Financial Stability Report

2018 | Issue 9

BANGLADESH BANK

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FINANCIAL STABILITY REPORT 2018

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GOVERNOR'S MESSAGE

Regular assessment of the state of financial stability along with the identification of underlying risks and vulnerabilities of the financial sector is critical for any Central Bank. As an in-house assessment of stability risks, Bangladesh Bank (BB) has been regularly publishing the Financial Stability Report since 2010. The current issue of this yearly publication "the Financial Stability Report 2018" to be disseminated to different stakeholders is a part of that endeavor to address those risks in a prudent manner.

The Financial Stability Report 2018 contains recent performances of the Bangladesh financial system vis-a-vis world economy along with their possible impacts on financial stability. Prolonged trade negotiations and protectionism together with energy price volatility amid escalation in trade tensions may impede international capital movement and global growth. Key global issues like Federal Reserve's interest rate doctrine, "no-deal" withdrawal of the United Kingdom from the European Union and a greater-than-envisaged slowdown in China along with higher debt burdens and tighter financial conditions in some major economies have been contributing to the weakening of global economic expansion.

The macro-financial system of Bangladesh exhibited a fair level of stability in 2018 attributable to stable inflation, increase in export & wage earners' remittances, growth-supportive policy stances of the financial sector regulators, and strong fiscal discipline. In the year 2018, the banking sector balance sheet recorded a notable growth, capital adequacy remained above regulatory requirement while the sector as a whole remained broadly compliant with Basel III liquidity metrics. Both scheduled banks and financial institutions (FIs) demonstrated resilience against various stress scenarios. However, managing macro-financial stability in the face of a rising current account deficit, changing global and domestic liquidity conditions along with bulging non-performing assets in the books of banks and FIs have to be dealt with intensive due diligence.

As a part of BB's enhanced vigilance activities substantial resources has been devoted towards establishing robust supervision mechanisms aiming to identify vulnerabilities and support preventive measures to protect any systemic disturbance. In this regard, I would urge all the financial sector stakeholders to do their best towards strengthening risk management practices including cyber risk. I would also call for ethical business practices among banks and FIs along with the culture of good corporate governance.

I hope our analyses and assessments in this report will be able to develop risk awareness among the stakeholders as well as help them take preemptive measures. Finally, I appreciate the efforts of the officers of Financial Stability Department in preparing the report in reasonable time.

Fazle Kabir
Governor

DEPUTY GOVERNOR'S MESSAGE

Global growth has slightly weakened in the review year compared to the estimated growth of 3.8 percent for 2017. The growth projections for 2019 and 2020 have been revised by IMF to 3.5 percent and 3.6 percent respectively due to negative effects of tariff increase enacted in the US and China earlier. Besides, revision of output growth since October 2018, introduction of new automobile fuel emission standards in Germany, concerns about sovereign and financial risks in Italy, weakening of financial market sentiment and contraction in Turkey could aggravate risk sentiment globally. These might have some spillover effects on the financial system of Bangladesh as well.

Although global growth slightly declined, domestic macroeconomic outlook remained largely stable with significant GDP growth of 7.9 percent in FY18, attributable to strong domestic demand and rebound in remittances. Average inflation dropped further to 5.5 percent from 5.7 percent of the previous calendar year; food inflation declined while non-foood inflation increased in equal magnitude. Remittance inflow rose notably. Foreign exchange reserve stood at USD 32.0 billion which is equivalent to meeting more than 6 months' import payments. Also, the reserve position is sufficient to meet outstanding short-term external debt.

Gross non-performing loan (NPL) ratio of the banking sector slightly increased in CY18 compared to the previous year while net NPL ratio remained reasonably low. Banking sector profitability, measured by return on assets (ROA) and return on equity (ROE), slightly declined. Capital-to-risk weighted asset ratio and tier-1 capital ratio of banks remained above the regulatory requirement. Banking sector, on an aggregate basis, maintained leverage ratio above the regulatory requirement, led by higher leverage ratio maintained by PCBs and FCBs. The sector also appeared to be resilient against minor liquidity and market shocks but remains vulnerable to various credit shocks. FIs recorded improvement in terms of capital adequacy compared to the position of the preceding year. Most of the FIs were compliant in terms of fulfilling the reserved requirements-CRR and SLR. However, their asset quality and profitability slightly declined.

This report also finds that some large non-financial corporations (NFCs) in Bangladesh are indebted considerably. Therefore, banks need to remain prudent in lending to the NFCs. Also, NFC loans need to be monitored closely. On the other hand, as our analysis reveals that banks' loans are concentrated within a few geographic regions, banks need to diversify their loan portfolio for lessening geographic concentration to the best extent possible. Moreover, banks have to expedite recovery rate from both performing and non-performing loans. What is more, banks need to be cautious about creation of forced loans from their off-balance sheet exposures and take preemptive measures in this regard.

Finally, I commend the dedication and effort of the officials of Financial Stability Department as well as other contributing departments of Bangladesh Bank, different financial sector regulators, commercial banks and FIs in preparing this report. I hope the report will help the stakeholders of the financial system to understand different aspects of risks and vulnerabilities to the Bangladesh financial system and take preemptive measures in withstanding them.

Ahmed Jamal
Deputy Governor

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Acronyms

AD	Authorized Dealer
ADR	Advance-to-Deposit Ratio
BACH	Bangladesh Automated Clearing House
BACPS	Bangladesh Automated Cheque Processing System
BB	Bangladesh Bank
BBS	Bangladesh Bureau of Statistics
BCBS	Basel Committee on Banking Supervision
BDT	Bangladeshi Taka
BEFTN	Bangladesh Electronic Funds Transfer Network
BIA	Bangladesh Insurance Association
BSEC	Bangladesh Securities and Exchange Commission
BSRD	Bangladesh Systemic Risk Dashboard
CAR	Capital Adequacy Ratio
CDBL	Central Depository Bangladesh Limited
CFSI	Composite Financial Stability Index
CMSME	Cottage, Micro, Small and Medium Enterprise
CPI	Consumer Price Index
CRAR	Capital to Risk-weighted Asset Ratio
CRR	Cash Reserve Requirement
CSE	Chittagong Stock Exchange
CY	Calendar Year
DSE	Dhaka Stock Exchange
ECAI	External Credit Assessment Institutions
FC	Foreign Currency
FCB	Foreign Commercial Bank
FI	Financial Institution
FX	Foreign Exchange
FY	Fiscal Year
GC	Gini Coefficient
GDP	Gross Domestic Product
HBFC	House Building Finance Corporation
HHI	Herfindahl-Hirschman Index
HV	High Value
ICB	Investment Corporation of Bangladesh
IDR	Investment Deposit Ratio
IDRA	Insurance Development and Regulatory Authority
IMF	International Monetary Fund
IRR	Interest Rate Risk
IT	Information Technology
LCR	Liquidity Coverage Ratio
L/C	Letter of Credit

MCAP	Market Capitalization
MFI	Microfinance Institution
MFS	Mobile Financial Services
MRA	Microcredit Regulatory Authority
MT	Mail Transfer
NBFI	Non-Bank Financial Institution
NDA	Net Domestic Assets
NEER	Nominal Effective Exchange Rate
NFA	Net Foreign Assets
NFCD	Non-Resident Foreign Currency Deposit Accounts
NII	Net Interest Income
NIM	Net Interest Margin
NPL	Non-Performing Loan
NPSB	National Payment Switch Bangladesh
NSC	National Savings Certificate
NSFR	Net Stable Funding Ratio
OBU	Off-shore Banking Unit
OTC	Over the Counter
PCB	Private Commercial Bank
P/E	Price-Earnings Ratio
PKSF	Palli Karma-Sahayak Foundation
RBCA	Risk Based Capital Adequacy
REER	Real Effective Exchange Rate
RFCD	Resident Foreign Currency Deposit Accounts
RJSC	Registrar of Joint Stock Companies and Firms
ROA	Return on Assets
ROE	Return on Equity
RTGS	Real Time Gross Settlement
RV	Regular Value
RWA	Risk Weighted Assets
SCB	State-owned Commercial Bank
SDB	Specialized Development Bank
SLR	Statutory Liquidity Requirement
SME	Small and Medium-sized Enterprises
T-bill	Treasury Bill
T-bond	Treasury Bond

EXECUTIVE SUMMARY

This report is the summary of the assessment of Bangladesh Bank on the resilience of the financial system of Bangladesh to withstand risks and vulnerabilities, and the course of actions taken in the calendar year 2018 (CY18). Also, the report reveals structural trends and issues relating to developments and regulations of the financial sector which have implications to the stability of the financial system of Bangladesh.

The global growth has been estimated to be slower than expected in CY18 and is projected to continue this trend in CY19. Less harmonized growth dynamics across the world since the beginning of the year decelerated the global growth momentum witnessed during the preceding year. While some advanced economies recorded moderation in growth, emerging and developing economies registered a stable growth during the review year. Drop in fuel prices near the end of CY18 along with favorable global commodity prices eased the inflationary pressure in most advanced as well as emerging economies. Normalization of US monetary policy along with spike in US treasury yields elevated the downside risk of capital flights from emerging economies. Furthermore, ongoing US-China trade tensions and inward looking trade policy in different jurisdictions might pose uncertainties about future trade policies, upsetting the global growth outlook.

The domestic macroeconomic situation remained broadly favorable. A real GDP growth of 7.9 percent was recorded in FY18 against the target of 7.4 percent, supported largely by strong domestic investment and consumption demand. Annual average inflation slightly decreased to 5.5 percent at end-CY18 from 5.7 percent at end-CY17. Though growth in export earnings and wage earners' remittance picked up in FY18, sharp growth in imports during the same period caused a considerable current account deficit. However, increase in financial account, led mainly by medium and long-term external debt, helped to minimize the deficit in overall balance of payment. Aggregate external debt increased in which rising short-term external debt appeared to cast some headwinds for the future. Besides, Government's domestic debt from the banking system recorded a rise during FY18.

The banking sector registered a moderate asset growth in CY18. A modest asset growth, led primarily by growth in loans and advances, was observed during the review year. In fact, slowdown in deposit growth moderated growth in loans and advances which ultimately affected banking sector's asset growth in CY18. However, accumulation of higher deposits in earlier periods appeared to provide the banking sector with adequate liquid funds to accommodate increased loan demand during this period. Besides, private commercial banks (PCBs) held the major portion of earning assets which might enhance banking system stability through their better management of asset quality. Compared to CY17, concentration of assets within a few banks remained almost unchanged in CY18.

Asset quality of the banking sector, particularly state-owned commercial banks (SCBs), deteriorated in CY18. Gross nonperforming loan (NPL) ratio showed an upward trend throughout CY18. Particularly, rising NPL ratio in the SCBs appeared to be a concern as these banks had dragged down the overall asset quality of the banking sector. However, a majority of banks maintained required loan-loss provisions during the period. Moreover, increased provision shortfall in SCBs was offset by provision surplus maintained in other banking clusters. As a result, net NPL ratio remained unchanged at end-December 2018. Bad/loss loans to gross NPL ratio dropped marginally from CY17, but still remained high in CY18. What is more, a considerable share of total loans was composed of rescheduled loans, which turned into NPL again at a significant rate. This phenomenon remained a concern for the improvement in asset quality of the banking system as well.

Banking sector profitability was adversely affected by deteriorated asset quality during the review year. In CY18, the banking sector experienced a decline in net profit due mainly to higher provision requirement. Accordingly, return on assets (ROA) and return on equity (ROE) of the banking industry declined as well. However, net interest margin (NIM) increased slightly in CY18 due to banks' increased interest income. This was reflected in rise of weighted average lending rates of banks during the year. Yet, the overall interest rate spread recorded a decline due to a rise in weighted average deposit rates.

Capital to risk-weighted assets ratio (CRAR) of the banking sector, though decreased, remained above the regulatory requirement. During the review year, CRAR of the banking industry stood at 10.5 percent against the regulatory requirement of 10 percent. Considerable decrease in the capital position of SCBs largely affected the banking sector CRAR adversely. For the same reason, banking industry maintained a Capital Conservation Buffer (CCB) of only 0.5 percent against the regulatory requirement of 1.875 percent. Nevertheless, PCBs and FCBs, which together accounted for a major portion of banking sector assets, maintained both CRAR and CCB much above the regulatory requirement. Moreover, the banking industry maintained a leverage ratio reasonably higher than the regulatory requirement.

The liquidity situation in the banking industry, particularly in PCBs, appeared to be tightening in CY18. The advance-to-deposit ratio (ADR) of the banking industry increased gradually mainly due to slower growth of deposit compared to credit, still the ratio remained within the prescribed limit. However, a few PCBs had ADR higher than the regulatory limit, indicating liquidity stress in some of the banks on a standalone basis. Correspondingly, call money rates also recorded an increase. On the other hand, banks' maintained Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR) were higher than the regulatory requirement of 100 percent, reflecting banking sector's resilience against systemic liquidity stress. This also indicates that liquidity stress in the banking sector was not a system-wide phenomenon.

Overseas branches of local banks performed well in CY18. Overseas branches of local banks constituted a very minor portion of banking sector assets as of end-December 2018. However, both of their assets and liabilities increased moderately in CY18. Their net profit also registered a reasonable growth. Strong balance sheets of the overseas branches of local banks with sound financial health and ample liquidity indicate no near-term risks.

Islamic Shari'ah based banks demonstrated mixed trend in CY18. Aggregate assets of the Islamic Shari'ah based banks (IBs), accounting for around 20 percent of total banking sector assets, experienced a slowdown in growth compared to that of CY17. Like the banking industry, their investment (loan) growth exceeded their deposit growth. Nevertheless, IBs' maintained LCR and NSFR were higher than the respective regulatory requirements. Asset quality and capital adequacy of the Islamic banks were better than the industry average.

Banking sector's overall risk exposures remained broadly stable. In CY18, the Risk Weighted Asset Density ratio of the banking industry remained almost same as that of the preceding year. However, the ratio for PCBs (excluding Islamic banks and fourth generation PCBs) and state-owned banks recorded an increase, indicating their rising exposures to more risky business activities. Despite registering a rise in total risk-weighted assets (RWA) in CY18, shares of RWA associated with each of credit, market and operational risk were the same as those of the previous year. RWA related to credit risk from on-balance sheet exposures constituted the major portion of total RWA of the industry.

Banking and FI sectors demonstrated mixed resilience under different stress scenarios. Stress tests on banks as of end-December 2018 revealed that among three broad types of shocks namely credit, liquidity and market shocks, credit shock remained as the most dominant force in terms of its impact on CRAR of the banking sector. In particular, in case of default of 03 largest borrowers, 22 banks would become noncompliant in maintaining minimum regulatory capital. Besides, increase in NPLs and the combination of all shocks under credit risk were also found to adversely impact the industry's CRAR to some extent. The market and liquidity stress tests, on the other hand, displayed substantial resilience of banks to relevant shock scenarios. Similarly, stress tests on FIs showed that most of the FIs remained resilient against different stressed scenarios in CY18.

Financial institutions (FIs) sector exhibited mixed trend in CY18. Total assets of FIs grew notably in CY18, which was mainly attributable to a sharp rise in FIs' borrowings. Consequently, as a source of fund, share of borrowings increased considerably against a significant decrease in shares of deposits and equity. In turn, FIs' liability-asset ratio increased at end-CY18. During the review year, more than 75 percent of FIs' assets were composed of loans and leases in which exposures to trade and commerce sector held a significant share. However, concentration of loans and leases to any specific

sector reduced during the period. Asset quality of FIs deteriorated in CY18 as gross non-performing loans and leases ratio increased. As a result, FIs had to maintain higher provisions, which led to a decline in their profitability. Yet, the capital adequacy ratio (CAR) registered a slight increase in CY18. Most of the FIs remained compliant with CRR and SLR requirements during the period.

A moderate liquidity condition was observed in domestic money market during CY18. Lower issuance of BB Bill and large liquidity support facility (LSF) by BB signifies moderate liquidity condition in the money market during the review year. However, interbank repo rate and call money rate, though demonstrated an increasing trend during the last quarter, did not indicate any strong liquidity pressure in the money market.

The capital market in Bangladesh was bearish during CY18. The major indicators, such as index value, market capitalization and turnover declined considrably at the Dhaka Stock Exchange (DSE), the prime bourse in Bangladesh. However, as banking industry's exposure to capital market remained much below the BB's allowable limit; it appears that equity price shock would not pose any stability threat to the banking sector in the near term.

The financial infrastructure in Bangladesh continued to evolve to ensure an efficient and safe payment and settlement system. During the review year, transactions through various payment platforms such as National Payment Switch Bangladesh (NPSB), Bangladesh Automated Cheque Processing System (BACPS), Bangladesh Electronic Funds Transfer Network (BEFTN), Real Time Gross Settlement (RTGS) system and Mobile Financial Services (MFS) increased significantly, indicating stakeholders' confidence towards the growing efficiency and safety measures of the financial infrastructure. Besides, banks' coverage of their online branches also enhanced in CY18.

During the review year, the foreign exchange (FX) market was mostly stable. There was no abrupt volatility observed in the interbank (local) FX turnover in CY18. Due to sizeable imports and current account deficit in CY18, depreciation pressure on the nominal exchange value of BDT remained active. However, BB's sale of USD in the interbank FX market along with a pickup in exports and wage earners' remittances eased down the pressure to some extent. Gross FX reserves deemed to be adequate in terms of import coverage and ability to withstand probable external shocks in the near future. During the same period, real effective exchange rate (REER) experienced large appreciation, indicating lessening export competitiveness.

The overall performance of MFIs sector was quite stable during FY18. All the indicators of MFIs showed a positive and growing trend. Though the NPL ratio increased slightly in FY18, it remained quite low compared to that of the banking sector. MFIs market was found to be highly concentrated among the top 10 MFIs, which might cast a stability concern if any of those MFIs' performance deteriorates abruptly due to adverse shocks. Besides, overlapping of loans to individual borrowers would create credit trap in the long run if the borrower selection and their credit needs are not justified properly.

Insurance sector in Bangladesh is yet on the path of development. As of 2017, insurance premium as a share of GDP and per capita insurance premium, indicators of insurance sector development, were substantially low compared to other South-Asian countries. However, profitability indicators of insurance sector showed improvement in 2017 compared to the preceding year. Asset size of insurance sector, despite recording a gradual increase, remained very low as a percentage of GDP. Due to its limited exposure to other financial sectors, adverse shock in insurance sector does not appear to cause any concern for financial stability.

In sum, a reasonable level of stability and resilience was observed in the financial sector of Bangladesh during CY18 with a few exceptions.

Chapter 1

MACROECONOMIC DEVELOPMENTS

After a strong growth in 2017, global economy experienced a slight downturn in 2018. Economic activities slowed notably in the advanced economies such as the Euro area, UK, and Japan while the emerging economies, including South Asia, persisted with their sustained moderate growth in 2018. The latest decline in global energy price has eased the inflationary pressure that mounted up in early 2018. Trade tensions, however, have affected global business confidence, which took a toll in the financial markets both in advanced as well as emerging economies. Meanwhile, strong domestic demand, rebound remittance, and public spending have supported Bangladesh to record its notable GDP growth of 7.9 percent in FY18. The credit-to-GDP gap pose no stability threat from excessive credit as it remains within the territory of 5 percent along its long-term trend. Export of Bangladesh increased by 6.4 percent while the import soared by 25.2 percent in FY18, which resulted in significant current account deficit. Long-term external debt related to GDP remains stable while rising short-term debt-to-GDP also remains quite low. Government borrowing from banks has been declining in contrast to the National Savings Certificates which has been accumulating sharply. Financial Stability Map reveals that stability situation in Bangladesh macro-financial system exposed to a moderate level risk. However, it has slightly deteriorated in 2018 primarily due to worsening in the external economy, shrinking of capital and profitability, contraction in liquidity, rising NPLs and higher exposure of some banks to Non-Financial Corporations (NFC).

1.1 GLOBAL MACRO-FINANCIAL ENVIRONMENT

1.1.1 GLOBAL GROWTH

Global growth reached 3.6 percent in 2018, slightly lower than the growth (3.8 percent) of the preceding year. However, growth dynamics were less harmonized across the world since the beginning of the year. While some advanced economies experienced moderate growth, emerging and developing countries have recorded stabilized growth in aggregate term. Euro area has slipped away from its 2017 growth pace, primarily due to weakening in net exports, private consumption and weaker industrial production. United Kingdom posted slower growth than many of the advance economies. Japan, after achieving eight consecutive quarters of remarkable recovery, slipped down in the first quarter of 2018 followed by 3 percent growth in the second quarter. Meanwhile, the United States continued to be buoyant, supported by the fiscal stimulus and accommodative monetary policies. Also, emerging Asia recorded sustained growth, contributed by rising growth of Indian economy. China, the largest economy in Asia, maintained the growth momentum in the first half of 2018 based on strong service sector growth and domestic consumption. However, third quarter growth in China slowed because of some domestic factors like tightening of shadow banking, restrictions on housing markets and weakening in investment. In 2019, global growth is projected to be slowed down to 3.5 percent. In this connection, lower growth projection in advanced economies particularly in the USA and EU might have implication for Bangladesh export.

1.1.2 GLOBAL COMMODITY PRICES AND INFLATION

Energy prices had been on rising trend until October of the review year. The rise in energy prices was driven by supply constraints like fall in Venezuela's oil production and US sanctions on Iranian oil export. However, metal and agricultural commodity prices contributed to easing overall commodity prices. Driven by higher energy prices, headline inflation also surged up globally. A marked drop in fuel prices in recent months eased the inflationary pressure in advance economies as well as emerging economies. But due to weak position of currency, inflationary pressure in some emerging countries remained unchanged.

1.1.3 GLOBAL FINANCIAL SITUATION

Despite the instances of policy rate hike by the Federal Reserve and reduction of asset purchase program by European Central Bank, the financial condition remained broadly accommodative in US and Euro area. Credit spread for US corporate bonds stretched reflecting investors' increasing risk aversion, global trade uncertainties as well as less confidence about future growth prospects. For much of the same reason, yields of sovereign bonds-particularly of US treasuries, German bund and UK gilts were lowered. In contrast, financial condition was staged to be tighter for emerging and developing countries especially in Asia. Spike in US treasury yields, and monetary policy normalization contributed to unwinding of capital inflow in emerging markets. To address weakening of external position and inflationary pressure, central banks in some emerging economies have raised policy rates.

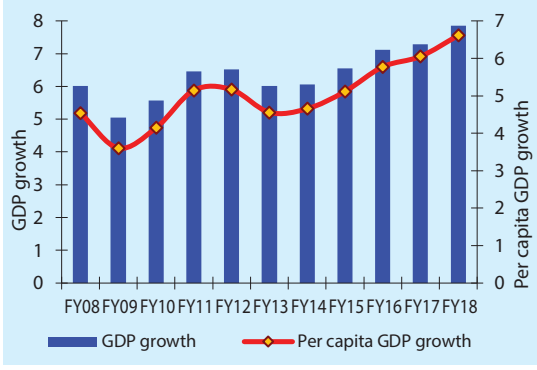
1.2 DOMESTIC MACROECONOMIC DEVELOPMENT

Bangladesh marked a record GDP growth in FY18 along with containing inflation at desired level. Furthermore, foreign exchange reserve remained at an adequate level. However, the overall balance of payment turned negative in FY18. Current account balance recorded deficit at 3.6 percent of GDP, largely attributable to sharp increase in import relative to export. Though short-term external debt increased in the recent years, overall external debt remained within 20 percent of GDP.

1.2.1 GDP GROWTH

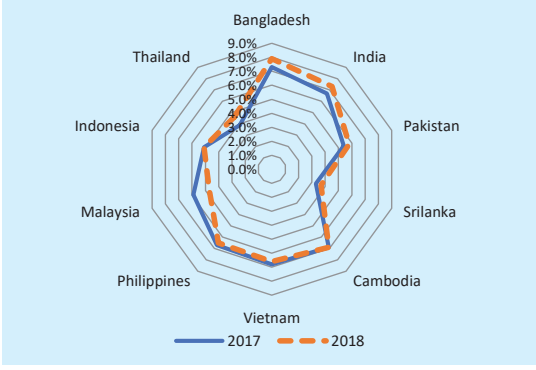
Bangladesh has maintained an upward growth trajectory registering notable real GDP growth of 7.9 percent in FY18 (Chart 1.1), outpacing its regional peer countries (Chart1.2), mainly supported by strong domestic demand as reflected in both public and private investment and consumption where rebound in remittances in FY18 implicitly played a notable role. In the overall GDP growth, service, industry and agiculture sectors accounted for 3.4, 3.9 and 0.6 percentage point respectively. However, these sectors alone grew by 6.4 percent, 12.1 percent and 4.1 percent respectively.

CHART 1.1 : BANGLADESH REAL GDP GROWTH



Source: *Research Department, BB.*

CHART 1.2 : GDP GROWTH OF SELECTED ASIAN COUNTRIES



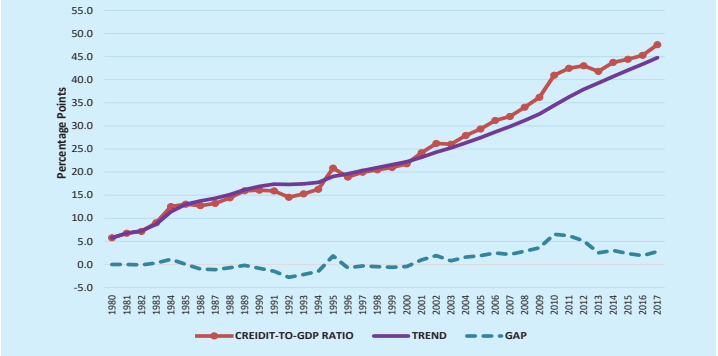
Source: *World Economic Outlook, IMF; Economic Trends, Bangladesh Bank.*

1.2.2 CREDIT-TO-GDP GAP

Credit-to-GDP gap has been estimated using Hodrick-Prescott filter approach[1] following the

1 see BCBS (2010). Guidance for national authorities operating the countercyclical capital buffer for details. The Credit-to-GDP gap is derived by subtracting the (non-linear) trend, as calculated by the HP filter, from the actual "Credit-to-GDP ratio" series. It is also measured in GDP percentage unit. Sometimes it may be reported as percentage deviation from the trend. The ratio measures the relative size of the outstanding debt of non-financial private sector . Assuming the value of smoothing parameter lamda of 400000, Credit-to-GDP gap ("credit gap") is defined as the difference between the credit-to-GDP ratio and its long-term trend, where the trend likely to reflect a sustainable evolution of the economy over time, while the "gap" reflects short-term tendencies that may not be sustainable and may lead to crises if left unchecked and un-managed. A higher positive gap means that the private sector borrows at a level that might be "not prudent" by the current output-producing abilities of the economy. Banks may tend to experience abnormally high rates of loan defaults that may even result in a banking crisis. On the other hand, a negative gap implies that additional amount of credit could be borrowed from the financial system without posing any significant threat to the system. Historical evidences suggest that, in most cases, the credit-to-GDP gap is an important robust indicator for the build-up of financial vulnerabilities (see BIS Quarterly Review, March 2014, pp-55-73 for details).

CHART 1.3 : THE CREDIT-TO-GDP RATIO, ITS TREND AND THE GAP



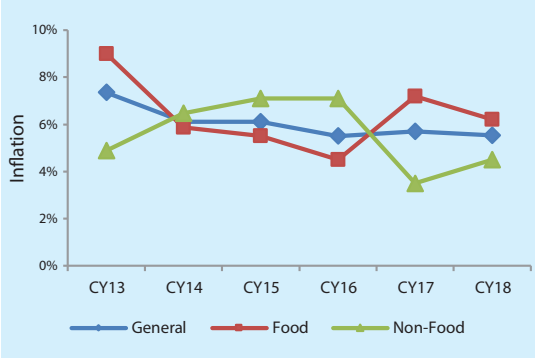
Source: *Data-World Bank, World Development Indicators, Calculated by FSD .*

guidance of Basel Committee on Banking Supervision. The estimated credit-to-GDP gap data indicates that financial system of Bangladesh has shown no significant excessive credit during the period of FY1980-2017[2]. In most of the cases, credit-to-GDP-gap remained below 5 percent except the period of FY2010-2011 when it crossed the level of 5 percentage points, implying that credit-to-GDP gap did not appear to pose any visible threat to the financial system stability (Chart 1.3).

1.2.3 INFLATION

The annual average CPI inflation (base: FY06 = 100) in Bangladesh stood at 5.5 percent, decreasing by 0.2 percentage point from 5.7 percent of end-CY17 (Chart 1.4).

CHART 1.4 : NATIONAL CPI INFLATION



Source: *Economic Trend, BB*

During the period, the annual average food inflation declined to 6.2 percent from 7.2 percent of end-CY17 owing to increase in food grain production and lower global food prices. However, annual average non-food inflation rose to 4.5 percent at end-CY18 from 3.5 percent of end-CY17. Importantly, general inflation declined as decrease in food inflation outweighed increase in non-food inflation.

1.2.4 EXPORT, IMPORT AND BALANCE OF PAYMENTS

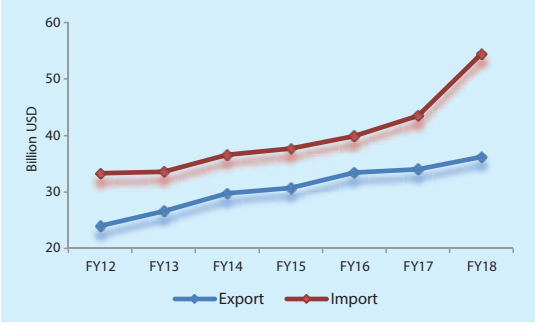
Merchandise export (fob) rose by 6.4 percent in FY18 to stand at USD 36.2^{P} billion from USD 34^{R} billion in FY17[3]. However, export as a percentage of GDP decreased by 0.4 percentage point from 13.6 percent in FY17 to 13.2 percent in FY18. Export growth was led by growth in apparels (woven garments and knitwear products), and jute goods, whereas negative export growth of petroleum by-product, engineering products, raw jute, leather and leather products offset the large impact of apparels export growth. Merchandise import (fob) soared by 25.3 percent in FY18 compared to 9.0 percent increase in FY17. Import (fob) increased to USD 54.5 billion in FY18 from USD 43.5 billion in FY17, mainly driven by intermediate goods, industrial raw material and capital goods.

Because of sharp rise in import, the trade deficit widened from USD 9.5 billion in FY17 to USD 18.3 billion in FY18. Deficit in services and primary income accounts widened by USD 1.8 billion. Significant deficit in these accounts reflected in the current account balance, which recorded a deficit of USD 9.8 billion, despite a moderating effect from strong remitance growth (17.3 percent). Deficit in current account as a percentage of GDP stood at 3.6 percent. Due to the large size of current account deficit,

2 Data for FY2018 is not available.

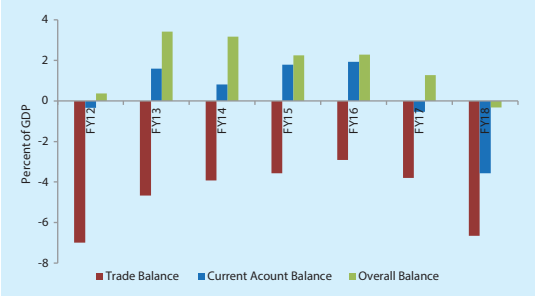
3 P-Provisional, R-Revised.

CHART 1.5 : EXPORTS AND IMPORT



Source: *Bangladesh Bank, Annual Report (2017-18).*

CHART 1.6 : TRENDS IN TRADE BALANCE, CURRENT ACCOUNT BALANCE AND OVERALL BALANCE



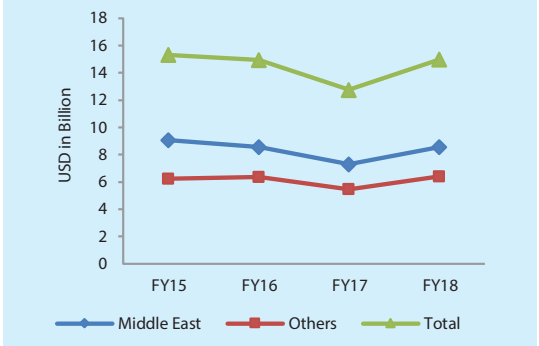
Source: *Bangladesh Bank, Annual Report (2017-18).*

overall balance turned into negative in FY18. However, overall balance of payments deficit remained small due to notable increase in financial account. It is mentionable that increase in financial account is largely attributable to the rise in short as well as medium and long-term external debt.

1.2.5 REMITTANCE AND OVERSEAS EMPLOYMENT

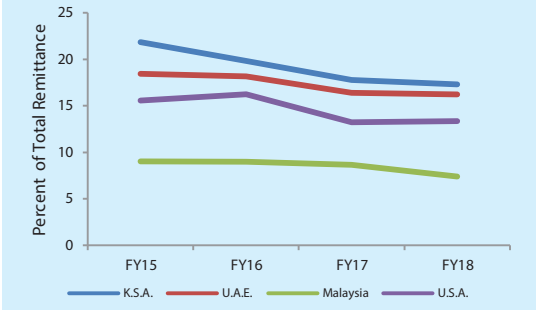
The remittance inflow in FY18 registered at USD 15.0 billion, which is 17.3 percent higher than that of the preceding year (Chart 1.7). While aggregate remittance inlfow showed an upward trend, inflow from top four countries dwindling gradually, reflecting ongoing diversification regarding dependence on these countries as a source of inward remittance.

CHART1.7: WAGE EARNERS' REMITTANCE



Source: *Statistics Department, BB.*

CHART 1.8: TRENDS IN REMITTANCE FROM TOP FOUR COUNTRIES



Source: *Statistics Department, BB.*

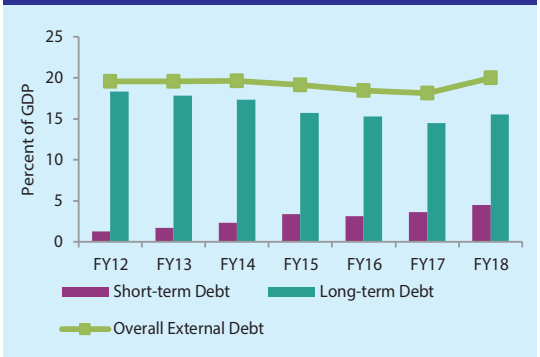
1.2.6 FOREIGN AID AND EXTERNAL DEBT

Total official foreign aid disbursement increased by 66.8 percent to USD 6.12^{P} billion in FY18 from USD 3.67^{R} billion in FY17[4]. Food aid disbursements stood at USD 0.02 billion in FY18 which was slightly lower than that of FY17. The disbursement of project assistance surged to USD 6.09^{P} billion in FY18 in comparison with USD 3.64^{R} billion in FY17. Total aid comprises of concessional loan and grant, with loan accounting for about 96 percent and grant for around 4 percent.

Overall external debt increased to USD 54.7 billion at end FY18, recording a rise of around USD 9.5 billion from the same of FY17. However, long-term debt relative to GDP had a decreasing trend until FY17, followed by a marginal increase in FY18 to register at 15.5 percent of GDP. On the other hand, short-term external debt had a rising trend, which stood at 4.5 percent of GDP in FY18 from 1.3 percent in FY12.

4 P-Provisional,R-Revised.

CHART 1.9 : EXTERNAL DEBT AS A PERCENTAGE OF GDP

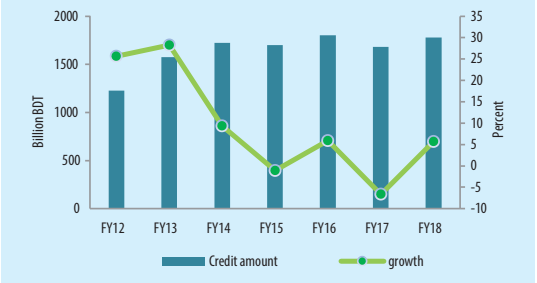


Source: *Statistics Department, BB.*

Pertinently, as of June 2018, short-term external debt to foreign exchange reserve ratio was 37.0 percent while short-term external debt to remittance was 81.6 percent, implying that Bangladesh holds enough reserve buffers for withstanding external shock. Furthermore, recent trend of remittance inflow seems to be able to redeem outstanding short-term external debt.

1.2.7 CREDIT TO GOVERNMENT (GROSS) BY THE BANKING SYSTEM

CHART 1.10 : CREDITS TO GOVERNMENT (GROSS) BY THE BANKING SYSTEM



Source: *Monthly Economic Trends, BB.*

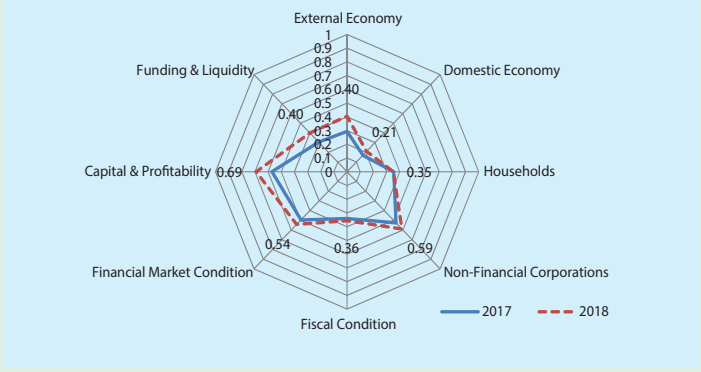
The credit to the Government by the banking system increased by BDT 96.4 billion in FY18 to BDT 1,780.9 billion from BDT 1,684.5 billion in FY17, registering an increase of 5.7 percent. Government borrowing from the banking system appeared to be steady in the last five years. Continued increase in fund raising by the Government through issuance of National Saving Certificates over the last few years reduced the reliance of the Government on credit from banking system.

BOX 1.1: FINANCIAL STABILITY MAP

As financial stability could be affected through various channels, mapping the state of financial stability components has utmost importance, particularly in the context of Bangladesh. This is also crucial due to the fact that each financial crisis has affected financial system stability in unique ways and a comprehensive framework is perhaps needed to cover all the possible stability threats. In this perspective, this study has been endeavored to analyze and map possible stability threats for Bangladesh macro-financial system taking into account eight components[5] : external economy, domestic economy, households, non-financial corporations, fiscal condition, financial market condition, capital and profitability, and funding and liquidity (Chart B1.1).

5 (i) External economy component consists of 7 sub indicators: real GDP growth of major trading partners, average inflation of top 5 countries from which Bangladesh imports; average unemployment rate in countries from which Bangladesh receives highest inward remittances; international crude oil price; 3-months LIBOR rate; current account deficit to GDP ratio; and reserve adequacy in months. (ii) Domestic economy component uses 4 sub indicators, namely output gap, external debt to GDP, currency fluctuations, and consumer price index. (iii) Household component consists of 3 sub indicators, namely household borrowing to GDP, credit portfolio quality in household sectors and inward remittance to GDP ratio. (iv) Non-financial corporation component covers 4 sub-indicators: NFC credit to GDP, NFC loans as proportion of banking sector loans, indebtedness of large NFCs and credit portfolio quality of large NFCs. (v) Fiscal condition component uses 4 sub indicators: Public debt to GDP, government budget deficit to GDP, sovereign risk premium, and tax revenue to GDP ratio. (vi) Financial market consists of banking sector, financial institutions, and capital market. (vii) Capital and profitability component uses 4 indicators: CRAR, TIER I capital, NIM and ROA. (viii) Funding and liquidity component uses 3 sub-indicators: ADR, LCR and NSFR.

CHART B1.1: FINANCIAL STABILITY MAP (2017 AND 2018)



Source: *Various publicaitons of BB, Compilation: FSD, BB.*

Chart B1.1 illustrates comparative financial stability condition of Bangladesh financial system in 2017 and 2018. The map has been developed by following the global best practices and also customized considering the unique nature of Bangladesh financial system[6] .

The stability map depicts moderate level risk in most of the components as standardized scores remained well below the score of 1. However, compared to 2017, stability situation has slightly deteriorated in 2018 mainly due to worsening in external economy, capital and profitability, funding and liquidity, and Non-Financial Corporations (NFC) components. Rise in crude oil price and LIBOR rate along with increasing current account deficit are the primary causes for the worsening in the external economy component while rise in Debt/Equity ratio of the NFCs caused deterioration in NFC component. Rising gross NPL ratio in both banks and FIs caused deterioration in financial market condition component. Similarly, decline in ROA and CRAR negatively affected the Capital & Profitability component. Funding and liquidity component experienced slight deterioration primarily due to sluggish growth in deposit compared to credit growth.

The detailed component wise analysis is explained below while the scores are summarized in Appendix-XLIII.

External economy component: Trading partners' real GDP growth, inflation in import partners and unemployment in top inward remittance partners remained mostly stable in both 2017 and 2018. But both oil price and LIBOR rate increased in 2018 which might induce rise in production cost and also import inflation along-with reverting foreign investment from Bangladesh to the developed countries. Moreover, rise in current account deficit and slight decline in import coverage (in months) also indicate added stress for the financial system.

Domestic economy component: Low level of external debt, small fluctuation in exchange rate and low and stable inflation are all favorable from financial stability point of view. Though a little rise in output gap might indicate a slight overheating of the economy, the overall domestic economy component appears to be quite stable with low risk of triggering stability threats for the financial system.

