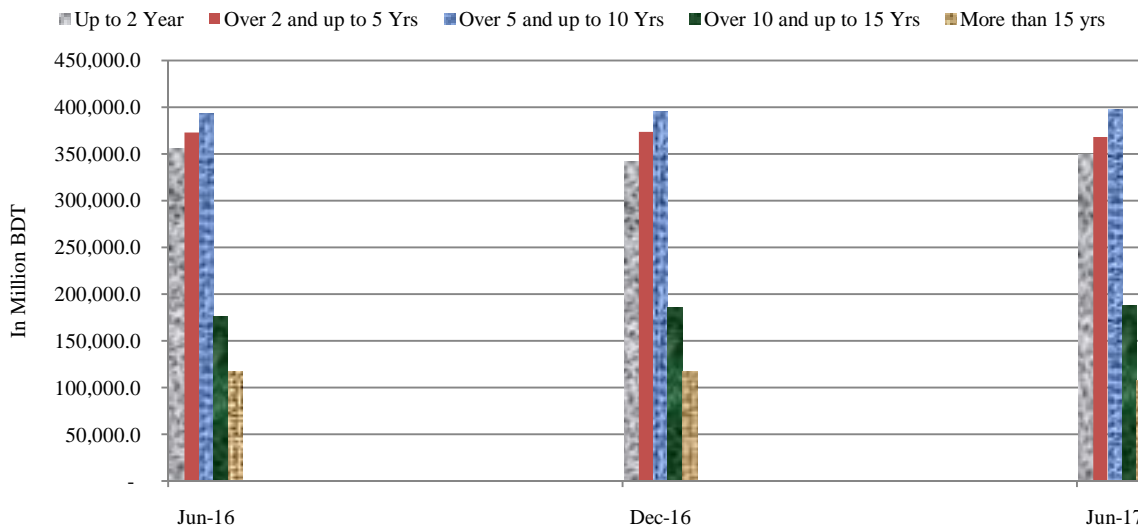
Source: DOS, BB.

*Advance-to-deposit ratio (ADR) remained stable over the last few years. ADRs of PCBs and SBs were higher and FCBs were lower than the industry average.*

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

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

##### a. Treasury Bond

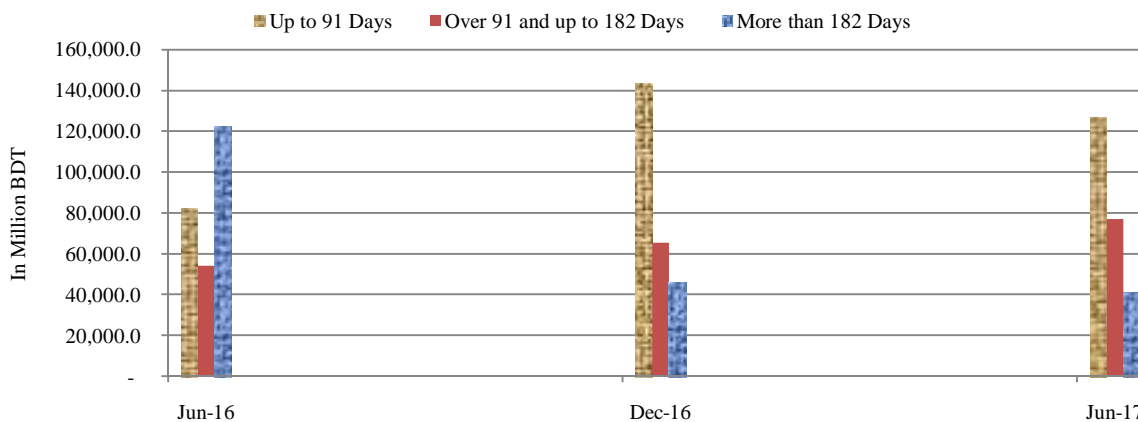


Source: DMD, BB.

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 5 and up to 10 years are the largest in terms of volume and showed increasing trend whereas bonds with remaining maturity of more than 15 years are the smallest and showed decreasing trend.*

##### b. Treasury Bill



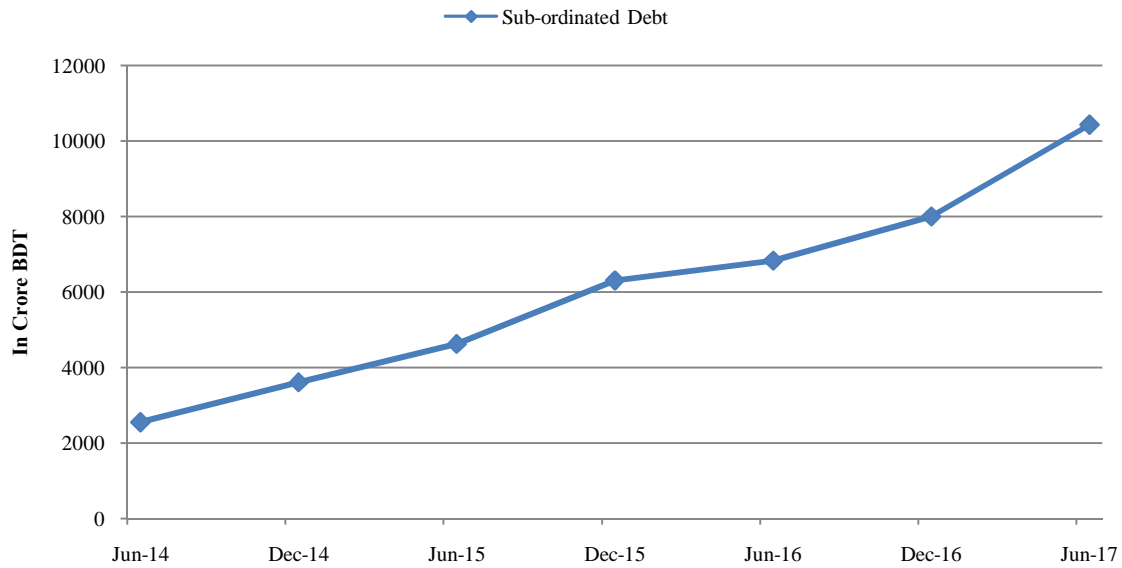
Source: DMD, BB.

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 which decreased from December 2016 whereas the same with remaining maturity of more than 182 days are the smallest and showed decreasing trend.*

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

#### 3.4 Subordinated debt



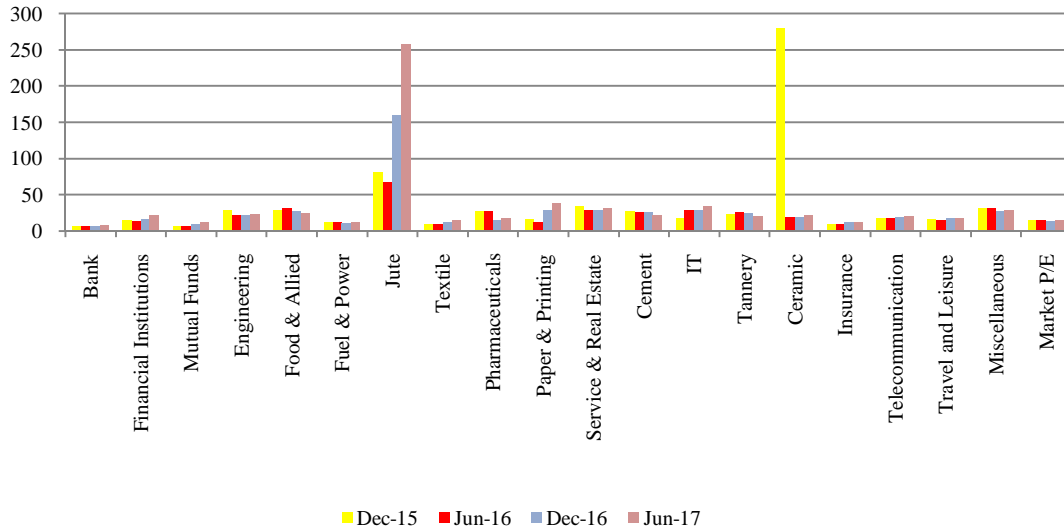
Source: DOS, BB.

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

*Subordinated debt showed increasing trend since 2014. Such increase in subordinated debts issued by banks contributes to the overall capital base of the banking sector.*

## 4. Market risk

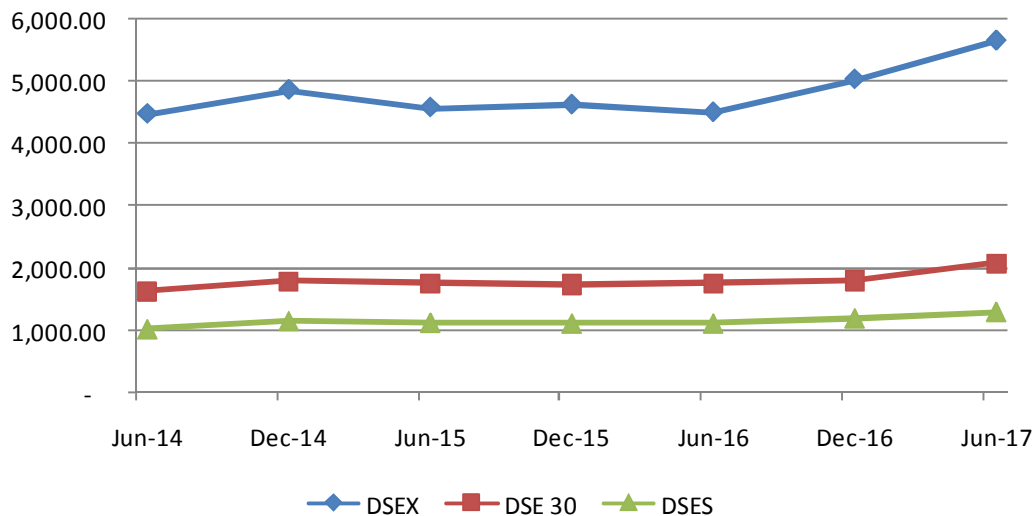
### 4.1 Price/earnings ratio of equity indices



Source: DSE Website.

*P/E ratio of all listed sectors remained mostly stable in June 2017 except for Jute.*

### 4.2 Equity indices



Source: DSE Website.

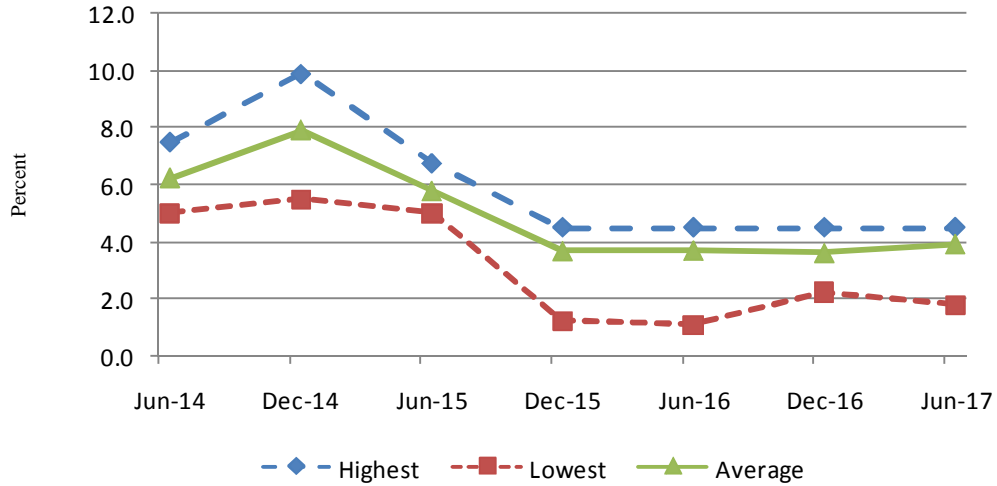
*DSEX, the major DSE index, showed steady growth since June 2016 and remained over 5000 at end-June 2017. Other equity indices showed small growth in the first half of 2017.*