Household component: Low household debt to GDP, better credit portfolio quality in household sectors and improving remittance to GDP ratio indicate that this sector is less risky for financial system of Bangladesh.

6 It contains 8 components and 37 indicators. Standardized scores for the indicators have been calculated using a formula [Standardized Score = $(x_i$ - min)/(max-min)] where maximum and minimum values are incorporated using time series data and in some cases, by assigning appropriate threshold values. Threshold values are selected using judgment, economic logic and experience of other countries. The components are calculated using weighted average of the indicators and component scores are plotted in the map (in a scale of 0 to 1). The components closer to the origin indicate lower risk while components further from the origin indicate higher risk.

Non-financial corporation component: High proportion of bank loans held by top NFCs[7] and high debt-equity ratio of large NFCs are found to be the two key risk factors for Bangladesh financial system.

Fiscal condition component: Low level of public debt and budget deficit indicates fiscal sector is apparently less risky for financial stability. However, low tax revenue to GDP ratio which showed some recent improvement can be a possible stability concern.

Financial market component: Due to deterioration in asset quality in both banks and FIs, the overall component is found moderately risky. Apart from adequate provisioning against gross NPL, falling asset concentration of D-SIBs, declining risk weighted asset density ratio and fall in market P/E ratio have helped to keep the risk to a moderate level. However, low proportion of deposit covered by deposit insurance trust fund could be another potential source of stability risk.

Capital and profitability component: Inadequate CRAR to meet capital conservation buffer requirement and substantial decline in ROA (mainly due to higher provision requirement against GNPL) are the two prime reasons behind the high risk perception in this component.

Funding and liquidity component: Found to be risky as worsening of the liquidity situation is identified in each of the three indicators. It appears that mismatch between lending and deposit growth might have caused liquidity stress for some of the banks in the system.

In a nut shell, the stability map shows a moderate level risk for the Bangladesh macro-financial system. Addressing possible risks from the external economy along-with improvement in capital, profitability and liquidity condition may contribute to enhancing the stability of the Bangladesh financial system in the near-term.

7 In this study, Non-financial Corporation (NFC) mainly refers to large systemic borrowers who are engaged in non-financial business. FSD used discretion in determining the NFCs and this definition may differ from the official group definition used by BB.

Chapter 2

BANKING SECTOR'S PERFORMANCE

The banking system in Bangladesh appeared to be mostly resilient in 2018. A modest asset growth, led primarily by growth in loans and advances, was observed during the review year. Though growth in loans and advances moderated, still it continued to outpace the deposit growth. However, accumulation of higher deposits in earlier periods seemed to provide the required stability to the banking sector's deposit base. Asset quality of the banking sector slightly deteriorated in CY18. Nevertheless, net NPL ratio remained the same as that of the previous year mainly due to maintenance of higher loan-loss provisions. Consequently, profitability declined during the review year. Capital to risk-weighted assets ratio (CRAR) of the banking industry, even though decreased slightly in the review year, remained above the regulatory minimum capital requirement. Banking industry also maintained Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR) well above the regulatory bechmarks. However, increase in advance-to-deposit ratio (ADR), particularly in PCBs, led towards a tighter liquidity condition.

2.1 FINANCIAL SYSTEM OF BANGLADESH

Based on the degree of regulation, the financial system in Bangladesh is comprised of three broad sectors, namely, formal sector, semi-formal sector and informal sector. The formal sector includes institutions under structured regulatory framework e.g., banks, financial institutions (FIs), insurance companies, capital market intermediaries, such as brokerage houses, merchant banks etc., and micro-finance institutions (MFIs). The semi-formal sector includes institutions regulated by their own acts under different ministries of the Government, e.g. Bangladesh House Building Finance Corporation (BHBFC), Bangladesh Samabaya Bank Limited (BSBL), Grameen Bank etc., Non-governmental Organizations (NGOs) and discrete government programs. The informal sector is comprised of alternative financing entities and activities which are less regulated or unregulated.

Bangladesh Bank (BB) regulates and monitors the activities of banks and financial institutions (FIs). Currently, there are six (06) state-owned commercial banks (SCBs), three (03) specialized development banks (SDBs), 41 domestic private commercial banks (PCBs and Islamic banks)[8], nine (09) foreign commercial banks (FCBs), five (05) non-scheduled banks, and 34 financial institutions (FIs) operating in Bangladesh. Bangladesh Securities and Exchange Commission (BSEC) regulates and supervises the capital market, comprising of two (02) stock exchanges - Dhaka Stock Exchange (DSE) and Chittagong Stock Exchange (CSE). The major capital market intermediaries are merchant banks, stock brokers, dealers, security custodians, credit rating agencies and asset management companies. At present, 61 merchant banks, eight (08) credit rating companies, 492 depository participants (stock dealers, brokers, security custodians), 39 asset management companies are operating in Bangladesh. Insurance companies and micro-finance institutions are supervised by the Insurance Development and Regulatory Authority (IDRA) and the Micro-credit Regulatory Authority (MRA) respectively. As of end-December 2018, 78 insurance companies and 806 registered micro-finance institutions are functioning in Bangladesh. Cooperatives and credit unions are regulated by the Department of Cooperatives. Besides, the Ministry of Finance regulates Bangladesh House Building Finance Corporation (BHBFC), Investment Corporation of Bangladesh (ICB) and five (05) non-scheduled banks.

8 Very recently, 3 new banks have been awarded license to operate banking business in Bangladesh.

The composition of Bangladesh financial system has been depicted in the following Table.

TABLE 2.1: FINANCIAL SYSTEM OF BANGLADESH

		Financial Markets	Institutions		Regulators
Financial System	Formal Sector	Money Market	Banks	SCBs (6) PCB (41) FCBs (9) SDBs (3)	BB
			FIs	Govt. Owned (2) Others (32)	
		Capital Market	DSE CSE	Merchant Banks (61) Credit Rating Companies (8) AMCs (39) DPs (492)	BSEC
		Insurance Market	Life Non-Life	Govt. Owned (2) Others (76)	IDRA
		Micro Credit Market		MFIs (806)	MRA
	Semi-formal Sector	BHBFC, PKSF, Samabay Bank & Grameen Bank			
	Informal Sector				

2.2 ASSET STRUCTURE OF THE BANKING SECTOR

A modest asset growth of 11.5 percent was observed in CY18, led primarily by growth in loans and advances. However, the asset growth demonstrated a declining trend in recent years largely due to deceleration in deposit growth.

The banking sector assets reached BDT 14,566.9 billion in CY18, registering a moderate growth of 11.5 percent from that of CY17. The growth was slightly lower than that of the previous year (12.4 percent). It can be mentioned that banking sector experienced declining trend in asset growth since CY15, however, notable decline was observed in CY18.

CHART 2.1: TOTAL ASSET GROWTH :Y-O-Y BASIS

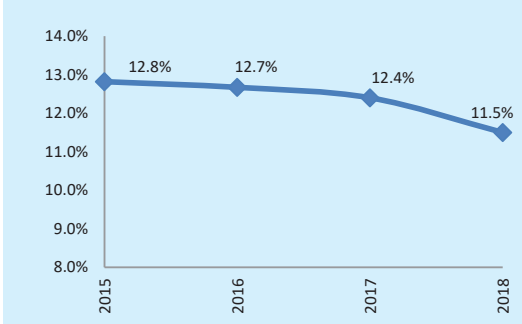
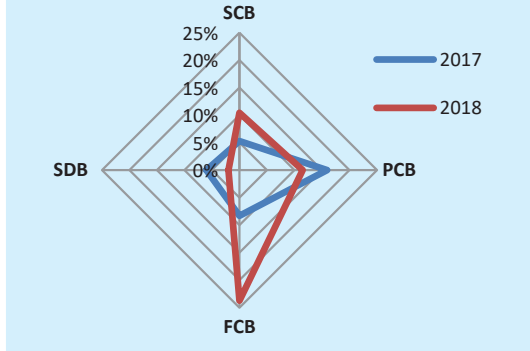


CHART 2.2: ASSET GROWTH OF BANKING CLUSTERS



Source: *DOS, BB; compilation: FSD, BB.*

Among the different banking clusters, FCBs had the highest asset growth followed by SCBs while the growth slowed down in PCBs and SDBs (Chart 2.2). The main driver of the asset growth was the loan growth. In CY18, banking sector's loans and advances grew by 14.1 percent compared to 18.9 percent in CY17. Low deposit growth, and BB's instruction to bring down the Advance-to-Deposit Ratio (ADR) within the regulatory limit, among others, might have slowed down the loan growth in CY18. Considering asset structure, loans and advances constituted the highest share of banking sector assets followed by investment in CY18. Loans and advances accounted for 66.5 percent (65 percent in CY17) of total assets while investment constituted 13.4 percent (14.7 percent in CY17) (Chart 2.3). Chart 2.4 also shows that the growth of loans and advances moderated in CY18 after a strong growth in CY17. The overall investment remained almost similar to that of CY17 as the decline in investment in government securities was offset by increase in investments in other securities.

CHART 2.3: YEAR-WISE BANKING SECTOR ASSET STRUCTURE

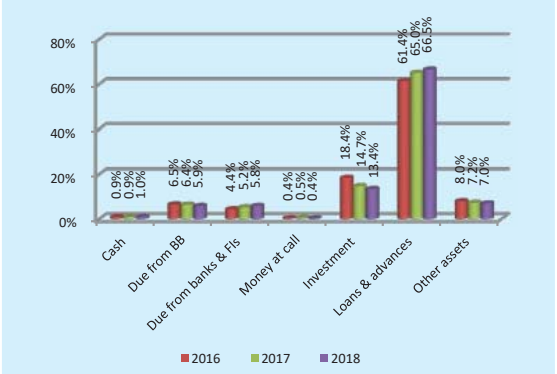
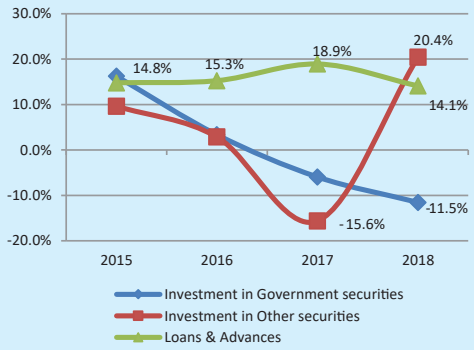


CHART 2.4: YEAR-WISE GROWTH OF LOANS AND ADVANCES AND INVESTMENT IN SECURITIES



Source: *DOS, BB; compilation: FSD, BB.*

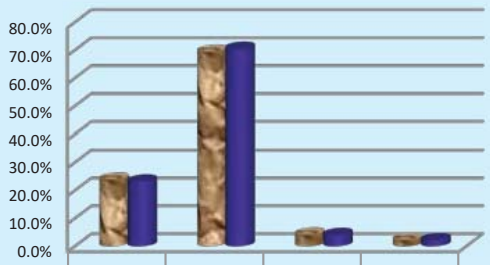
Among different categories of banks, SDBs and PCBs had higher share of loans and advances (80.3 and 74.3 percent respectively) while SCBs possessed the lowest proportion (48.5 percent) in their asset mix. It can be noted that stringent MOUs with BB accompanied by high NPLs might have induced SCBs to invest more in money market rather than expanding loans and advances.

PCBs held major proportion of earning assets of the banking sector which might enhance stability through asset quality improvement. However, liquidity situation of the PCBs needs to be dealt cautiously.

In CY18, the share of major earning assets[9] of PCBs increased by 100 basis points while the same of SCBs declined by 70 basis points (Chart 2.5). The market shares of the earning assets of other two categories of banks declined marginally from CY17. The higher market share of the earning assets of the PCBs reflects a positive sign for financial system stability as the PCBs possess better asset quality and higher capital to risk weighted asset ratio compared to those of the SCBs.

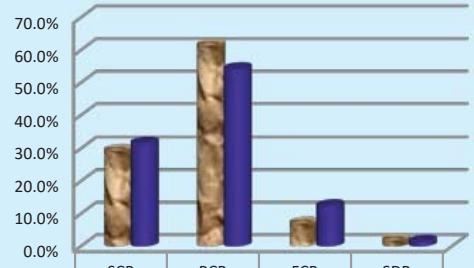
Chart 2.6 demonstrates market shares of liquid assets of different categories of banks. The chart shows that PCB's market share declined substantially whereas the same increased moderately for the SCBs. In particular, SCBs' share increased by 2.3 percentage points, while the share of the PCBs reduced by 7.2 percentage points. It appears that PCBs are reducing their liquid asset holdings while focusing more on earning assets.

CHART 2.5: SHARE OF EARNING ASSETS OF DIFFERENT CATEGORIES OF BANKS



	SCB	PCB	FCB	SDB
2017	23.9%	69.5%	4.3%	2.4%
2018	23.2%	70.5%	4.1%	2.2%

CHART 2.6: SHARE OF LIQUID ASSETS OF DIFFERENT CATEGORIES OF BANKS



	SCB	PCB	FCB	SDB
2017	29.4%	61.5%	7.1%	2.0%
2018	31.7%	54.3%	12.5%	1.6%

Source: *DOS, BB; compilation: FSD, BB.*

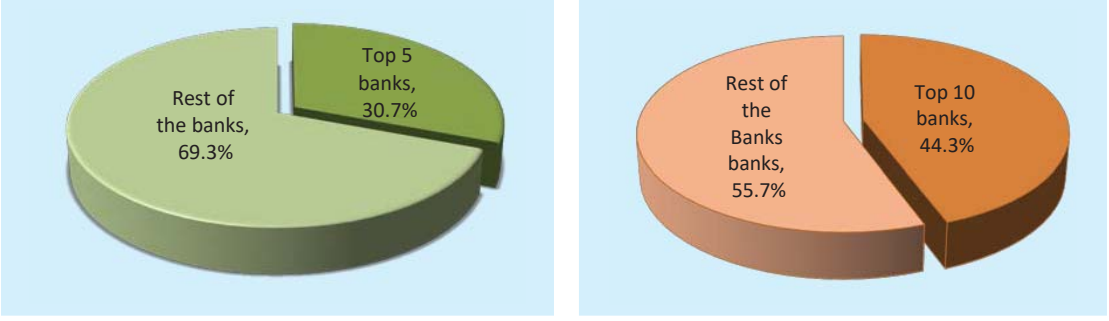
9 Earning assets include loans and advances and investment. Liquid assets include cash, dues from BB, dues from banks and FIs and money at call and short notice.

However, the substantial reduction in liquid asset holdings along with a very high ADR might trigger liquidity stress in some of the PCBs. To avoid such problem, Bangladesh Bank has already instructed the banks to bring down their ADR within allowable limit by September 2019.

Compared to CY17, concentration of assets within a few banks and sector-wise loan concentration remained almost unchanged in CY18.

Chart 2.7 shows that concentrations of assets within the top five (5) and top 10 banks were 30.7 percent and 44.3 percent respectively as of end-December 2018, which were 30.8 percent and 44.3 percent at end-December 2017 indicating almost unchanged scenario. In CY18, the list of top 10 banks included five (5) PCBs, four (4) SCBs and one (1) FCB. Noteworthy, PCBs and SCBs covered 67.0 percent and 25.6 percent of the total assets of the banking industry respectively; FCBs and SDBs shared 5.1 and 2.2 percent respectively.

CHART 2.7: TOP 5 AND TOP 10 BANKS BASED ON ASSET SIZE (CY18)



Source: *DOS, BB; calculation: FSD, BB.*

In case of sector-wise loan concertation, the calculated Herfindahl-Hirschman Index (HHI) of 1393.30 points in CY18 indicates slight increase of concentration risk from CY17 when the index value was 1372.3. In CY17, there were five sectors having double digit market share while in CY18 only four sectors had such concentration. The latest index indicates a moderate level of sectoral concentration of loans and advances in the banking sector. Among the different economic sectors, large industries showed 25.98 percent concentration in the total loan portfolio, followed by wholesale and retail trade with a share of 17.78 percent (Table 2.2).

TABLE 2.2: SECTOR-WISE LOAN CONCENTRATION (CY18)

Sl No.	Sector	Amount (In Billion BDT)	Percent of Total	HHI*
1	Large Industries	2342.46	25.98	675.03
2	Wholesale and Retail Trade (CC, OD etc.)	1603.29	17.78	316.23
3	Import Financing (LIM, LTR, TR etc.)	995.57	11.04	121.93
4	Miscellaneous	968.54	10.74	115.40
5	Small and Medium Industries	736.01	8.16	66.64
6	Service Industries	536.07	5.95	35.35
7	Export Financing(PC, ECC etc)	423.83	4.70	22.10
8	Agriculture	383.01	4.25	18.05
9	Housing (Commercial): Developer/Contractor	252.68	2.80	7.85
10	Housing (Residential): Urban Area, Individual	244.27	2.71	7.34
11	Other Construction	211.85	2.35	5.52
12	Infrastructure Development (Road, Culvert, Bridge,Tower etc.)	89.90	1.00	0.99
13	House Renovation/Repairing/Extension	44.86	0.50	0.25
14	Fishing	34.00	0.38	0.14
15	Lease Financing/Leasing	32.19	0.36	0.13

Sl No.	Sector	Amount (In Billion BDT)	Percent of Total	HHI*
16	Road Transport (Excluding Personal Vehicle & Lease Finance)	30.83	0.34	0.11
17	Water Transport (Excluding Fishing Boats)	30.29	0.34	0.11
18	Housing (Residential): Rural Area, Individual	21.19	0.24	0.06
19	Air Transport	14.12	0.16	0.02
20	Cottage Industries/Micro Industries	12.11	0.13	0.02
21	Procurement by Government	8.09	0.09	0.01
22	Forestry and Logging	0.35	0.00	0.00
23	Water-works	0.32	0.00	0.00
24	Sanitary Services	0.10	0.00	0.00
	Total loans and advances	**9015.93**	**100**	**1393.30**

Source: *Statistics Department, BB; computation: FSD, BB.*
** HHI = Herfindahl–Hirschman Index.*
Note: Total loans and advances exclude bills payable and OBU figures.

2.3 NONPERFORMING LOANS, PROVISIONS, WRITTEN-OFF LOANS AND ADVANCES IN THE BANKING SECTOR

Asset quality deteriorated in CY18 as gross nonperforming loan ratio showed an upward trend throughout the CY18. Particularly, rising NPL ratio in the SCBs appeared to be a concern as these banks have dragged down overall asset quality of the banking sector.

The gross nonperforming loan (NPL) ratio[10] in the banking sector showed an upward trend throughout CY18, though quarterly fluctuations were observed (Chart 2.8). The ratio reached 10.3 percent in CY18 from 9.3 percent in CY17. In quantum term, gross NPL increased by BDT 196.1 billion to BDT 939.1 billion in CY18.

CHART 2.8: GROSS NPL RATIO OF BANKING INDUSTRY

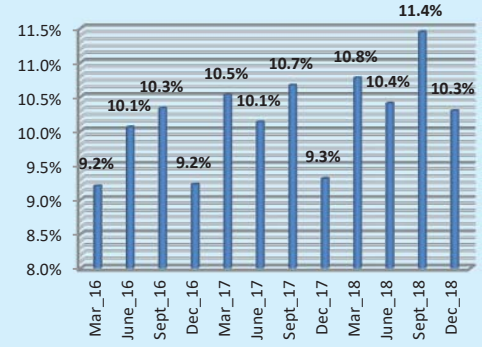
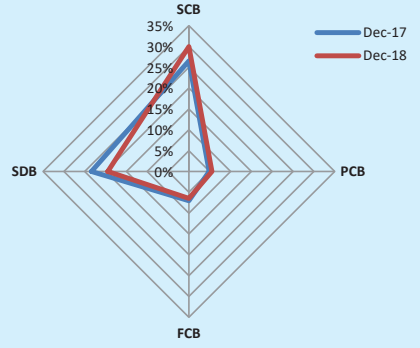


CHART 2.9: GROSS NPL RATIO OF BANKING CLUSTERS (DEC, 2017- 2018)

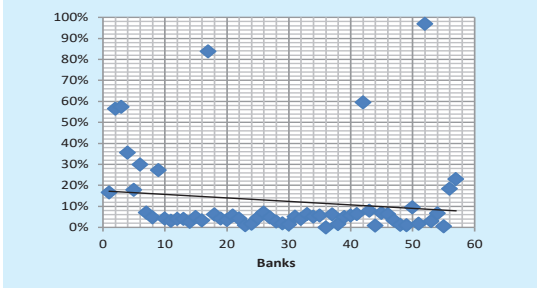


Source: *BRPD, BB; compilation: FSD, BB.*

Considering gross NPL ratios of different categories of banks, it appears that main driving force for rise in industry's overall NPL ratio was deterioration of asset quality in SCBs and a few PCBs (Chart 2.9). The NPL ratio of SCBs increased by 3.5 percentage points and reached 30 percent at end-December 2018. SDBs achieved some improvement as their NPL ratio dropped by 3.9 percentage points. Despite the improvement, the ratio still remained high (19.5 percent). The NPL ratio of the PCBs increased by 60 basis points and reached 5.5 percent while the same for FCBs remained almost stable at 6.5 percent at end-December 2018.

10 Total classified loans as a percentage of total loans outstanding.

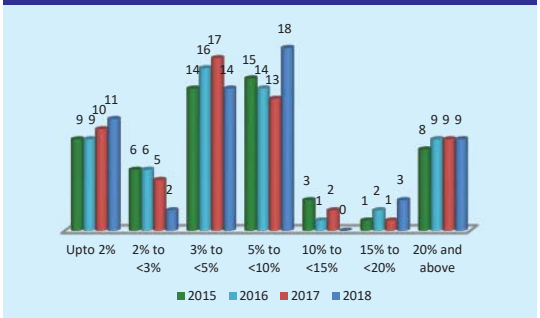
CHART 2.10: GROSS NPL RATIO OF INDIVIDUAL BANKS (END-DECEMBER 2018)



Source: *BRPD, BB; computation: FSD, BB.*

Chart 2.10 shows gross NPL ratio of individual banks. It is evident from the chart that bank-wise gross NPL is widely dispersed. Out of 57 banks, 45 banks had single digit gross NPL ratio in CY18. However, poor performance of a few banks dragged down the overall asset quality of the banking system.

CHART 2.11: GROSS NPL RATIO OF BANKS INTO DIFFERENT BUCKETS



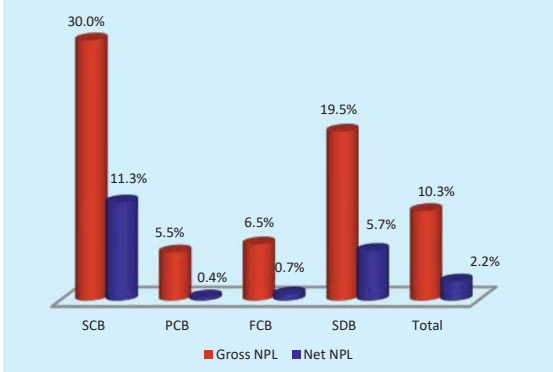
Source: *BRPD, BB; Computation: FSD, BB.*

Chart 2.11 presents distribution of banks based on their NPL ratios. The distribution shows that the number of banks with gross NPL ratios of 10 percent or above remained unchanged at 12 in both CY17 and CY18. However, in CY18, all 12 banks had NPL ratios of 15 percent and above indicating relative deterioration in asset quality.

A total of 9 banks (4 SCBs, 1 SDB, 3 PCBs and 1 FCB) had gross NPL ratio of 20 percent and above. These banks' asset quality remained mostly unchanged compared to CY17. However, 45 banks maintained single digit NPL ratio. Eight out of 9 FCBs recorded single digit gross NPL ratio, while all PCBs except 3 experienced less than 10 percent gross NPL ratio as of December 2018. Moreover, low NPL ratios were observed in banks which commenced operation in 2013 except one bank.

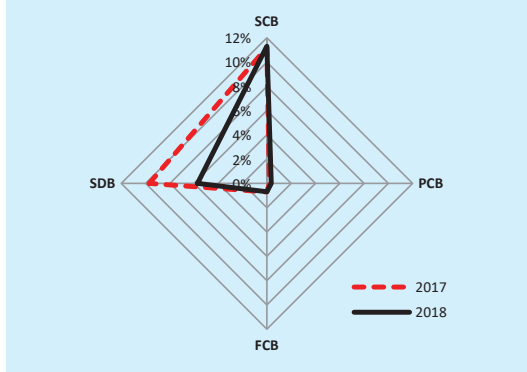
Despite one percentage point increase in gross NPL ratio, net NPL ratio[11] remained mostly unchanged at 2.2 percent compared to the ratio of the preceding year, mainly due to higher provision maintenance.

CHART 2.12: GROSS AND NET NPL RATIO IN CY18



Source: *BRPD, BB; compilation: FSD, BB.*

CHART 2.13: NET NPL RATIO OF BANKING CLUSTERS (DEC 17 & 18)



Source: *BRPD, BB; compilation: FSD, BB.*

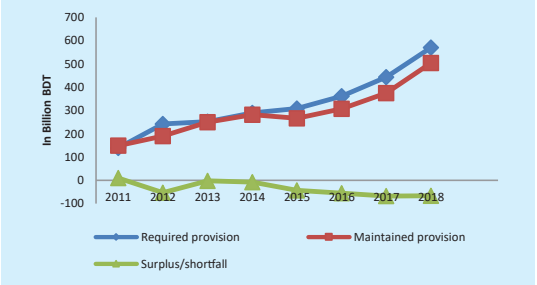
11 Net NPL ratio = (Gross NPLs - Loan-loss Provisions – Interest Suspense)/(Total Loans Outstanding - Loan-loss Provisions – Interest Suspense).

Chart 2.12 illustrates that the industry's net NPL ratio stood at 2.2 percent after netting of specific provision and interest suspense from gross NPL ratio of 10.3 percent. The lower the net NPL ratio, the more resilient the system is thought to be to withstand any endogenous or exogenous shocks. Therefore, it can be argued that despite increase in gross NPL ratio, the banking system remained resilient almost similar to the preceding year.

Chart 2.13 shows change in net NPL ratio of different categories of banks. Though PCBs held the largest share of industry assets, their net NPL ratio remained considerably low. However, a slight increase in their net NPL ratio was observed in CY18. FCBs also had very low and unchanged net NPL ratios. These banks seem to be fairly resilient against stability threat emanated from asset quality deterioration. On the other hand, double digit net NPL ratios of the SCBs indicate a weaker resilience of these banks. Both provision requirement and provision shortfall increased for the SCBs in CY18. The industry's net NPL ratio did not deteriorate because of the higher provision maintained by other categories of banks. Some of the SCBs also enjoyed phased-in provisioning arrangement. However, to improve their financial health, these banks need to bring down their gross and net NPLs to a manageable level through ensuring good governance and better risk management practices.

In CY18, all banks except four (4) SCBs, and 11 PCBs maintained loan loss provision as per regulatory requirement of BB.

CHART 2.14: YEAR-WISE BANKING SECTOR LOAN LOSS PROVISIONS

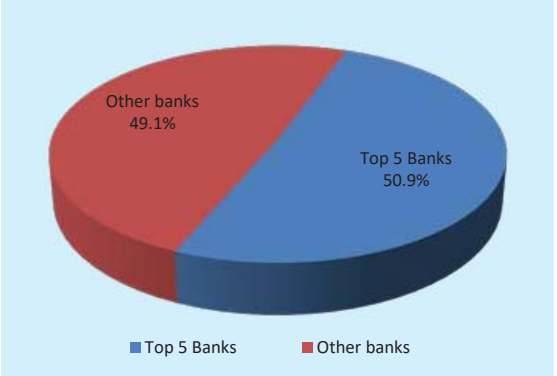


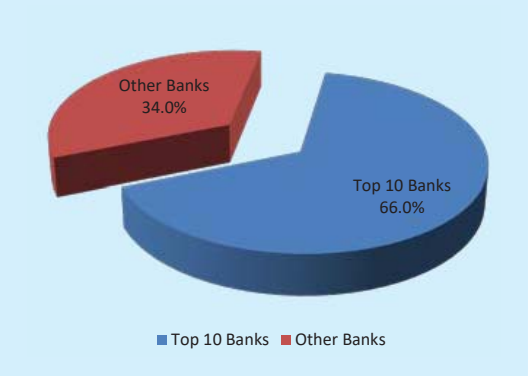
Source: *BRPD, BB; computation: FSD, BB.*

The gross NPLs increased by BDT 196.1 billion between CY17 and CY18. These new NPLs along with the previous cumulative NPLs required banks to maintain cumulative provisions of BDT 570.4 billion as of end-December 2018 against which banks actually maintained provisions amounting to BDT 504.3 billion. The maintained provision in CY18 was around BDT 129 billion higher than that of CY17. Consequently, provision maintenance ratio increased from 84.7 percent in 2017 to 88.4 percent in 2018. Similarly, maintained provision to gross NPL ratio increased from 50.5 percent to 53.7 percent during the same period. The improvement in the ratio is attributable to surplus provision maintained by different categories of banks except the SCBs. The SCBs experienced a provision shortfall of BDT 78.6 billion in CY18 (BDT 82.6 billion in CY17). Besides, 11 PCBs also had an aggregate provision shortfall of BDT 16.4 billion during CY18. The provision shortfall both in terms of amount and number of banks increased in CY18 from CY17.

Top 5 and top 10 banks held nearly 51 percent and 66 percent of NPLs respectively.

CHART 2.15: TOP 5 AND TOP 10 BANKS BASED ON GROSS NPL SIZE (CY18)





Source: *BRPD, BB; compilation: FSD, BB.*

The gross NPLs concentration ratios (based on the size of gross NPLs) of the top 5 and top 10 banks were 50.9 and 66.0 percent respectively as of end-December 2018 compared to the corresponding figures of 49.2 and 65.5 percent respectively in CY17. All of the top 5 banks were SCBs while top 10 banks included 5 SCBs, 4 PCBs and 1 SDB.

The sector-wise NPL distributions didnot show much concentration of NPL in any particular sector except trade and commerce in CY18.

Table 2.3 shows a modest concentration of NPLs across different sectors of the economy in CY18. However, NPL concentration increased in trade and commercial loans. Compared to CY17, the share of loans to trade and commerce sectors decreased by 0.7 percentage point in CY18 while the share of NPL to this sector increased by 4.4 percentage points. Loan disbursement to this sector needs to be monitored intensively due to it's deteriorating asset quality.

TABLE 2.3: SECTOR-WISE NONPERFORMING LOANS DISTRIBUTION (CY18)

(Amount in billion BDT)

Sl. No.	Name of Sector	Total loans outstanding	Gross NPL	Gross NPL Ratio	% share of loans extended to a particular sector	% share of NPLs of a particular sector
1	**Agriculture**	374.5	47.3	12.63%	4.1%	5.0%
2	**Industrial (Manufacturing):**					
2.1	RMG	1079.2	116.2	10.77%	11.8%	12.4%
2.2	Textile	710.4	62.3	8.77%	7.8%	6.6%
2.3	Ship building and Ship breaking	135.0	26.8	19.84%	1.5%	2.9%
2.4	Agro-based Industry	585.6	64.6	11.04%	6.4%	6.9%
2.5	Other Industries (Large Scale)	1451.6	110.7	7.63%	15.9%	11.8%
2.6	Other Industries (Small, Medium and Cottage)	396.1	52.0	13.12%	4.3%	5.5%
3	**Industrial (Services):**					
3.1	Construction	614.3	58.3	9.49%	6.7%	6.2%
3.2	Transport and Communication	150.9	17.9	11.83%	1.7%	1.9%
3.3	Other Service Industries	326.6	25.3	7.74%	3.6%	2.7%
4	**Consumer Credit:**					
4.1	Credit Card	45.3	2.8	6.09%	0.5%	0.3%
4.2	Auto (Car)	25.8	0.6	2.26%	0.3%	0.1%
4.3	Housing Finance	159.3	11.3	7.11%	1.7%	1.2%
4.4	Personal	246.0	9.2	3.73%	2.7%	1.0%
5	**Trade and Commerce (Commercial Loans)**	2037.3	265.9	13.05%	22.4%	28.3%
6	**Credit to NBFI**	77.8	2.3	2.97%	0.9%	0.2%
7	**Loans to Capital Market:**					
7.1	Merchant Banks	23.8	0.4	1.68%	0.3%	0.0%
7.2	Other than Merchant Banks	19.1	0.1	0.57%	0.2%	0.0%
8	**Other Loans**	656.4	65.1	9.91%	7.2%	6.9%
	Total	**9115.1**	**939.1**	**10.3%**	**100.0%**	**100.0%**

Source: *Scheduled Banks and DOS, BB; compilation: FSD, BB*

Bad/Loss loans to gross NPL ratio dropped marginally in CY18 from CY17, but still remained high.

The percentage of bad/loss (B/L) loans to gross NPL declined to 85.9 percent in CY18 from 87.0 percent in CY17. Despite some improvement over CY17, the high bad loan ratio indicates that major portion of the NPL has not been performing for a longer period of time which is not desirable from the financial stability point of view. The other two categories of classified loans, sub-standard (SS) and doubtful (DF) constituted 9.4 percent (7.5 percent in CY17) and 4.7 percent (5.5 percent in CY17) of the total NPL respectively (Chart 2.16).

CHART 2.16: GROSS NPLS COMPOSITION IN CY18

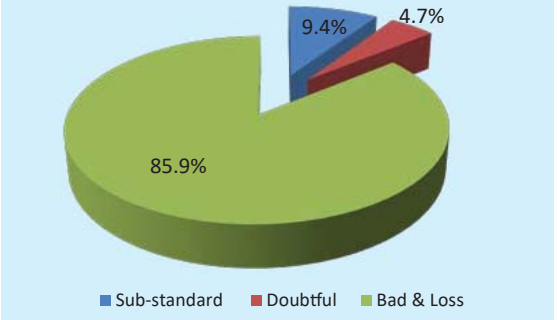
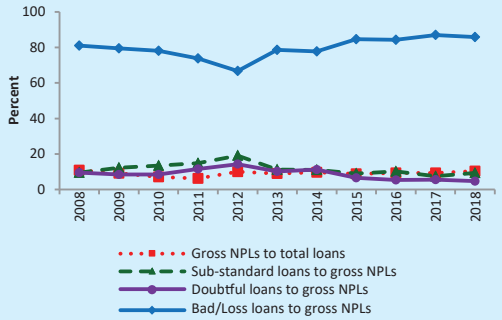


CHART 2.17: YEAR-WISE RATIOS OF THE THREE CATEGORIES OF NPLS



Source: *BRPD, BB; computation: FSD, BB.*

Chart 2.17 illustrates that the proportion of bad/loss (B/L) loans has been increasing since 2012 and remained above 80 percent of the gross NPL over the years. B/L loans of the banking sector reached BDT 806.9 billion in CY18, recording an increase of BDT 160.7 billion from BDT 646.2 billion of CY17. Higher B/L loans adversely affected profitability and capital base of the banks as they were required to maintain 100 percent provision against such classified loans.

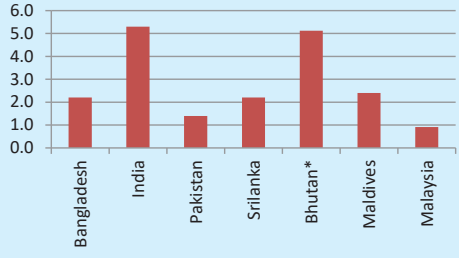
The outstanding balance of written-off loans stood at BDT 401.0 billion at end-December 2018.

Adversely classified loans of BDT 528.8 billion was written-off from the banks' balance sheet till December 2018,[12] which was BDT 481.9 billion at end of CY17. Indeed, written-off loans increased by BDT 46.9 billion during CY18. The cumulative written off amount roughly accounts for 4.1 percent of banking sector on-balance sheet assets at end-December, 2018. However, out of the total written off loans, banks have been able to recover BDT 127.8 billion till end-December, 2018 and thus the outstanding balance of written off loans stood at BDT 401.0 billion. It should be noted that despite the loans being written off, the legal procedures against the defaulted borrowers continue and initiatives persist by the banks for successful recovery of those loans.

BOX 2.1: NONPERFORMING LOANS AND FINANCIAL STABILITY

Rising NPL in the banking sector has been a major concern from the viewpoint of financial stability across the world. The global financial crisis of 2007-08, originated from the default of subprime mortgages in the US, demonstrated how poor asset quality of the banking sector can threaten financial stability of an economy. Large amount of NPLs augment a bank's provision requirement, reduce profitability and eventually erode capital base leading to bank insolvency, which may trigger system-wide instability in the financial sector. Besides, due to NPLs, it is hard for banks to reduce lending cost, which obstructs private investment and economic growth. In this context, this study has been endeavored to understand the nature and dynamics of NPL scenario of the banking sector of Bangladesh.

CHART B 2.1.1: NET NPL RATIOS IN SOUTH AND EAST ASIAN COUNTRIES (END- DECEMBER, 2018)



Source: *Websites of central banks.*
** Data as on September, 2018.*

The net NPLs as a percentage of total loans outstanding in the banking sector of Bangladesh is relatively low among the neighboring South and East Asian countries. Within SAARC countries, the ratio is much lower compared to India and Bhutan (Chart B2.1.1).

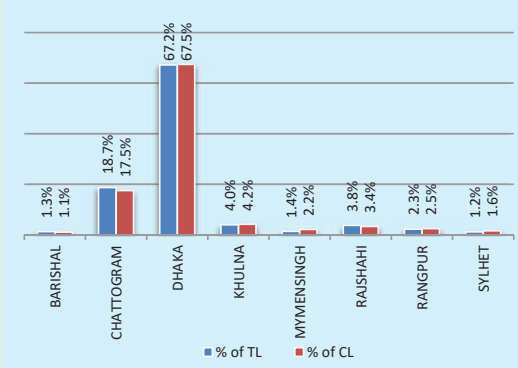
12 Source: BRPD, BB. Provisional data has been used and some of the values for CY17 are revised.

Geographical and Sectoral Concentration of NPLs

Both loans outstanding and NPLs had high geographical concentration in Dhaka and Chattogram regions. Among different sectors, proportionately higher NPLs in trade and commerce appeared to be one of the key reasons behind the higher NPLs in the industry.

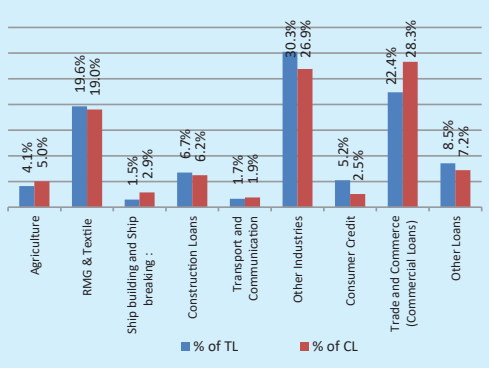
From Chart B 2.1.2, it is observed that loans were mainly concentrated in Dhaka (67.2 percent) followed by Chattogram (18.7 percent). Considering these two regions, they comprised almost 86 percent of total outstanding loans in banking sector. Geographical concentration of NPLs also follow this trend as Dhaka had 67.5 percent while Chattogram had 17.5 percent of classified loans. These statistics indicate that the current geographical concentration of loans does not seem to be a critical reason behind the rise in NPLs as NPL concentration matched with the loan concentration in these regions. Most of the sectors had similar or lower share of total NPLs against their share of total loans except trade and commerce as of end-December 2018 (Chart B 2.1.3). NPLs in trade and commerce sector were proportionately higher than their share in total industry's loans in CY18.

CHART B 2.1.2 : GEOGRAPHICAL CONCENTRATION OF LOANS AND NPLs



Source: *Statistics Department, BB*

CHART B 2.1.3 : SECTORAL CONCENTRATION OF LOANS AND NPLs



Source: *DOS, BB*

A closer look at SCBs' NPL scenario

Poor performance in the SCBs was not due to their exposure to any particular sector or their involvement in financing the public enterprises. Rather, overall inefficiency in loan management seems to be the prime reason behind deterioration in asset quality of the SCBs.

There has been a long standing perception that SCBs generally provides loans to public enterprises which subsequently turn into NPL. Therefore, this study has conducted an investigation on SCBs' loans to public enterprises. It can be observed from Table B2.1.1 that the banking sector supplied only 1.5 percent of its total loan portfolio to public enterprises, of which around 95 percent was provided by SCBs as on June 2018. However, these loans accounted for only 7.7 percent of SCBs' total loan portfolio. Moreover, only 6.8 percent of public enterprises' loans provided by SCBs became nonperforming, which stood at only 0.5 percent against SCBs' total loans outstanding. Thus, public enterprises' loans do not appear to have any significant influence in rising NPLs of SCBs.