## 4. Market risk-cont'd.

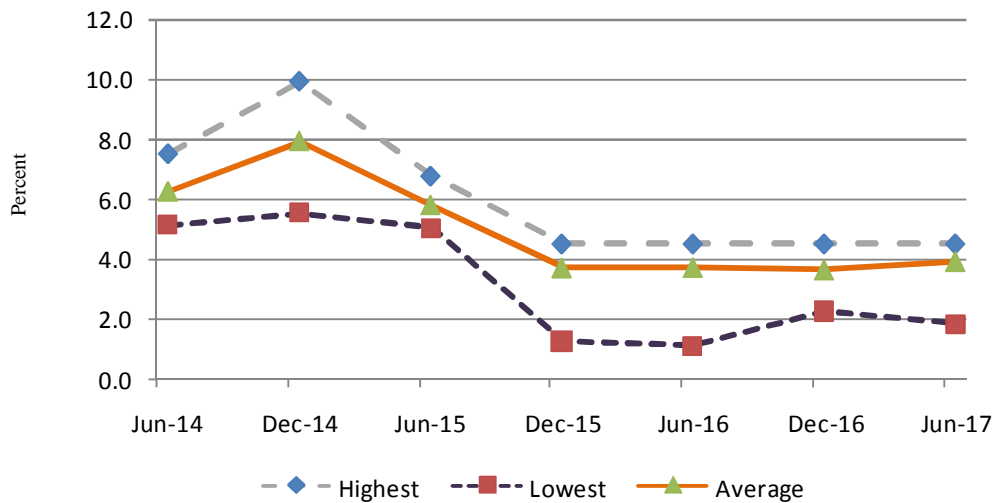
### 4.3 Weighted average call money market rates

#### a. Borrowing rate



Source: Statistics Department, BB.

#### b. Lending rate

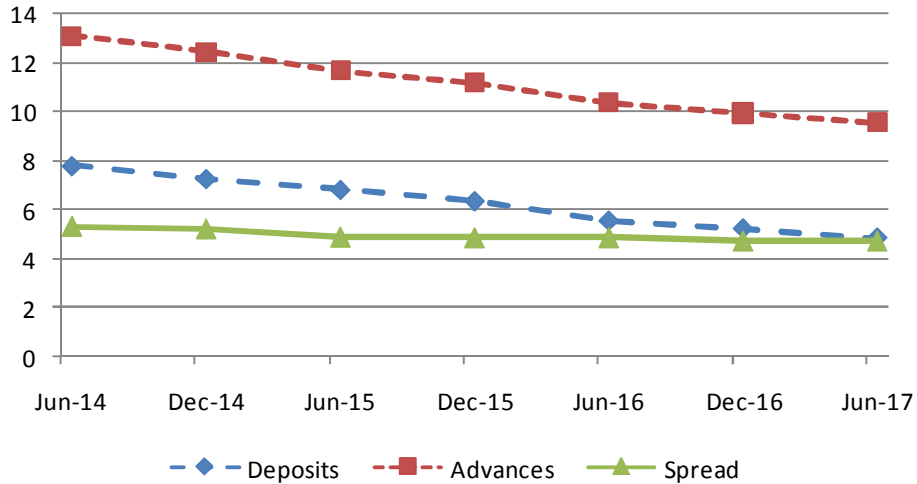


Source: Statistics Department, BB.

*Call money borrowing and lending rates remained stable in June 2017 with minor increase on average indicating no significant stress on liquidity management.*

## 4. Market risk–cont'd.

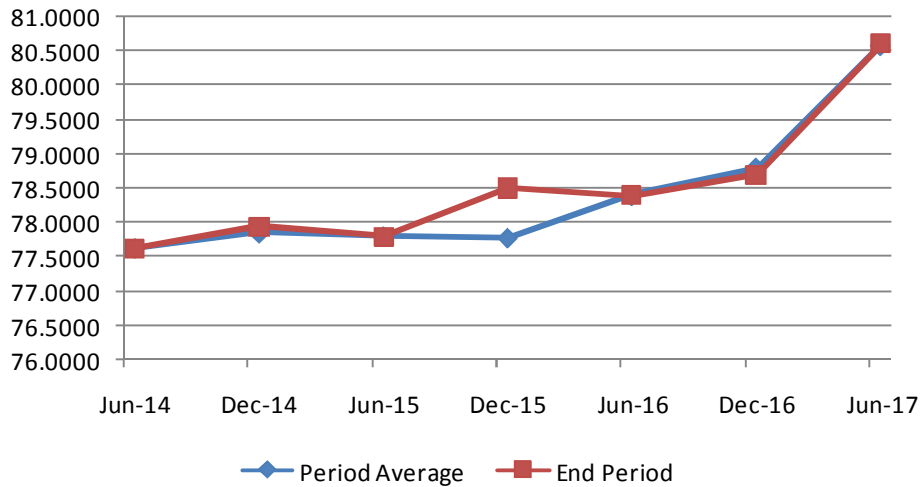
### 4.4 Scheduled banks' weighted average interest rate on deposits and advances



Source: Statistics Department, BB.

*Weighted average interest rate on deposits and advances slightly declined at end-June 2017 though the spread between advances and deposits remained stable.*

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



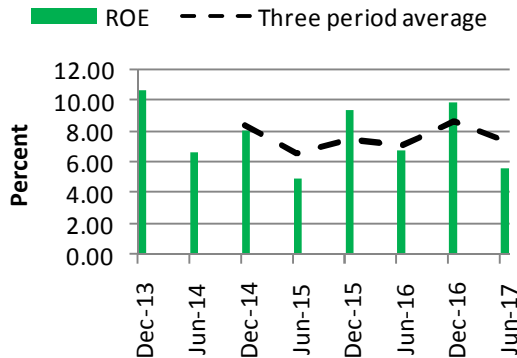
Source: Statistics Department, BB.

*BDT experienced slight depreciation in its value against USD at end-June 2017 compared to end-December 2016.*

## 5. Profitability and solvency risk

### 5.1 Banks' profitability indicators

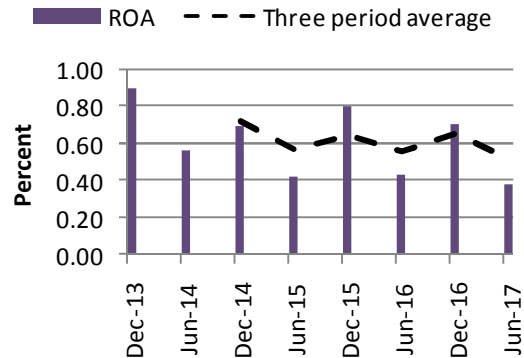
#### a. Return on equity (ROE)



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

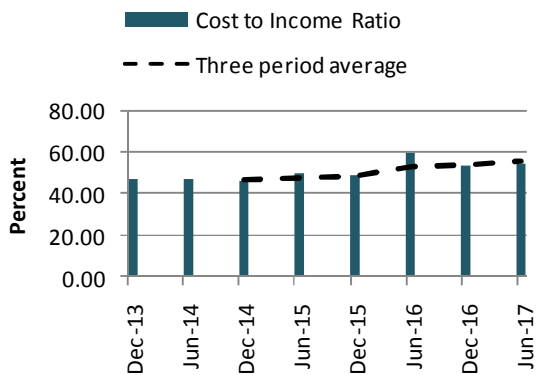
*ROE and ROA remained broadly stable albeit slight decrease in June 2017.*

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



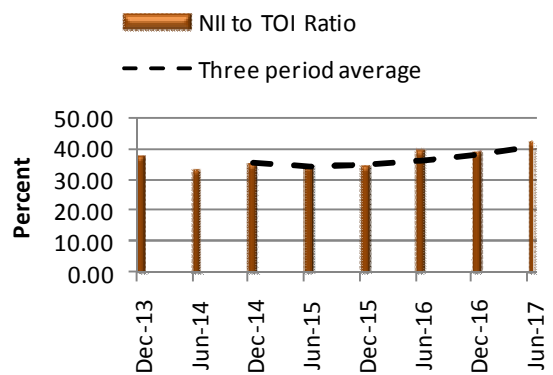
Source: Scheduled Banks; Computation: Financial Stability Department, BB.  
Note: End-June ratios are annualized.

#### 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



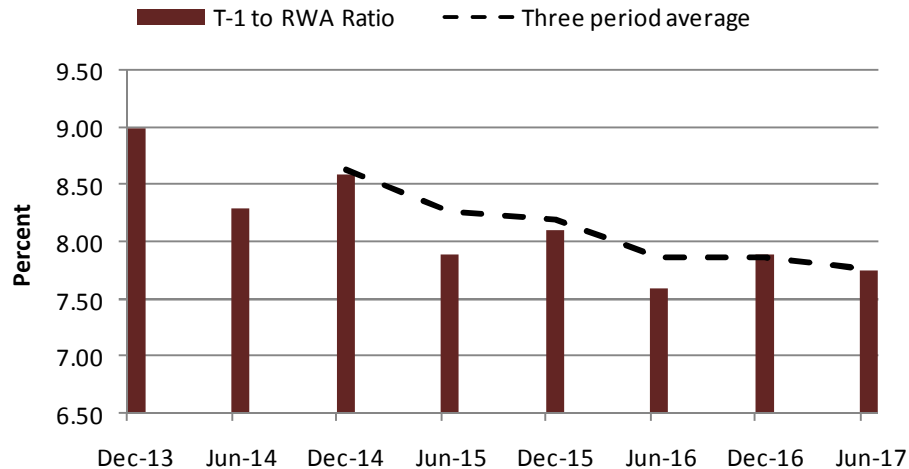
Source: Scheduled Banks; Computation: Financial Stability Department, BB.  
Note: Ratio between net interest income and total income.

*Cost to income ratio remained stable. Proportion of net interest income in total operating income showed upward trend at end-June 2017*

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

### 5.2 Banks' solvency indicators

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

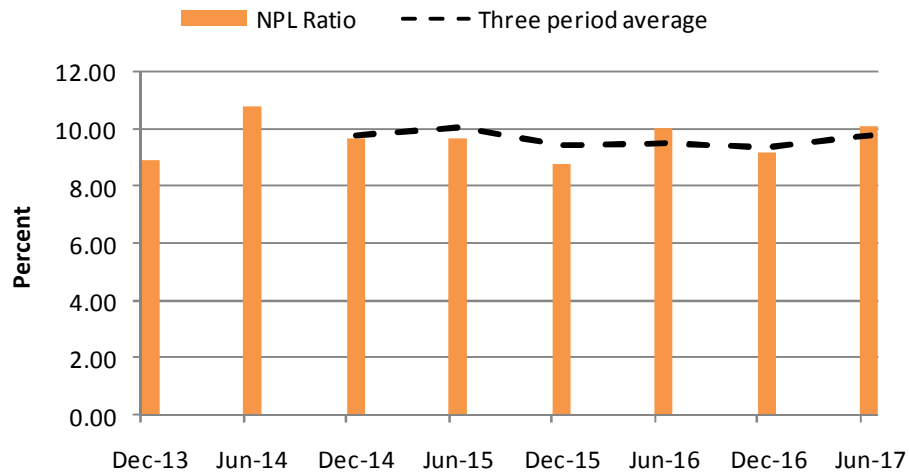


Source: DOS, BB.

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

*The ratio slightly decreased in June 2017 but remained well above the regulatory requirement.*

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



Source: BRPD, BB.

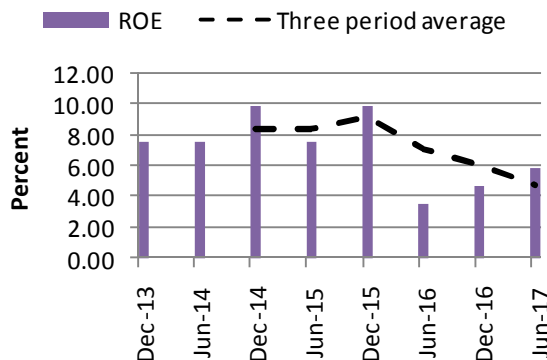
Note: Ratio of non-performing loans & advances to total loans & advances.