TABLE B 2.1.1: LOANS TO PUBLIC ENTERPRISES AS ON JUNE 2018

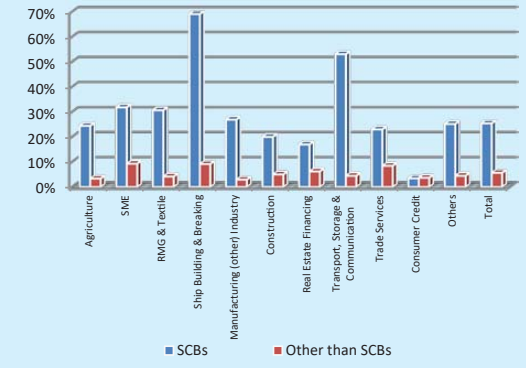
(Amount in Billion BDT)

Bank	Total Loans Disbursed	Loans Disbursed to Public Enterprises (% of Total Loans)	NPLs of Public Enterprises (as % of total loans to PEs and as % of total loans)	Bad/Loss Loans to Public Enterprises (B/L Loans to Public Enterprises)
SCBs	1557.9	120.6 (7.7%)	8.2 (6.8% and 0.5%)	2.75 (2.3%)
Other Banks	6912.3	6.2 (0.1%)	0.1 (1.9% and 0.0%)	0.0 (0.0%)
Total	**8470.2**	**126.9 (1.5%)**	**8.3 (6.6% and 0.1%)**	**2.9 (2.3%)**

Source: *Statistics Department, BB*

In the context of the above findings, this study further investigates the possible factors liable for high NPLs in SCBs. To this end, SCBs' sectoral loans vis-a-vis other bank groups (e.g., PCBs, Islamic Banks and FCBs) have been analyzed to find if there is any sectoral bias in terms of NPLs.

CHART B 2.1.4: SECTORAL NPL RATIO: SCBS VS. OTHER BANK GROUPS AT END-SEPTEMBER 2018

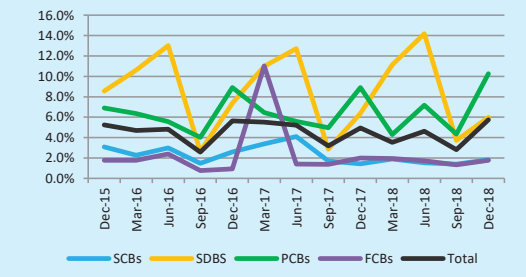


Source: *FPM data, FSD, BB*

Broadly, loans are provided to 11 major sectors by SCBs and their peer banking clusters. SCBs' loans to all sectors have performed poorer compared to those of other banks as of end-June 2018 (Chart B 2.1.4). For statistical validation, t-test[13] for sector-wise GNPL ratio of SCBs and other banking clusters was conducted using the annual data from June 2012 to June 2018. The t-test results showed that except for consumer credit and loans to ship breaking industry, SCBs' average GNPL ratio in each sector was statistically different from each of the other banking cluster's average GNPL ratio in the same sector. The Spearman's rank correlation test also shows that there are weak or very weak correlations between the ranks of SCBs and each of the other banking clusters, whereas correlations among the ranks of banking clusters other than SCBs are moderate or strong. As the GNPL ratios were found to be significantly higher in every sector for SCBs, therefore, results from t-test and rank correlation test indicate that higher GNPL ratios are not induced from the sectors' inherent characteristics, rather NPLs might have stemmed mainly from lack of good governance and poor credit risk management in SCBs.

Recovery and rescheduling of nonperforming loans

CHART B 2.1.5: BANKS' CLUSTER-WISE RECOVERY RATE OF NONPERFORMING LOANS

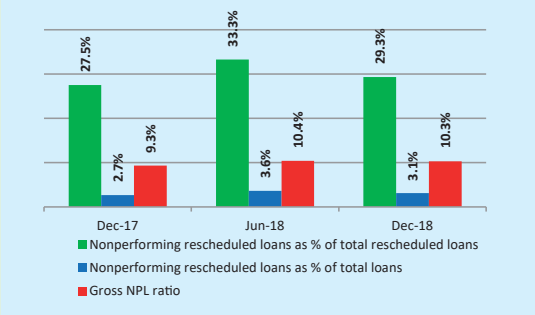


Source: *BRPD, BB; calculation: FSD, BB.*

A significant increase in NPL recovery along with higher rescheduling rates was observed during December quarters. This suggests that a significant portion of the recovery of NPLs might be the down payment against the rescheduled loans.

13 T-test assesses whether the means of two groups are statistically different from each other.

CHART B 2.1.6: STATUS OF NONPERFORMING RESCHEDULED LOANS



Source: *Scheduled Banks; calculation: FSD, BB.*

The analysis of rescheduled loans between December 2017 and December 2018 demonstrates that an average of 30 percent of the total rescheduled loans turned into nonperforming loans again during this period. Nonperforming rescheduled loans as a percentage of total loans constituted a significant portion of gross NPL ratios during the period. Also, nonperforming rescheduled loans to total rescheduled loans ratio was lower at end-December than that of end-June 2018, indicating the creation of new NPL from a portion of rescheduled loans at a higher rate in post-December periods.

Seasonality in NPL was observed in December quarters primarily caused by high rescheduled and written-off loans of the PCBs.

Chart B 2.1.7 and Chart B 2.1.8 depict that banking sector used to reschedule and write-off a large volume of NPLs, measured as rescheduling rate[14] and written-off rate[15], in December quarters, which was reflected in lower GNPL ratio in those quarters. Banks' cluster-wise analysis since December 2015 shows that PCBs' rescheduling and written off rates were consistently much higher than those of other banking clusters, particularly in December quarters. This seasonality in PCBs heavily influenced the banking industry's trend in rescheduling non-performing loans since these banks account for three-fourth of the banking sector loans and advances.

CHART B 2.1.7: BANKS' CLUSTER-WISE RESCHEDULING RATE OF NONPERFORMING LOANS

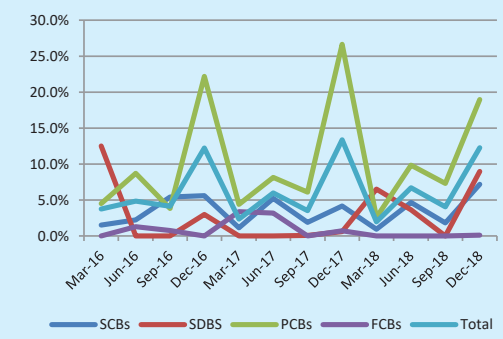
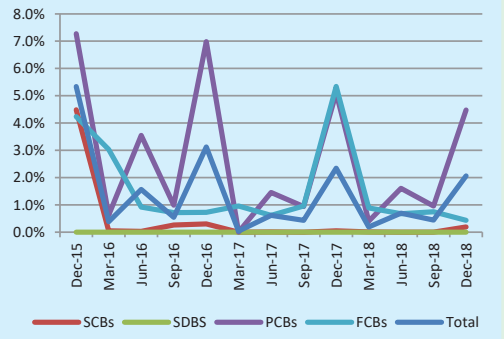


CHART B 2.1.8: BANKS' CLUSTER-WISE WRITTEN-OFF RATE OF NONPERFORMING LOANS



Source: *BRPD, BB; calculation: FSD, BB.*

2.4 RESCHEDULED LOANS AND ADVANCES

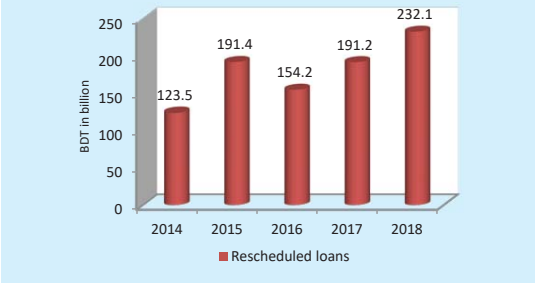
The rescheduled loans have exerted additional stress on the banking system in recent time as these constitute a significant part of the banks' total loan portfolio.

At end-December 2018, the loans that had been rescheduled for at least once, reached 10.6 percent of banks' total outstanding loans of which 70.7 percent were unclassified.

14 Rescheduling rate at current period = (Rescheduled loans during the period/Total nonperforming loans outstanding at the end of the preceding period)

15 Written-off rate at current period = (Written-off loans during the period/Total loans outstanding at the end of the preceding period)

CHART 2.18: RESCHEDULED LOANS



Source: *BRPD, BB; Computation: FSD, BB.*

Chart 2.18 shows the trend in rescheduled loans for the past five years. In 2018, the total rescheduled loan was BDT 232.1 billion, which was 24.0 percent higher than that of CY17. There could be several reasons for increase in rescheduled loans such as over-leverage, slow down in external demand for export oriented products, poor due diligence, and negligence in compliance of risk management practices.

Chart 2.19 illustrates the sector-wise composition of rescheduled loans at end-December 2018. Loans rescheduled in industrial sector (regardless of the size of the industries) were 26.8 percent while the same working capital was 8.2 percent to working capital. RMG & textile sector accounted for 21.2 percent of the industry's rescheduled loans. Among other categories, commercial loans, other non-specified sectors (including ship building and breaking, transportation and communication and consumer credit, etc.) and foreign trade (export credit, import credit and loans against trust receipts) shared 8.8 percent, 12.7 percent and 9.4 percent of the total rescheduled loans respectively.

CHART 2.19: SECTOR-WISE RESCHEDULED LOAN COMPOSITION

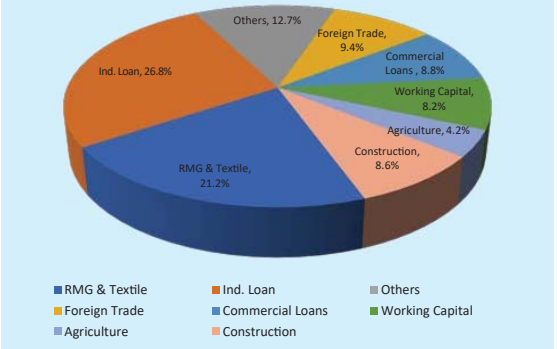
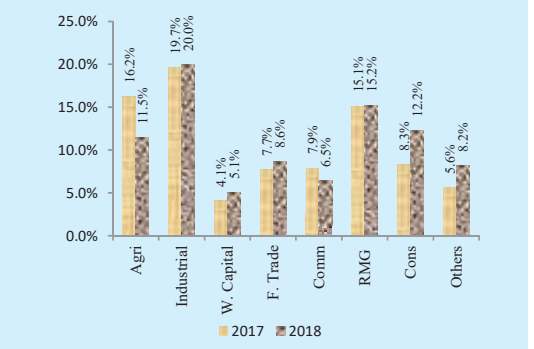


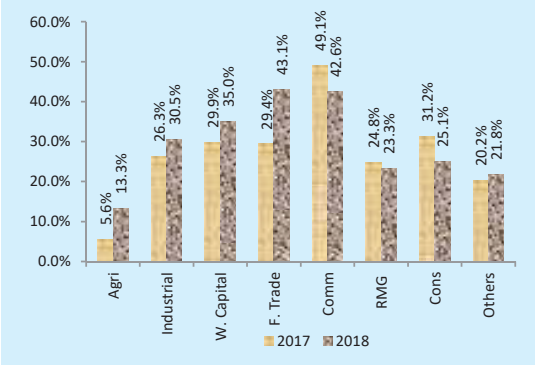
CHART 2.20: SECTOR-WISE RESCHEDULED LOAN RATIO



Source: *Scheduled Banks; computation: FSD, BB*

The rescheduled loan ratio (rescheduled loan/total loan outstanding) of industrial sector ranked the top of all sectors with 20.0 percent followed by RMG, construction and agricultural sectors with 15.2 percent, 12.2 percent and 11.5 percent respectively (Chart 2.20). Mentionable that Bangladesh Bank allowed banks to reschedule their short-term agricultural credit with relaxed down payments. The rates of rescheduled loans in the remaining sectors were below 10.0 percent.

CHART. 2.21: SECTOR-WISE NON-PERFORMING RESCHEDULED LOAN RATIO



Source: *Scheduled Banks; computation: FSD, BB.*

Chart 2.21 demonstrates the sector-wise non-performing rescheduled loans ratio. Although 6.5 percent of commercial loans were rescheduled, still 42.6 percent of those rescheduled loans remained as non-performing. The non-performing rescheduled loans ratio of construction, working capital, foreign trade and industrial sectors were 25.1 percent, 35.0 percent, 43.1 percent and 30.5 percent respectively. However, non-performing rescheduled loans of agricultural sector was relatively lower compared to other sectors.

Chart 2.22 exhibits the share of rescheduled loans to large, medium, small and micro & cottage industries. As of December 2018, 57.8 percent of total reschedule loans amounting to BDT 559.1 billion was under large size industries. Shares of Medium, others, small, and micro & cottage industries' were 14.7 percent, 18.2 percent, 7.3 percent and 2.1 percent respectively.

CHART 2.22: INDUSTRY-WISE RESCHEDULED LOAN COMPOSITION

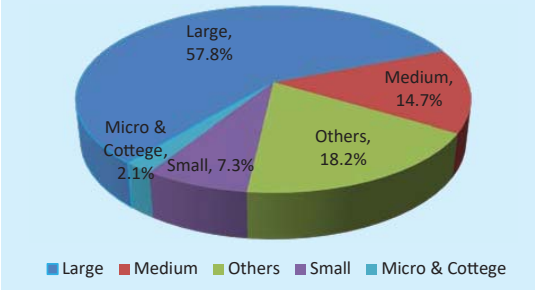
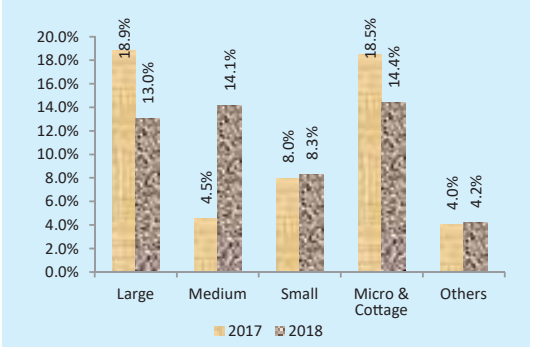


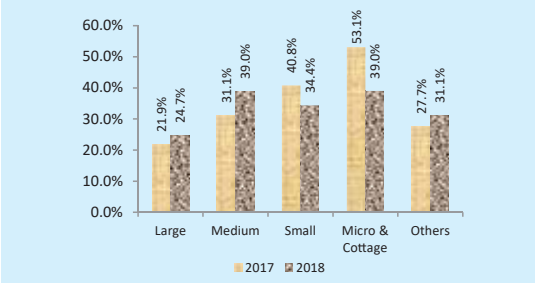
CHART 2.23: INDUSTRY-WISE RESCHEDULED LOAN RATIO



Source: *Scheduled Banks; computation: FSD, BB*

Chart 2.23 illustrates industry-wise rescheduled loan ratio at end-December 2018. The highest rescheduled loan ratio was observed in Micro & Cottage industries with 14.4 percent followed by Medium, Large and Small industries with 14.1 percent, 13.0 percent and 8.3 percent respectively.

CHART 2.24: INDUSTRY-WISE NON-PERFORMING RESCHEDULED LOAN RATIO



Source: *Scheduled Banks; computation: FSD, BB*

Chart 2.24 illustrates industry-wise non-performing rescheduled loan ratios. Although only 14.4 percent loans in micro & cottage industries were rescheduled, 39.0 percent of the rescheduled loans remained non-performing. Non-performing rescheduled loans ratio in medium industry was 39.0 percent while small, others, and large industries accounted for 34.4 percent, 31.1 percent and 24.7 percent respectively.

At end-December 2018, PCBs had the highest amount of rescheduled loans, which accounted for 56.1 percent of total rescheduled loans of the banking industry. During the same period, SCBs,

SDBs and FCBs shared respectively 40.1 percent, 2.9 percent and 0.9 percent of industry's aggregate rescheduled loans (Chart 2.25).

CHART 2.25: BANK CLUSTER-WISE RESCHEDULED LOAN COMPOSITION (CY18)

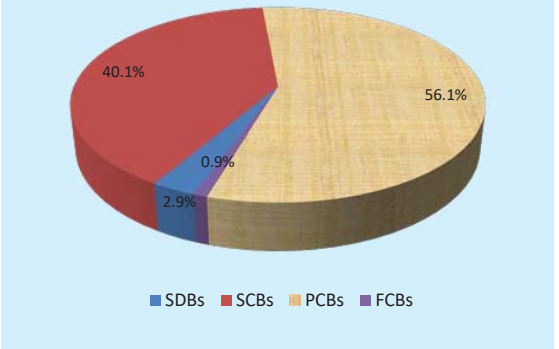
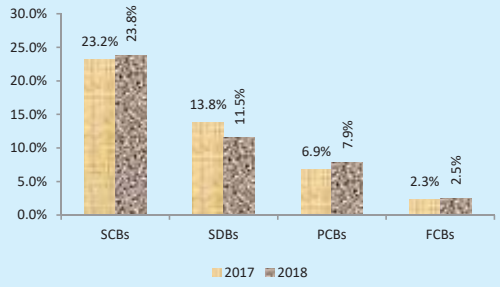


CHART 2.26: BANK CLUSTER-WISE RESCHEDULED LOAN RATIO

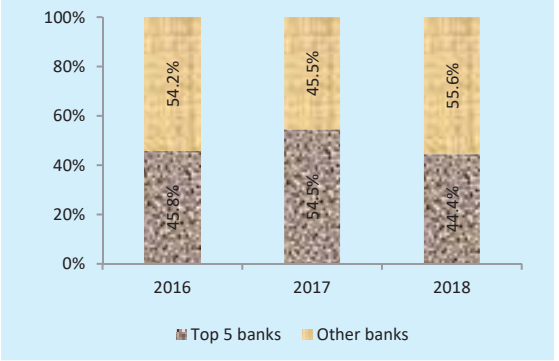


Source: *Scheduled Banks; computation: FSD, BB*

Chart 2.26 reveals that the SCBs, at end-December 2018, ranked top with rescheduled loan ratio of 23.8 percent followed by SDBs with 11.5 percent. The ratios were 7.9 percent and 2.5 percent respectively for PCBs and FCBs.

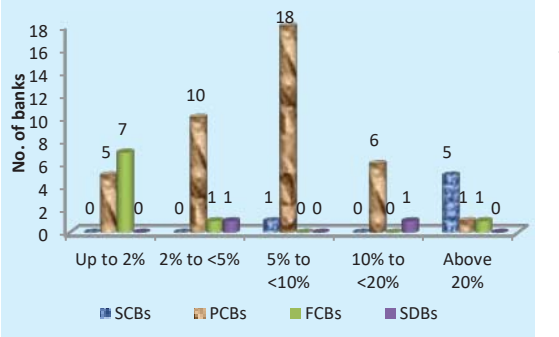
Chart 2.27 highlights the concentration of outstanding rescheduled loans among banks. At end-December 2018, the top 5 (five) banks held 44.4 percent of total outstanding rescheduled loans while the top 10 (ten) banks possessed 63.6 percent. The top 5 banks comprised of 3 (three) SCBs and 2 (two) PCBs and the top 10 banks included 5 (five) SCBs and 5 (five) PCBs.

CHART 2.27: TOP 5 AND TOP 10 BANKS BASED ON RESCHEDULED LOAN SIZE



Source: *Scheduled Banks; computation: FSD, BB*

CHART 2.28: DISTRIBUTION OF BANKS BY RESCHEDULED LOAN RATIO AT END-DECEMBER 2018



Source: *Scheduled Banks; computation: FSD, BB*

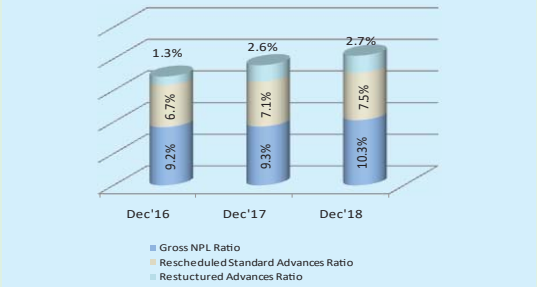
Chart 2.28 shows the distribution of banks by rescheduled loan ratio. It is evident that the rescheduled loan ratio lies between five (5) to 10 percent for 19 banks. The ratio was within two percent for 12 banks of which five (5) were PCBs and seven (7) were FCBs. 43 banks had rescheduled loans ratio within 10 percent while 14 banks had above 10 percent.

The banking sector primarily provides short term credit and thus contributes to economic growth. Although the banks help prospective investors to sustain during their difficult times by rescheduling overdue loans to keep loans performing, cumulative rescheduled loans seems to be a matter of concern for them. Despite expected rescheduling, elevated amount of rescheduled loans in industrial, and RMG and textile sectors, in conjunction with lack of required follow-up may create downside risks for the banking system as a whole.

BOX 2.2: STRESSED ASSETS IN BANKING SECTOR

The stressed assets ratio (stressed assets as a percentage of total loans and advances outstanding) at end December 2018 stood at 20.5 percent which was 19 percent at end-December 2017, mainly attributable to the augmented volume of non-performing assets and rescheduled advances[16].

CHART B2.2.1: COMPOSITION OF STRESSED ASSETS RATIO



Source: *Scheduled Banks; computation: FSD, BB*

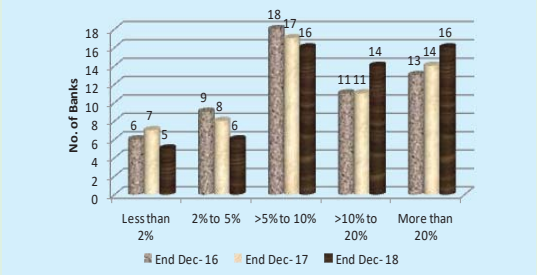
Chart B2.2.1 shows the composition of stressed assets ratio for the period 2016- 2018. The stressed assets ratio rose to 20.5 percent at end-December 2018 which was the highest in the past 3 years. Within a year, gross NPL ratio increased by 100 basis points, rescheduled standard advances ratio[17] increased by 40 basis points and restructured advances ratio[18] increased by 10 basis points. The rise in NPL contributed mostly to the increase in stressed assets ratio at end-December 2018.

Accumulation of large volume of stressed assets affects profitability of the banks, raises the cost of capital, widens the possibility of asset-liability mismatch and hinders the financial intermediation process. Under this scenario, banks are expected to improve their efficiency and effectiveness in managing stressed assets, comply with the regulatory instructions and also strengthen recovery units for smooth collection of outstanding loans and advances.

B 2.1.1 Bank-wise distribution of stressed assets ratio

30 banks had stressed assets ratio over 10 percent at end-December 2018 compared to 25 banks at end-December 2017. These ratios were particularly higher for SDBs and SCBs indicating considerable weaknesses in credit administration in those categories of banks.

CHART B2.2.2: DISTRIBUTION OF STRESSED ASSETS RATIO



Source: *Scheduled Banks; computation: FSD, BB*

The distribution of stressed assets ratio (Chart-B2.2.2) shows that 11 banks maintained their stressed assets ratios below 5 percent at end-December 2018 against 15 banks in the previous year. A total of 16 banks had their stressed assets ratios between 5 to 10 percent, while stressed assets ratios of 30 banks were more than 10 percent at end-December 2018. The corresponding numbers of banks were 17 and 25 at end-December 2017.

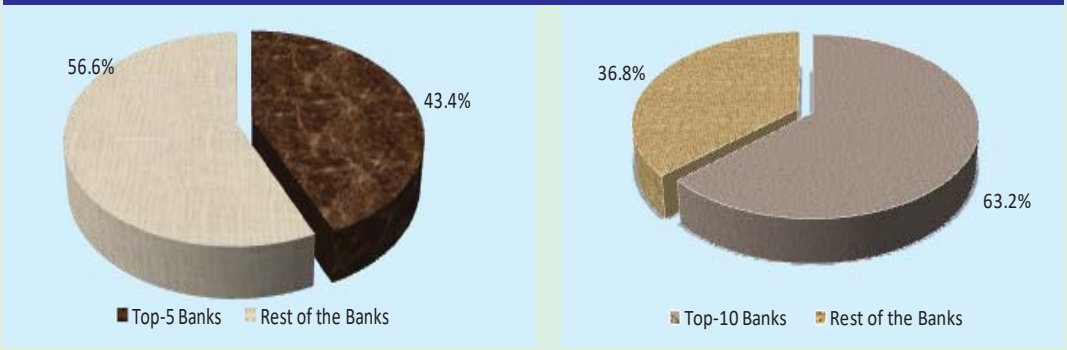
16 In general, banking sector's stressed assets are defined as the sum of gross nonperforming assets plus restructured and rescheduled standard advances.

17 Rescheduled standard advances as a percentage of total loans and advances.

18 Restructured advances as a percentage of total loans and advances.

An analysis of stressed assets concentration ratios showed that the top five (5) and top ten (10) banks out of 57 banks held 43.4 percent and 63.2 percent of total stressed assets in the banking sector respectively at end-December 2018 (Chart-B2.2.3). This ratio was higher in CY18 compared to CY17 indicating higher concentration in the review year. Among the top 10 banks in terms of total amount of stressed assets, five are SCBs, four are PCBs, and one is SDB.

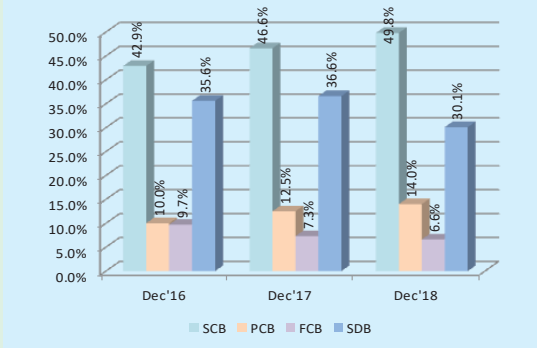
CHART-B2.2.3: TOP 5 AND TOP 10 BANKS BASED ON THEIR SIZE OF STRESSED ASSETS (CY18)



Source: *Scheduled Banks; computation: FSD, BB*

SCBs and SDBs held major portion of stressed assets in comparison with PCBs and FCBs during the period, 2016-2018

CHART-B2.2.4: BANK CLUSTER-WISE DISTRIBUTION OF STRESSED ASSETS RATIO



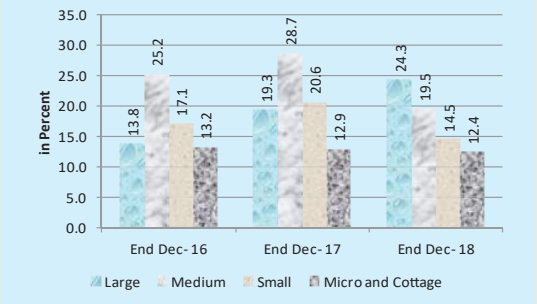
Source: *Scheduled Banks; computation: FSD, BB*

Chart-B2.2.4 illustrates the bank cluster-wise distribution of stressed assets ratio. At end-December 2018, SCBs' stressed assets ratio increased by 3.2 percentage points from the level of end-December 2017. However, SDBs' stressed assets ratio decreased by 6.5 percentage points during the same period due to better recovery efforts. PCBs' stressed assets ratio recorded a slight increase of 1.5 percentage points whereas FCBs' stressed assets ratio decreased by 0.7 percentage point.

B 2.2.2 Stressed assets ratio by industry size

Highest stressed assets ratio was observed in large industries in CY18.

CHART-B2.2.5: DISTRIBUTION OF STRESSED ASSETS RATIO BY INDUSTRY SIZE



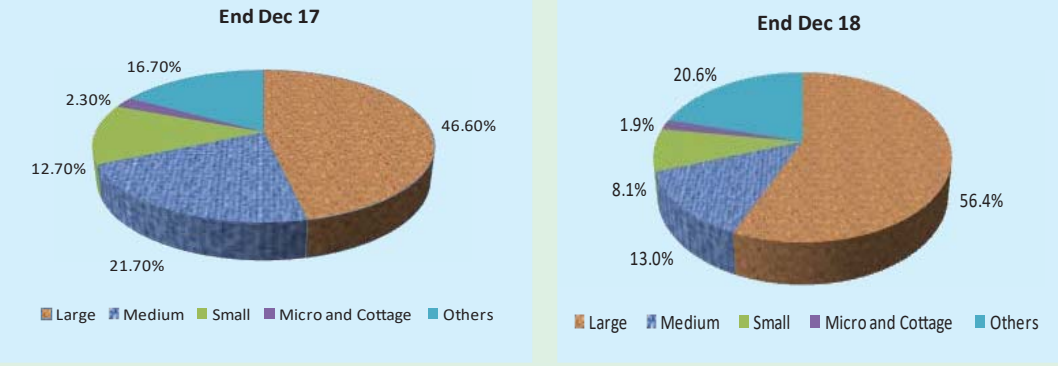
Source: *Scheduled Banks, computation: FSD, BB*

Chart B2.2.5 shows the distribution of stressed assets ratios across four major borrower segments[19] namely i) Large, ii) Medium, iii) Small and iv) Micro & Cottage industries. All four borrower categories comprised of manufacturing, trading and service industries. Stressed assets ratio of large industries increased by 5.0 percentage points at end-December 2018 compared to the previous year due to higher volume of rescheduled and restructured advances.

19 definition based on National Industrial Policy 2016 and SMESPD circular no.2 dated 29 June 2017

On the other hand, medium industries showed the efficiency, lowering their overall stressed assets ratio by 9.2 percentage points from CY17. Small, and micro & cottage industries also experienced notable improvement in reducing stressed assets ratios during the same period.

CHART-B2.2.6: INDUSTRY-WISE COMPOSITION OF STRESSED ASSETS



Source: *Scheduled Banks; computation: FSD, BB*

From chart-B2.2.6, it is observed that the large industries contributed lion share of the industries' aggregate stressed assets. At end-December 2018, large industries contributed 56.4 percent of the total stressed assets which was 9.8 percentage points higher than the position of end-December 2017. Mentionable that banks' exposure to large industries was the highest among all clusters. Medium industries contributed 13 percent of the stressed assets but their share was reduced by 8.7 percentage points from the position of end-December 2017. Small, Micro & cottage industries also experienced relative decline in their share of industries' stressed assets during the review period.

2.5 LIABILITY STRUCTURE OF THE BANKING SECTOR

The growth in deposit declined in CY18 compared to that of CY17. The moderate deposit growth appeared to have downward effect on credit growth in CY18. Though a few banks faced liquidity stress on standalone basis, there was no system-wide liquidity stress as policy measures had been taken to reallocate institutional deposits to ease the liquidity condition.

Deposit constituted the largest share of fund in the banking sector. The share of total deposits was 82.0 percent of the total liabilities at end-December 2018 which was 1.3 percentage points lower than that of CY17. At end-December 2018, total deposits increased by 10.5 percent (11.7 percent in CY17) while deposit grew by 9.8 percent if interbank deposit is excluded. The slow growth of bank deposit might be primarily attributed to low rates offered on bank deposits and substantial sale of NSC in CY18.

CHART 2.29: YEAR-WISE BANKING SECTOR LIABILITY STRUCTURE

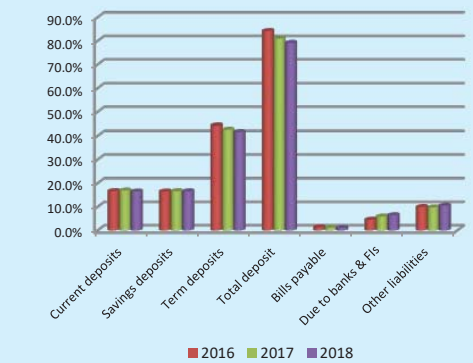
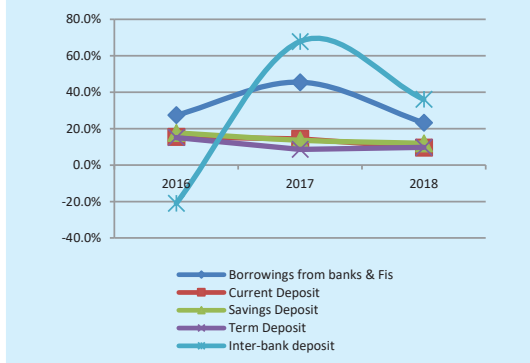


CHART 2.30: YEAR-WISE GROWTH OF DEPOSITS AND BORROWINGS FROM BANKS AND FIs



Source: *DOS, BB; compilation: FSD, BB.*

Low deposit growth induced banks to remain cautious in sanctioning new loans in CY18. Because of this, loan growth also declined. If the deposit growth declines further, it might cause credit rationing in future which would be a stability concern for the financial system of Bangladesh.

Among various categories of deposit term deposit exhibited higher growth of 9.7 percent in CY18 compared to 8.6 percent of CY17 while current deposit growth notably declined to 9.6 percent from 14.4 percent of CY17. Growth of savings deposit declined to 11.9 percent from 13.6 percent in CY17. Borrowings from other banks and FIs increased by 23.2 percent against 45.5 percent in CY17. Bills payable increased by 6.4 percent against a decrease of 8.2 percent in CY17. The slow growth of deposit appeared to have caused liquidity stress for some of the banks on a standalone basis; however, the stress did not create any stability issue. SCBs were the major provider of liquid fund as they lent BDT 382.1 billion to other banks and FIs in CY18. Besides, government's initiative to reallocate institutional deposit helped to ease the liquidity stress in CY18.

The gap between loan and deposit growth appeared to be narrowing in CY18.

Although banking system experienced higher loans growth than deposit growth in CY18, the gap between the rates appeared to be closing as shown in Chart 2.31. The gap would have been even lower if forced loan creation from off-balance sheet items (OBS) could be minimized. Without forced loans from OBS, loan growth in CY18 would have been 11.4 percent. In quantum term, the gap reduced to BDT 1,113 billion in CY18 form BDT 1,347 billion in CY 17 (Chart 2.32). Despite such development banking system had reasonable liquid fund to satisfy increased loan demand, mainly met by accumulated deposits of the previous years. However, continuous narrowing of the gap between deposits and loans outstanding could be a challenge in future if the trend continues.

CHART 2.31: YEAR-WISE LOANS AND DEPOSIT GROWTH

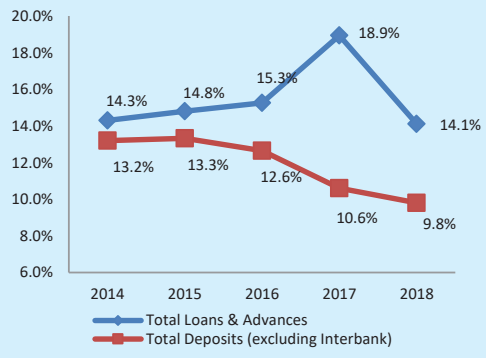
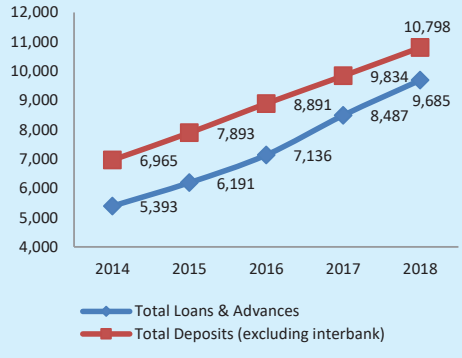
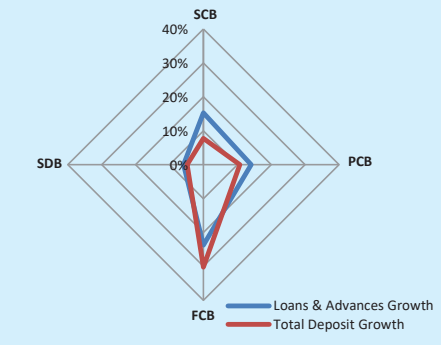


CHART 2.32: LOANS AND DEPOSITS OUTSTANDING (BILLION BDT)



Source: *DOS, BB; compilation: FSD, BB.*

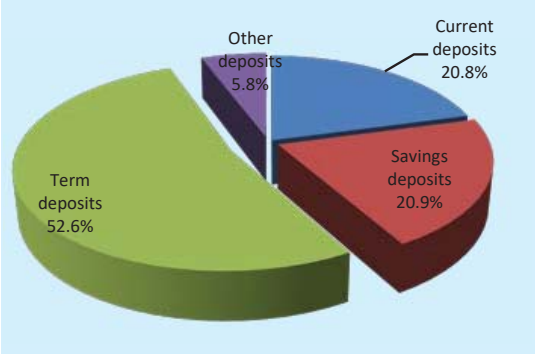
CHART 2.33: GROWTH RATE COMPARISON OF BANK CLUSTERS (CY18)



Source: *DOS, BB; computation: FSD, BB.*

Chart 2.33 compares deposit and loan growth of banking clusters in CY18. Only FCBs had higher deposit growth compared to loan growth. Loan growth outpaced deposit growth for both PCBs and SCBs.

CHART 2.34: BANKING SECTOR DEPOSIT* SHARE BY TYPES OF ACCOUNTS: CY18

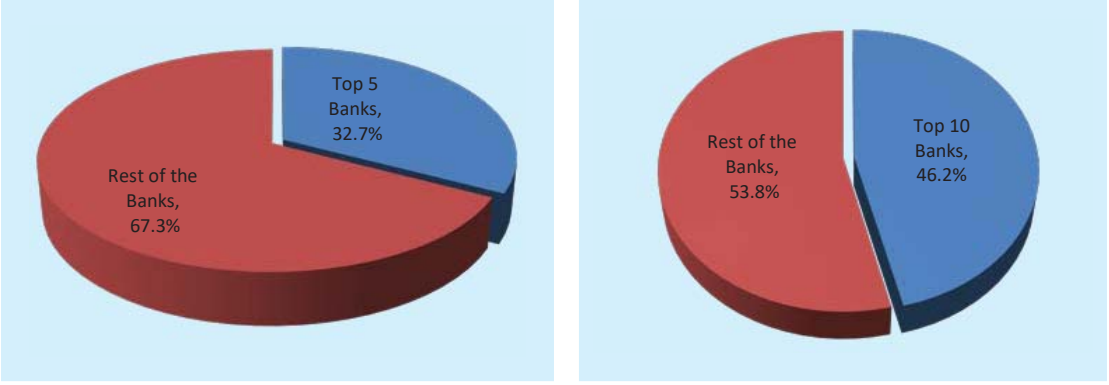


**Inter-bank deposits are excluded.*
Source: *DOS, BB; compilation: FSD, BB.*

At end-December 2018, the share of term deposit was 52.6 percent of total deposits, whereas the shares of savings deposit, current deposit and other deposits were 20.9 percent, 20.8 percent and 5.8 percent respectively. The share of term and savings deposit increased marginally; current deposit remained almost unchanged and other deposit declined in CY18 compared to those of CY17.

Concentration of deposits in the top 5 (five) and top 10 banks in CY18 remained almost similar to CY17. These banks accounted for 32.7 and 46.2 percent of total deposits respectively during CY18, compared to 32.9 and 46.6 percent in CY17. SCBs were listed as the top five (5) in terms of deposit holding.

CHART 2.35: TOP 5 AND TOP 10 BANKS BASED ON SIZE OF DEPOSIT (CY18)

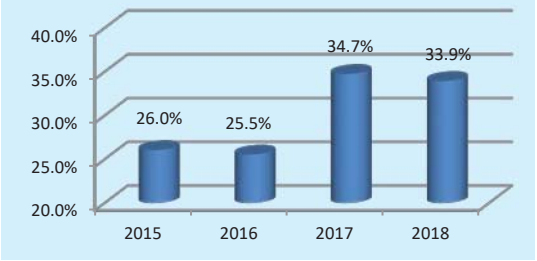


Source: *DOS, BB; compilation: FSD, BB.*

Rise in off-balance sheet (OBS) items induced by increasing import could be a possible stability concern as it might weaken bank balance sheet through forced loan creation in the near term. Also forced loan creation from OBS had played a major role behind rising ADR level and weakening the industry's asset quality in recent years.

Financial stability risk might arise from off-balance sheet items as well. In the past two calendar years, the aggregate balance of these items increased rapidly and reached BDT 4942 billion at the end of CY18.

CHART 2.36: OBS ITEMS TO ON-BALANCE SHEET ASSET RATIO



Source: *DOS, BB; compilation: FSD, BB.*

As Chart 2.36 shows, OBS exposures to total asset ratio of the banking sector remained high in CY18 primarily due to rise in import financing. This may create stability concern for the financial system. Rise in import induced OBS exposures might weaken stock of foreign reserve and increase forced loan creation through NPL exposing the banking sector under considerable stress.

During the four quarters of CY18, a total of BDT

346.5 billion of forced loans was generated from OBS items with BDT 231.7 billion outstanding at end-December 2018. Substantial forced loans from OBS were also observed in CY17. This trend may create a stability concern as it indicates falling cash recovery and increasing ADR for the banks. The gross NPLs is also expected to rise since forced loans are created due to cash recovery problem which is likely to create debt servicing problem in the near term. Banks have to be cautious and monitor their OBS transactions to address such problem.

2.6 BANKING SECTOR DEPOSIT SAFETY NET

92.1 percent of the total depositors with maximum balance of BDT 100,000 are insured under the deposit safety net. In terms of value, it is around 23 percent of the total insurable deposits of the entire banking system at end-December 2018.

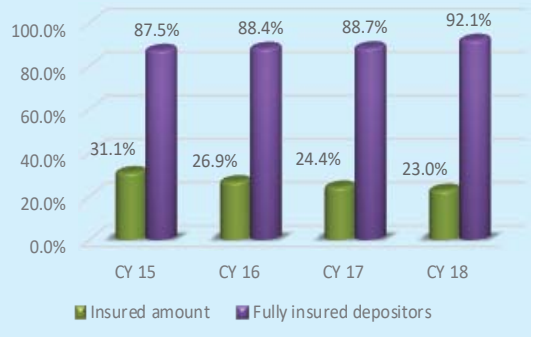
The volume of Deposit Insurance Trust Fund (DITF) reached at BDT 74.3 billion at end-December 2018 which is 16.03 percent higher than that of end-December 2017. Despite having steady progression of premium collection rate and investment income, the balance of DITF stood only 0.6 percent of the total deposits of the banking system at end-December 2018[20]

TABLE 2.4: DEPOSIT INSURANCE TRUST FUND AND ITS COMPOSITION (AMOUNT IN BILLION BDT)

Particulars	2014	2015	2016	2017	2018
Insurable Deposits	6,034.86	6,816.38	7,918.17	8,334.27	9,051.76
Insurance Premium (during the year)	3.54	4.01	4.6	5.07	5.49
i. Investment	36.35	44.06	53.73	63.98	74.24
ii. Cash	0.005	0.57	0.0086	0.042	0.041
Deposit Insurance Trust Fund Balance	36.36	44.63	53.74	64.02	74.28

Source: *DID, BB.*

CHART 2.37: SAFETY NET ON BANKING SECTOR DEPOSITS



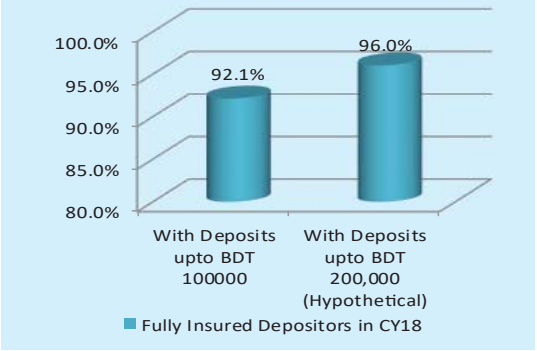
Source: *DID, BB; computation: FSD, BB*

The percentage of insured deposits[21] to total insurable deposits decreased from 24.4 percent in CY17 to 23.0 percent in CY18, indicating a rise in the size of larger deposits. The insurable deposits with the banks grew by 8.6 percent in 2018 as opposed to 5.6 percent growth recorded in 2017. However, 92.1 percent of the total depositors of the entire banking system is insured under the deposit insurance scheme indicating a comprehensive deposit safety net for the small depositors, which covers majority of the depositors.

20 In Bangladesh deposit insurance is administered by the 'The Bank Deposit Insurance Act 2000'. As per the act, BB is authorized to accumulate a fund called Deposit Insurance Trust Fund (DITF). In case of liquidation of an insured bank, BB will pay to every depositor of that bank an amount equal to his/her deposits not exceeding BDT 100,000 from the DITF. This fund is mostly invested in long-term government securities. Premium rate varies based on the CAMELS rating of the insured banks. The premium rate for different ratings, sound, early warning and problem banks has been fixed as 0.08, 0.09 and 0.10 percent respectively.

21 The insured amount refers to the aggregate figure considering the deposits up to BDT 100,000 per depositor of each bank.

CHART 2.38: PROTECTION OF DEPOSITORS ON ENHANCEMENT OF INSURED DEPOSIT COVERAGE LEVEL



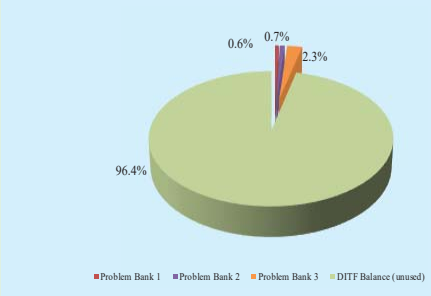
Source: *DID, BB; computation: FSD, BB*

A proposal is under consideration of the Ministry of Finance to amend 'The Bank Deposit Insurance Act 2000' with a view to enhancing protection of the additional depositors and thus to expand the safety net for the depositors of the banks and financial institutions.

BOX 2.3: THE CAPACITY OF EXISTING DITF AND ITS FORECAST

The capacity of the DITF seems to be adequate in single bank liquidation. Chart B2.3.1 demonstrate that the fund from the DITF will be enough to liquidate three PCBs chosen based on highest GNPL ratio at end-December 2018 under the current level of insured deposits.

CHART B2.3.1: UTILIZATION OF FUND FROM DITF TO LIQUIDATE THREE PRIVATE COMMERCIAL BANKS AT CURRENT INSURED LEVEL OF BDT 100,000



Source: *DID, BB; Compilation: FSD, BB.*

Chart B2.3.2 illustrates that the DITF can compensate up to 31 small banks' insured deposits (up to BDT 100,000 per depositor) in case of either single bank liquidation or a series of banks' liquidation. Here, the banks are arranged in an ascending manner of their corresponding deposit size, irrespective of the category. However, a significant number of banks' depositors may not be fully compensated (hypothetical scenario) with the current balance of DITF due to the larger deposit bases of those banks.

CHART B2.3.2: OPTIMUM NUMBER OF SMALL BANKS CAN BE LIQUIDATED USING FUND FROM DITF

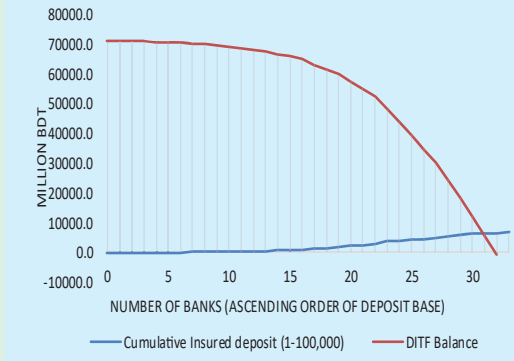
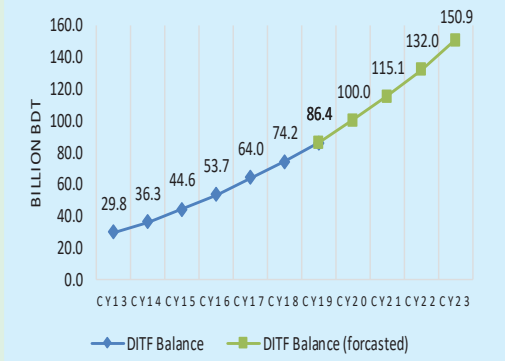


CHART B2.3.3: FORECASTED DEPOSITORS' SAFETY NET IN NEXT 5 YEARS (BILLION BDT)



Source: *DID, BB; compilation: FSD, BB.*

There is no evidence of bank liquidation in Bangladesh so far. After the incorporation of deposit insurance system in 1984, the DITF has grown over time, exceeding BDT 74.0 billion at end-December 2018. Assuming no bank failure and no requirement of fund for liquidation in next 5 years, the fund may reach BDT 150 billion in 2023* (Chart B2.3.3).

**** For Methodology of forecasting the Deposit Insurance Trust Fund (DITF) please see Financial Stability Report 2014.***

2.7 BANKING SECTOR PROFITABILITY

The banking sector net profit declined considerably in CY18 compared to that of CY17.

Banking sector's operating profit[22] increased to BDT 266.4 billion in CY18 from BDT 246.5 billion in CY17, recording an increase of 8.1 percent. However, net profit decreased by 57.5 percent from BDT 95.1 billion in CY17 to BDT 40.4 billion in CY18. It is noteworthy that the total maintained provision increased by 98.6 percent from BDT 73.6 billion in CY17 to BDT 146.2 billion in CY18. The decline in net profit in CY18 was mainly due to higher provision requirement against the increased NPL. Banking sector profitability has also been measured in terms of (i) Return on Assets (ROA) (ii) Return on Equity(ROE) and (iii) Net Interest Margin(NIM).

ROA and ROE of the banking industry declined in CY18 compared to those of CY17.

Return on Asset (ROA) decreased to 0.3 percent at end-December 2018 from 0.7 percent at end-December 2017. The amount of profit earned declined relative to the banks' total assets due to lack of efficiency in asset management. Therefore, nonperforming loans and loan loss provisions, were built up which had negative effect on ROA. In addition, the return on equity (ROE) decreased by 6.0 percentage points and reached to 4.4 percent in CY18 from 10.4 percent in CY17.

CHART 2.39: BANKING SECTOR RETURN ON ASSETS (ROA)

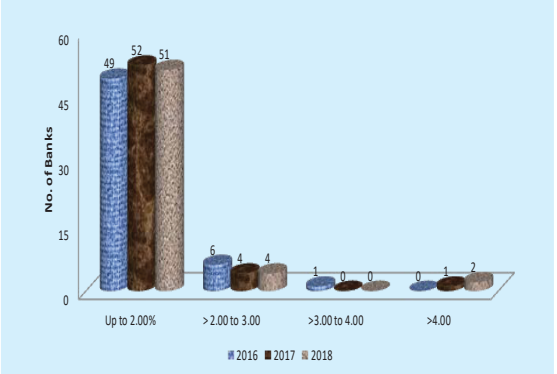
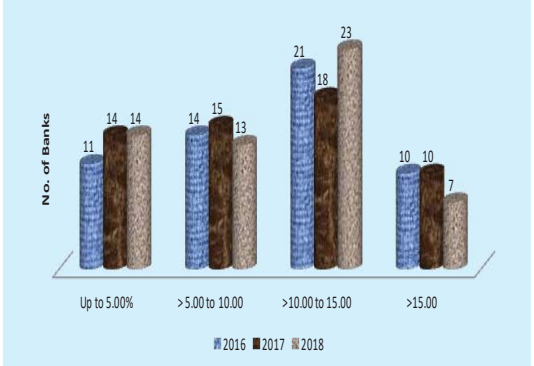


CHART 2.40: BANKING SECTOR RETURN ON EQUITY (ROE)



Source: *DOS, BB; compilation: FSD, BB.*

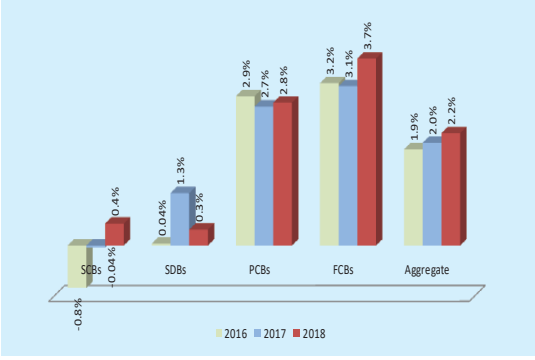
ROA declined for 29 banks, remained unchanged for 11 banks while it increased for 17 banks in CY18. Similarly, ROE declined for 28 banks, remained unchanged for five (5) banks and increased for 24 banks. Notably, 89.5 percent of the banks had ROA of less than two (2) percent (Chart 2.39) and 52.6 percent of the banks had ROE higher than 10 percent (Chart 2.40). Total interest income and interest expense increased by 22.1 and 21.8 percent respectively in CY18 from those of CY17. On the other hand, non-interest income declined by 4.8 percent mainly due to the falling investment income from government securities compared to the previous year.

22 profit before provision and tax

In CY18, the overall Net Interest Margin[23] for the banking industry increased slightly to 2.2 percent from 2.0 percent in CY17.

The net interest margin (NIM) increased by 20 basis points from 2.0 percent in CY17 to 2.2 percent in CY18.

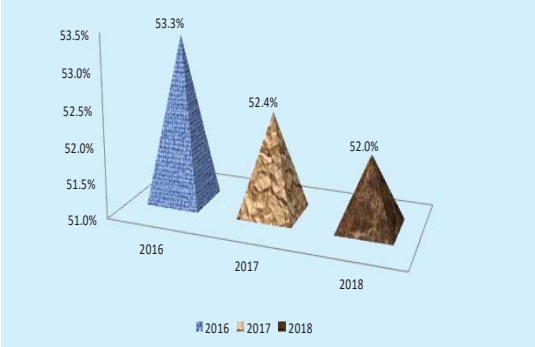
CHART 2.41: BANK TYPE WISE NET-INTEREST MARGIN



Source: *DOS, BB, compilation: FSD, BB*

The SCBs registered positive NIM in CY18 after experiencing negative NIM for the past two years. The NIM of SDBs decreased moderately to 0.3 percent in CY18 from 1.3 percent in CY17. The NIM of PCBs slightly increased from 2.7 percent in CY17 to 2.8 percent in CY18. The NIM of FCBs continued to remain higher than that of all other categories of banks in CY18. It is noteworthy that the interest income for FCBs was much higher compared to their interest expense, whereas the interest income barely exceeded interest expense for the SCBs and SDBs.

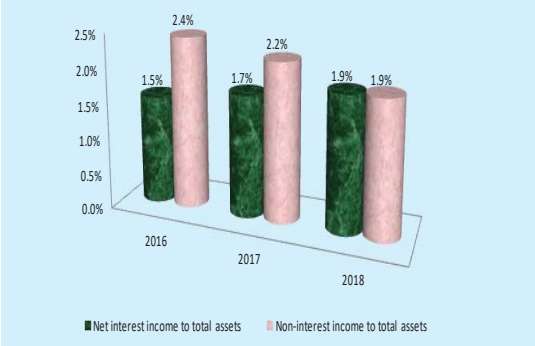
CHART 2.42: YEAR-WISE NON-INTEREST EXPENSE TO GROSS OPERATING INCOME RATIO



Source: *DOS, BB, compilation: FSD, BB*

The ratio of non-interest expense to gross operating income[24] declined slightly by 40 basis points from 52.4 percent in CY17 to 52.0 percent in CY18. Although the growth in operating expense (6.2 percent) was less than the growth in operating income (7.1 percent), banks should take initiative to boost interest and non-interest income to meet non-interest expenses as these expenses are expected to rise in future mainly due to higher salary bills, allowances, expansion of branch network, introduction of technology-based services for enhancing financial outreach etc. Nonetheless, higher NPL would force the banks to enhance recovery drives. In this process, the expenses for recovery and litigation are also expected to inflate the non-interest expenses of banks.

CHART 2.43: BANKING SECTOR INCOME BY SOURCES



Source: *DOS, BB, compilation: FSD, BB*

The ratio of net interest income to total assets increased by 20 basis points from 1.7 percent in CY17 to 1.9 percent in CY18. The ratio of non-interest income to total assets declined by 30 basis points from 2.2 percent in CY17 to 1.9 percent in CY18. The decrease of non-interest income to total assets ratio and increase of net interest income to total assets ratio continued the trend established in previous years mainly due to the shifting of funds from investments in securities to loans and advances. Nevertheless, banks have to remain cautious in pursuit of higher net interest income as aggressive credit expansion and adverse selection of borrowers may create more NPLs.

23 Net interest margin is measured as the difference between interest income and interest expense.

24 Gross Operating Income=Net Interest Income + Non-interest Income

The overall interest rate spread was reduced by 20 basis points at end-December 2018 compared to that of end-December 2017.

The spread is generally an outcome of many factors, such as the level of competition in the banking sector, the volume of stressed assets, managerial efficiency of financial intermediation process, overall level of interest rate risk in the sector and movements in market interest rates. For banks in Bangladesh, the weighted average interest rate spread decreased from 4.4 percent in December 2017 to 4.2 percent in December 2018 (Chart 2.44). However, the weighted average lending rate for the banks increased from 9.3 percent in December 2017 to 9.5 percent in December 2018. The weighted average deposit rate also experienced an increasing trend from 4.9 percent in December 2017 to 5.3 percent in December 2018.

CHART 2.44: BANKING SECTOR MONTHLY WEIGHTED AVERAGE OVERALL INTEREST RATE SPREAD

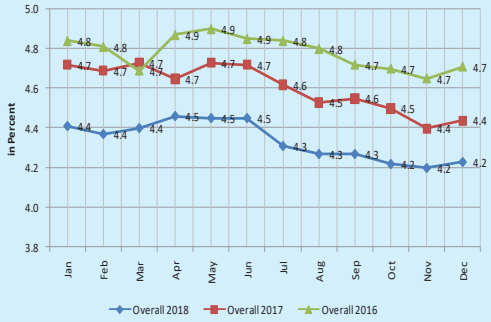
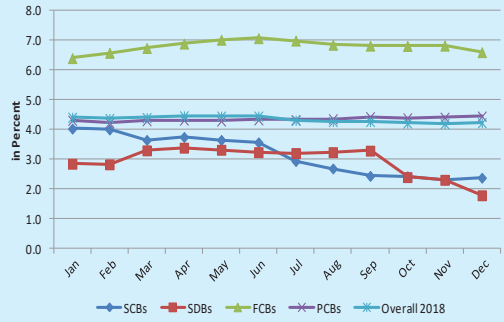


CHART 2.45: BANK CATEGORY-WISE MONTHLY WEIGHTED AVERAGE INTEREST RATE SPREAD FOR CY18



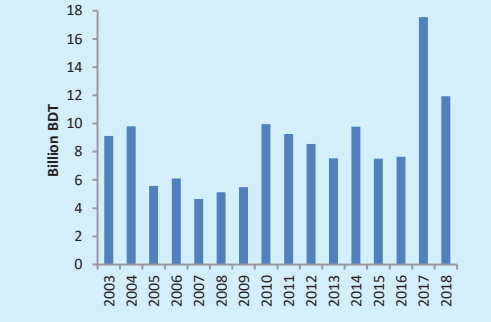
Source: *Statistics Department, BB*

Chart 2.45 illustrates the difference in spreads among different categories of banks. The weighted average spreads of SCBs, SDBs and PCBs remained below 5.0 percent. On the other hand, for FCBs, the spreads continued to remain moderately higher than other bank clusters despite BB's instruction to maintain spread within lower single digit except for consumer finance and credit card operation.

2.7.1 INTEREST WAIVER IN THE BANKING SECTOR

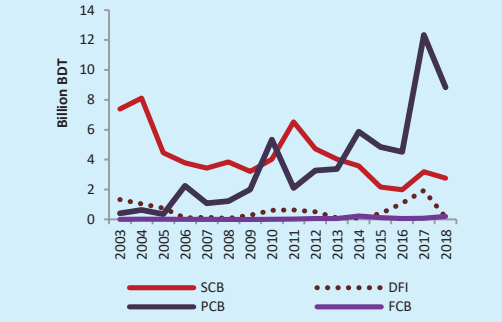
In CY18, interest amounting BDT11.94 billion was waived in the banking sector while the figures were BDT17.53 billion and BDT7.64 billion in CY17 and CY16 respectively (Chart 2.46). Highest interest waiver took place in PCBs (BDT8.84 billion) followed by SCB (BDT2.24 billion). The corresponding figures of these two categories of banks in CY17 were BDT12.34 billion and BDT3.19 billion respectively (Chart 2.47). Interest waivers in SDBs and FCBs were BDT0.14 billion and BDT0.20 billion respectively. These figures indicate that had there been no interest waiver, banking sector's net profit could have been much higher (19.31 percent) than the CY18's net profit of BDT 40.4 billion.

CHART 2.46: INTEREST WAIVER IN THE BANKING INDUSTRY



Source: *DOS, BB*

CHART 2.47: BANK CLUSTER WISE INTEREST WAIVER



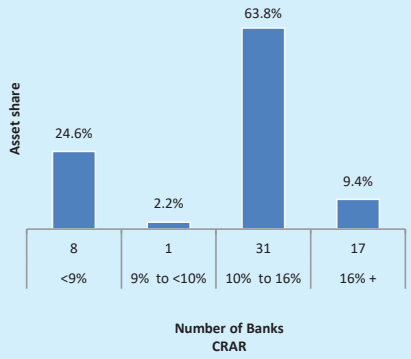
Source: *DOS, BB*

2.8 CAPITAL ADEQUACY

Both capital to risk-weighted assets ratio (CRAR) and Tier-1 capital ratio of the banking industry decreased from those of end-December 2017 and stood at 10.5 percent and 6.8 percent respectively at end-December 2018. Considerable decrease in the capital position of SCBs largely affected the banking sector CRAR adversely.

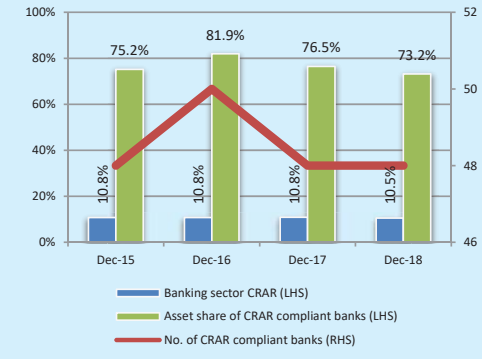
CRAR of the banking industry stood at 10.5 percent at end-December 2018, which was 10.8 percent at end-December 2017. The industry CRAR, though declined, remained above the regulatory minimum requirement of 10.0 percent. Out of 57 scheduled banks, 48 banks maintained a CRAR of 10.0 percent or higher as of end-December 2018 (Chart 2.48). Though the number of CRAR compliant banks remained the same as that of end-December 2017, their aggregate asset share in banking industry's total assets decreased from 76.5 percent to 73.2 percent during the review period (Chart 2.49).

CHART 2.48: ASSET SHARE OF BANKS BASED ON CRAR IN CY18



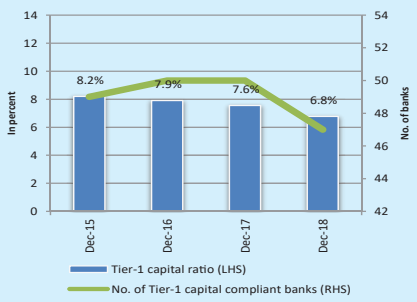
Source: *DOS, BB; computation: FSD, BB*

CHART 2.49: YEAR-WISE CRAR, CRAR COMPLIANT BANKS AND THEIR ASSET SHARE



Source: *DOS, BB; computation: FSD, BB*

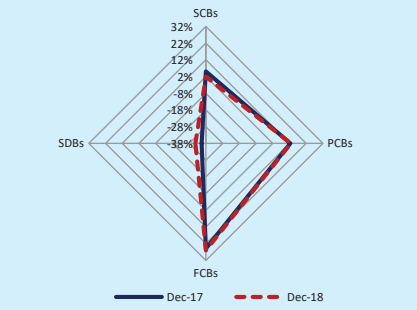
CHART 2.50: YEAR-WISE TIER-1 CAPITAL RATIO OF BANKS



Source: *DOS, BB, compilation: FSD, BB*

Banking sector Tier-1 capital to RWA ratio declined from 7.6 percent in 2017 to 6.8 percent at end-December 2018 against the minimum regulatory requirement of 6.0 percent (Chart 2.50). Moreover, the number of Tier-1 capital compliant banks also decreased during this period. Since Tier-1 capital constitutes the core capital of banks, decline in of this ratio along with the number of compliant banks appears to be a matter of concern for the banking sector.

CHART 2.51: BANKING GROUP-WISE CRAR AT THE END OF CY17 AND CY18

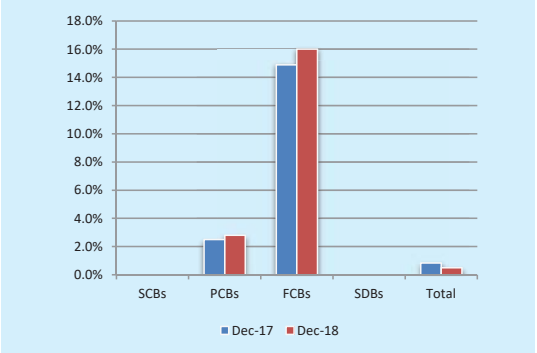


Source: *DOS, BB; computation: FSD, BB*

Chart 2.51 presents the group-wise comparative analysis of CRAR of banks. CRARs of PCBs and FCBs increased by 30 bps and 110 bps respectively from end-December 2017 position and reached 12.8 percent and 26.0 percent respectively at end-December 2018. SCBs' CRAR considerably declined from 5.0 percent to 1.9 percent during this period mainly due to substantial provision incurred by one SCB. It also adversely affected the industry CRAR. Besides, SDBs' CRAR remained negative.

In line with the Basel III framework, banks are required to maintain a Capital Conservation Buffer (CCB) above the minimum required CRAR of 10.0 percent.[25] Against the CCB requirement of 1.875 percent for CY18, banking industry maintained a CCB of 0.5 percent as of end-December 2018 (Chart 2.52). It was 0.8 percent at end-December 2017 against the regulatory requirement of 1.25 percent for CY17. During the review period, 43 out of 57 banks were able to maintain the minimum required CCB.

CHART 2.52: BANKING GROUP-WISE CCB AT THE END OF CY17 AND CY18



Source: *DOS, BB, compilation: FSD, BB*

Chart 2.52 presents the group-wise comparative analysis of CCB of banks between CY17 and CY18. The analysis shows that PCBs and FCBs maintained CCBs above the minimum requirement as of end-December 2018 and higher than those of the preceding year. SCBs and SDBs, which could not maintain minimum required CRAR of 10.0 percent, failed to meet the CCB requirement. However, one SCB maintained the CCB requirement during the review year.

Taking the cross-country scenario into account (Table 2.5), the capital adequacy of the country's banking sector was lower compared to the ratios of neighboring countries as of end-December 2018.

TABLE 2.5: COMPARISON OF CAPITAL ADEQUACY INDICATORS OF THE NEIGHBORING COUNTRIES

Countries	CRAR (%)				
	2014	2015	2016	2017	2018
India	12.8*	12.7*	13.3*	13.9*	13.7*
Pakistan	17.1	17.3	16.2	15.8	16.2
Sri Lanka	17.2	15.4	15.6	15.2	15.9*
Bangladesh	11.4	10.8	10.8	10.8	10.5

Source: *Financial Stability Report, December 2018, Reserve Bank of India; Quarterly Compendium: Statistics of the Banking System, December 2018, State Bank of Pakistan; Soundness Indicators – Quarterly Financial Information, Central Bank of Sri Lanka; and DOS, BB.*
** Data as of end-September.*

2.9 LEVERAGE RATIO[26]

A higher level of leverage ratio maintained by both PCBs and FCBs helped the banking sector to maintain a leverage ratio above the regulatory minimum requirement. On the other hand, SCBs remained over leveraged in relation to their capital base.

In order to constrain the build-up of excessive on- and off-balance sheet leverage in the banking system, the Basel III framework introduced a simple, transparent, non-risk based leverage ratio to act as a credible supplementary measure to the risk-based capital framework. Against the regulatory minimum requirement of 3.0 percent, banking sector maintained a leverage ratio of 4.1 percent at end-December 2018, lower than 4.6 percent maintained at end-December 2017 (Chart 2.53). The leverage ratios of PCBs and FCBs declined slightly in CY18 compared to the previous year, still the ratios were above 5.0 percent and 13.0 percent respectively. SCBs' leverage ratio turned negative during the review period. Since SCBs accounted for substantial banking sector exposures, rising

25 CCB requirement for banks in Bangladesh started from early 2016 in phased-in manner and would be fully implemented by 2019 when CCB would be 2.5 percent above the regulatory MCR of 10.0 percent. CCB needs to be maintained in the form of Common Equity Tier-1 (CET-1) capital.

26 Leverage ratio = (Tier-1 capital after related deductions)/(Total exposure after related deductions).

trend therein against decreasing capital base may raise concern for financial stability. Besides, the number of non-compliant banks in terms of leverage ratio increased at the end of CY18 (Chart 2.54).

CHART2.53: YEAR-WISE LEVERAGE RATIO OF BANKS

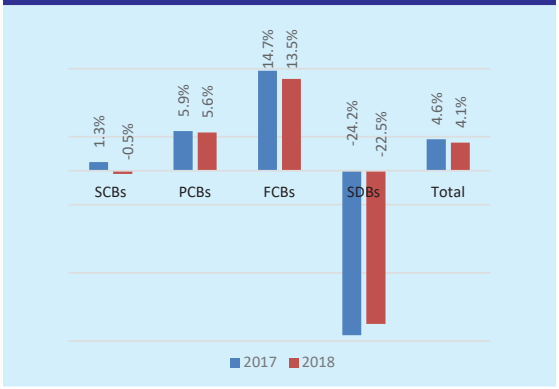
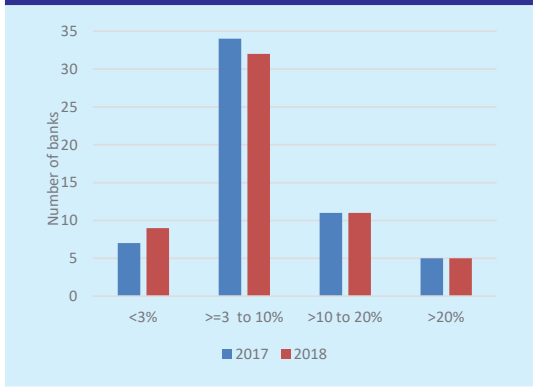


CHART 2.54: YEAR-WISE DISTRIBUTION OF BANKS' LEVERAGE RATIO



Source: *DOS, BB; calculation: FSD, BB.*

2.10 INTERNAL CAPITAL ADEQUACY ASSESSMENT PROCESS (ICAAP)

In order to implement the Pillar 2 of Basel III framework, BB has been conducting supervisory review of scheduled banks' capital adequacy through assessing their Internal Capital Adequacy Assessment Process (ICAAP)[27]. Banks usually prepare ICAAP reports annually and submit the same to BB along with supplementary documents. Under ICAAP, banks need to calculate capital charges against various risks, e.g., residual risk, concentration risk, liquidity risk, reputation risk, strategic risk, settlement risk, appraisal of core risk management practice, environmental and climate change risk and other material risks, which are generally not covered under pillar 1. Based on the findings of the ICAAP reports as of December 2017, BB started Supervisory Review Evaluation Process (SREP) on January 21, 2019, which includes a series of bilateral meetings between BB and the individual banks' SRP (Supervisory Review Process) team. These meetings are expected to be completed by April 2019.

Based on the outcomes of the meetings held in 2016, it was observed that a majority of banks met the required capital adequacy under pillar 1 and pillar 2 of Basel Accord. Among the pillar 2 risks, additional capital requirement against residual risk was observed mainly due to documentation error. Besides, strategic risks and appraisal of core risk management practice remained the other major concerns for banks according to the observations. The previous meetings held in 2013, 2014 and 2015 also found similar outcomes.

2.11 BANKING SECTOR LIQUIDITY

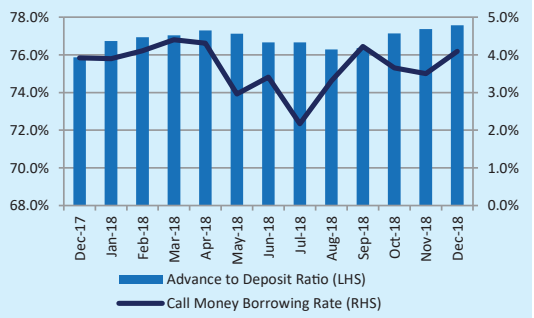
The liquidity situation in the banking industry, particularly in PCBs, appeared to be tightening in CY18.

The banking sector liquidity was relatively tight in CY18 compared to the preceding year as evident from higher advance-to-deposit ratio (ADR) and rising call money borrowing rate. The ADR of the banking industry increased to 77.6 percent at end-December 2018 from 75.9 percent at end-December 2017 and 71.9 percent at end-December 2016 as the growth of loans and advances continued to outpace the deposits growth during the review year. However, the ADR of the banking industry remained below the allowable limit[28] set by BB.

27 ICAAP includes regulations of a bank's own supervisory review of its capital positions aiming to reveal whether it has prudent risk management and sufficient capital to cover its overall risk profile.

28 Banks were instructed in April 2018 to rationalize their ADRs within maximum 83.5 percent for conventional banks and 89.0 percent for Islamic Shari'ah based banks by March 2019 (DOS circular no. 03/2018), which was later extended to 30 September 2019 (DOS circular no. 01/2019). Earlier, the limits were maximum 85 percent and 90 percent for conventional and Islamic Shari'ah based banks respectively.

CHART 2.55: MONTHLY ADR AND CALL MONEY BORROWING RATE



Source: *DOS, BB.*

Banking sector ADR increased gradually until April 2018 and thereafter showed a slightly declining trend up to August 2018 before going up again to a higher level in the end of the year. Despite some fluctuations, monthly ADR was less volatile during CY18 compared to CY17 (Chart 2.55).

In CY18, increased call money borrowing rates reflected the liquidity pressure especially when ADR increased during 1st and 3rd quarter of the review year. Broadly, call money rate increased from 3.9 percent at end-December 2017 to 4.1 percent at end-December 2018, indicating a tightening liquidity condition.

Banks' cluster-wise analysis shows that ADRs of all the banking clusters increased in CY18 except for FCBs (Chart 2.56). The ADR of PCBs, which was already very high at 84.7 percent at end-December 2017, exceeded the prudential limit of BB and stood at 86.0 percent at end-December 2018 indicating liquidity stress in PCBs. To ease the liquidity pressure in PCBs, banks' CRR was revised down by one percentage point to 5.5 percent.[29] Moreover, the maximum limit of government sector deposit into PCBs was enhanced to 50 percent from 25 percent.[30] Consequently, investible funds of the banking sector should have increased due to two reasons: first, release of a portion of cash reserves maintained with BB; second, shift of a portion of government deposits from SCBs to PCBs which should cause a decline in PCBs' ADR and opposite effect on SCBs' ADR. The ADR of SCBs, as expected, increased to 58.1 percent at end-December 2018 from 54.6 percent at end-December 2017. However, contrary to the expectation, PCBs' ADR increased and reached 86.0 percent at end-December 2018. Besides, the number of banks having ADR above 90 percent increased from 7 (seven) in CY17 to 12 (twelve) in CY18 (Chart 2.57). This might indicate imprudent lending practices by some PCBs on the back of their slower deposit growth and subsequent liquidity stress in those PCBs on standalone basis.

CHART 2.56: BANKS' CLUSTER-WISE ADR

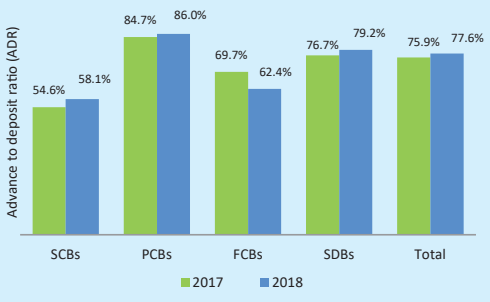
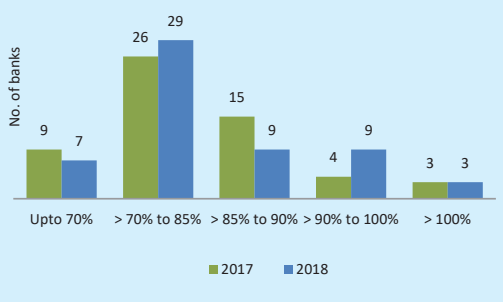


CHART 2.57: DISTRIBUTION OF BANKS BY ADR



Source: *DOS, BB.*

In spite of having higher ADR, all the banking clusters as well as the banking industry as a whole maintained liquidity coverage ratio (LCR[31]) and net stable funding ratio (NSFR[32]) above the regulatory requirement[33] throughout CY18 (Chart 2.58 and 2.59). The industry LCR declined slightly from 174.9 percent at end-December 2017 to 173.3 percent at end-December 2018. SCBs maintained the

29 MPD circular no. 01, dated 03 April 2018.

30 BRPD circular letter no. 05, dated 17 April 2018.

31 LCR measures a bank's need for liquid assets in a stressed environment over the next 30 calendar days.

32 NSFR measures a bank's need for liquid assets in a stressed environment over one year period.

33 100 percent for LCR; greater than 100 percent for NSFR.

highest LCR of 566.8 percent on average throughout CY18. Banking industry's NSFR increased from 107.5 percent at end-December 2017 to 109.4 percent at end-December 2018. Pertinently, PCBs' LCR increased from 121.7 percent to 124.2 percent while NSFR rose from 108.1 percent to 110.1 percent during the review period.

CHART 2.58: BANKS' CLUSTER-WISE MONTHLY LCR

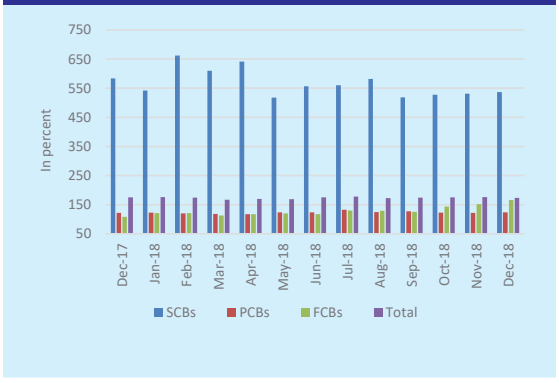
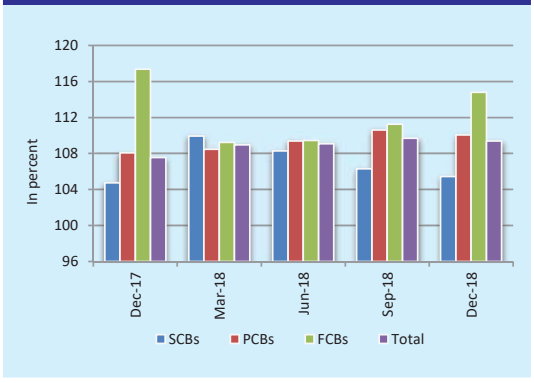


CHART. 2.59: BANKS' CLUSTER-WISE QUARTERLY NSFR



Source: *DOS, BB.*

Besides, both conventional and Islamic Shari'ah based banks were able to maintain the minimum Cash Reserve Ratio (CRR) of 5.5 percent as of end-December 2018. Also, both conventional and Islamic Shari'ah based banks were compliant in fulfilling the Statutory Liquidity Ratio (SLR) of 13.0 percent and 5.5 percent respectively.

2.12 PERFORMANCE OF BRANCHES OF LOCAL BANKS OPERATING ABROAD

Bangladeshi banks operating abroad through their branches and subsidiaries achieved moderate growth in CY18. They are covering the major financial centers spreading over 20 countries through seven commercial bank branches, nine representative offices, 41 exchange houses and 12 other offices at end-December 2018.

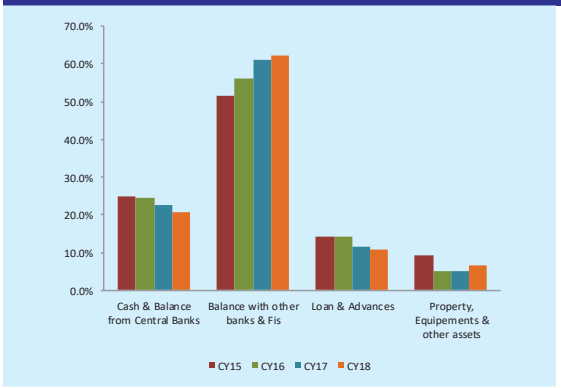
Among the overseas bank branches, one SCB with its four branches is operating in the United Arab Emirates (UAE). Besides, another SCB with its two branches and one PCB with a single branch are operating in India. The overseas business networks of Bangladeshi banks are focusing mostly on facilitating business and wage earners' remittances. These bank branches also collect deposits and go for lending along with other banking services e.g., funds transfer, buying or selling foreign exchange, investment in securities and ancillary services. Exchange houses are permitted to remit money of the expatriate workers to Bangladeshi account with any bank in Bangladesh through own network. Moreover, these institutions are providing trade services to Bangladeshi importers and exporters and also non-resident Bangladeshis (NRBs).

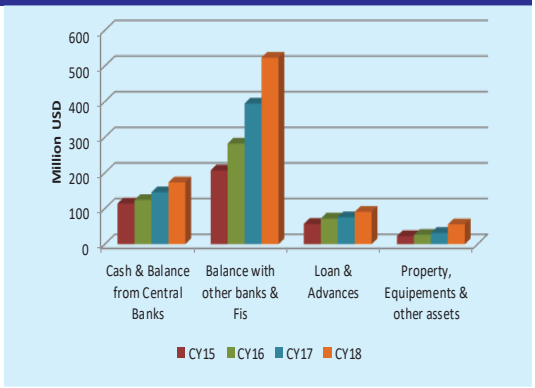
2.12.1 ASSET STRUCTURE OF OVERSEAS BRANCHES

In 2018, the total assets of the overseas branches of Bangladeshi banks grew moderately, mostly attributable to significant growth observed in balance with central banks, other banks and FIs.

The total assets of overseas branches of Bangladeshi banks, holding only 0.5 percent of the total banking industry's assets, reached USD 842.4 million at end-December 2018 which was USD 195.1 million higher than that of the previous year. The main asset components, balance with other banks and FIs, and cash and balance with central banks increased by USD 128.8 million and USD 27.6 million respectively which contributed to this upward movement in asset size.

CHART 2.60: ASSET COMPOSITION OF BANGLADESHI BANKS IN ABROAD





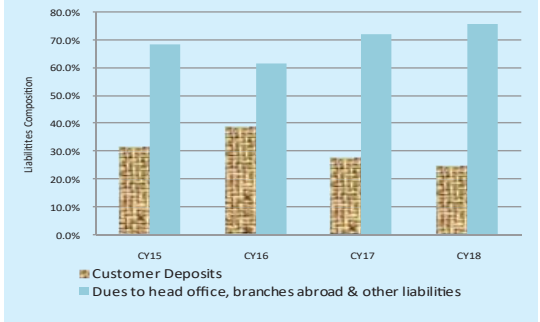
Source: *Scheduled Banks, compilation: FSD, BB*

On the other hand, growth of loans and advances was 19.5 percent while their share in total assets declined by 1.0 percentage point compared to that of CY17 and stood at 10.7 percent in CY18. Besides, investment funds in the interbank market and other financial institutions constituted a major part of the total assets, which accounted for 62.1 percent of the total assets.