*The ratio remained mostly stable during the last three years with a minor increase in June 2017.*

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

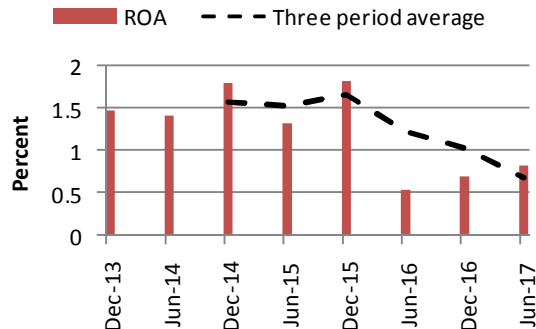
### 5.3 FIs' profitability indicators

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



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

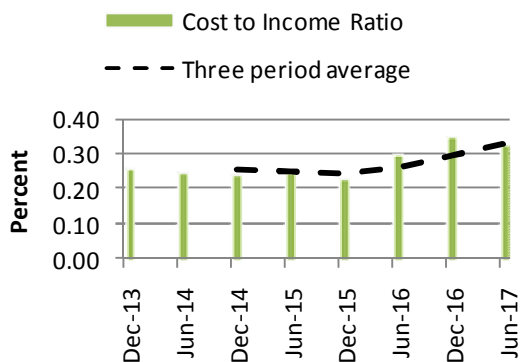
#### b. Return on assets (ROA)



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

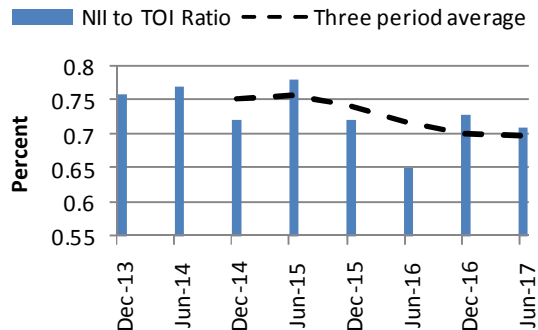
*ROE and ROA remained broadly stable though recorded moderate increase in June 2017.*

#### 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



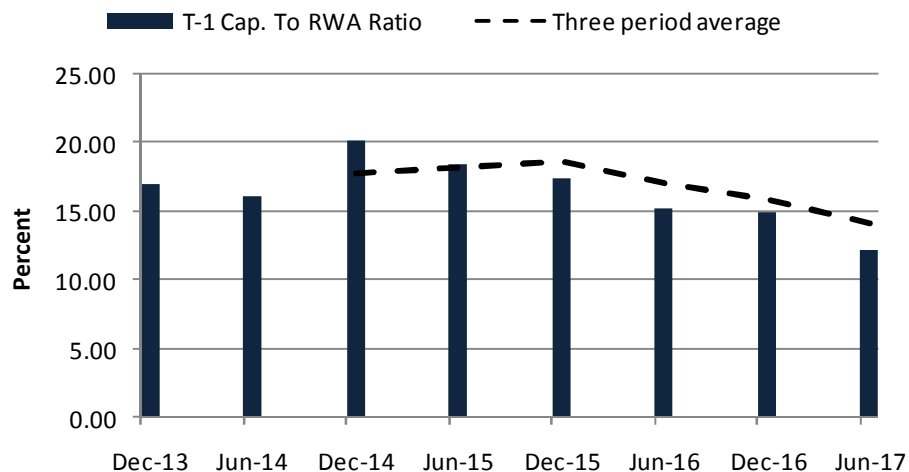
Source: DFIM, BB.  
Note: Ratio between net interest income and total operating income.

*FIs' cost to income ratio slightly went down in June 2017 implying better cost efficiency. Net interest income to total operating income ratio declined slightly in June 2017 which implies a decrease of FIs' income from interest earning assets.*

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

### 5.4 FIs' solvency indicators

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

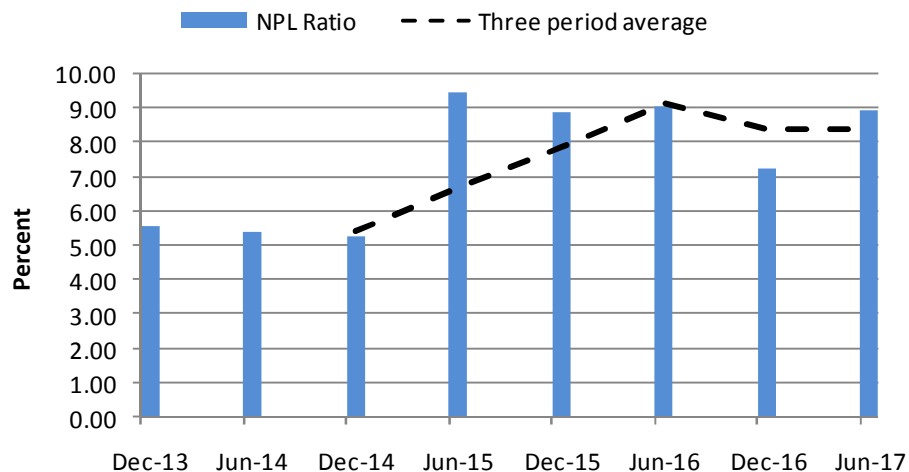


Source: DFIM, BB.

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

*Though the ratio declined since December 2015, it was well above the regulatory requirement.*

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



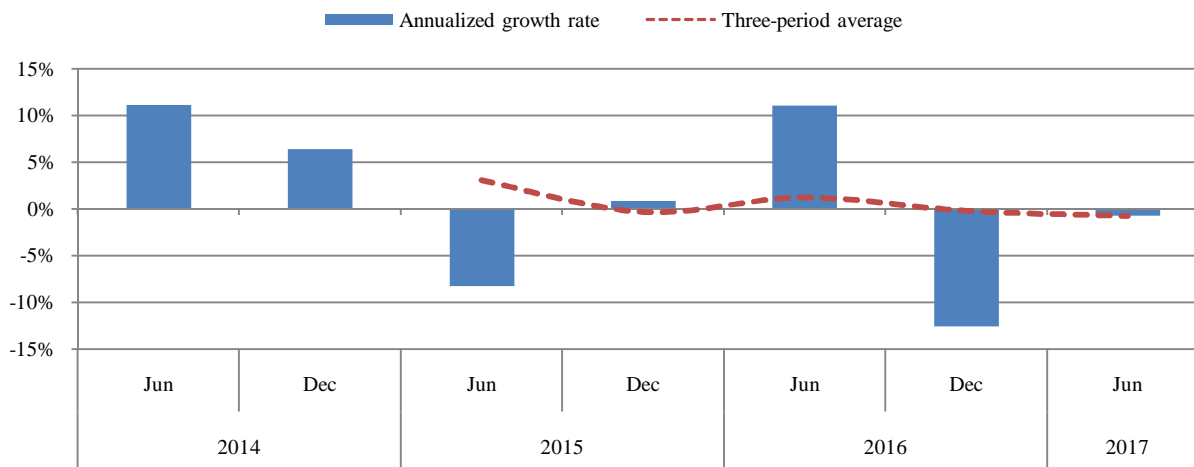
Source: DFIM, BB

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

*The ratio slightly went up at end-June 2017 compared to end-December 2016 position.*