2.12.2 LIABILITY STRUCTURE OF OVERSEAS BRANCHES

In 2018, the total liabilities of the overseas branches increased by 32.3 percent in comparison with that of 2017.

CHART 2.61: LIABILITY COMPOSITION OF BANGLADESHI BANKS IN ABROAD



Source: *Scheduled banks, compilation: FSD, BB*

The volume of deposits increased by USD 25.6 million in CY18 compared to that of CY17 which constituted 24.3 percent of the total liabilities of overseas branches of Bangladeshi banks while the remaining 75.7 percent of the liabilities comprised of dues with the Head office and branches abroad along with other liabilities (Chart 2.61).

However, the share of liabilities of overseas bank branches constituted less than one percent of the aggregate liabilities of the banking industry.

2.12.3 PROFITABILITY OF OVERSEAS BRANCHES

The aggregate net profit of the overseas branches increased by 26.4 percent in 2018 compared to that of 2017.

The aggregate net profit of the overseas branches[34] of Bangladeshi banks in CY18 was USD 8.6 million, which was USD 1.8 million higher than that of CY17. Because of moderate increase in net profit compared to significant asset growth in 2018, the ROA reduced from 1.05 percent to 1.02 percent. The six overseas branches of two SCBs contributed 70 percent of the total overseas branch profit while the single branch of one PCB contributed the remaining 30 percent of the total overseas profit.

34 Balances denominated in foreign currencies is translated into USD and recorded at the exchange rate as on 31 December 2018 from the January 2019 issue of Monthly Economic Trends, Bangladesh Bank.

2.12.4 RISKS FROM OVERSEAS BANKING OPERATION

Sound financial health of the overseas branches of Bangladeshi banks and adequate liquidity condition indicate no near term risks. However, monitoring is required so that regulatory requirements of both host country and country of origin are duly complied.

Operation of overseas bank branches is generally exposed to various risks including non-compliance to rules and regulations of host countries and changing macro-financial conditions. Any materialization of such risks can put significant stress on their financial positions. However, as of December 2018, the overall financial health and banking activities of overseas branches were not sizeable enough to create any systemic risks on the accounts of their parent banks in Bangladesh.

2.13 ISLAMIC BANKING

A total of eight (8) full-fledged Islamic banks with 1189 branches are currently operating in the banking system of Bangladesh. In addition, seven (7) conventional banks with seventeen (17) Islamic banking branches and six (6) conventional banks with 40 Islamic banking windows are providing Islamic banking services. These banks have been operating in the financial system of Bangladesh successfully for the last three decades with the idea of "equity based and interest-free" banking, not as a separate component but as an alternative to conventional banks.

2.13.1 GROWTH OF ISLAMIC BANKING

Although Islamic banks experienced a steady growth over the last couple of years in terms of assets, deposits, investments (loans and advances)[35] and shareholders' equity, the growth of Islamic banking sector decreased in CY18 compared to the previous year. On the other hand, Islamic banks' investment growth was higher than their deposit growth.

CHART 2.62: GROWTH OF ISLAMIC BANKING

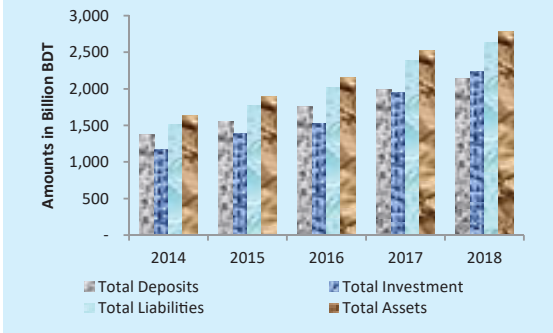
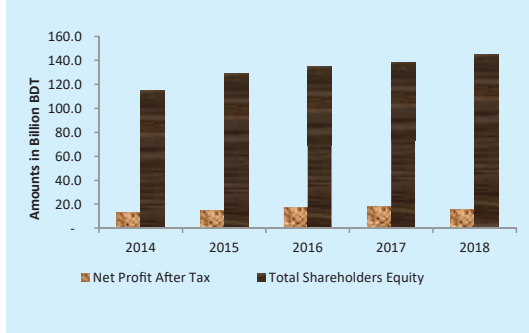


CHART 2.63: GROWTH OF ISLAMIC BANKING



Note: Excluding Islamic banking branches/windows of conventional banks
Source: *DOS, BB; computation: FSD, BB.*

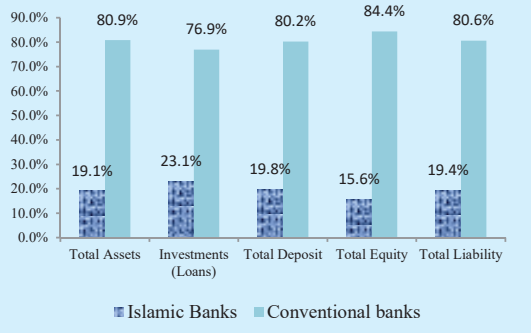
The trends in Islamic banking growth are presented in term of total deposit, total liabilities, total investments (loans and advances), total assets, and net profit in Charts 2.62 and 2.63. In CY18, Islamic banking assets increased by 10.5 percent (17.3 percent in CY 17); investments (loans and advances) grew by 14.6 percent (27.3 percent in CY17); liabilities grew by 10.9 percent (18.2 percent in CY17), and deposit base increased by 9.1 percent (15.6 percent in CY17).

35 According to Islamic shari'ah based banking loans and advances are termed as investment.

2.13.2 MARKET SHARE OF ISLAMIC BANKS

Eight Islamic banks hold about one-fifth of the banking sector assets.

CHART 2.64: MARKET SHARE OF ISLAMIC BANKS AND THE BANKING SECTOR IN CY18



Source: *DOS, BB; computation: FSD, BB.*

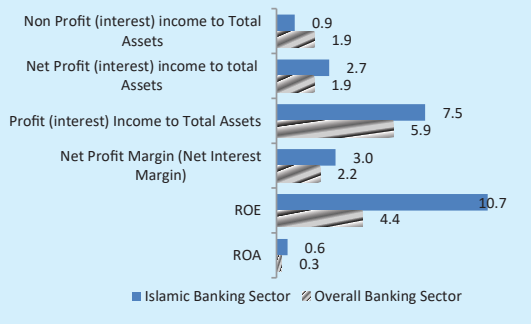
Chart 2.64 shows that the aggregate market share of Islamic banks in CY18 (excluding Islamic banking branches/windows of conventional banks) remained almost same as in CY17. At end-December 2018, Islamic banks possessed 19.1 percent (19.3 percent in CY17) of total assets, 15.6 percent (15.2 percent in CY17) of equity and 19.4 percent (19.6 percent in CY17) of liabilities of the overall banking system; whereas the investments (loans and advances) and deposits shares were 23.1 and 19.8 percent respectively in CY18, almost same as CY17.

2.13.3 PROFITABILITY OF ISLAMIC BANKS

Despite having lower non-profit (interest) income compared to conventional banking the net profit growth of Islamic banks' was higher than the industry average growth due to larger growth in profit income.

The net profit of Islamic banks decreased by 15.0 percent in CY18 compared to 3.4 percent in CY17.

CHART2.65 SELECTED INCOME RATIOS FOR ISLAMIC BANK AND BANKING INDUSTRY



Source: *DOS, BB; computation: FSD, BB.*

During CY18, Islamic banks contributed 38.3 percent of total industry profits. The profit[36] to total assets ratio of Islamic banks reached 7.5 percent, which was higher than that of the industry average (interest income to total assets ratio was 5.9 percent). On the other hand, non-profit income to total assets ratio was only 0.9 percent as compared with the industry average of 1.9 percent, representing a lower income from off-balance sheet (OBS) transactions, services and fee-based incomes.

The ROA of Islamic Banks was 0.6 percent in CY18 (0.7 percent in CY17), which was higher than the industry's ROA of 0.344 percent. On the other hand, the ROE of the Islamic banks stood at 10.7 percent in CY18 (13.1 percent in CY17), which was higher than the overall banking industry's ROE of 4.4 percent, indicating higher earnings of Islamic banks with relatively lower equity.

36 For Islamic Shari'ah based banks profit income means income (interest) from investments (loans and advances).

2.13.4 ISLAMIC BANKS' LIQUIDITY

Islamic banks had sufficient liquidity during the CY18 considering their Cash Reserve Ratio (CRR), Statutory Liquidity Requirement (SLR), Liquidity Coverage Ratio (LCR) and Net Stable Funding Ratio (NSFR).

Islamic banks are allowed to maintain their statutory liquidity requirement (SLR) at a concessional rate compared to that of the conventional banks, as Shari'ah compliant SLR eligible instruments are not widely available in the market. Islamic banks are consistently maintaining (daily basis) statutory liquidity requirement of CRR and SLR of 5.5 percent[37] and 5.5 percent of their total time and demand liabilities[38] respectively.

According to the roadmap towards implementation of Basel III, banks are required to maintain at least 100 percent (the minimum standard) of Liquidity Coverage Ratio (LCR) and greater than 100 percent of Net Stable Funding Ratio (NSFR) from January 2015[39].

CHART2.66: LCR MAINTAINED BY CONVENTIONAL BANKS AND ISLAMIC BANKS

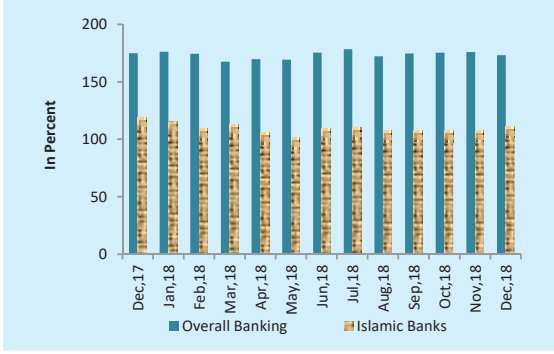
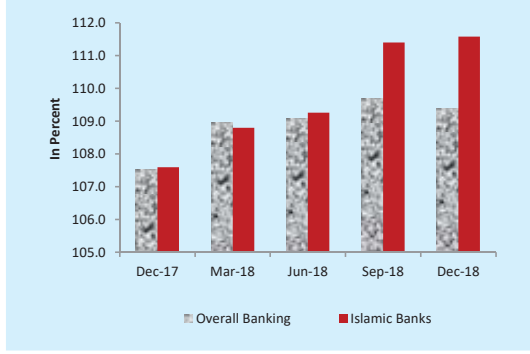


CHART 2.67: NSFR MAINTAINED BY CONVENTIONAL BANKS AND ISLAMIC BANKS



Source: *DOS, BB; computation: FSD, BB.*

Chart 2.66 and Chart 2.67 show that Islamic banks as well as overall banking system maintained the required level of LCR and NSFR throughout the calendar year 2018.

The aggregate Investment-Deposit Ratio (IDR) of Islamic banks was 90.8 percent at end-December 2018 against permissible level of 90 percent, which was 87.8 percent at end-December 2017.

CHART 2.68: IDR (ADR) OF ISLAMIC BANKS AND THE OVERALL BANKING SECTOR FROM CY15 TO CY18

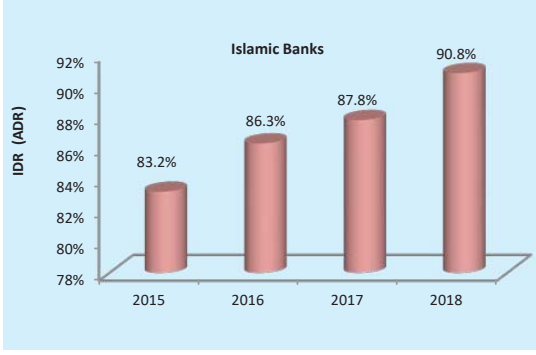


Chart 2.68 demonstrates that the IDR of the Islamic banks was 90.8 percent.

Source: *DOS, BB; computation: FSD, BB.*

37 BB has re-fixed the CRR at 5.5 percent on bi-weekly average basis effective from 15 April 2018 (MPD Circular No. 01, dated 03 April 2018).

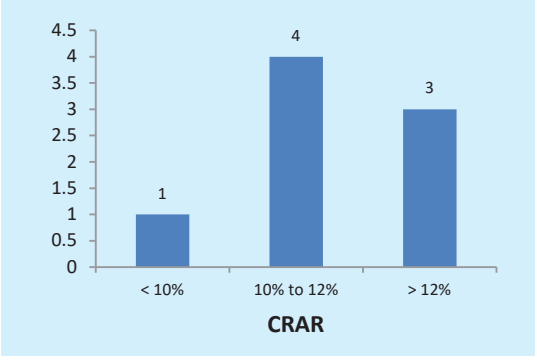
38 Refer to MPD Circular No. 02, dated-10/12/2013, and MPD Circular No. 01, dated-23/06/2014.

39 Refer to DOS Circular No. 01, dated 01/01/2015.

2.13.5 CAPITAL POSITION OF ISLAMIC BANKS

Under the Basel-III risk-based capital adequacy framework of Bangladesh, given the minimum Capital to Risk-weighted Assets Ratio (CRAR) of 10 percent, seven out of eight full-fledged Islamic banks were able to comply the regulatory capital requirement in CY18.

CHART 2.69: CAPITAL TO RISK WEIGHTED ASSETS RATIO (CRAR) OF ISLAMIC BANKS IN CY18



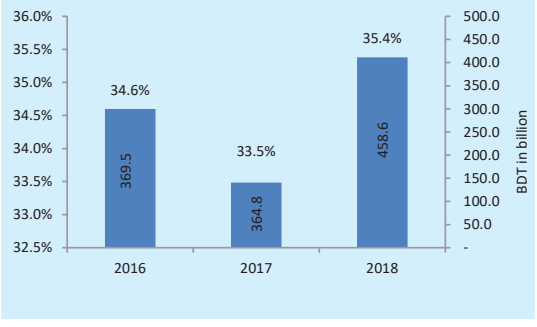
Note: Excluding Islamic banking branches/windows of conventional bank
Source: *DOS, BB; computation: FSD, BB.*

Chart 2.69 shows that 7 out of 8 Islamic banks remained compliant in terms of capital to risk weighted asset ratio (CRAR) requirement in CY18. The stronger capital base maintained by Islamic banks indicates that these banks would be more resilient. However, the CRAR of one Islamic bank remained negative since 2007 due to cumulative loss and provision shortfall. Currently the bank is operating under a reconstruction scheme.

2.13.6 REMITTANCE MOBILIZATION BY THE ISLAMIC BANKS

Islamic banks in Bangladesh mobilized more than one third of the total wage earners' remittance in CY18.

CHART 2.70: SHARE OF REMITTANCES COLLECTED BY THE ISLAMIC BANKS IN THE OVERALL BANKING SECTOR IN CY18



Source: *Developments of Islamic Banking Sector in Bangladesh, BB publication (quarterly); and Quarterly Report on Remittance inflow; Computation: FSD, BB.*

Like conventional banks, Islamic banks also play an important role in channeling foreign remittance to the local beneficiaries across the country. In CY18, the total inward foreign remittance was BDT 1,296.2 billion, of which BDT 458.6 billion was collected and distributed by the Islamic banks. Thus the Islamic banks constituted 35.4 percent of the foreign remittances collected by the entire banking industry (chart 2.70).

2.13.7 CLASSIFIED INVESTMENTS OF ISLAMIC BANKS

Islamic banks showed a better position compared to the conventional banks in term of classified investments to total investments ratio in CY18.

Islamic banks' classified (non-performing) investment to total investment ratio in CY18 was 4.8 percent, substantially lower than the industry NPL ratio of 10.3 percent. Pertinently, the ratio was 4.2 percent in CY17.

2.14 PERFORMANCE OF NEW BANKS

As of end December 2018, 10 new banks, nine (9) of which incorporated in 2013 and the latest one in 2016, aggregately accounted for 4.3 percent of the total banking industry assets. Aggregate loans and advances of these banks were 75.4 percent of their total assets during the period under review. Gross NPL ratio of these banks rose to 8.3 percent in CY18 from 2.8 percent of CY17.

All the new banks[40] are categorized as private commercial banks (PCBs) according to their ownership structure. Out of ten banks, one is offering Shari'ah-based banking and the rest are providing conventional banking services. Moreover, three of them are sponsored by non-resident Bangladeshis (NRBs). At end-December 2018, the aggregate assets of these banks accounted for 4.3 percent of the total industry assets while the same was 3.9 percent at end-December 2017.

The share of loans and advances of the new banks reached 4.9 percent of the overall industry's loans and advances at end-December 2018 which was 4.8 percent at end-December 2017. Loans and advances constituted the largest segment of the assets of these banks and the proportion was much higher than that of the overall banking industry. At end-December 2018, loans and advances accounted for 75.4 percent of the total assets of these banks which was 72.5 percent at end-December 2017. The same ratio was 66.5 percent for the overall banking industry in the review year.

These banks were operating with 495 branches across the country including 241 rural branches at end-December 2018 against 378 branches at end-December 2017. Considering the number of bank branches under operation, the new banks accounted for 4.8 percent (495 out of 10,286) of the banking industry at end-December 2018, while the ratio was 3.9 percent (378 out of 9,752) at end-December 2017.

The quality of assets of these banks at end-December 2018 appeared to be better as their gross NPL ratio was lower (8.3 percent) compared to the industry NPL ratio of 10.3 percent. The gross NPLs of the nine new banks incorporated in 2013 and the banking industry as a whole were 2.8 percent and 9.3 percent respectively at end-December 2017.

All the 10 new banks except one were successfully maintaining the required provisions at end-December 2018. The ratio of required provision maintained by the new banks was 98.8 percent whereas the same for the industry was 88.4 percent as at end-December 2018.

CHART 2.71: ROA AND ROE COMPARISON IN CY18

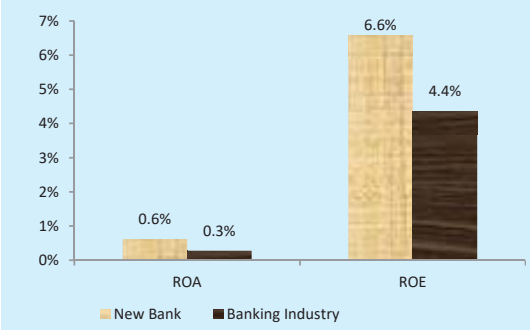
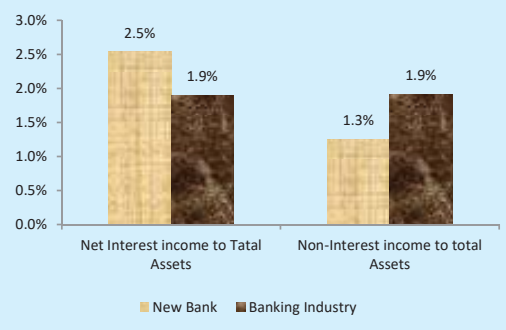


CHART 2.72: COMPARISON BY SOURCES OF INCOME IN CY18



Source: *DOS, BB; computation: FSD, BB.*

40 Banks incorporated in 2013 and 2016 are treated as new banks.

The new banks performed with lower profitability in CY18 compared to that of CY17. In CY18, the net profit of the banks decreased almost 23.4 percent compared to CY17. However, the ROA of the new banks (0.6 percent) was higher than that of the banking industry (0.3 percent) in CY18 while the ROE decreased from 9.4 percent in CY17 to 6.6 percent in CY18, which was still higher than industry ROE of 4.4 percent.

The capital to risk-weighted assets ratio (CRAR) of these banks was significantly higher than that of the industry CRAR as a whole and also higher than that of other categories of banks except foreign banks operating in the industry. The CRAR of these banks was15.8 percent at end-December 2018, which was 14.5 percent at end-December 2017 (Chart 2.73). The level of CRAR of new banks in CY18 indicates that these banks had higher loss absorption capacity than the overall industry.

CHART 2.73: CRAR OF NEW BANKS

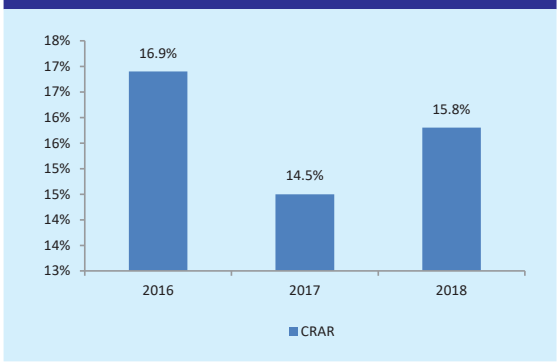
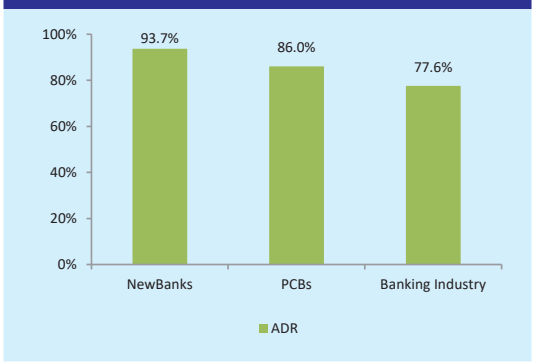


CHART 2.74: ADVANCE TO DEPOSIT RATIO



Source: *DOS, BB; computation: FSD, BB.*

The new banks had lower liquidity compared to their peer group of PCBs and the banking industry as a whole at end-December 2018 as revealed by their ADR. The ADR of these banks was 93.7 percent which was found significantly higher than that of PCBs (86.0 percent) and overall industry (77.6 percent) levels (chart 2.74).

BOX 2.4: INTERBANK TRANSACTION MATRIX

The interbank market, one of the most important sources of liquidity for banks and FIs, could be a potential source of systemic risk due to close interconnectedness of the market participants. This closeness helps to spread the liquidity shocks to the entire financial market, especially where individual players dominate the market. Therefore, liquidity imbalance of any of them can eventually lower the liquidity position of the remaining participants; and thus, increase the risk of systemic shocks. In Bangladesh, banks use the interbank market for liquidity management, but for FIs it is the main source of operational funding. Although banks are the key market players, FIs presence in every segment made them important despite their smaller asset size. As of December 2018, FIs received BDT 240.4 billion (gross) from banks, whereas net fund flow was BDT 155.1 billion from banks to FIs.

CHART B2.4.1: MARKET SHARE OF TOTAL FUNDED ASSETS

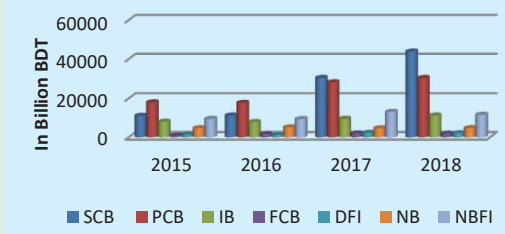
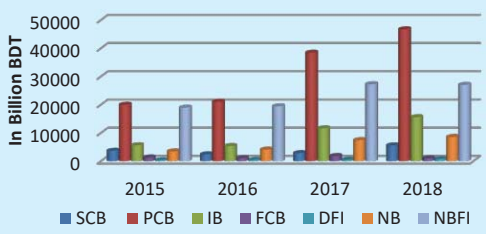


CHART B2.4.2: MARKET SHARE OF TOTAL FUNDED LIABILITIES

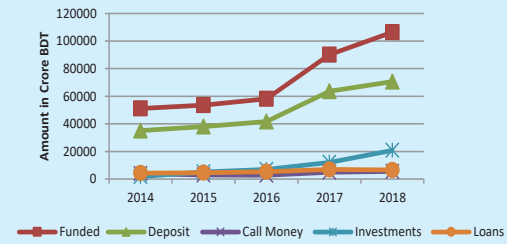


Source: *Financial Stability Department, BB*

Market share of the total interbank assets are dominated by SCBs and PCBs while liabilities are dominated by PCBs and FIs. Other stakeholders' participation is limited in the market. In 2015 and 2016, PCBs led the asset side. But since 2017, SCBs took the lead due to a substantial flow of SCBs' deposit to PCBs and FIs. On the liability side, PCBs and FIs had the lion share throughout the period, though PCBs' liabilities jumped substantially from 2017.

Interbank funded exposures mainly consist of call money, interbank deposit, investments and loans. Chart B2.4.3 shows that funded exposure had a consistent growth for the past four years (2015-2018), due to expansion of deposit market. Total interbank funded exposures are dominated by deposit market followed by investment market. As of December 2018, deposit market held 66.33 percent and investment market held 19.50 percent of the total market share. Deposit market doubled while investment market had a ten times growth due to issuance of subordinated bonds by some PCBs during this period. Call money and loan markets are relatively smaller and had relatively lower growth. Call money market had some fluctuations, but loan market had a steady growth.

CHARTB2.4.3: FUNDED MARKET EXPOSURE



Source: *Financial Stability Department, BB*

As of December 2018, SCBs were the major fund providers (38 percent of total fund), while PCBs were the major fund receivers (39 percent of total fund) in deposit market. Three SCBs provided 34.14 percent of the total market funds. The deposit market was relatively steady and more connected compared to call money, investment and loan markets. Since SCBs are on the supply side, the overall interbank market seems to be resilient to market shocks because of SCBs huge surplus funds. But this may also be a concern from systemic viewpoint. Liquidity imbalance or failure of any of the SCBs may spread to other participants causing an undeniable possibility of contagion effect.

One of the most important indicators to signal the current liquidity scenario of the industry is call money. In any stressed situation money circulation and interest rate in call money market might jump abruptly. Over the last four years, call money rate remained almost unchanged. Chart B2.4.5 shows that the monthly weighted average call money rate was almost stable throughout 2018.

This steadiness was due to absence of any major liquidity shock in the system. Steady and faster growth of deposit market owing to substantial injection of SCBs fund into the market might have absorbed potential shocks. However, in call money market, SCBs were the major fund providers, while PCBs were the major receivers. As of December 2018, two SCBs alone provided 46.94 percent of total funds of this market.

CHART B2.4.4: WEIGHTED AVERAGE CALL MONEY RATE

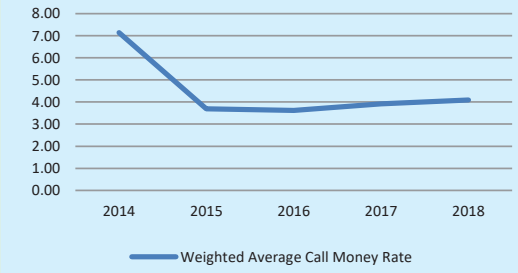
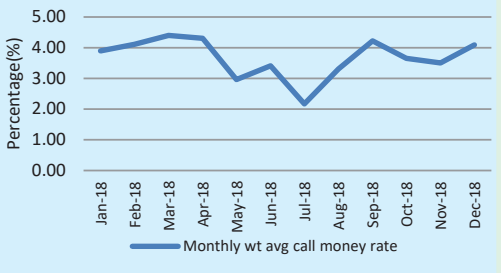


CHART B 2.4.5 : MONTHLY WEIGHTED AVERAGE CALL MONEY RATE



Source: *Economic Data, BB website.*

In investment market, SCBs were the major buyers of the securities issued by PCBs. As of December 2018, four SCBs had 63.80 percent stake in the investment market. In interbank loan market, FIs were the top ten borrowers. They borrowed 66.92 percent of the total fund as of December 2018.

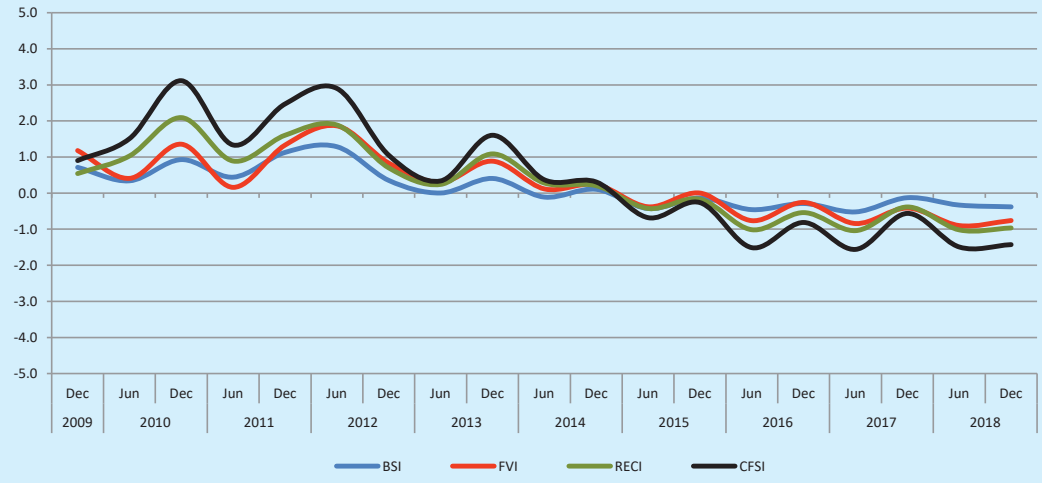
Non-Funded market was concentrated to PCBs. Top five (5) banks possessed more than half of the interbank claims. FIs had little presence in this market.

Using three centrality measures, such as betweenness, closeness and eigenvector, 11 banks (four SCBs and seven PCBs) were found very much interconnected as of December 2018. Among them two SCBs and one PCB were more concentrated with other banks and FIs. These banks are not only big in terms of their asset size, but also are important because of their connectivity and size of exposures. They currently have more contagion risk on the interbank system. Any large change in the fundamental variables, such as fund flow, liquidity, profitability etc. of one (or a group) of them may result in an industry wide 'domino effect'. Although there was no significant presence of FIs in centrality measures, but in cluster analysis few FIs were found to have more reciprocated links with some banks; i.e., they were more exposed to each other's vulnerability.

BOX 2.5: COMPOSITE FINANCIAL STABILITY INDEX (CFSI): DECEMBER 2018

Composite financial stability index (CFSI)[41] is a tool to measure the stability of a financial system as well as to monitor any build up of systemic stress in the system. More specifically, this is a measure of the volatility in the financial system. Excess volatility in a direction for a prolonged period might be an indication of build-up of systemic risk provided that other relevant information is taken into consideration during the analysis. It is a combination of eighteen different indicators under three sub-indices - Banking Soundness Index (BSI), Financial Vulnerability Index (FVI) and Regional Economic Climate Index (RECI)[42]. Using semi-annual data since December 2004, this index has been updated regularly on half-yearly basis. In this current version, movement of CFSI has been shown for the period ranging from December 2009 to December 2018.[43]

CHART B2.5.1: COMPOSITE FINANCIAL STABILITY INDEX (CFSI)



Notes: Regime of CAR calculation changed twice: Basel I to Basel II in 2010 and to Basel III in 2015; Minimum capital requirement (in amount) for banks increased (BDT 2 billion in 2007 and BDT 4 billion in 2011); From June 2013, base year of CPI changed (from 1995-96=100 to 2005-06=100).

The index shows that the financial system of Bangladesh has been mostly stable during the past few years except for some periods of high volatility. As the movement of CFSI indicates, relatively high volatility in 2010 was due to the historic rise of the country's stock market index since mid-2009 up to December 2010 and subsequent price correction. The liquidity crisis in the financial sector as well as banks' maintenance of higher capital adequacy ratio for adoption of Basel II framework in Bangladesh is reflected in CFSI during July-December 2011. The index captures another considerable volatility during the first half of 2012 when huge current account surplus was recorded and the banking system experienced a severe liquidity pressure in domestic money market. From the mid-2012, the CFSI eased down to the mean (zero) line. Besides, during January-June 2015, CFSI showed a small downward bump under the mean line when there was immense pressure of appreciation on BDT; capital adequacy and profitability of the banking sector also deteriorated due to the impacts of the major disruptions in the domestic supply chain in the early 2015. Thereafter, the CFSI along with the three sub-indices did not exhibit any abrupt volatility indicating relative stability of the financial system during the period. Analyzing the events of the review year i.e. 2018, CFSI reflected the subdued performance of the banking sector stemming

41 See FSR 2017 (pp. 46-47) for methodology used to prepare CFSI.

42 The list of indicators used in CFSI is provided in annexure-XLII.

43 See FSR 2017 (pp. 46-47) for discussions before December 2009.

articularly from the stressed asset quality and capital base of the SCBs. Though widening current account deficit, due to sharply increased import payments, put stress on the economy during the first half, slowdown in import growth along with increased exports and remittance inflows in the second half eased the pressure. Overall, there was no excessive volatility observed, implying a modestly stable and resilient financial system during 2018. Nevertheless, the downside risk remains ahead if the banking sector performance does not improve as this may adversely impact the overall financial sector. Moreover, a sustainable current account balance remains contingent upon the continuation of strong export earnings and remittance inflows on the back of an escalated trade tensions and geopolitical risks in a number of major economies.

Chapter 3

BANKING SECTOR RISKS

This chapter analyses different types of risk aspects of the banking sector in Bangladesh. For analysis, banks are categorized into five different groups. Table 3.1 demonstrates the details of the bank groups and their shares in total banking sector assets as of December 2018.

TABLE 3.1: GROUPING OF BANKS FOR THE PURPOSE OF RISK ANALYSIS

Bank Group	Description of the group	Number of banks	Share in total banking sector assets (in percent)
Group 1	Private commercial banks (Long-standing conventional banks)	22	44.3
Group 2	State-owned and Private commercial banks under special attention[44]	10	28.2
Group 3	Private commercial banks (Full-edged Islamic banks)	7	19.0
Group 4	Foreign commercial banks	9	5.1
Group 5	Fourth generation[45] private commercial banks	9	3.3

Source: *DOS, BB.*

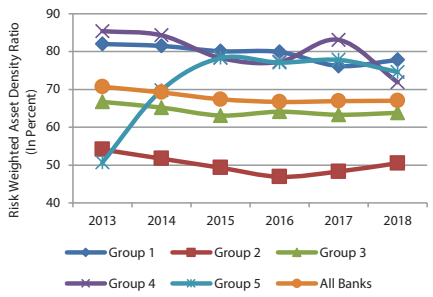
3.1 OVERALL RISK PROFILE OF THE BANKING SECTOR

Table 3.2 shows the trend in risk-weighted assets (RWA) density ratio[46] of different groups of banks during the period 2013-2018. It is mentionable that the higher density ratio reflects that banks are exposed towards more risky assets. Group 1, 5 and 4 have higher RWA density. It appears that the ratio increased for group 1, 2 and 3, while it decreased for group 4 and 5 from the previous year.

TABLE 3.2: RISK WEIGHTED ASSET DENSITY RATIO

(In Percent)

	2013	2014	2015	2016	2017	2018
Group 1	82.0	81.5	80.1	79.9	76.2	77.8
Group 2	54.1	51.7	49.3	46.9	48.3	50.5
Group 3	66.7	65.2	63.1	64.1	63.3	63.8
Group 4	85.4	84.3	78.3	77.3	83.1	71.9
Group 5	50.7	69.8	78.3	77.1	77.8	74.6
All Banks	70.7	69.2	67.4	66.7	66.9	67.0



Source: *DOS, BB.*

44 Banks operating under memorandum of understanding (MOU) or Directives of Bangladesh Bank (DOBB), which requires additional amount of supervision and suffer from various constraints inhibiting their performance including poor asset quality, capital inadequacy and weak governance.

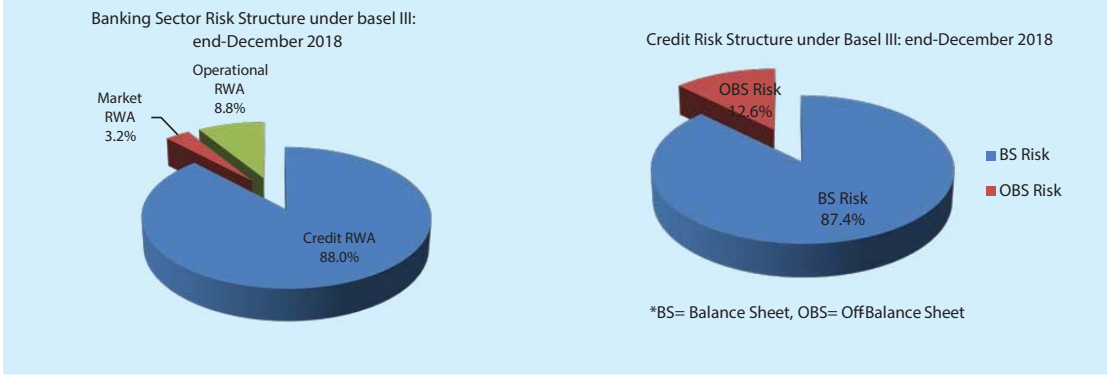
45 Banks which were granted license in 2013 onward to operate as scheduled banks in Bangladesh (except one Islamic bank that is included in group 3).

46 The RWA density ratio is a simple and quick measure of weighted average relative risk of a bank's on- and off-balance sheet exposures. However, there are some criticisms of this ratio for its significant divergences across banks and jurisdictions due to the inconsistency of risk measurement methodologies across jurisdictions. As RWA density ratio, in this case, is calculated for the whole banking system under one jurisdiction, there may be less bias in the result.

3.2 CREDIT RISK STRUCTURE IN BANKS[47]

Chart 3.1 shows the share of RWA attributed to credit, market and operational risks. The credit risk was 88.0 percent of the total RWA of the banking system as of December 2018, whereas the RWA associated with market and operational risks were 3.2 percent and 8.8 percent respectively. The distribution of RWA among credit risk, market risk and operational risk (in percentage) was same as the previous year despite the 11.8 percent increase in RWA from the previous year. It is notable that 87.4 percent of the credit risk was derived from balance sheet exposures.

CHART 3.1: OVERALL RISK AND CREDIT RISK STRUCTURE



Source: *DOS, BB.*

The capital to risk weighted asset ratio (CRAR) of the banking industry was 10.5 percent at end-December, 2018 which was 33 basis points lower than previous year (point to point). However, the maintained CRAR was still above the regulatory requirement of 10 percent.

The nominal value of RWA for credit risk was BDT 8,589.1 billion for funded and non-funded credit exposure while the value of RWA for market risk and operational risk were BDT 314.9 billion and BDT 859.9 billion respectively.

In CY18, credit risk of the top 5 banks accounted for 23.6 percent of the total credit risk of the banking sector, while about 40.1 percent of credit risk was held by the top 10 banks (Table 3.3). The concentration of credit risk within top 5 and top 10 banks remained almost same at end-2018 compared to end-December 2017.

TABLE 3.3: CREDIT RISK UNDER BASEL III IN THE BANKING INDUSTRY

(As of end-December 2018)

Banks	Share in industry credit risk	Share in industry overall risk
Top 5	23.6%	20.8%
Top 10	40.1%	35.2%
All banks	100.0%	88.0%

Source: *DOS, BB.*

The group-wise analysis of credit risk (Table 3.4) reveals that group 1 (22 banks), possessing 44.3 percent of total assets, contained more than half (52.2 percent) of the industry's credit risk and 45.9 percent of overall industry's risk weighted asset. Group 2 (10 banks), on the other hand, possessed 28.2 percent of the assets but contained about one-fifth of the industry credit risk and 17.6 percent of the overall industry risk.

The remaining groups (Islamic banks, foreign banks and fourth generation domestic private banks) contained credit risk almost similar to their asset shares of the banking system. Thus, the credit risk

47 Credit risk is defined as the probability of loss (due to non-recovery) emanating from the credit extended, as a result of the non-fulfillment of contractual obligations arising from unwillingness or inability of the counter-party or for any other reason. However, in this chapter credit risk refers to credit risk weighted asset.

of the banking system was mostly concentrated in conventional private commercial banks, state-owned banks and commercial banks operating under special attention.

TABLE 3.4: GROUP-WISE DISSECTION OF CREDIT RISK IN THE BANKING SYSTEM

Banks	Share in industry credit risk	Share of Credit Risk in overall industry risk	Share of total RWA in overall industry risk[48]
Group 1	52.2%	45.9%	51.5%
Group 2	20.0%	17.6%	21.2%
Group 3	18.7%	16.4%	18.1%
Group 4	5.4%	4.8%	5.5%
Group 5	3.7%	3.3%	3.7%
Total	100.0%	88.0%	100.0%

Source: *DOS, BB.*

3.3 MARKET RISK STRUCTURE[49]

Under Basel III, the sources of market risks are mainly attributed to the risks pertaining to interest rate related instruments and equities in the trading book and foreign exchange risk and commodities risk in both the trading and banking book. Chart 3.2 illustrates the market risk structure at end-December 2018. RWA for market risk in total RWA remained stable in CY18 from the previous year. But the nominal value of RWA for market risk increased by 12.2 percent during the same period. Equity price risk constituted the highest stake (43.5 percent) in the market risk structure in CY18 followed by foreign exchange rate risk 33.0 percent and interest rate risk 23.5 percent.

Table 3.5 demonstrates the group wise analyses of market risk in the banking system. The table shows that the group 1 with 22 banks and the group 2 with 10 banks were jointly exposed to 90.7 percent of the total interest rate risk in the segment of market risk in CY18. The equity price risk of the two groups was 89.8 percent. Thus, long standing local private commercial banks and the state owned banks possessed most of the interest-rate related instruments and accounted for capital market investments of the banking system. Moreover, these banks under Group 1 and 2 categories contained 72.5 percent of the exchange rate risks in the system. However, the group 3, consisting of all the Islamic banks, possessed 19.2 percent of the exchange rate risks in CY18, which was 25.2 percent in CY17.

TABLE 3.5 : GROUP WISE DISSECTION OF MARKET RISK IN THE BANKING SYSTEM

Banks	Share in industry interest rate risk	Share in industry equity price risk	Share in industry Exchange rate risk
Group 1	22.0%	53.9%	35.5%
Group 2	68.7%	33.8%	36.9%
Group 3	0.0%	9.4%	19.2%
Group 4	1.8%	0.0%	5.2%
Group 5	7.5%	2.9%	3.1%
Total	100.0%	100.0%	100.0%

Source: *DOS, BB.*

The bank group 4 and group 5 consisting of foreign banks and fourth generation commercial banks respectively were less exposed to market risk in the banking system.

48 Total risk includes credit risk, market risk and operational risk.

49 Market risk is defined as the risk of loss in on- and off-balance sheet positions arising from movements in market prices. In this chapter market risk refers to market risk weighted asset.

3.3.1 INTEREST RATE RISK (IRR)[50]

The share of RWA attributed to interest rate risk (IRR) was 0.8 percent of the total RWA of the banking system at the end of 2018 which was similar to that of the preceding year (point to point). But the nominal value of the RWA for interest rate risk increased by 9.0 percent from the previous year. Mentionable that, IRR contributed 23.5 percent of the market RWA in CY18, which was 26.2 percent in previous year. The bank's capital charge for interest rate risk was BDT 7.4 billion in CY18 which was same in CY17, reflecting stability in terms of interest rate risk in the banking system. Table 3.6 shows that the top 5 banks contained 79.5 percent of industry's interest rate risk. Three SCBs and two PCBs were ranked in the top 5 in terms of capital charges for IRR in the banking system. With comparison to CY17, interest rate risk weighted asset to industry's total risk weighted asset for both top 5 banks and top 10 banks were increased in CY18. But the IRR in overall risk for top 5 banks and top 10 banks remained unchanged in this year.

TABLE 3.6: INTEREST RATE RISK IN THE BANKING SYSTEM

Banks	Interest rate risk	Share in market risk	Share in overall risk
Top 5	79.5%	18.7%	0.6%
Top 10	91.0%	21.4%	0.7%
All Banks	100.0%	23.5%	0.8%

Source: *DOS, BB.*

3.3.2 EXCHANGE RATE RISK[51]

The RWA assigned to exchange rate risk constituted 1.1 percent of the total RWA of the banking system while the share was 33.0 percent of the market risk as of December 2018. The banks' capital charge for exchange rate risk increased to BDT 10.4 billion at the end of December 2018 from BDT 6.3 billion at the end of December 2017. Table 3.7 shows that top 10 and top 5 banks were exposed to 65.4 percent and 47.0 percent of the industry's exchange rate risk in 2018. The values were 58.7 percent and 39.2 percent in 2017 for top 10 and top 5 banks respectively.

TABLE 3.7: EXCHANGE RATE RISK IN THE BANKING SYSTEM

Banks	Exchange rate risk	Share in market risk	Share in overall risk
Top 5	47.0%	15.5%	0.5%
Top 10	65.4%	21.6%	0.7%
All Banks	100.0%	33.0%	1.1%

Source: *DOS, BB.*

3.3.3 EQUITY PRICE RISK[52]

The risk weighted assets (RWA) assigned to equity price risk constituted 1.4 percent of the total RWA of the banking system while it was 43.5 percent of the total market risk as of December 2018. The banks' capital charge for equity price risk was BDT 13.7 billion at the end of December 2018, which was about BDT 0.8 billion lower than that of the previous year. The top 10 banks contained 62.7 percent of industry's equity price risk. The risk was 63.9 percent at the end of December 2017. It is notable that two SCBs and three PCBs occupied the top 5 positions from the perspective of equity price risk (36.9 percent in 2018).

50 Interest rate risk is defined as potential risk to interest sensitive assets and liabilities of a bank's on- and off-balance sheet items arising out of adverse or volatile movements in market interest rate.

51 Exchange rate risk is defined as the variability of a firm's earnings or economic value due to changes in the rate of exchange. In other words, this is the risk of possible direct loss (as a result of an un-hedged exposure) or indirect loss in the firm's cash flows, assets, net profit and, in turn, its estimated market value of equity from an exchange rate movement.

52 Equity price risk is the potential risk of reduction in profitability or capital caused by adverse movements in the values of equity securities, owned by the banks, whether traded or non-traded, or taken as collateral securities for credits extended by the bank. Equity risk, at its most basic and fundamental level, is the financial risk involved in holding equities in a particular investment.

TABLE 3.8 EQUITY PRICE RISK IN THE BANKING SYSTEM			
Banks	Equity price risk	Share in market risk	Share in overall risk
Top 5	36.9%	16.1%	0.5%
Top 10	62.7%	27.3%	0.9%
All Banks	100.0%	43.5%	1.4%

Source: *DOS, BB.*

3.4 OPERATIONAL RISK[53]

Risk weighted assets (RWA) assigned to operational risk constituted 8.8 percent of the total RWA of the banking industry at end-December 2018 which was same as at the end-December 2017. At end-December 2018, the banking industry charged BDT 86.0 billion as capital for operational risk which was 9.2 billion higher than that of the previous year. Table 3.9 shows that the top 10 banks were exposed to 43.9 percent of the industry's operational risk in 2018. This exposure was closely aligned with their asset share in the industry, i.e., 43.4 percent. Considering the overall industry risk, the share of top 10 banks remained at the same level of operational risk in the past four years, i.e.; 4.1 percent in 2015, 4.0 percent in 2016 and 3.9 percent in 2017 and 2018.

TABLE 3.9: OPERATIONAL RISK UNDER BASEL III IN THE BANKING INDUSTRY		
Banks	Share in industry operational risk	Share in industry overall risk
Top 5	27.6%	2.4%
Top 10	43.9%	3.9%
All Banks	100.0%	8.8%

Source: *DOS, BB.*

Table 3.10 depicts the group-wise operational risk for 2018. It reveals that 48.6 percent of the operational risk was confined within the bank group 1. However, the share of operational risk in the overall industry risk for the bank group 1 was only 4.3 percent. On the other hand, bank group 2 and 3 were exposed to 25.3 percent and 15.3 percent of the total operational risk respectively. The exposure to overall industry risk for group 2 and 3 were 2.2 percent and 1.3 percent respectively. However, the share of group 4 and 5 in both operational risk and overall industry risk were not very significant.

TABLE 3.10 : GROUP WISE DISSECTION OF OPERATIONAL RISK IN THE BANKING SYSTEM		
Banks	Share in industry operational risk	Share in overall industry risk
Group 1	48.6%	4.3%
Group 2	25.3%	2.2%
Group 3	15.3%	1.3%
Group 4	7.5%	0.7%
Group 5	3.2%	0.3%
Total	100.0%	8.8%

Source: *DOS, BB.*

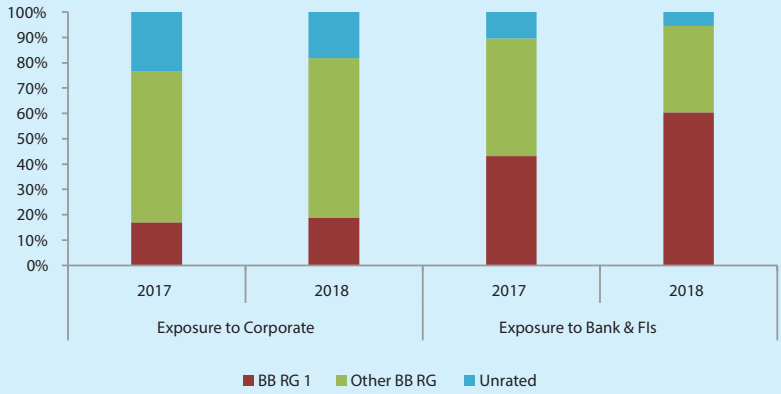
53 Operational risk is defined as the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events. This definition includes legal risk, but excludes strategic and reputation risk. Under Basel III, two methods - the Basic Indicator Approach (BIA) and the Standardized Approach (TSA) - have been recommended for calculating operational risk capital charges in Bangladesh. Banks in Bangladesh are now implementing BIA, no bank has adopted TSA so far. They are allowed to adopt TSA subject to attaining the qualifying criteria stipulated under the Basel III framework.

3.5 RISK MITIGANTS

The rated exposures increased for banks, financial institutions (FIs) and corporate sector in CY18. The proportion of best rated exposures (BB RG 1) also increased for both financial and corporate sectors.

In Bangladesh, Banks' exposures to non-financial corporations (NFCs) and other banks and financial institutions are rated by external credit assessment institutions (ECAIs) to determine the capital requirements against credit risks. The better the ratings of the exposures, the lesser the likelihood for the banks to default. Chart 3.3 shows the rated and unrated exposures to NFCs and Banks & FIs during the period, 2017-2018.

CHART 3.2 : BANKS' RATED EXPOSURES TO CORPORATE AND BANKS & FIs



Source: *DOS, BB.*

It is evident from chart 3.3 that total exposure of the banking system to corporate sector as well as banks and FIs increased in December 2018 compared to that of December 2017. The overall exposure to corporate sector was BDT 5729.3 billion at end-December 2018, which was BDT 777.3 billion higher than the exposure in 2017. Similarly, the overall rated exposure along with the best rated exposure (BB RG 1) increased by 5.1 percentage points and 1.9 percentage points respectively in December 2018 compared to those of December 2017. In December 2018, the total rated exposure was 81.8 percent, of which the best rated exposure was 18.9 percentage points. The overall exposure to banks and FIs was BDT 1258.5 billion in December 2018, which was BDT 194.0 billion more than that of December 2017. It is mentionable that 94.5 percent of the matured exposure got BB grading from RG1 to RG6 and 5.5 percent was unrated. Likewise banks' corporate exposure, the rating of exposure to banks and FIs improved in CY18 compared to CY17. In CY18, 60.3 percent of matured exposures received BB rating RG1, a notable improvement compared to the rating obtained in the previous year. 43.1 percent exposures got similar ratings in 2017. The higher ratings, obtained in both corporate and banks and FIs in 2018, indicate a lower credit risk of the banking system, which counteracts the systemic risk of the financial sector.

3.6 CREDIT RATING TRANSITION MATRIX

Most of the corporate entities/exposures obtained the similar credit rating in 2018 in comparison to the rating of 2017. The percentage of upward migration of credit ratings was greater than downward migration in 2018. This suggests the resilience of the financial system with respect to corporate solvency.

Table 3.11 demonstrates the credit rating transition matrix for 2017-18. It shows the transition or migration of entities/exposures from one rating category to another over the 4th quarter of two consecutive years, 2017 and 2018.

TABLE 3.11: TRANSITION MATRIX 2017-18[54]						
From 2017 Rating*	To 2018 rating*					
	1	2	3	4	5	6
1	72 (97.3%)	-	2 (2.7%)	-	-	-
2	5 (2.2%)	209 (92.9%)	9 (4.0%)	2 (0.9%)	-	-
3	-	12 (3.9%)	284 (93.1%)	8 (2.6%)	1 (0.3%)	-
4			14 (45.2%)	17 (54.8%)	-	-
5	-	-	-	-	-	-
6	-	-	-	1 (100%)	-	-

Source: *BRPD, BB; computation: FSD, BB. *Rating grades are BB equivalent.*

The matrix reveals a stable credit rating scenario in 2017-2018 where almost 95 percent of the entities/exposures maintained either their previous ratings or upgraded to higher rating categories. The magnitudes of upward and downward migration were 5.0 percent and 3.5 percent respectively compared to 8.4 percent and 1.3 percent during 2016-2017. Following BB grading system, 91.5 percent of the total entities obtained ratings between 1 and 3. The higher percentage of better credit ratings of the entities/exposures to which banks and FIs were exposed indicates lesser counterparty risk in near future. However, very few entities were found in low rating categories (i.e., 4, 5 and 6), suggesting the possible tendency of entities/exposures to remain unrated rather than rated with a poor score. This may help the entities to maintain the required capital adequacy since lower risk weight is assigned to unrated entities/exposures.

Overall, any immediate threat of credit risk is unlikely to be originated from corporate entities/ exposures.

54 The analysis considers both entity-wise and exposure-wise long-term rating under surveillance category. The 4th quarter ratings of 636 entities/exposures of Argus, CRAB, CRISL, ACRL and ECRL were compared between 2017 and 2018.

Chapter 4

BANK AND FI RESILIENCE

Bangladesh Bank (BB) conducts periodical stress tests to measure the resilience of banks and FIs throughout the year under different plausible shock scenarios. This chapter contains the results of stress tests on banks and FIs as well as on the banking system based on the data of end-December 2018.

4.1 BANKING SECTOR RESILIENCE

Stress test on banks is conducted through sensitivity analysis, incorporating impacts of the shock scenarios for credit risk, market risk and liquidity risk. Under each scenario, the after-shock Capital to Risk-weighted Assets Ratio (CRAR) is compared with the minimum regulatory requirement of 10 percent.[55] Particular attention is paid to credit risk, which is the major risk in the banking sector.

Among the 57 scheduled banks, 48 banks were able to meet the minimum regulatory requirement of CRAR of 10 percent while the CRAR of the remaining nine (9) banks were found below the minimum regulatory requirement as of end-December 2018. It is noteworthy to mention that, out of nine (9) under-capitalized banks, five (5) banks had negative CRAR due to a cumulative loss and provision shortfall. Besides, Basel III compliance standard requires conservation buffer of 1.875 percent in addition to the existing minimum capital requirement of 10 percent. As at end-December 2018, 34 banks were able to maintain both regulatory capital of 10 percent and capital conservation buffer of 1.875 percent as suggested under Basel III.

4.1.1 CREDIT RISK

Different sensitivity tests for credit risk have been conducted to assess the impact of different shocks on banks' capital adequacy. Generally, the ratio of gross NPL to total gross loans is considered as the main measure of credit risk based on the assumption that credit risk is associated with the quality of the banking industry's loan portfolio.[56]

TABLE 4.1: STRESS TESTS FOR CREDIT RISK: CRAR AND NPL RATIO AFTER SHOCKS

(Percent)

Before Stress Scenario	Gross NPL Ratio	Required Minimum CRAR	Maintained CRAR
Banking System	10.30	10.00	10.50
Stress Scenarios[57]			
	Gross NPL Ratio	Required Minimum CRAR	CRAR after shock
Shock 1: NPL increase by 3%	12.99	10.00	9.37
Shock 2: NPL increase by 9%	18.38		6.66
Shock 3: NPL increase by 15%	23.76		2.63

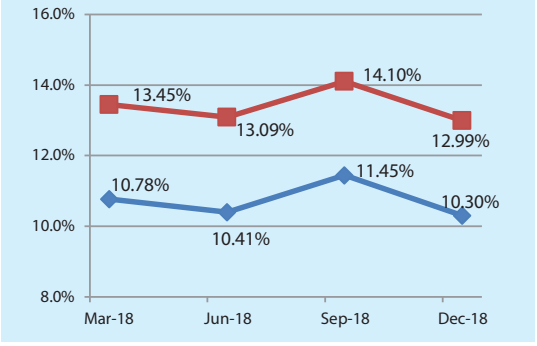
Source: *FSD, BB*

55 The results are based on the unaudited data for the calendar year ended at December 2018.

56 Gross NPL (Non-performing loan) means aggregate loans classified as substandard, doubtful, and bad/loss category.

57 Shock 1, Shock 2, and Shock 3 stand for minor, moderate and major shocks respectively.

CHART 4.1: PROBABLE NPL RATIO AFTER MINOR SHOCK



Source: *FSD, BB*

In Chart 4.1, historical gross NPL ratios of four (4) quarters of CY18 are illustrated with a blue solid line and the red line shows the stressed NPL ratio of each quarter. Under the minor shock scenario, the banking sector's gross NPL ratio is likely to rise to the level of 12.99 percent from the current level of 10.30 percent. Consequently, the banking sector CRAR would decline to the level of 9.37 percent.

It also reveals that five (5) out of 48 banks might become noncompliant in capital adequacy requirement under this stress scenario. Moreover, additional 17 banks would fail to comply with the Basel III minimum required capital including capital conservation buffer (CCB) under NPL stressed scenario.

TABLE 4.2: STRESS TESTS FOR CREDIT RISK: DEFAULT BY THE LARGEST BORROWERS

(Percent)

Before Stress Scenario	Required Minimum CRAR	Maintained CRAR
Banking System	10.00	10.50
Stress Scenarios	After-Shock CRAR	
Shock 1: Top 3 largest borrowers	8.88	
Shock 2: Top 7 largest borrowers	7.38	
Shock 3: Top 10 largest borrowers	6.41	

Source: *FSD,BB*

The **second test** has been conducted on the credit concentration risk of banks to examine the effect of capital adequacy in case of default of the three largest individual/group borrowers (Table 4.2). It was found that the capital adequacy of the banking system would decrease to 8.88% from existing 10.5% while 22 out of 48 banks are likely to become noncompliant in maintaining minimum capital adequacy. Moreover, additional six (6) banks would fail to comply with the minimum required capital including capital conservation buffer when the top three (3) largest borrowers' credit quality turns to bad/loss grade.

TABLE 4.3: STRESS TESTS FOR CREDIT RISK: INCREASE IN NPLS IN PARTICULAR SECTOR

(Percent)

Before Stress Scenario	Required Minimum CRAR	Maintained CRAR
Banking System	10.00	10.50
Stress Scenarios		After-Shock CRAR
Shock 1: 3% of performing loans directly downgraded to bad/loss		10.44
Shock 2: 9% of performing loans directly downgraded to bad/loss		10.31
Shock 3: 15% of performing loans directly downgraded to bad/loss		10.18

Source: *FSD,BB*

In the **third test** (Table 4.3), shock has been applied to standard loans outstanding as at end-December 2018 under selected business lines, e.g., readymade garments (RMG), textiles, ship building, ship breaking, real estate (residential and commercial), construction, power and gas, transport, storage and communication, capital market, consumer credit, etc. Although the SME sector has the highest exposure with 17.15 percent of the total loans, the result reveals that the risk potential of the two largest business lines would be minimal. If an additional three (3) percent of the largest outstanding loans become non-performing (bad/loss), the banking sector's CRAR would likely to decrease to 10.44 percent, which would remain above the minimum regulatory requirement. Under this shock scenario, two (2) out of 48 banks would likely to become noncompliant in maintaining capital adequacy requirement. Moreover, additional nine (9) banks would fail to maintain Basel III minimum required capital with capital conservation buffer under this shock scenario.

TABLE 4.4: STRESS TESTS FOR CREDIT RISK: DECREASE IN FSV OF THE COLLATERAL (Percent)		
Before Stress Scenario	Required Minimum CRAR	Maintained CRAR
Banking System	10.00	10.50
Stress Scenarios		After-Shock CRAR
Shock 1: 10% decline in the forced sale value of mortgaged collateral		9.83
Shock 2: 20% decline in the forced sale value of mortgaged collateral		9.14
Shock 3: 40% decline in the forced sale value of mortgaged collateral		7.74

Source: *FSD, BB*

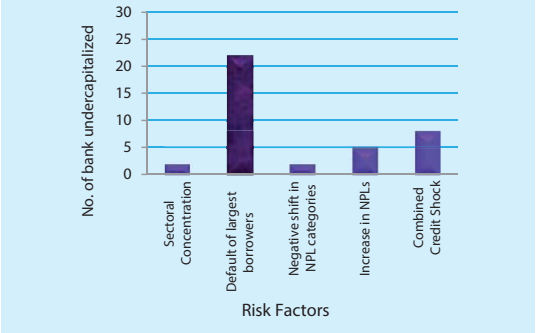
The **fourth test** (Table 4.4) deals with the fall in forced sale value (FSV) of mortgaged collateral. Shock has been applied on the FSV of mortgaged collateral assuming its value would decline by 10, 20 and 40 percent under different stress scenarios. Due to the minor shock, no banks would become noncompliant to maintain the minimum capital requirement. However, seven (7) banks would fail to maintain Basel III minimum required capital with capital conservation buffer under this shock scenario.

TABLE 4.5: STRESS TESTS FOR CREDIT RISK: NEGATIVE SHIFT IN NPL CATEGORIES (Percent)		
Before Stress Scenario	Required Minimum CRAR	Maintained CRAR
Banking System	10.00	10.50
Stress Scenarios		After-Shock CRAR
Shock 1: 5% negative shift in the NPLs categories		9.64
Shock 2: 10% negative shift in the NPLs categories		8.17
Shock 3: 15% negative shift in the NPLs categories		6.70

Source: *FSD, BB*

The **fifth test** (Table 4.5) assumes negative shifts in the existing NPL categories, due to some adverse events for the banks, which might result in additional provision requirements. The standardized shocks are 5, 10 and 15 percent downward shift in the NPL categories (loans downgraded to one step lower NPL category). Resilience is tested for minor level of shock where hypothetically five (5) percent of the standard and special mention account (SMA) grade loans are downgraded to substandard, five (5) percent of the substandard loans are downgraded to doubtful, and five (5) percent of the doubtful loans are downgraded to and push the bank to the level bad/loss category. It is observed that the minor level of shock may erode the capital of two (2) banks below the minimum regulatory required capital. In addition, five (5) banks would fail to maintain the minimum regulatory capital in compliance with the Basel III capital conservation buffer.

CHART 4.2: STRESS TESTS: MINOR SHOCK ON DIFFERENT CREDIT RISK FACTORS



Source: *FSD, BB*

The test results suggest that the credit shock is the most dominant shock in terms of its impact on CRAR. The sensitivity analysis on the banking sectors' credit portfolio reveals that the banking sector is relatively less resilient with different types of credit shocks. When shocks are applied by defaulting three (3) largest borrowers using the data as of end-December 2018, 22 out of 48 banks would become noncompliant in maintaining the minimum required capital. As a result of increase in NPL, five (5) banks would fall short of minimum capital requirements. A combined credit shock which is a summation of all shocks (decrease in FSV, increase in NPL, and negative shift in NPL categories) under credit risk, would cause eight (8) banks to become noncompliant in maintaining the minimum required capital. In brief, default of the top three (3) borrowers is likely to have the highest impact on the banks' resilience (Chart 4.2).

4.1.2 LIQUIDITY RISK

The liquidity stress test considers excessive[58] withdrawal of demand and time deposits both in local and foreign currency.[59] A bank is considered to be adequately-liquid if it can survive (after maintaining SLR[60]) up to five (5) consecutive business days under a stressed situation. Standardized shocks are 2, 4 and 6 percent withdrawal of deposits, in excess of bank's normal withdrawal.[61] However, withdrawal is to be adjusted with available liquid assets (excluding SLR).

TABLE 4.6: STRESS TESTS: LIQUIDITY RISK

Liquidity Stress: Consecutive 5 working days	Stress Scenarios		
	Shock 1 (2%)	Shock 2 (4%)	Shock 3 (6%)
Whether the bank remains liquid (Yes) or not (No)			
Day:1	Yes	Yes	Yes
Day:2	Yes	Yes	Yes
Day:3	Yes	Yes	Yes
Day:4	Yes	Yes	Yes
Day:5	Yes	Yes	Yes

Source: *FSD, BB*

The results of liquidity shocks reveal that the individual banks and the banking system as a whole would remain resilient against liquidity stress scenarios of 2 to 6 percent additional withdrawal of deposits.

4.1.3 MARKET RISK

The banking industry is found to be fairly resilient in the face of various market shocks.[62] Banking sector will not be noncompliant in maintaining the minimum required capital adequacy under the exchange rate shock. Interest rate shock and equity price shock affect only one (1) and two (2) banks respectively as they become noncompliant in maintaining the minimum regulatory capital.

TABLE 4.7: STRESS TESTS: INTEREST RATE RISK

(Percent)

Before Stress Scenario	Required Minimum CRAR	Maintained CRAR
Banking System	10.00	10.50
Stress Scenarios	After-Shock CRAR	
Shock 1: 1% increase in interest rate	10.17	
Shock 2: 2% increase in interest rate	9.84	
Shock 3: 3% increase in interest rate	9.50	

Source: *FSD,BB*

TABLE 4.8: STRESS TESTS: EXCHANGE RATE RISK

Before Stress Scenario	Required Minimum CRAR	Maintained CRAR
Banking System	10.00	10.50
Stress Scenarios		After-Shock CRAR
Shock 1: Currency appreciation/depreciation by 5%		10.47
Shock 2: Currency appreciation/depreciation by 10%		10.43
Shock 3: Currency appreciation/depreciation by 15%		10.39

Source: *FSD,BB*

58 Higher than usual

59 A liquidity stress test in the context of banks in Bangladesh shows how many days a bank and the banking sector would be able to survive in a situation of liquidity drain without resorting to liquidity from outside (other banks, financial institutions or central bank).

60 SLR= Statutory Liquidity Requirement.

61 Withdrawal means only deposit outflow.

62 Market risk shocks: Interest rate, exchange rate and equity price movements.

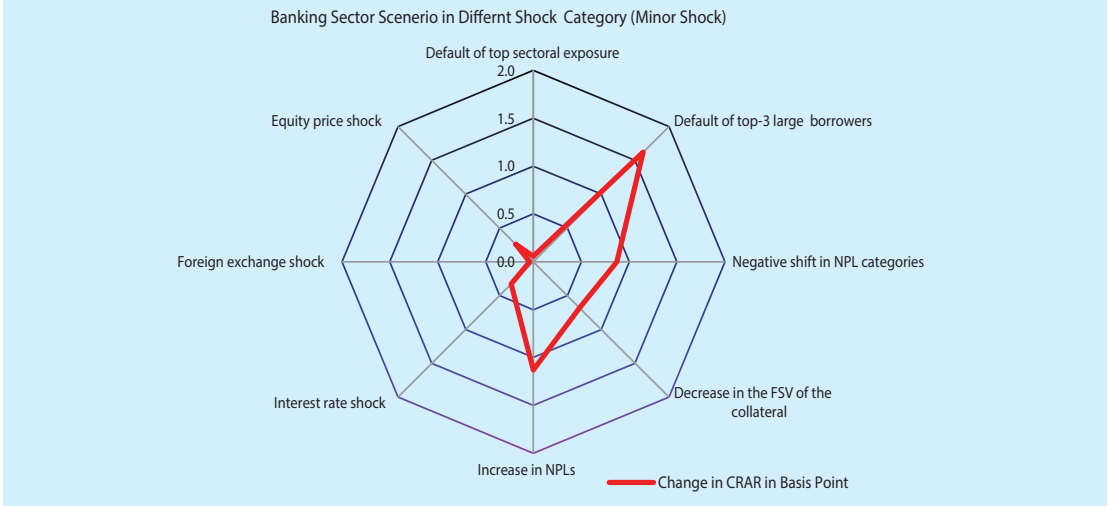
TABLE 4.9: STRESS TESTS: EQUITY PRICE RISK		
Before Stress Scenario	Required Minimum CRAR	Maintained CRAR
Banking System	10.00	10.50
Stress Scenarios		After-Shock CRAR
Shock 1: Fall in the equity prices by 10%		10.24
Shock 2: Fall in the equity prices by 20%		9.97
Shock 3: Fall in the equity prices by 40%		9.44

Source: FSD,BB

4.1.4 BANKING SECTOR RESILIENCE AT A GLANCE

Banking sector demonstrates a mixed resilience under different stress scenarios. Due to lower minimum capital ratio maintained by the SCBs and SDBs, the banking sector CRAR falls sharply to the minimum regulatory requirement level. Banking system finds itself vulnerable with credit defaults, especially in the event of default of large NFCs, although remains resilient at interest rate, exchange rate and equity price shocks. However, most of the banks as well as the banking system would likely to remain resilient against liquidity stress scenarios (Chart 4.3).

CHART 4.3: BANKING SECTOR RESILIENCE IN DIFFERENT SHOCK CATEGORY (AT MINOR SHOCK)



Source: *FSD, BB*

4.2 RESILIENCE OF THE FINANCIAL INSTITUTIONS

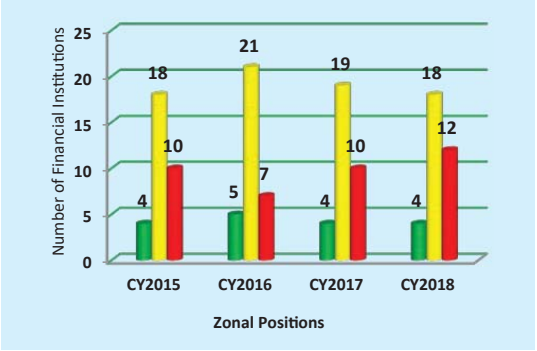
Stress test is conducted on the financial institutions (FIs) to assess their resilience at standalone basis and on system wide as well with different shock events. The Weighted Average Resilience (WAR) of FIs is calculated based on the weights of 10.0 percent for interest rate, 60.0 percent for credit, 10.0 percent for equity price and 20.0 percent for liquidity with three levels of shock scenarios.

The NPL to loan ratio of FIs signifies the Infection Ratio. The Infection Ratio which completely erodes the regulatory capital of the FIs to zero level is called the Critical Infection Ratio (CIR). Insolvency Ratio (IR) implies the percentage; an FI is, towards insolvency. For stress testing, minor, moderate and major level of shocks are applied giving weights of 50.0 percent, 30.0 percent and 20.0 percent respectively to derive the Weighted Insolvency Ratio (WIR).

Both the WAR and WIR of FIs are measured in a scale of 1 to 5 (best to worst) grades and categorized as either green (for grade 1) or yellow (for grade 2 and 3) or red (for grade 4 and 5) zone. The WAR-WIR Matrix expresses the overall financial strength and resilience of an FI by plotting its achieved ratings Matrix. The combined zonal position is set based on the weights of 80.0 percent on WAR and 20.0 percent on WIR (Chart 4.4).

Stress test results, based on the data as of end-December 2018, reveal that four (4) out of 34 FIs are positioned in green and 18 in yellow zone. Indeed, 22 FIs would have performed as resilient institutions during October-December 2018 quarter. On the other hand, 12 FIs are positioned in red zone during the same period. Overall, a majority of the FIs would remain resilient in the appearance of different shock scenarios.

CHART 4.4: COMBINED WAR-WIR MATRIX-BASED ZONAL POSITION (CY18)



Source: *DFIM, BB*

The stress testing result reveals that the whole banking system (including FIs) would be resilient to different shock simulations. However, the existence of few banks with double digit NPL ratio has been a source of risk to the financial stability. Thus, provision requirements might be stiffen to mitigate the potential emerging risks. Besides, if there is a potential risk escalation in any specific sector's credit, sector-specific provision maintenance could be implemented to shield the banks and FIs from generating potential risks in that specific sector. Moreover, the guidelines on large exposures would be helpful in reducing risks on banks' exposures to large corporate or group as well as avoiding concentration of loans to specific group, specific sector or specific region. Monitoring of financial fragilities is essential to issue policies which could prevent or mitigate systemic risk.

Chapter 5

FINANCIAL INSTITUTIONS' PERFORMANCE

Financial institutions (FIs) in Bangladesh play a significant role in meeting the diverse financial needs of various sectors of the economy and thus contribute to the economic development and deepening of the financial system. Their activities are viewed as catalysts for economic growth as they provide additional and alternative financial services apart from banks.

FIs are performing active role in promoting manufacturing and service industries especially garments, knitwear and textile besides agriculture, micro small and medium enterprises (MSMEs), trade, housing, transport, and information technology. FIs are also investors in the capital markets.

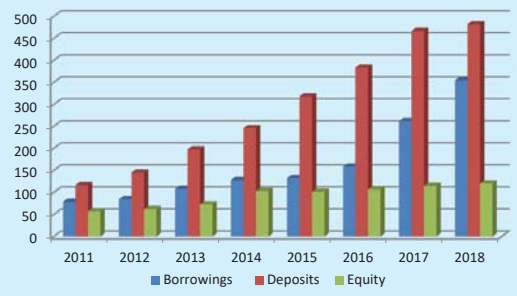
FIs are licensed and regulated under the Financial Institutions Act 1993 and supervised by Bangladesh Bank following a risk-based supervisory approach.

5.1 PERFORMANCE OF FIs

Performance of the financial institutions is measured by their sources of funds, asset composition, liability-asset ratio, asset quality and profitability.

5.1.1 SOURCES OF FUNDS

CHART 5.1: FIs' BORROWINGS, DEPOSITS AND EQUITY TREND



Source: *DFIM, BB*

As of end-December 2018, deposits, borrowings[63] and equity constituted 50.4 percent, 37.1 percent, and 12.5 percent of the funding sources respectively. These proportions were 55.3 percent, 31.1 percent and 13.6 percent respectively at end-December 2017. It is mentionable that, in CY18 deposits, borrowings, and equity of FIs increased by 3.2 percent, 35.4 percent and 4.7 percent respectively compared to those of the previous year.

5.1.2 ASSETS COMPOSITION

At end-CY18, aggregate assets of all the FIs stood at about BDT 957.1 million, increased by 13.4 percent from that of CY17. FIs' total assets to GDP[64] ratio remained almost same (around 4.3 percent) in CY18 compared to CY17 (Chart 5.2).

63 Borrowing includes borrowing from other banks and financial institutions and other liabilities.

64 GDP data as of June 2018.

CHART 5.2: FIs' TOTAL ASSET TO GDP RATIO

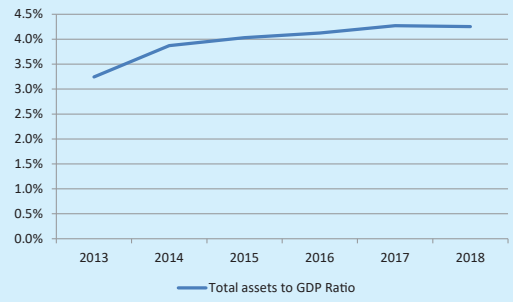
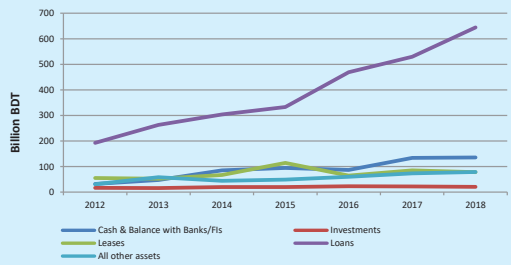


CHART 5.3: FIs' ASSET COMPOSITION



Source: *DFIM, BB.*

Major components of assets were loans, cash and balances with banks/FIs, and leases. The share of loans and leases to total assets was 75.5 percent as of end-December 2018 which was 72.8 percent at end-December 2017. The loans alone constituted 67.3 percent of the total assets of the FIs while cash balance and leases possessed 14.2 percent and 8.2 percent of the total assets respectively as of end-December 2018. The shares of investments and all other assets (including fixed assets) were 2.1 percent and 8.2 percent of the total assets respectively.

BOX 5.1: FIs' SECTOR-WISE LOANS AND LEASES AS OF END-DECEMBER 2018

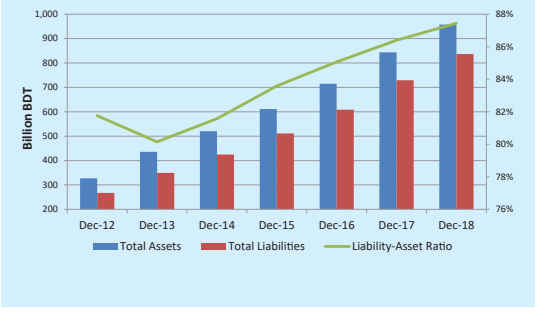
SL	Major sectors	Amount (in million BDT)	Percent	HHI*
1	**Trade and Commerce**	100.4	15.3%	234
2	**Industry:**			
	A) Garments and Knitwear	30.9	4.7%	22
	B) Textile	32.0	4.9%	24
	C) Jute and Jute-Products	3.1	0.5%	0
	D) Food Production and Processing Industry	28.2	4.3%	18
	E) Plastic Industry	7.3	1.1%	1
	F) Leather and Leather-Goods	2.8	0.4%	0
	G) Iron, Steel and Engineering	33.6	5.1%	26
	H) Pharmaceuticals and Chemicals	14.8	2.3%	5
	I) Cement and Allied Industry	13.2	2.0%	4
	J) Telecommunication and IT	16.3	2.5%	6
	K) Paper, Printing and Packaging	11.9	1.8%	3
	L) Glass, Glassware and Ceramic Industry	3.7	0.6%	0
	M) Ship Manufacturing Industry	4.4	0.7%	0
	N) Electronics and Electrical Products	8.0	1.2%	1
	O) Power, Gas, Water and Sanitary Service	57.5	8.8%	77
	P) Transport and Aviation	26.3	4.0%	16
3	**Agriculture**	20.1	3.1%	10
4	**Housing**	126.0	19.2%	369
5	**Others**			
	A) Merchant Banking	24.4	3.7%	14
	B) Margin Loan	13.1	2.0%	4
	C) Others	78.8	12.0%	144
	TOTAL	**656.8**	**100.0%**	**978**

** Herfindahl-Hirschman Index (HHI)*
Source: *DFIM, BB.*

The calculated Herfindahl-Hirschman Index (HHI) indicates that FIs' loans and leases were competitive[65] during CY18. The aggregate value of the index was 978 at end- December 2018 while it was 1005 in 2017. The two major sectors namely housing sector, and trade and commerce sector account for 19.2 and 15.3 percent of total loans and leases respectively.

5.1.3 LIABILITY-ASSET RATIO

CHART 5.4: FIs' LIABILITY-ASSET RATIO



The liability-asset ratio stood at 87.4 percent at end-CY18, 100 basis points higher than 86.4 percent recorded at CY17. The higher liability-asset ratio of the FIs indicates declining profit for CY18 which would have negative impact on retained earnings.

Source: *DFIM, BB.*

5.1.4 ASSET QUALITY

FIs asset quality declined in CY18 compared to that of CY17. The ratio of non-performing loans and leases to total loans and leases stood at 7.9 percent in CY18 which was 64 basis point higher than the ratio in CY17. During CY18, loan loss provisions amounting to BDT 27.5 billion was maintained by FIs, against a requirement of BDT 33.3 billion, representing a coverage ratio of 50.4 percent of non-performing loans and leases, 6.8 percentage points higher than the level recorded in CY17. Two FIs among 34 could not maintain the required provision, which eventually led to provision shortfall of BDT 5.7 billion in the industry. The shortfall was 4.9 billion at end-December 2017.

CHART 5.5: FIs' CLASSIFIED LOANS AND LEASES

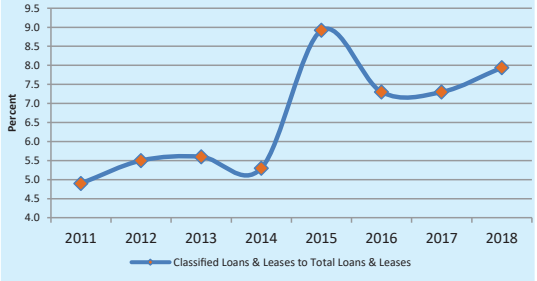
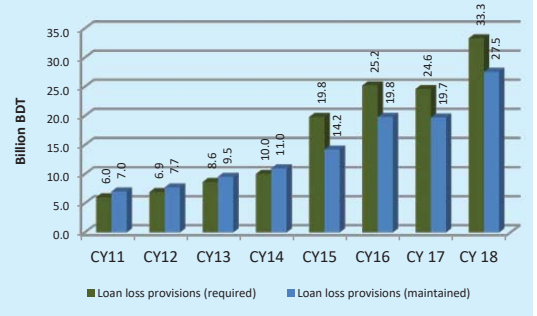


CHART 5.6: FIs' LOAN LOSS PROVISIONING



Source: *DFIM, BB.*

5.1.5 PROFITABILITY

The overall profitability of the FIs as of December 2018 was lower than that of 2017. FIs' profit before taxes slightly decreased by 5.2 percent in CY18 from the previous year, attributable to 62.2 percent decline in investment income, 2.2 percent decrease in net interest income, 34.8 percent increase in other operating income and 30.8 percent increase in income from commission and brokerage. At the same time, operating expenses increased by 6.8 percent and loan loss provisions increased

65 HHI less than 1000 considered as competitive marketplace.

by 39.5 percent and tax provisions decreased by 2.6 percent compared to those of the previous year. Consequently, the key profitability ratios return on assets (ROA) and return on equity (ROE)-declined compared to those of the previous year. The ROA and the ROE was 0.9 percent and 7.4 percent respectively at end-December 2018 while the ratios were 1.1 percent and 8.3 percent at end-December 2017.