## 6. Inter-linkages

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

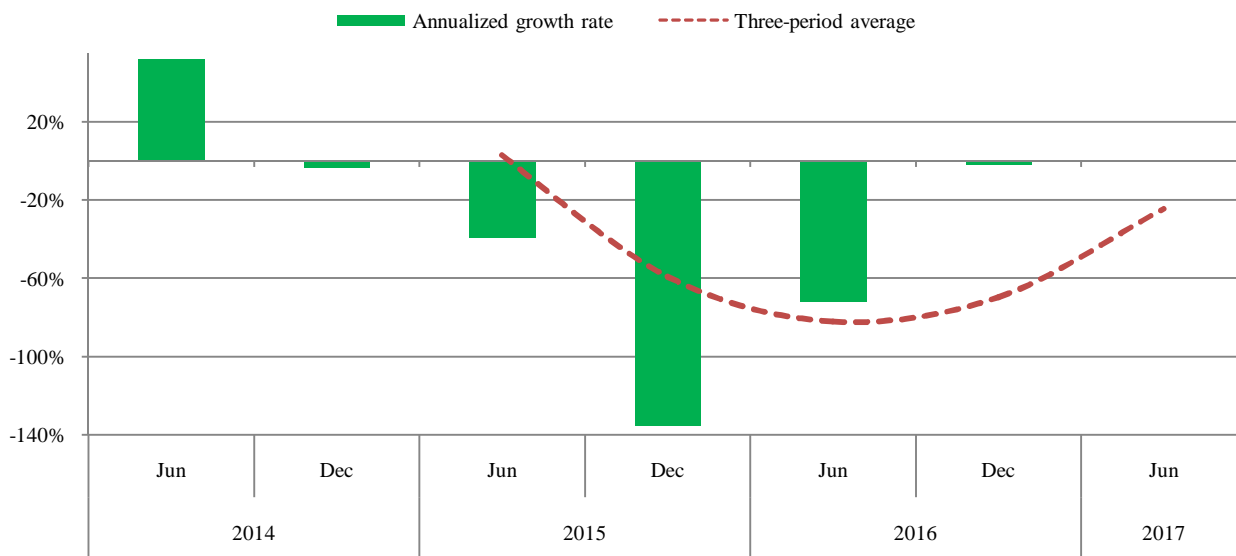


Source: Statistics Department, Bangladesh Bank.

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

*Overall government borrowings from the banking sector have been on a declining trend.*

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



Source: Statistics Department, Bangladesh Bank.

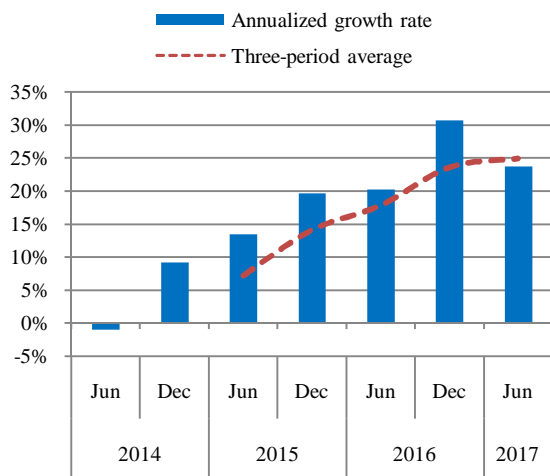
Notes: NBDCs include depository FIs, Grameen Bank, Ansar-VDP Unnayan Bank, Karma Sangsthan Bank, Probashi Kallyan Bank, central cooperative bank, and exclude non-depository FIs.

*Government borrowings from the NBDCs have been at a very low level since June 2014.*

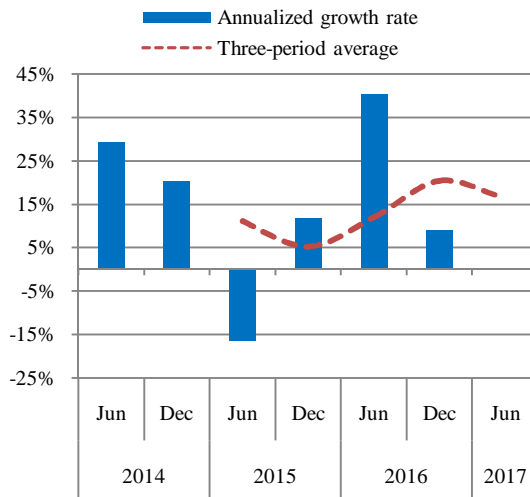
## 6. Inter-linkages- Cont'd.

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

#### a. Loans to residential housing



#### b. Loans to commercial housing

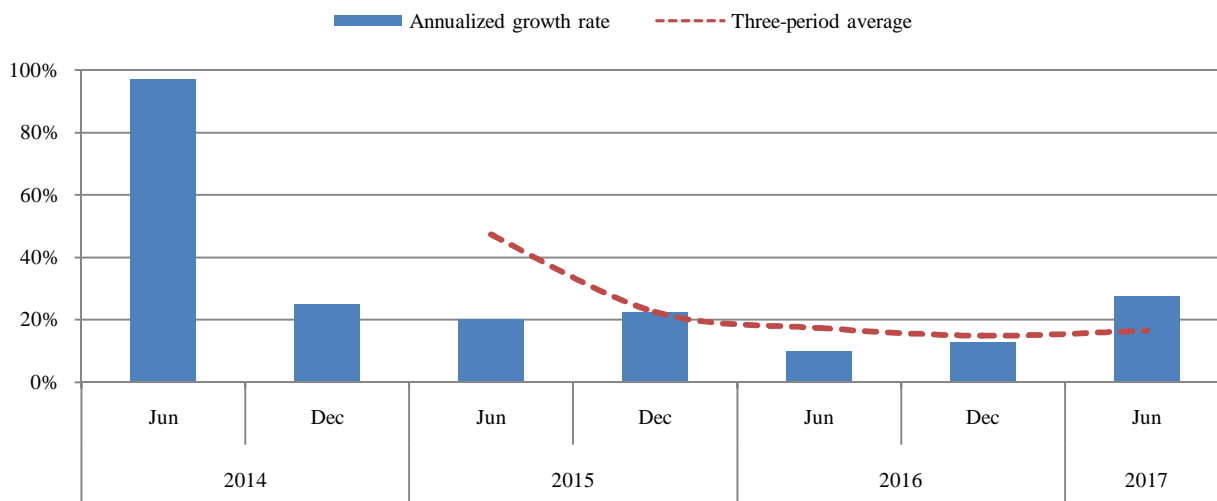


Source: Statistics Department, Bangladesh Bank.

Notes: Data for December 2016 and June 2017 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 both residential and commercial housing sector recorded moderate decline at end-June 2017 compared to those of end-December 2016.*

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



Source: DFIM, Bangladesh Bank.

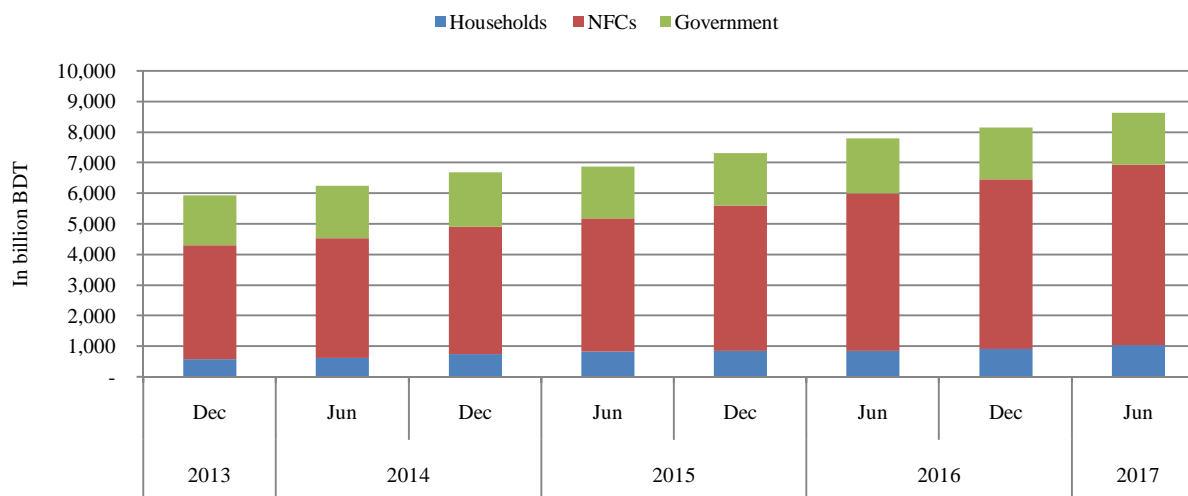
Notes: Loans to housing sector refer to loans extended by FIs for both residential and commercial housing purposes.

*FIs' loans to housing sector slowed down markedly since June 2014. However, a slight rise in the growth rate is observed since June 2016.*



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

### 6.5 Banks' loans to counterpart sectors

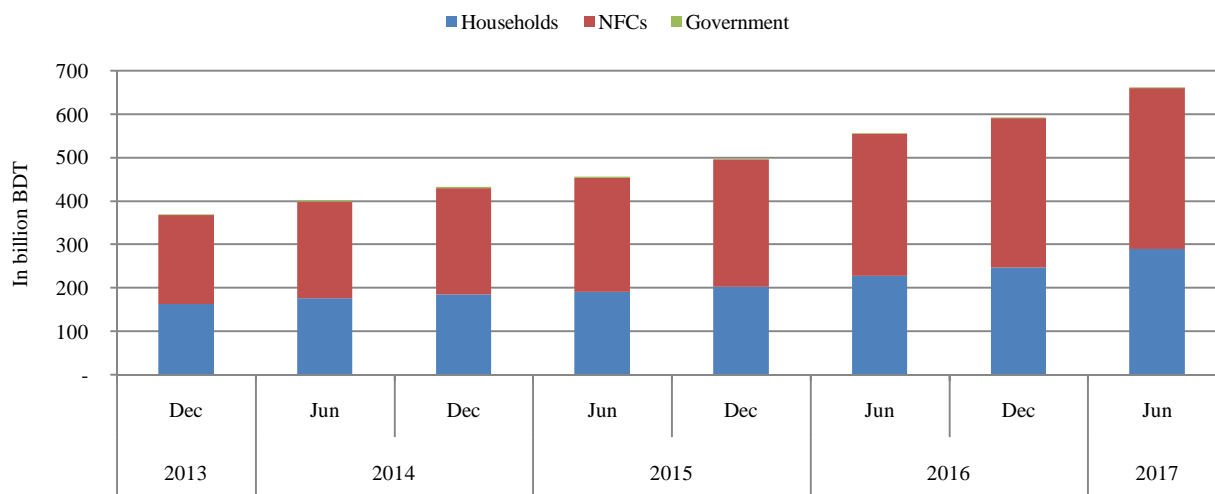


Source: Statistics Department, Bangladesh Bank.

Notes: Data of households and NFCs for December 2016 and June 2017 are provisional. Loans extended to households and NFCs refer to outstanding loans and advances excluding bills. Loans to government refer to gross amount.

*Increase in banks' exposure to its major public and private counterparts has been mainly led by NFCs accounting for more than sixty percent of total bank loans.*