CHART 5.7: FIs' TRENDS OF INCOME AND EXPENSE

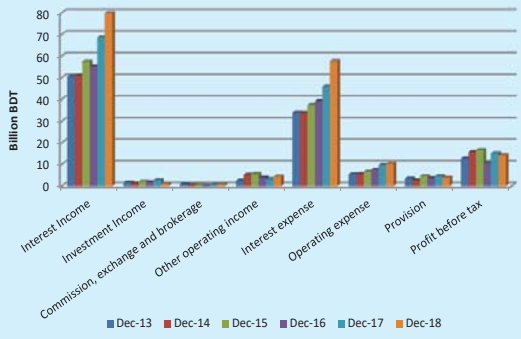
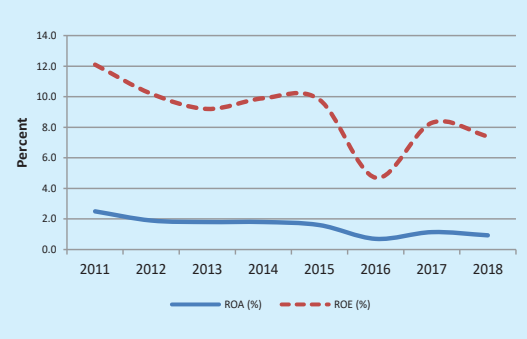


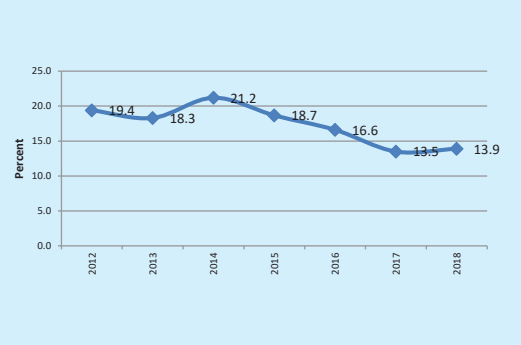
CHART 5.8: FIs' PROFITABILITY TREND



Source: *DFIM, BB.*

5.2 CAPITAL ADEQUACY

CHART 5.9: FIs' CAPITAL ADEQUACY RATIO (CAR)

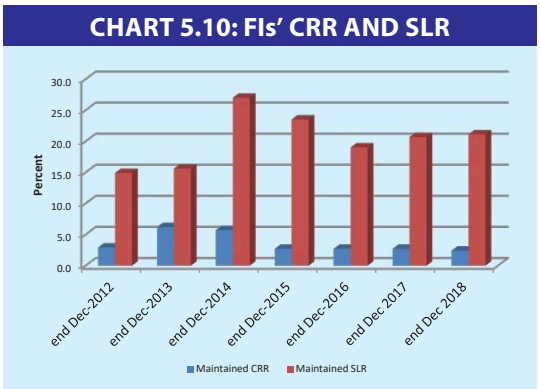


Source: *DFIM, BB.*

FIs are required to maintain regulatory capital as per Basel II guidelines issued by Bangladesh Bank. The capital adequacy ratio (CAR) was 13.9 percent at end-December 2018, compared to 13.5 percent (revised) recorded at end-December 2017. Against the 4.2 percent increase of total risk weighted asset (RWA), total maintained eligible capital increased by 7.6 percent in CY18 from that of the previous year. The trend of CAR of FIs showed a slightly upward trend in CY18 from CY17. The overall CAR depicts a strong position as it was well above the regulatory minimum requirement.

5.3 LIQUIDITY

CHART 5.10: FIs' CRR AND SLR



Source: *DFIM, BB.*

As of end-December 2018, the FIs sector maintained a 2.4 percent CRR and 21.1 percent SLR. The SLR maintained by FIs remained higher than CY17. Balances with other banks and FIs, call money investment, investments in government securities and any other assets, approved by BB, are considered as the components of SLR. Five (05) FIs were unable to maintain the minimum required CRR and one (01) FI could not maintain the minimum required SLR as of end-December

2018.[66] In November 2018, six (06) FIs could not maintain the required CRR while one (01) FI failed to maintain the minimum SLR.

Financial institutions demonstrated a mixed trend during the reviewed year attributable to increase in deposits, borrowing and equity, notable increase in asset size, increase in NPL, decrease in profit, and marginal increase in capital adequacy ratio compared to those of the previous year. However, poor performance of some financial institutions impacted the overall performance of the financial institutions. In order to overcome this situation, BB has already taken some policy measures to protect depositors' interest and ensure good governance.

66 FIs, taking term deposits, are required to maintain a statutory liquidity requirement (SLR) of 5.0 percent of their total liabilities, inclusive of an average 2.5 percent cash reserve ratio (CRR) of their total term deposits. FIs, operating without taking term deposits, are required to maintain an SLR of 2.5 percent and are exempted from maintaining CRR.

Chapter 6

MONEY AND CAPITAL MARKET

A moderate liquidity condition was observed in domestic money market during CY18. Lower issuance of BB Bill and large liquidity support by BB signifies tighter liquidity in the financial market. However, interbank repo rate and call money rate did not indicate any strong liquidity pressure in the money market. The capital market did not show up with investors' expectation in 2018. The sluggish stock market development can partly be attributed to moderate liquidity in the banking system and relatively higher return on National Saving Certificates (NSC).

6.1 MONEY MARKET

Gradual decline in issuance of BB bills was observed during the CY18. The issuance of T-bills was increased mostly in April-June and July-September 2018 quarters.

Bangladesh Bank (BB) issued BB bills worth BDT 4,573.18 billion in 2018, which was 56.29 percent lower than the issuance worth BDT 10,462.85 billion in 2017. BB bills with different maturities such as 07, 14 and 30-day worth BDT 3,950.89 billion, BDT 581.11 billion and BDT 41.18 billion respectively were issued in 2018[67]. Chart 6.1 exhibits that the issuance of BB bills declined sharply in the second-half of 2018.

CHART 6.1: VOLUME OF BB BILLS ISSUANCE IN 2018

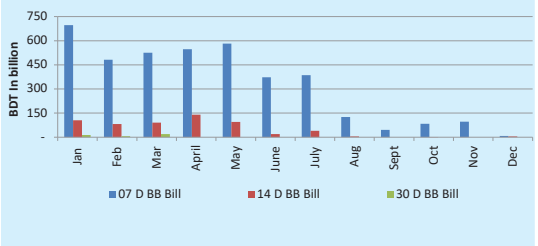
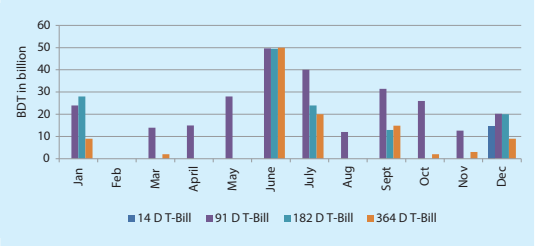


CHART 6.2: VOLUME OF T-BILLS ISSUANCE IN 2018



Source: *BB website, Economic Data; calculation: FSD, BB*

The government issued treasury bills (T-bills) with different maturities worth BDT 532.21 billion in 2018 for better management of the public funds, which was 5.0 percent higher than that of the previous year. T-bills with maturities of 14, 91, 182 and 364 days worth BDT 14.75 billion, BDT 273.09 billion, BDT 134.42 billion and BDT 109.9 billion respectively were issued in 2018 (Chart 6.2). Large sales of National Savings Certificate (NSC) with high interest rate might be a possible reason for such lower growth in T-bills issuance.

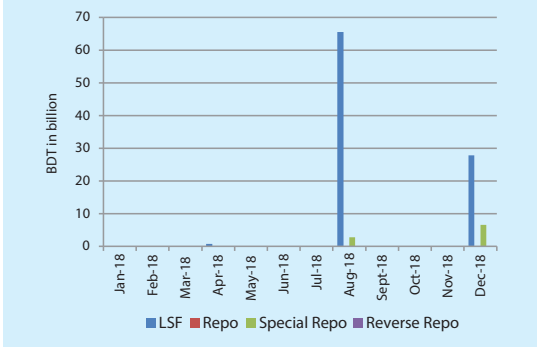
6.1.1 REPO WITH BANGLADESH BANK

Banks availed liquidity support facility (LSF) from Bangladesh Bank to a large extent during 2018.

Chart 6.3 shows that banks and financial institutions (FIs) did not enter into any repo and reverse repo arrangement with BB in 2018. Banks and FIs managed their required liquidity from call money market instead of repo with BB since repo rate was higher than the interbank call money rate.

67 07 and 14-day BB bills were introduced in April 2016 mainly for sterilization purpose (DMD Circular No. 03, dated 05 April 2016).

CHART 6.3 AVERAGE MONTHLY TURNOVER OF LSF, REPO, SPECIAL REPO AND REVERSE REPO IN 2018



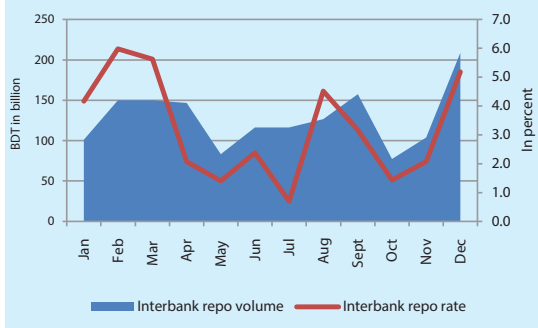
Source: *MPD, BB; calculation: FSD, BB*

However, they availed liquidity support facility (LSF) worth BDT 94 billion and special repo facility worth BDT 9.4 billion in 2018 (Chart 6.3). In 2017, LSF and repo facility worth BDT 3.0 billion and BDT 1.9 billion respectively were utilized.

6.1.2 INTERBANK REPO

The volume of interbank repo transactions decreased in 2018 amid fluctuating interbank repo rate[68].

CHART 6.4: INTERBANK REPO TURNOVER AND INTERBANK REPO RATE IN 2018



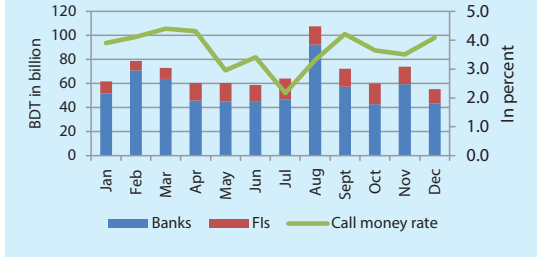
Source: *BB Website, Economic Data; calculation: FSD, BB*

The volume of interbank repo transactions in 2018 was BDT 1537.8 billion which was 14.9 percent lower than the amount of BDT 1,808.6 billion in 2017. Moreover, interbank repo rate showed a volatile trend throughout the year and reached to 5.2 percent in December 2018 (Chart 6.4), whereas the rate was 4.0 percent in December 2017.

6.1.3 INTERBANK CALL MONEY AND INTERBANK DEPOSIT MARKET[69]

Decline in annual average call money rate albeit transactions in the interbank call money and interbank deposit market increased.

CHART 6.5: CALL BORROWING VOLUME AND MONTHLY WEIGHTED AVERAGE CALL MONEY RATE IN 2018



Source: *BB website, Economic Data & FSD, BB. Calculations: FSD, BB*

During 2018, the monthly average call money rate was fluctuating and stood at 4.1 percent in December (Chart 6.5). However, the annual average call money rate decreased to 3.7 percent in 2018, 10 bps lower than that of the previous year.

In terms of total transaction volume, the call money borrowing was BDT 826.2 billion in 2018 which was 6.8 percent higher than that of 2017 (BDT 773.3 billion). The contribution of the banks stood at BDT 664.7 billion from BDT 632.4 billion

68 Monthly weighted average interbank repo rate.

69 Interbank call money only includes exposures of scheduled banks and FIs with each other. Assets or liabilities with non- scheduled financial institutions are excluded from this discussion.

of 2017 recorded an increase of 5.1 percent. The increased demand for fund can be attributed to increased private sector credit growth in 2018. While the FIs, on average, borrowed 20.2 percent of the total call money in 2018.

In terms of lending, the call money market was heavily concentrated as only 06 (six) banks supplied 74.3 percent of the total volume of call money lending as of December 2018. On the other hand, 06 (six) banks borrowed 53.5 percent of the totals available call funds. The state-owned commercial banks (SCBs) were the top lenders in the call money market in 2018 with a share of 55.4 percent while PCBs remained the top borrowers with a share of 63.2 percent at end-December 2018.

The interbank deposit market[70] was not as concentrated as the call money market in 2018. SCBs were the top deposit providers while PCBs were the top deposit receivers. FIs also secured a significant portion of the interbank deposit market. No single bank or cluster of banks dominated either the demand or supply side of this market. The total volume of this market recorded at BDT 706.1 billion at end-December 2018, which was 11.1 percent higher than that of the previous year. The increased interbank deposits helped liquidity management of the financial system in 2018.

6.2 BOND MARKET

Bonds issued by the government dominates the bond market in Bangladesh with low product variations and activities mostly based on primary auction. In 2018, long-term treasury bonds (T-Bond) worth BDT 253.9 billion were issued.

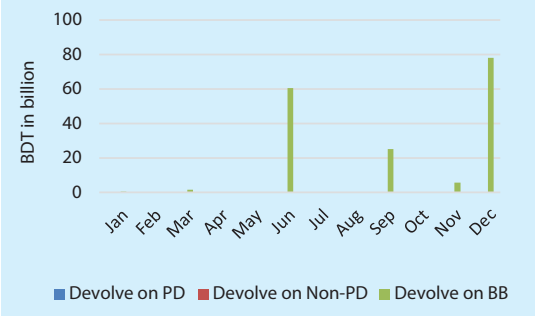
Table 6.1 demonstrates the volume of treasury bond sold in 2018 for different maturities. The higher sales volume for bonds with lower maturity indicates the preference of investors towards short-term bonds. Two-year treasury bonds were highest sold bonds, which captured 28.4 percent of the total auction sales.

TABLE 6.1: VOLUME OF T-BONDS AUCTION SALES IN 2018

Tenure	Volume(BDT in billions)	% of Total Auction sales
2 Y T-Bonds	72.00	28.4%
5 Y T-Bonds	65.85	25.9%
10 Y T-Bonds	51.90	20.4%
15 Y T-Bonds	31.85	12.5%
20 Y T-Bonds	32.29	12.7%
Total	**253.90**	**100.0%**

Source: *BB website, Treasury Bills/Bonds auctions. Calculation: FSD, BB.*

CHART 6.6: VOLUME OF TREASURY SECURITIES AUCTION SALES – MANDATORY DEVOLVEMENT (JANUARY- DECEMBER 2018)

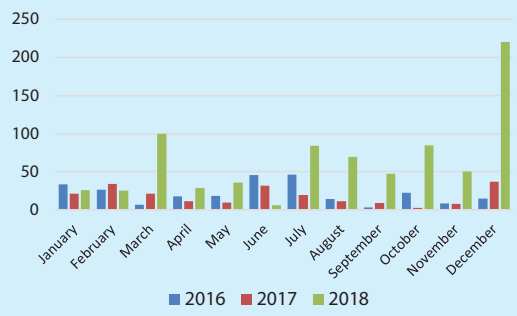


Source: *BB website, Treasury Bills/ Bonds auctions. Calculation: FSD, BB*

Chart 6.6 demonstrates the mandatory devolvement of treasury securities during the calendar year 2018. No mandatory devolvement on PDs and non-PDs was observed in primary auctions in 2018. However, devolvement on BB was BDT 171.8 billion in 2018 which was 6.7 times higher than that of the previous year. Higher devolvement was mainly observed at the end of June, September and December quarters.

70 Any Local Currency deposit that is held by one bank for another bank.

CHART 6.7: MONTHLY VOLUME OF OTC TRADE



Source: *DMD, BB; calculation: FSD, BB*

The total volume of treasury securities traded in the secondary market was BDT 282.9 billion during 2018. The volume of Over-the-Counter (OTC) transactions of treasury securities exhibited a 2.7 times rise in 2018 compared to that of the previous year. Chart 6.7 shows the trend in monthly OTC trade in 2018. The chart depicts an overall higher monthly trading volume in each month of the review year, as recorded a pick in December 2018 with 220 billion transactions. On the other hand, trading volume was the lowest in June 2018 worth BDT 5.8 billion.

BOX 6.1: STEEPENING YIELD CURVE

In December 2018, the treasury auction yield curve exhibited a downward trend in both short and long-term yields compared to those of December 2017 and June 2018 yield curves. The higher drop in short-term yield than the long-term yield made the yield curve steeper. Usually, a steeper yield curve indicates stronger economic activities and higher expected inflation. However, in the absence of a vibrant secondary bond market, such indication from the primary market yield curve may not be concrete.

CHART B.6.1: TREASURY BILL YIELD CURVE

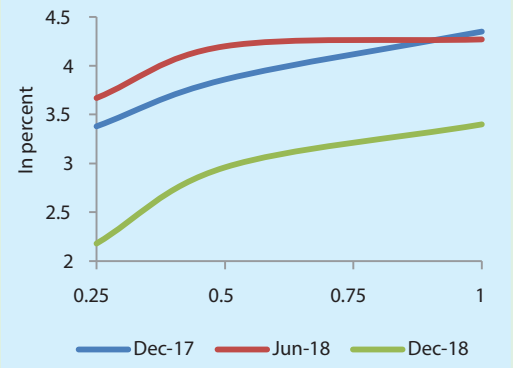
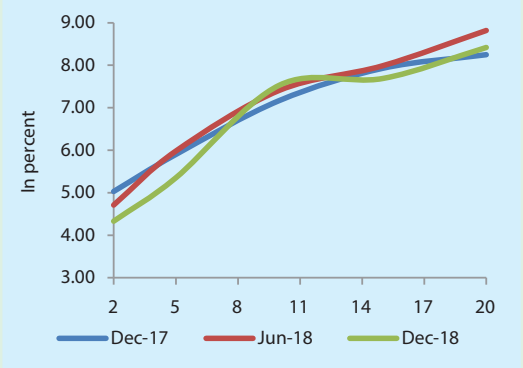


CHART B.6.2: TREASURY BOND YIELD CURVE



Source: *Major Economic Indicators, January 2018 BB.*

Chart B.6.1 exhibits that the yield of T-bills declined by 1.20 percentage points for 91 days, 0.90 percentage points for 182 days, and 0.95 percentage points for 364 days from December 2017 to December 2018 resulting an increase in yield gap between the shorter and longer term bills. On the other hand, Chart B.6.2 shows that yields declined by 0.70, 0.55 and 0.24 percentage points respectively for 2-year, 5-year and 15-year T-bonds whereas yield increased by 0.36 and 0.17 percentage points respectively for 10-year and 20-year bonds during the review year compared to those of the previous year. The increase in yield of 10-year bond formed a negative butterfly yield curve.

6.3 STOCK MARKET

The capital market in Bangladesh was bearish in CY18. The major indicators, such as index value, market capitalization and turnover declined sharply at the Dhaka Stock Exchange (DSE), the prime bourse in Bangladesh.

The DSE broad index (DSEX) decreased by 13.8 percent in 2018. Similarly, the market capitalization of DSE declined by 8.4 percent in 2018. However, the total issued capital increased by 4.1 percent and reached to BDT 1,243.0 billion during the review period. The turnover velocity ratio decreased to 34.4

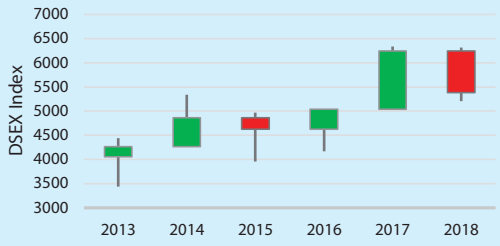
percent in 2018, a significant fall compared to 51.3 percent in 2017. The P/E ratio also dropped to 15.2 in December 2018 from 17.3 in December 2017. The sluggish stock market development in 2018 can partly be attributed to moderate liquidity in the banking system and higher return from NSC.

6.3.1 MAJOR INDEX AND MARKET CAPITALIZATION

Chart 6.8 shows the gradual downward movement of DSE broad index (DSEX) during 2018. DSEX stood at 5385.6 in December 2018 from 6244.5 in December 2017. Similarly, the market capitalization of DSE decreased to BDT 3,872.9 billion at the end of 2018 compared to BDT 4,228.9 billion at the end of 2017. The fall of both index and market capitalization has demonstrated a downtrend in capital market during the review year. The candlestick chart for DSEX index (Chart 6.9) reveals the reflection of investors' sentiments from the different pattern of opening index, highest index, lowest index and closing index. The long red candle in CY18 indicates strong selling pressure and bearish sentiment of the investors.

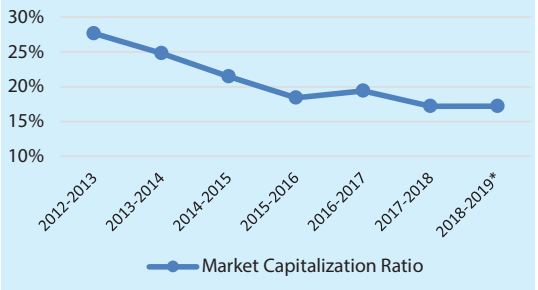
CHART 6.8: DSEX INDEX AND MARKET CAPITALIZATION TREND IN 2018

CHART 6.9: DSEX (CY13 TO CY18)



Source: *DSE*

CHART 6.10: MARKET CAPITALIZATION RATIO



Stock market deepening is measured by total market capitalization as a percentage of GDP. Chart 6.10 shows that the market capitalization-GDP ratio plummeted to 17.2 percent in 2018. Fall in market capitalization and positive GDP growth together contributed to this sharp fall in market capitalization ratio. It is mentionable that nominal GDP was in upward trend over the years while market capitalization ratio recorded downward trend with moderate fluctuation.

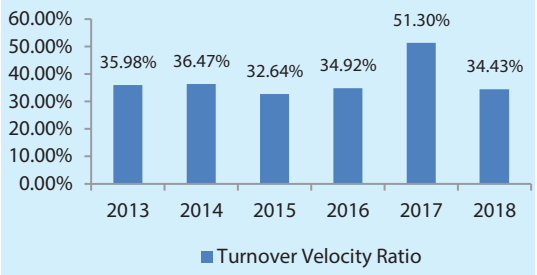
** up to December 2018.*

Source: *DSE Monthly Review, December 2018.*

6.3.2 TURNOVER RATIO

Liquidity in stock market can be measured by turnover velocity ratio, i.e. traded turnover divided by market capitalization. Chart 6.11 shows that turnover velocity ratio decreased to 34.4 percent in 2018 compared to 51.3 percent in 2017. This implies that liquidity was tighter in 2018. As a consequence, impact cost increased and price volatility widened in 2018.

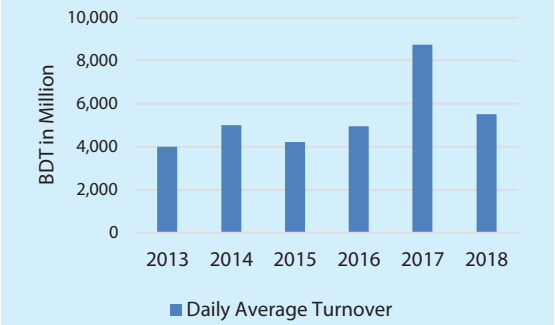
CHART 6.11: TURNOVER VELOCITY RATIO (CY13-CY18)



Source: *DSE*

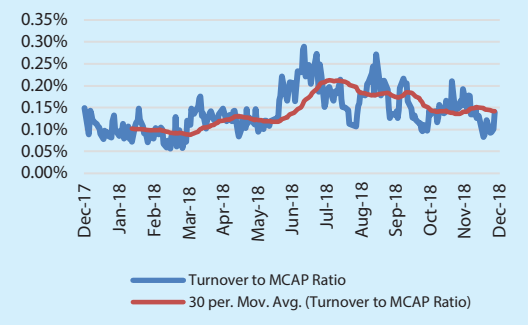
Chart 6.12 shows that the daily average turnover decreased from BDT 8.7 billion in 2017 to BDT 5.5 billion in 2018 reflecting lower liquidity in the market. However, turnover to market capitalization ratio indicates that liquidity situation was slightly better in the second half of the review year (Chart 6.13). The highest and the lowest value of the turnover to market capitalization ratio in 2018 was 0.29 percent and 0.06 percent compared to 0.58 percent and 0.08 percent in 2017.

CHART 6.12: DAILY TURNOVER (CY18)



Source: *DSE*

CHART 6.13: TURNOVER TO MARKET CAPITALIZATION RATIO (CY18)



Source: *DSE and Monthly Economic Trends, BB.*

6.3.3 MARKET CAPITALIZATION DECOMPOSITION

Chart 6.14 and 6.15 demonstrate the sectoral share in market capitalization in 2017 and 2018 respectively. The manufacturing sector dominates the market capitalization in 2018 capturing 39.1 percent which was 242 bps higher than the previous year. Food and allied, pharmaceuticals and

CHART 6.14: DECOMPOSITION OF MCAP (DEC- 2017)

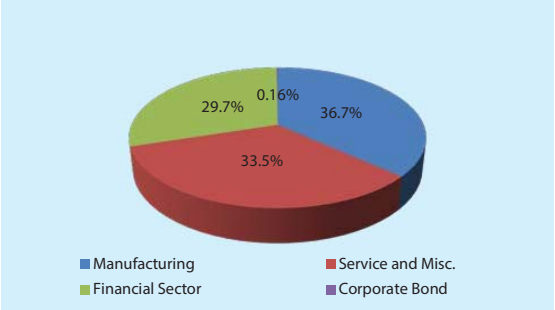
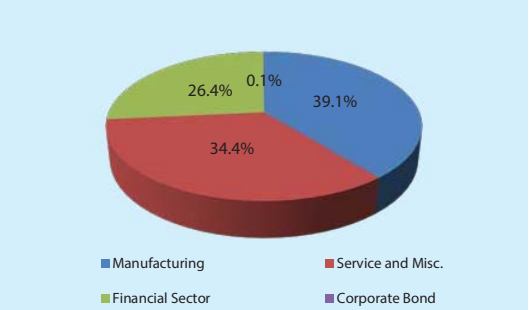


CHART 6.15: DECOMPOSITION OF MCAP (DEC- 2018)

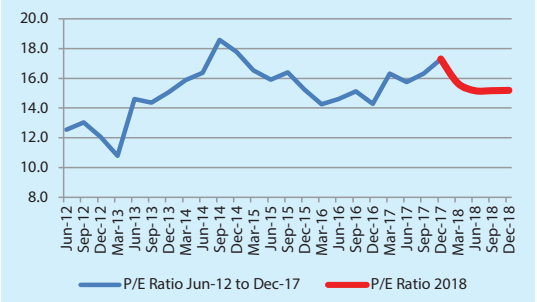


Source: *DSE*

chemicals, textile and engineering industries had the major contributions in the manufacturing sector.

The second largest share, 34.4 percent of the market capitalization was contributed by the service and miscellaneous sector in 2018 which was 33.5 percent in 2017. Fuel and power subsector was the key contributor in this sector. The market share of the financial sector decreased from 29.7 percent in 2017 to 26.4 percent in 2018 largely attributable to negative growth in banks and financial institutions. The growth in banks and financial institutions decreased by 23 and 22 percent respectively in 2018 compared to those of 2017. The share of corporate bond sector decreased from 0.16 percent in 2017 to 0.09 percent in 2018.

CHART 6.16: MARKET PRICE EARNINGS RATIO (JUNE 2012- DECEMBER 2018)



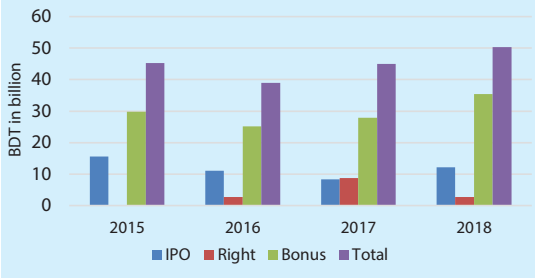
Source: *DSE*

6.3.4 PRICE-EARNINGS (P/E) RATIO

The current market price of the stock divided by its earnings per share (EPS) is known as price earnings (P/E) ratio which shows how much investors are paying for each unit of earnings.

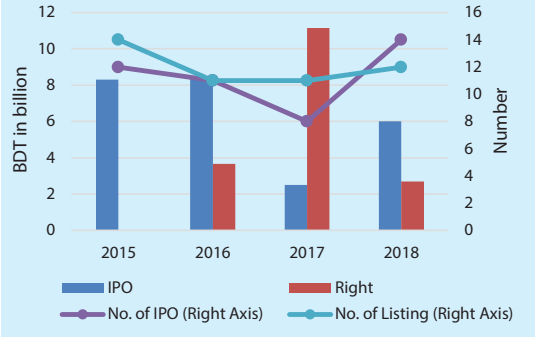
Chart 6.16 shows that the overall weighted average price-earnings (P/E) ratio of the DSE declined from 17.3 in December 2017 to 15.2 in December 2018. The lower PE ratio suggests stocks were less expensive during 2018 than in 2017. This also implies that investors were not optimistic about the future growth of the listed companies.

CHART 6.17: CAPITAL INCREASED BY THE SECURITIES TRADED AT DSE (CY15-CY18)



Source: *DSE Monthly Review, December 2018*

CHART 6.18: CAPITAL RAISED THROUGH IPO & RIGHT SHARES (CY15-CY18)



Source: *DSE Monthly Review, December-2018*

6.3.5 INITIAL PUBLIC OFFERING (IPO), RIGHT SHARE & BONUS SHARE

Chart 6.17 shows the trend in capital increase by the securities traded at DSE through initial public offering (IPO), right and bonus shares. In CY2018, issuance of bonus share dominated the increased capital following the previous years. A total of 154 companies listed in DSE enhanced capital through issuing bonus share amounting BDT 35.5 billion in CY18 compared to BDT 27.9 billion for 142 companies in CY17. Also, capital increase through IPO was higher in 2018 whereas capital increase by issuance of right share decreased. However, the total amount of capital increase in CY18 was BDT 50.3 billion which was highest since 2015. Capital increase contributes in stock market deepening by increasing market capitalization.

The trend in capital raised through IPO and right shares is exhibited in Chart 6.18. Capital raised through IPO was higher in CY18 than the previous year. A total of 14 companies including one mutual fund raised capital amounting BDT 6.0 billion through IPO in CY18 compared to BDT 2.5 billion capital raised for eight securities including two mutual funds in CY17. However, capital raised through right share issue was lower in CY18 compared to that of CY17. In 2018, two

companies raised capital of BDT 2.7 billion by issuing right shares compared to BDT 11.1 billion for four companies in CY17. Overall, total capital raised by both IPO and right share issue was lower in CY18 compared to previous two years, CY17 and CY16. However, increase in the number of both IPO and listing contributed more supply of securities in the stock market which would enhance the stability of stock market.

6.3.6 DIVIDEND & YIELD

The number of companies that declared cash dividend increased to 154 in CY18 from 142 in CY17, while the number of companies that declared stock dividend was decreased to 179 in CY18 from 187 in the previous year. However, the number of companies that did not declare any dividend decreased to 28 in CY18 from 36 in CY17 (Table 6.2).

TABLE 6.2: COMPARISON OF DIVIDEND AND YIELD

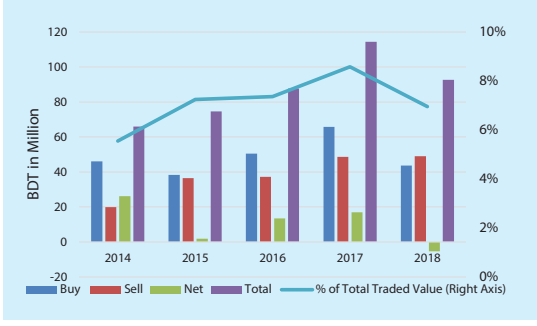
Particulars	2017	2018
No. of companies declared stock dividend	187	179
No. of companies declared cash dividend	142	154
No. of companies which did not declared dividend	36	28
Yield (%)	3.25	3.58

Source: *DSE Monthly Review, December 2018.*

Dividend yield shows slight improvement in the review year as it increased to 3.58 percent compared to 3.25 percent in CY17. Since dividend yield is one of the important return components for investors, regular dividend payment by the companies is crucial for attracting investors and a sound capital market. However, the dividend yield in DSE is much lower than the returns of other alternative investments, for example, the rate of NSC or Fixed Deposit rate of banks and NBFIs.

6.3.7 TRADE BY FOREIGN INVESTORS

CHART 6.19: FOREIGN TRADE TURNOVER (CY14-CY18)



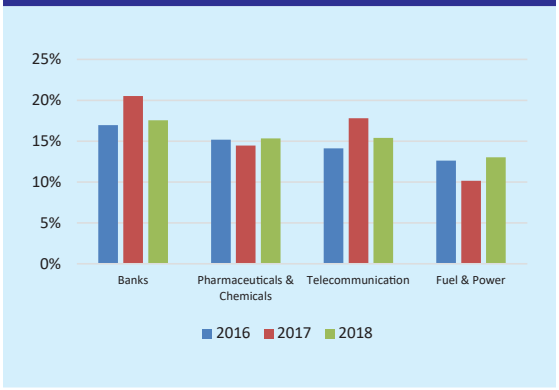
Source: *DSE Monthly Review, December 2018*

Chart 6.19 shows the trend in foreign trade turnover in DSE. The total trade by foreign investors decreased to BDT 92.7 billion in CY18 from BDT 114.5 billion in CY17, dropped by 19 percent in the review year. Total shares bought by foreign investors declined to BDT 43.7 billion in CY18 from BDT 65 billion in CY17, recorded a 33.5 percent decline. On the other hand, total share sold by foreign investors increased to BDT 49 billion in CY18 from BDT 48.7 billion in CY17. As a result, net investment became negative in CY18 for the first time in the past five years. Moreover, the value of total foreign trade recorded at 6.9 percent of total turnover of DSE during CY18 compared to 8.6 percent in CY17. Depreciation of BDT against USD and higher international interest rate might have been the possible reasons for the depressed scenario of foreign portfolio investment in DSE in 2018.

6.3.8 INTERLINK BETWEEN BANKING SECTOR & STOCK MARKET

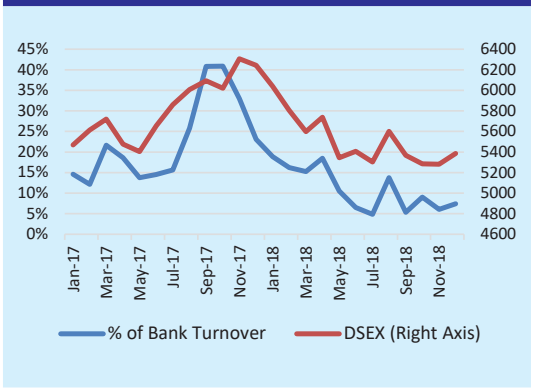
The linkage between banking sector and stock market is crucial from the perspective of financial stability. Chart 6.20 shows the top four sectors' market capitalization in DSE for the past three years. The chart clearly shows the dominance of banking sector in DSE, capturing more than 15 percent share of the total market capitalization. Therefore, any stress on the banking sector may have adverse effect and/or contagion effect on the stock market. Both market capitalization and index may fall

CHART 6.20: TOP FOUR SECTORS' MARKET CAPITALIZATION IN DSE (CY16-CY18)



Source: *DSE Monthly Review, December 2018.*

CHART 6.21: PERCENT OF BANK TURNOVER & DSEX MOVEMENT (CY17-CY18)



Source: *DSE Monthly Review, December 2018.*

sharply due to fall in bank share price. Chart 6.21 shows that both bank turnover and DSEX had been moving towards the same direction during the past two years implying that bank turnover had impact on the index.

Similarly, the performance of stock market has impact on banks as well since banks have investment exposure in stock market. However, banks' aggregate investment in the capital market remained much below the allowable limit set by Bangladesh Bank. Banks' capital market exposure was 16.5 percent and 27.4 percent of prescribed capital on solo and consolidated basis respectively at end-September 2018. It is noteworthy that maximum allowable limit to investment in capital market is 25 percent and 50 percent of the prescribed capital on solo and consolidated basis respectively. Considering the lower capital market exposure of banks it seems that equity price shock would not pose any stability threat to the banking sector in the near term.

Chapter 7

FINANCIAL INFRASTRUCTURE

A safe and efficient financial infrastructure is the key to stability and growth of any financial system. Financial infrastructure needs proper management for managing its inherent risk of causing contagion effect at any stressed market scenario. As a regulator, Bangladesh Bank has been working on ensuring proper regulation and supervision introducing state-of-the-art payment platforms and instruments to avoid any domestic or crossborder risk that may lead to systemic shock to the financial system. To foster smooth functioning of the financial markets, Bangladesh Bank has introduced several sophisticated payment platforms, such as National Payment Switch Bangladesh (NPSB), Bangladesh Automated Cheque Processing System (BACPS), Bangladesh Electronic Funds Transfer Network (BEFTN), Real Time Gross Settlement (RTGS) and Mobile Financial Services (MFS) that develop electronic transaction and payment systems.

7.1 ELECTRONIC BANKING OPERATIONS

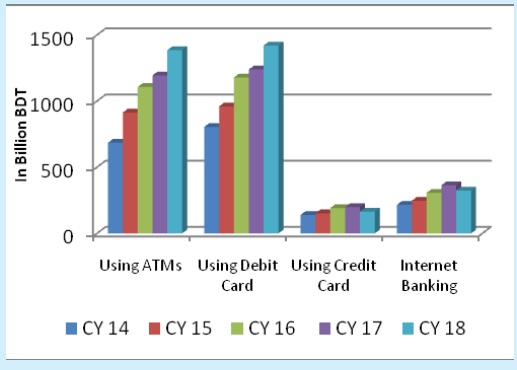
Banking industry has been enjoying various cutting edge electronic banking solutions that enable a bank to share banking information and transaction details electronically. Electronic banking has different aspects like internet banking, online banking, e-payment etc. In Bangladesh, 56 banks out of 58 had at least one online branch where internet banking services were available in 41 banks as of end-December 2018. Table 7.1 demonstrates the online banking scenario of Bangladesh as of December 2018.

TABLE 7.1: ONLINE BANKING SCENARIO AS OF DECEMBER, 2018

Type of Banks	No. of ATMs	No. of total Branches	No. of Branches with Online Coverage	Percent of Online Branches (%)
SCBs	210	3,713	3,687	99.30
SDBs	6	1,415	381	26.93
PCBs	6,416	5,060	5,059	99.98
FCBs	144	66	66	100.00
Total	**6,776**	**10,254**	**9,193**	**89.65**

Source: *Sustainable Finance Department, BB.*

CHART 7.1: TOTAL VOLUME OF ELECTRONIC BANKING TRANSACTIONS



Source: *Statistics Department, BB*

Chart 7.1 depicts the volume of electronic banking transactions during CY14 to CY18. The volume of transactions using ATMs and debit cards have been increasing fast since CY15, while the usage of credit card and internet banking declined in CY18 after a steady growth during CY14-CY17.

7.2 NATIONAL PAYMENT SWITCH BANGLADESH (NPSB)

National Payment Switch Bangladesh (NPSB) is an electronic platform facilitating inter-bank card based or online retail transactions through Automated Teller Machines (ATM), Point of Sales (POS) and Internet Banking Fund Transfer (IBFT) since its inception in 2012. It broadens the card-based payment networks substantially and promotes e-commerce throughout the country. At present, 53 banks are operating card business in Bangladesh. Among them, interbank ATM transactions of 51 banks, interbank POS transactions of 50 banks, and Internet Banking Fund Transfer (IBFT) transactions of 19 banks are being routed through NPSB.

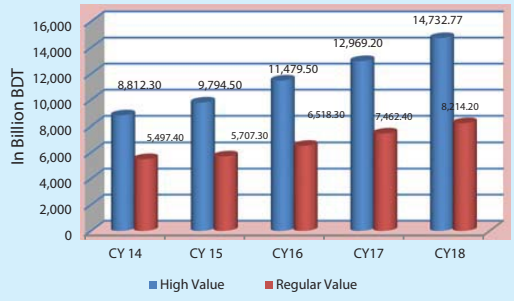
In CY18, approximately 24 million transactions amounting BDT 155 billion had been settled through NPSB recording a growth of 48.71 percent and 49.18 percent in terms of number of transactions and amount of payments respectively.

7.3 BANGLADESH AUTOMATED CHEQUE PROCESSING SYSTEM (BACPS)

Automated Cheque Processing System (ACPS) is used in banks to reduce the time taken to clear the cheques. It helps the banks in providing better customer services and increasing operational efficiency by cutting down overheads in physical clearing with faster reconciliation and fraud prevention. The BACPS has two presentment clearing sessions and two corresponding return clearing sessions per day. The clearing sessions are conducted High Value (HV) and Regular Value (RV) transactions.[71]

High Value transactions increased by 13.60 percent and Regular Value transactions increased by 10.07 percent from CY17 to CY18.

CHART 7.2: AUTOMATED CHEQUE CLEARING OPERATIONS



Source: *PSD, BB; compilation: FSD, BB.*

The total amount of High Value (HV) and Regular Value (RV) transactions were approximately BDT 14,732.77 billion and BDT 8,214.20 billion respectively in CY18. Chart 7.2 shows an upward trend, both in high-value and regular-value transactions for the past five years, CY14-CY18. The volume of high-value cheque processing increased relatively faster than that of regular-value.

7.4 BANGLADESH ELECTRONIC FUNDS TRANSFER NETWORK (BEFTN)

Bangladesh Bank operates Bangladesh Electronic Funds Transfer Network (BEFTN), a central clearing system that facilitates the settlement among the participating banks. BEFTN receives entries from Originating Banks (OB) and distributes the entries to appropriate Receiving Banks (RBs). BEFTN settles credit transactions (foreign and domestic remittances, social security payments, payroll, company dividends, bill payments, corporate payments, government tax payments, social security payments and person to person payments etc.) and debit transactions (utility bill payments, insurance premium payments, Club/Association payments, EMI payment etc.) with the objective of reducing paper based instrument and increasing electronic payment. Most of the government payments are also processed through BEFTN.