### 6.6 NBDCs' loans to counterpart sectors



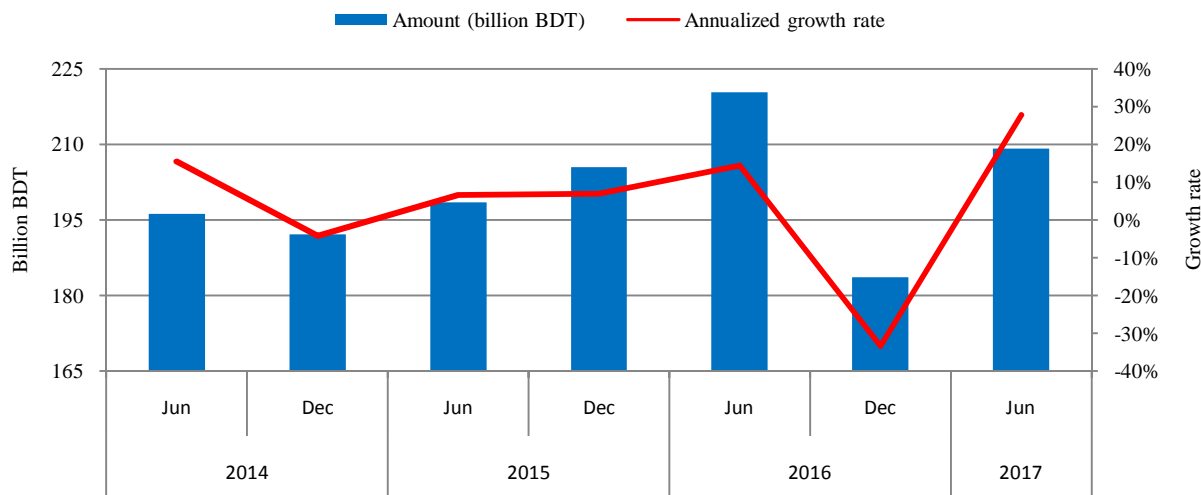
Source: Statistics Department, Bangladesh Bank.

Notes: Loans to government refer to gross amount. NBDCs include depository FIs, Grameen Bank, Ansar-VDP Unnayan Bank, Karma Sangsthan Bank, Probashi Kallyan Bank, central cooperative bank, and exclude non-depository FIs.

*NFC borrowing constitutes major portion of NBDCs' increasing loan portfolio closely followed by an increasing loan exposure to households while the government borrowing is almost non-existent.*

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

### 6.7 Banks' cross-border claims

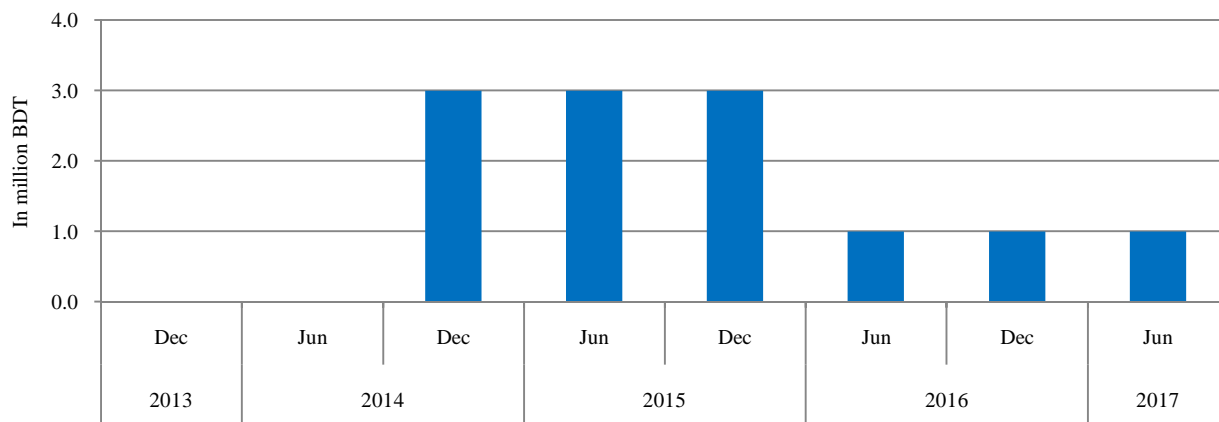


Source: Statistics Department, Bangladesh Bank.

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 are increasing as the country's banking transaction with rest of the world is also growing; however, it makes up only around 1 percent of total assets of the banking sector.*

### 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 depository FIs, Grameen Bank, Ansar-VDP Unnayan Bank, Karma Sangsthan Bank, Probashi Kallyan Bank, central cooperative bank, and exclude non-depository FIs.

*NBDCs' cross-border claims are almost non-existent compared with the asset size of the industry.*

### 1. Macro risk:

#### 1.1 Current and forecasted real GDP growth

Sources: Statistics Department, Bangladesh Bank and IMF World Economic Outlook Update, April, 2017.

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 World Economic Outlook Update, April, 2017.

#### 1.2 Current account balance-to-GDP ratio

Sources: Monthly Economic Trends, BB.

Current account balance represents the sum of the 6 months of calendar year. 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 total 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 Parisad, Municipalities, Thana/Upazila Parishad, Union Parishad, Gram Parishad and Other Local Bodies. The dotted line represents three-year moving average of the government debt-to-GDP ratio.

#### 1.5 Government deficit-to-GDP ratio

Sources: Monthly Report on Fiscal Position (various issues).

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.

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.

Both public non-financial corporations and private non-financial corporations are considered for 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), Grameen Bank, Ansar-VDP Unnayan Bank, Karma Sangsthan Bank, Probashi Kallyan Bank, central cooperative bank; non-depository FIs are excluded.

### **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; NBDCs include depository FIs, Grameen Bank, Ansar-VDP Unnayan Bank, Karma Sangsthan Bank, Probashi Kallyan Bank, central cooperative bank; non-depository FIs are excluded.

### **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; FIs include both depository and non-depository FIs and exclude Grameen Bank, Ansar-VDP Unnayan Bank, Karma Sangsthan Bank, Probashi Kallyan Bank, central cooperative bank; due to unavailability of NBDC data, provision maintenance ratio of FIs was used as majority of both NBDCs and FIs are depository FIs.

## **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.

Data 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, DSE 30 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 annualized.

### **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 annualized.

### **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 annualized.

## **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; NBDCs include depository FIs, Grameen Bank, Ansar-VDP Unnayan Bank, Karma Sangsthan Bank, Probashi Kallyan Bank, central cooperative bank; non-depository FIs are excluded.

### **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; FIs include both depository and non-depository FIs and exclude Grameen Bank, Ansar-VDP Unnayan Bank, Karma Sangsthan Bank, Probashi Kallyan Bank, and central cooperative bank.

#### **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; NBDCs include depository FIs, Grameen Bank, Ansar-VDP Unnayan Bank, Karma Sangsthan Bank, Probashi Kallyan Bank, central co-operative bank; non-depository FIs are excluded.

#### **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; NBDCs include depository FIs, Grameen Bank, Ansar-VDP Unnayan Bank, Karma Sangsthan Bank, Probashi Kallyan Bank, central cooperative bank; non-depository FIs are excluded.

---