In CY18, on average, 67,956 transactions were settled per day through BEFTN, which was 33.33 percent higher than that of CY17. Approximately BDT 1,722.85 billion was processed through BEFTN, which was 29.20 percent higher than that of CY17.

71 Cheques amount of BDT 500,000 or above represent as HV and less than BDT 500,000 represent as RV.

7.5 MOBILE FINANCIAL SERVICES (MFS)

Mobile Financial Services (MFS) has been growing fast along with the rapid expansion of mobile phone network, increased number of mobile phone users and improvement of IT infrastructure since 2011.

BB allowed MFS for disbursement of inward foreign remittance, cash in/out using mobile phone account through agents/bank branches/ATMs/mobile operators' outlets, person to business payments, business to person payments, government to person payments, person to government payments and person to person payments.

The growth of transactions through MFS is portrayed in Table 7.2 below:

TABLE 7.2: CATEGORY-WISE GROWTH OF MFS

(In Million BDT)

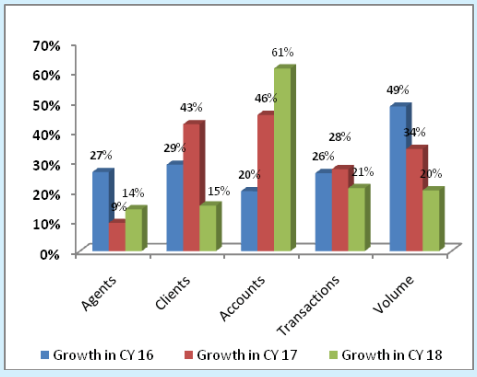
Category	CY17	CY18	Growth
Inward Remittance	841.0	3,605.8	328.75%
Cash In	1,326,612.8	1,551,994.9	16.99%
Cash Out	1,202,220.0	1,432,646.5	19.17%
P2P	471,564.6	591,109.7	25.35%
Salary Disbursement (B2P)	45,992.3	67,108.5	45.91%
Utility Bill Payment (P2B)	25,464.4	33,485.9	31.50%
Others	73,154.7	55,800.4	-23.72%

Source: *PSD, BB.*

Inward remittance gained massive growth (328.75 percent) in CY18. Disbursement of salary, mostly to RMG workers, increased by 45.91 percent. Among different categories of MFS transactions, the highest volume of transaction was from 'Cash In' operations followed by 'Cash Out' operations. But other forms of MFS had shown a negative growth due to some stringent regulatory measures.

MFS in Bangladesh is a bank-led model. 18 banks provided MFS to 67.5 millions registered clients through 886,473 agents during CY18.

CHART 7.3: RATE OF GROWTH OF MFS



Source: *PSD, BB; compilation: FSD, BB.*

Chart 7.3 depicts the significant increase in MFS accounts and number of agents in CY18 indicating its growing demand among the unbanked population in Bangladesh. However, the number of clients, number and volume of transactions through MFS decreased largely due to stringent regulatory measures introduced to check the abuses of MFS.

7.6 CENTRAL DEPOSITORY SYSTEM

Central Depository System (CDS), a major financial market infrastructure, is being operated by Central Depository Bangladesh Limited (CDBL). It is engaged in operations of capital market of Bangladesh assisting listed companies in handling of script less delivery, settlement and transfer of ownership of securities through computerized book entry system. The agents of CDBL extending depository services are called Depository Participants (DPs).

At end-December 2018, there were 348 full-fledged DPs, 4 full-fledged exchange DPs, 96 custodian DPs and 44 treasury DPs registered under CDBL. In addition, there were 407 issuers and 407 International Securities Identification Numbers (ISINs) registered under CDBL. The number of active BO accounts as of end-December 2018 was around 2.78 million.

7.7 REAL TIME GROSS SETTLEMENT (RTGS) SYSTEM

Real Time Gross Settlement (RTGS) system, an electronic instant settlement system, facilitates settlement of large value time critical payments without any waiting period. It is designed to settle high value (more than or equal to BDT 1,00,000) local currency and foreign currency transactions. However, the system is currently allowed to settle local currency only.

More than 7000 online branches of 55 scheduled banks are currently connected to this system out of total 11000 bank branches of 58 banks in the country and the number has been increasing gradually. In CY18, it settled approximately 863,352 transactions amounting to BDT 6,674.75 billion.

7.8 RECENT AND UPCOMING DEVELOPMENTS

In CY18, BB along with all other stakeholders intended to focus on ensuring a safe and secure financial ecosystem in the country. Apart from some sporadic domestic frauds and forgeries, the payment infrastructure did not create any systemic risk that could affect the financial stability of the country adversely, especially due to comprehensive and reasonably tight monitoring and supervision.

(a) Online Payment Gateway Service

Several private sector banks and couple of companies have established payment gateways for providing services to e-commerce entrepreneurs in the country. These gateways enabled the e-merchants to receive their sale proceeds from domestic and international buyers.

In view of the growing role of the services provided by the Online Payment Gateway Service Providers (OPGSPs), it has been decided to allow the Authorized Dealers (ADs) to offer the facility of repatriation of remittances against small value service exports in non-physical form, such as data entry/data process, off-shore IT service, business process outsourcing etc. Under this initiative, the exporters of the above services will be able to receive their overseas payments through the OPGSPs, such as Paypal, Money Bookers, Best Payment Gateway and Virtual Pay online platforms.

BB has drafted **Payment and Settlement Systems Act** which is now under process of approval. BB is working closely with various government departments for introducing online VAT payment system. Recently a new initiative has been undertaken with IFC of the World Bank Group.

BB has permitted six (6) banks including Sonali Bank Ltd and Rupali Bank Ltd to collect inward remittance through PayPal. PayPal in Bangladesh is expected to increase freelancers, create new entrepreneurs and increase foreign remittance.

(b) Payment Systems Oversight

Payment systems oversight concentrates on both the Retail Payment Segments (such as-cheque clearing, EFT, Card Payment system, MFS, internet banking etc.) and the Large Value Payment Segment (such as RTGS) along with all the payment instruments and participants (banks and PSOs including their third party service partners, PSPs etc.).

Besides their regular activities, payment system oversight encompasses some ad hoc activities such as conducting assessment of monitoring systems and their compliance with the applicable standards in the event of disruptions in service levels, monitoring new developments, new features of the system etc.

The upcoming developments in payment system infrastructure are as follows:

(i) **BACH2:** The expected deadline for completion of the upgradation of Bangladesh Automated Clearing House (BACH) has been set as March, 2019. Meanwhile, User Acceptance Test (UAT) of the central system has already been completed. System Integration Test has been started with member banks and BB Offices. Data migration from existing BACH storage to central storage system is under process.

(ii) **MFS:** MFS regulations were published on 30 July 2018. Implementation of MFS Interoperability is on progress. However, Government fund transfer using MFS via EFT has started.

(iii) **EMV standardization:** EMV stands for Europay, Master Card, and Visa, the three companies that originally created the standard. It's a chip based standardization process for all local cards. The standard covers the processing of credit and debit card payments using a card that contains a microprocessor chip. Attaining EMV compliant transaction system is going in full swing.

(iv) **PCI-DSS:** PCI DSS 12 requirements is a set of security controls that businesses are required to implement to protect credit card data and comply with the Payment Card Industry Data Security Standard (PCI DSS). The requirements were developed and are maintained by the Payment Card Industry (PCI) Security Standards Council. Upgradation of the payment system of Bangladesh to PCI-DSS compliant environment is under process.

Payment mechanisms are exposed to cyber security and operational risks, particularly arising from cross border financial transactions that are highly complex and involve multiple cross border jurisdictions. In the backdrop of recent cyber-attacks on payment systems of neighbouring countries, BB has issued an alert to all local banks to ensure proper cyber security measures. In the payment system of Bangladesh, BACPS (High Value) and RTGS could be identified as systemically most important payment platforms from the perspective of financial stability as these two accounted for most of the transactions through all the payment platforms in CY18. Any disruption in these platforms, even for a shorter period of time, may cause tension in the overall financial system. But other than some isolated domestic frauds and forgery mainly with electronic cards and mobile banking, the payment infrastructure did not pose any systemic risk that could have adverse effect on the financial stability of the country due to comprehensive and reasonably tight monitoring of BB. However, payment platforms, particularly the growing Fintech solutions, still require close supervision and monitoring due to their constant evolutionary nature with advanced technology.

Chapter 8

FOREIGN EXCHANGE MARKET

During the review year, the foreign exchange (FX) market of Bangladesh was mostly stable. FX assets and liabilities of banks constituted a small portion of banking sector assets and liabilities. On the other hand, FX contingent liabilities, which increased markedly due to sizeable imports in CY18, made up a significant share of banking sector's off-balance sheet exposures. In CY18, L/C opening decreased compared to that of CY17 whereas L/C settlement increased and exerted pressure on the FX market. However, higher growth in exports and wage earners' remittances along with BB's sale of USD in the market eased down the pressure to some extent. Consequently, no abrupt volatility was observed in the interbank (local) FX market and depreciation pressure on the nominal exchange value of BDT against USD moderated. Real effective exchange rate (REER) experienced large appreciation during the year, which may result in diminishing export competitiveness. Besides, BB's large scale sale of USD pur pressure on the country's gross FX reserve. Still the reserve position deemed to be adequate in terms of import coverage and ability to withstand probable external shocks in the near future.

8.1 FOREIGN EXCHANGE ASSETS AND LIABILITIES

FX denominated assets and liabilities constituted only around 5.1 percent and 4.7 percent of total banking sector assets and liabilities respectively in CY18, thereby appearing no immediate stability threats to the financial system.

FX denominated assets of the banking sector are mainly composed of cash holdings, BB clearing account, debit balance in nostro accounts, foreign currency bills purchased, investment in off-shore banking units (OBUs) and others. At end-December 2018, banks' total FX assets increased by 27.3 percent and stood at USD 8.8 billion from USD 6.9 billion at end-December 2017. Although banks' FX exposures have been increasing gradually along with the increasing international trade and finance, it remained around 5.1 percent of the total banking sector assets as of end-December 2018. Chart 8.1 shows that investments in OBUs and debit balances in nostro accounts constituted the highest shares of FX assets during CY17 and CY18, excluding the other items. Share of debit balance in nostro accounts increased by 7.7 percentage points to reach 19.4 percent while share of investments in OBUs decreased by 3.8 percentage points to secure 25.8 percent in CY18. Mentionable here that more than 60 percent of the debit balances in nostro accounts included banks' placements abroad in CY18, which may be vulnerable to any adverse movements in the exchange rate. On the other hand, decrease in the share of investments in OBUs may help reduce banks' risks from unfavorable exchange rate shocks.

CHART 8.1: YEAR-WISE FX ASSET STRUCTURE

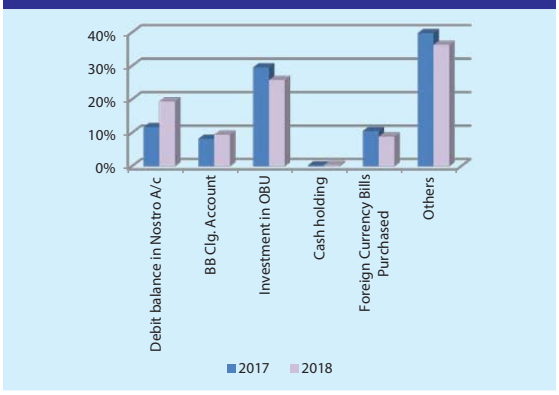
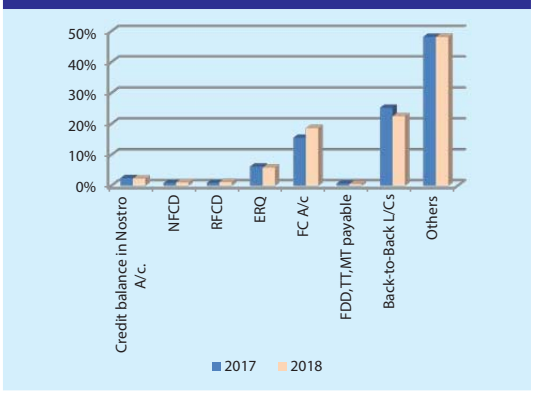


CHART 8.2: YEAR-WISE FX LIABILITY STRUCTURE



Source: *FEPD, BB*

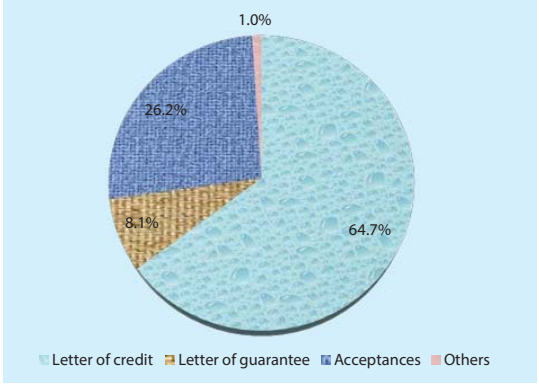
Chart 8.2 demonstrates component-wise segregation of FX denominated liabilities, which are mainly composed of credit balances in Nostro accounts, back-to-back L/Cs fund awaiting for remittance, balances in customer accounts (such as, non-resident foreign currency deposit (NFCD), resident foreign currency deposit (RFCD), exporters' retention quota (ERQ), FC accounts, foreign demand draft (FDD), telegraphic transfer (TT) and mail transfer (MT) payables), and others. FX liabilities recorded a 20 percent increase from USD 6.5 billion at end-December 2017 to USD 7.7 billion at end-December 2018. FX liabilities constituted about 4.7 percent of total banking sector liabilities as of December 2018. In CY18, back-to-back L/Cs fund awaiting for remittance and FC accounts shared 22.5 percent and 18.6 percent respectively of total FX liabilities while 48.1 percent was held for other purposes. All components of FX liabilities except FDD, TT, MT payables recorded a positive growth in CY18 compared to those of CY17.

8.2 FOREIGN EXCHANGE CONTINGENT LIABILITIES

FX contingent liabilities, a large portion of banking sector off-balance sheet exposures, increased markedly in CY18. This may create stress on financial stability if any sudden adverse exchange rate shocks materialize.

FX denominated contingent liabilities, which made up a major portion of total banking sector off-balance sheet exposures, increased by 45.0 percent from USD 42.4 billion at end-December 2017 to USD 61.5 billion at end-December 2018.

CHART 8.3: COMPONENTS OF FX CONTINGENT LIABILITIES (END-DECEMBER 2018)



Source: *FEPD, BB*

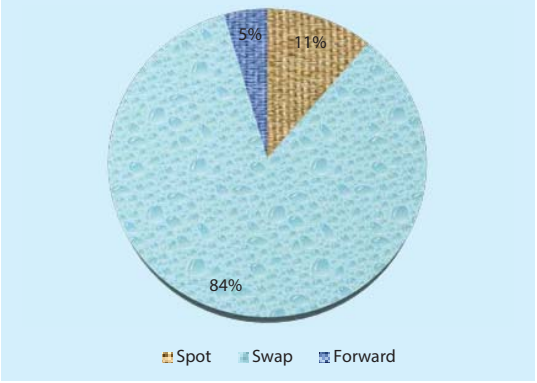
FX contingent liabilities were held in four major accounts: letter of credits (L/Cs), letter of guarantees, acceptances and others. These four components accounted for 64.7 percent, 8.1 percent, 26.2 percent and 1.0 percent of FX contingent liabilities respectively in CY18. Increase in FX contingent liabilities has important bearing on financial stability as adverse movement in exchange rate may create pressure on FX market liquidity and country's FX reserve. This may also erode importers'/buyers' capacity to meet financial obligation leading to a higher possibility of creation of non-performing on-balance sheet exposures.

8.3 INTERBANK (LOCAL) FX TURNOVER

Interbank (local) FX turnover, led by swap transactions, reached USD 20.9 billion in CY18, about 2.3 times of the total FX assets. No abrupt volatility was observed in the FX turnover and FX net open position remained well below the approved limit of BB.

Interbank (local) FX market has been dominated by swap transactions since 2015. This is due to the fact that swap transactions provided the market participants more flexibility in FX liquidity management.

CHART 8.4: COMPONENTS OF INTERBANK FX TURNOVER (CY18)

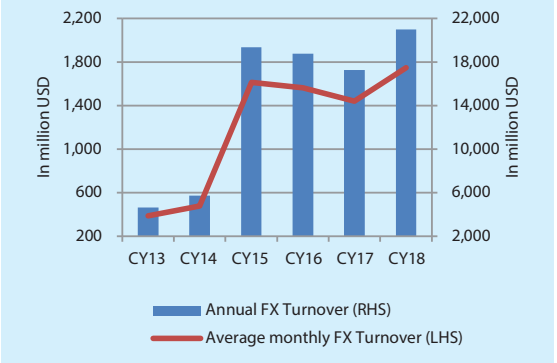


Source: FRTMD, BB

In CY18, 84.0 percent of total interbank (local) FX turnover was represented by swap transactions followed by 11.0 percent spot transactions and 5.0 percent forward transactions (Chart 8.4). Almost 99.0 percent of these transactions were executed in USD. Compared to CY17, swap and forward transactions increased by 25 and 31 percent respectively while spot transactions declined by 5 percent in CY18.

Total interbank (local) FX turnover increased to USD 20,969.1 million in CY18 from USD 17,277.9 million in CY17, recording a growth of 21.4 percent. The monthly average turnover of interbank (local) FX transactions was USD 1,747.4 million in CY18, which was USD 1,439.8 million in CY17 (Chart 8.5). The monthly FX turnover did not show any notable volatility during CY18, though the turnover dipped slightly during the second half of the year (Chart 8.6).

CHART 8.5: ANNUAL FX TURNOVER



Source: FRTMD, BB

CHART 8.6: MONTHLY FX TURNOVER (CY18)

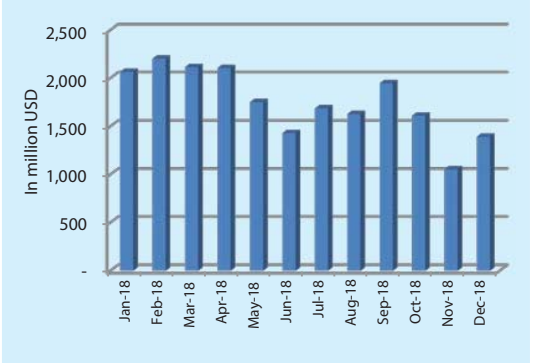
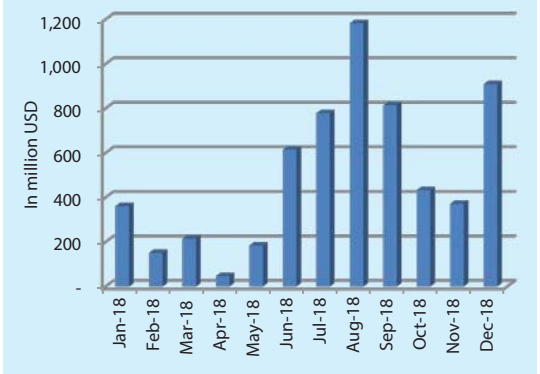


CHART 8.7: FX NET OPEN POSITION (CY18)



Source: *FEPD, BB*

The overall FX net open position (NOP) was USD 908.0 million at end-December 2018. The highest balance of USD 1,181.7 million was recorded at end-August 2018, while the lowest balance of USD 45.7 million was found at end-April 2018. The net FX position was more volatile during CY18 compared to CY17. However, it remained well below the approved limit[72] set by Bangladesh Bank and thereby helped minimize the potential exchange rate risks.

72 Approved limit of NOP is currently 20 percent of Tier-1 and Tier-2 capital.

8.4 ADEQUACY OF FX RESERVES

Gross FX reserves of Bangladesh stood at USD 32.0 billion at end-December 2018. This amount is deemed to be adequate in terms of import coverage and sufficient to withstand probable external shocks in the near future.

Adequacy of FX reserves is an important parameter in assessing an economy's ability to absorb external shocks. There are different benchmarks for measuring FX reserve adequacy; however, assessing reserve adequacy based on a single indicator may not ensure a country's resilience against foreign exchange shock. Three mostly used international benchmarks are: (i) import coverage of FX reserve, (ii) reserves equal to 20 percent of M2, and (iii) reserves sufficient to cover external debt becoming due within 12 months.[73] Considering these benchmarks, the reserve adequacy position of Bangladesh has been examined.

The gross foreign exchange reserves decreased by 3.6 percent from USD 33.2 billion at end-December 2017 to USD 32.0 billion at end-December 2018. This drop in FX reserves is mainly attributable to Bangladesh Bank's attempt to keep the FX market stable in the wake of increased current account deficit in CY18.

Though FX reserves dropped in CY18, it was sufficient to cover around 7 months' import payments (Chart 8.8), which is much higher than the international benchmark of meeting three months' import payments. Also, in terms of reserves to M2 (broad money) criteria[74], Bangladesh has the required level of reserves. Chart 8.9 shows that though reserves to M2 ratio decreased in CY18, still the ratio (23 percent) remained above the acceptable benchmark of 20 percent.

CHART 8.8: IMPORT COVERAGE OF FX RESERVES

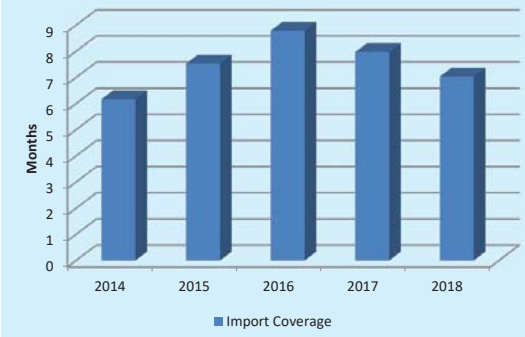
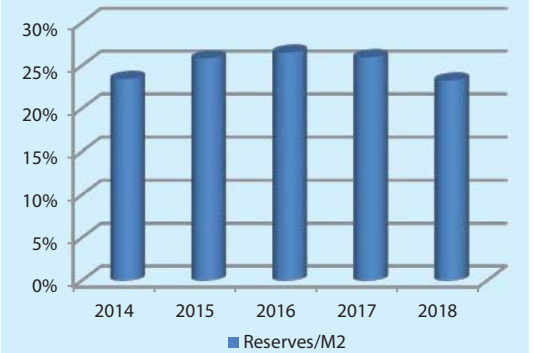


CHART 8.9: FX RESERVES TO M2 RATIO



Source: *Monthly Economic Trends, February 2019 Issue, BB.*

In terms of short-term external debt to FX reserve criteria, which indicates safety cushion if the ratio is equal to or less than 100 percent, Bangladesh had adequate reserve to cover the external debts coming due in next 12 months (Chart 8.10). In CY18, the ratio stood at 28.0 percent, well within the standard yardstick of 100 percent.

73 Islam,M.S. (2009), "An Economic Analysis of Bangladesh's Foreign Exchange Reserves", ISAS Working Paper No. 85, Singapore, September.

74 Which indicates an economy's ability to withhold external shocks and ensures convertibility of local currency.

CHART 8.10: SHORT-TERM EXTERNAL DEBT TO FX RESERVE RATIO

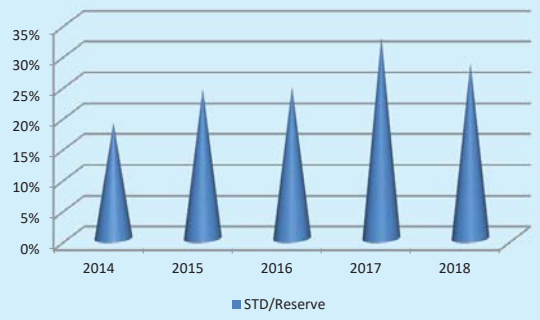
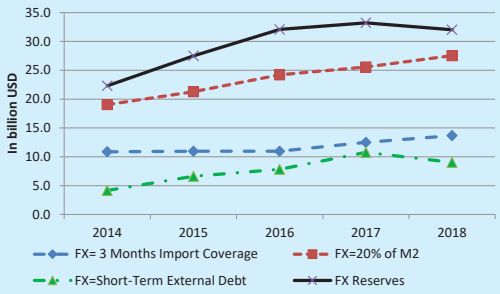


CHART 8.11: FX RESERVES ADEQUACY MEASURES FOR BANGLADESH



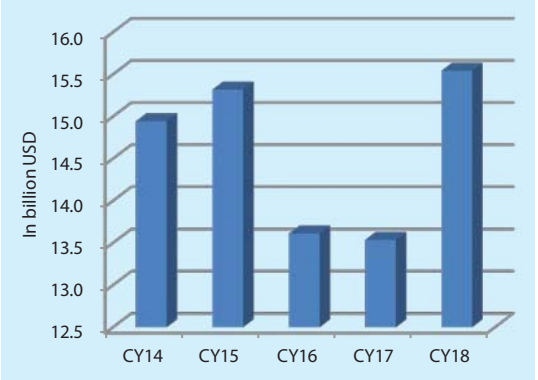
Source: *Monthly Economic Trends, February 2019 Issue, BB; and External Debt, NSDP, BB website.*

Chart 8.11 summarizes the above-mentioned three criteria. Over the years, FX reserve of Bangladesh seemed to be adequate to cover each benchmark of reserve adequacy individually in case of any adverse currency shocks. Moreover, FX reserves as of end-December 2018 were adequate to cover three months' import payments and short-term external debt together, which is a positive sign from financial stability viewpoint.

8.5 WAGE EARNERS' REMITTANCE

Wage earners' remittance rebounded in CY18 providing stability in the FX market.

CHART 8.12: WAGE EARNERS' REMITTANCE



Source: *Monthly Economic Trends, February 2019 Issue, BB.*

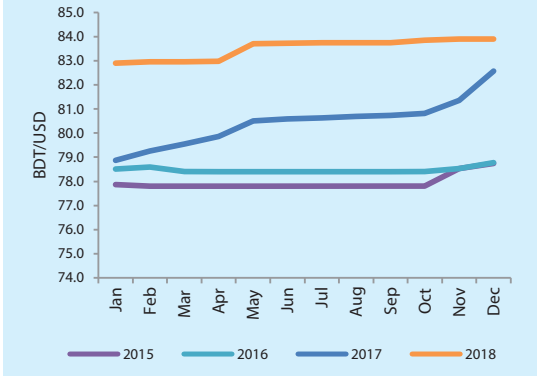
The remittance inflow increased from USD 13.5 billion in CY17 to USD 15.5 billion in CY18. The growth was 14.8 percent in CY18 compared to the negative growth of 0.6 percent in CY17. After a subdued inflow of remittances in the preceding two years, rebound in remittance inflow in the review year helped strengthen the supply side of the FX market, thereby providing resilience to external shocks.

8.6 EXCHANGE RATE MOVEMENT

Nominal exchange rate experienced mild depreciation during the review year.

Nominal exchange rate depreciated by 1.61 percent in CY18 compared to 4.82 percent in CY17. Though the rate slightly depreciated in the first-half of the year, it remained almost stable during the second-half. Supply of liquidity by central bank in the FX market helped maintain stability in the nominal exchange rate.

CHART 8.13: EXCHANGE RATE MOVEMENT



Source: *Monthly Economic Trends, February 2019 Issue, BB.*

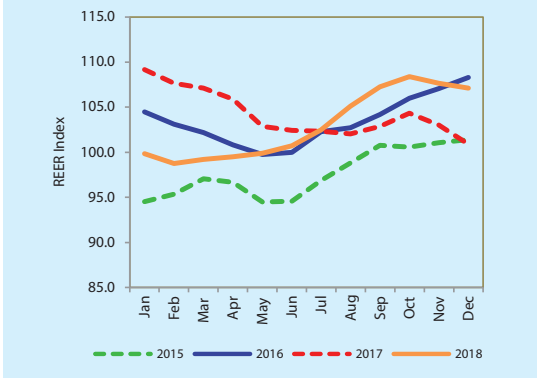
Chart 8.13 shows that the monthly average nominal BDT/USD exchange rate was steadily depreciating mainly from May 2018 (orange line). The maximum exchange rate (BDT/USD 83.90) was observed in December 2018 while the minimum exchange rate (BDT/USD 82.70) was recorded in January 2018. The difference between maximum and minimum exchange rate was 1.2 in CY18, which was much smaller compared to 3.70 of CY17. Noteworthy, difference between highest and lowest exchange rate was 0.38 in CY16.

8.7 MOVEMENT OF REAL EFFECTIVE EXCHANGE RATE (REER)

Real Effective Exchange Rate (REER) experienced large appreciation amid fluctuations during the year which may lessen the export competitiveness.

Movement of REER[75] index was mostly upward with some fluctuations. The index was appreciated by 6.16 percent during CY18. In the review year, the minimum index value was 98.75 in February 2018, and the maximum was 108.39 in October 2018. Difference between the minimum and maximum REER was 9.64 in CY18, while the gap was 8.28 in CY17.

CHART 8.14: REER MOVEMENT



Source: *Monetary Policy Department, BB*

Chart 8.14 shows the trend of REER movement in CY18 (orange line) with those of the last three consecutive calendar years. Its movement was relatively volatile in CY18 as the standard deviation of REER was 3.82 in CY18, while it was 2.62 in CY17. Particularly, REER index exhibited higher volatility in the second half of the review year. Appreciation of REER amid greater fluctuations might have led to lessening the export competitiveness, but gave some comfort to imports.

8.8 OPENING AND SETTLEMENT OF LETTER OF CREDIT (L/C)

High value of L/C settlement in the review year appeared to have increased pressure on foreign exchange market from the demand side.

The total value of L/C opening for imports decreased from 65.3 billion in CY17 to USD 58.5 billion in CY18. In percentage term, the value of L/C opening decreased by 10.5 percent during the review year. On the other hand, the value of L/C settlement increased by USD 7.8 billion and reached USD 54.1 billion in CY18 from USD 46.3 billion in CY17. In percentage, the value of L/C settlement increased by 16.9 percent during CY18. This high value of L/C settlement in the review year led to increasing pressure on foreign exchange market from the demand side.

75 REER index is a combination of 15 currencies in a basket with the base year 2015-16=100; it is a measure that adjusts the nominal exchange rate for differences in domestic inflation and those of the country's main trading partners.

CHART 8.15: L/C OPENING

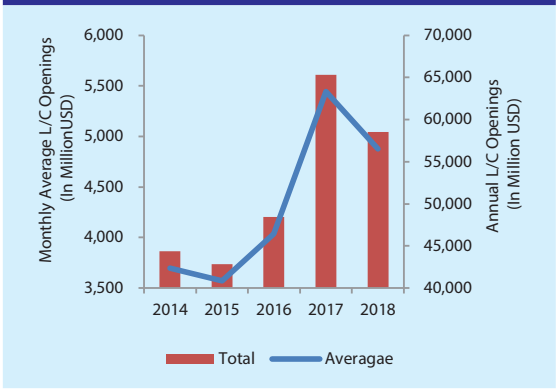
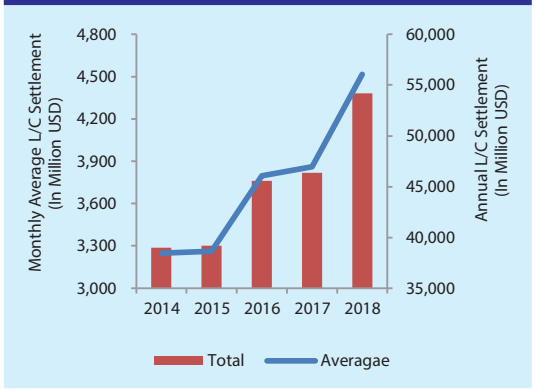


CHART 8.16: L/C SETTLEMENT



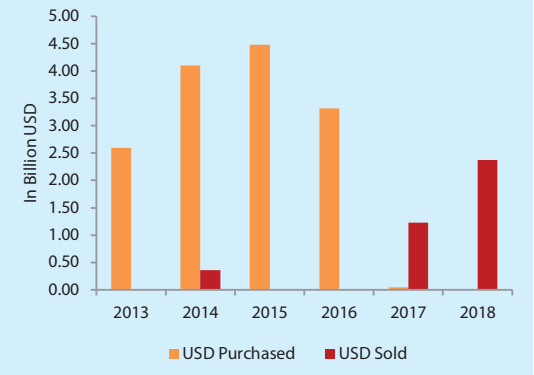
Source: *FEOD, BB*

8.9 INTERVENTION AND STERILIZATION IN FX MARKET BY BB

Bangladesh Bank sold USD 2.4 billion to ease the FX market in CY18.

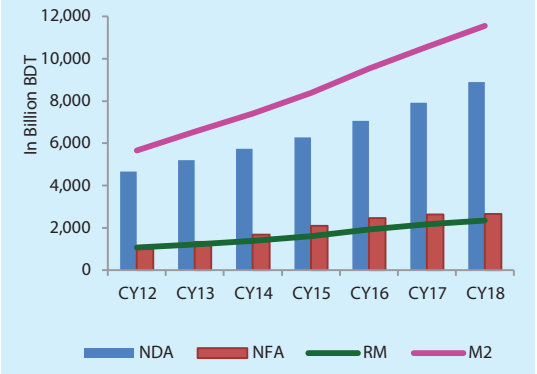
Generally, exchange rate in Bangladesh is determined by the interaction between market demand and supply of foreign exchange. However, it became necessary for the central bank to intervene the market for maintaining stability in the nominal exchange rate.

CHART 8.17: INTERVENTION IN FX MARKET BY BANGLADESH BANK



Source: *FRTMD, BB.*

CHART 8.18: NDA, NFA, RM AND M2 MOVEMENT



Source: *Major Economic Indicators and Monetary Survey, BB.*

Chart 8.17 shows that central bank sold USD 2.4 billion in CY18 compared to USD 1.2 billion in CY17. This reflects the increased pressure from the demand side in foreign exchange market during the review year. Driven from substantial import payments, demand for foreign exchange was much higher than the supply of foreign exchange mainly from export receipts and inward foreign remittances in CY18. Therefore, central bank had to supply foreign exchange in the market to maintain the exchange rate stability.

This intervention in the FX market may have impact on money supply and subsequently on price level, interest rate and financial system's liquidity.

Record import settlements in 2018 decreased the Net Foreign Assets (NFA) of reserve money (RM). To offset this effect and to keep the reserve money as programmed, Net Domestic Assets (NDA) were increased significantly. On the other hand, NDA of the broad money (M2) was increased by 12.5 percent whereas the growths of NFA of the same were limited to 0.3 percent during the review year (Chart 8.18). However, growths of reserve money and broad money were approximately in line with the program targets.

In sum, the FX market demonstrated reasonable stability during the review year. Although sizeable imports during the year created some pressure on the country's FX reserves and overall FX market, rise in export growth and wage earners' remittances eased the FX market which, in turn, enhanced overall stability of the financial system.

Chapter 9

INSURANCE SECTOR IN BANGLADESH

Insurance provides protection against financial loss in addition to facilitating financial intermediation. Moreover, insurance coverage against the loss acts as an insulator, particularly during crises period. As such, prudent risk management by insurance business contributes to financial stability.

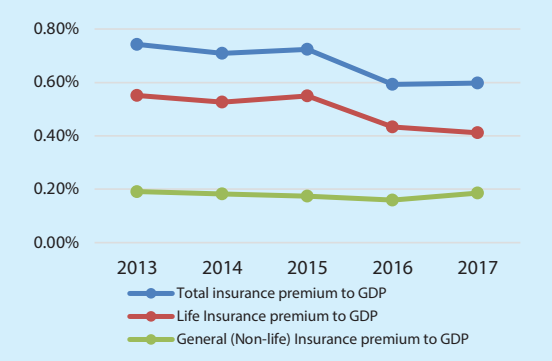
Unlike banks and many other financial institutions, insurance companies (particularly life insurance) accumulate long-term liabilities which make them less prone to liquidity risk. Therefore, they are able for long-term investment. such as bonds, FDR and equity. Thus insurance sector is interlinked to other segments of financial market, such as bond market, banks and FIs, and capital market. Therefore, careful investment decision is important as otherwise the insurance sector would be vulnerable and transmit risks to other interconnected sectors of the economy.

Currently, 32 life insurance companies (including a foreign company and a public sector company) and 46 general (non-life) insurance companies (including a public sector company) are operating in Bangladesh. Insurance Development and Regulatory Authority (IDRA), established in 2010, is the supervisory authority of the insurance industry in Bangladesh.

9.1 INSURANCE SECTOR DEVELOPMENT: PENETRATION AND DENSITY RATIO

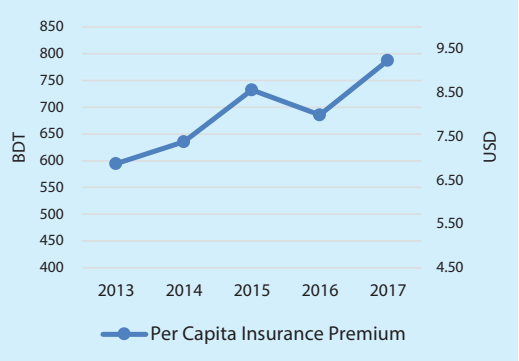
Insurance penetration, measured as the ratio of insurance premium underwritten in a particular year to the GDP and, per capita insurance premium (i.e., insurance density ratio) are the indicators of insurance sector development. Chart 9.1 shows the trend in insurance premium as a share of GDP in Bangladesh during 2013-2017.[76] The penetration ratio was 0.60 percent in December 2017 which had been falling since 2013. The ratio is low compared to other South Asian countries.[77] The lower growth in gross premium is mainly liable for the declining trend.

CHART 9.1: INSURANCE PREMIUM AS A SHARE OF GDP



Source: *BIA, FSD calculations.*

CHART 9.2: PER CAPITA INSURANCE PREMIUM



Source: *BIA, FSD calculations.*

Insurance density or per capita premium is calculated as the ratio of total premiums to total population, which indicates the average level of insurance coverage of people. Chart 9.2 shows the trend in density ratio for the period, 2013-2017. The ratio stood at approximately USD 9.5 in December 2017, relatively low compared to other South-Asian countries.[78] The stated development of the insurance sector in Bangladesh can be attributed to lower savings and financial literacy rate of the country.

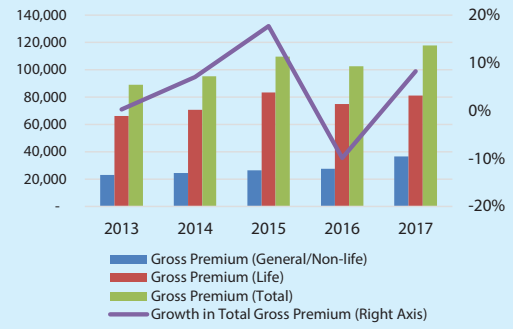
76 Data available up to December 2017.

77 The share of Insurance premium to GDP ratio for India, Pakistan, and Sri Lanka was 3.69, 0.86, and 1.16 respectively in 2017.

78 Per capita insurance premium (in USD) of India, Pakistan, and Sri Lanka were 73, 13, and 47 respectively in 2017.

9.2 PREMIUM GROWTH AND ASSETS SIZE

CHART 9.3: TREND IN GROSS PREMIUM AND ITS GROWTH

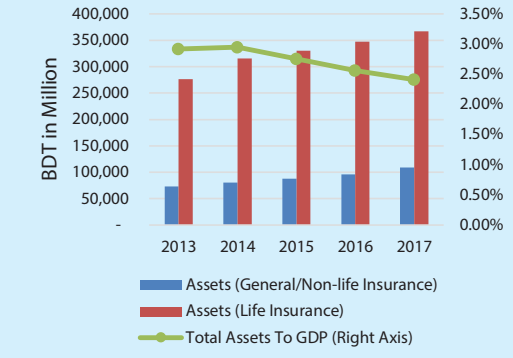


Source: *BIA, FSD Calculations.*

Chart 9.3 exhibits the trend in gross premium of the insurance industry in Bangladesh. The chart shows that total gross premium has been gradually increasing over the years. The life insurance companies contributed approximately three-fourth of the total gross premium. However, the growth rate of total gross premium had been fluctuating and did not keep pace with the GDP growth resulting the lower penetration ratio as mentioned in Section 9.1.

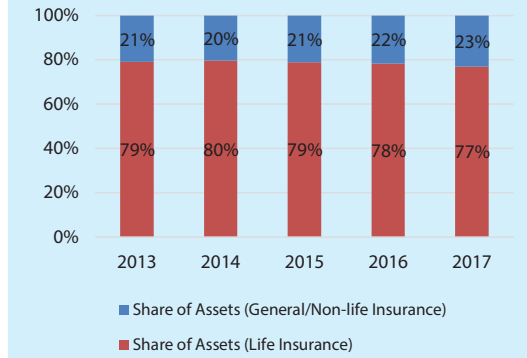
Chart 9.4 shows total asset size of the insurance sector had been increasing steadily for both life and general (non-life) insurance during 2013-2017. The total assets as a percentage of GDP stood at 2.4 percent in 2017. The ratio had been declining since 2015 due to slower growth in total assets. The life insurance sector comprises more than 75 percent of the total assets (Chart 9.5). However, the asset share of non-life insurance companies' had been increasing gradually.

CHART 9.4: TREND IN INSURANCE SECTOR ASSETS



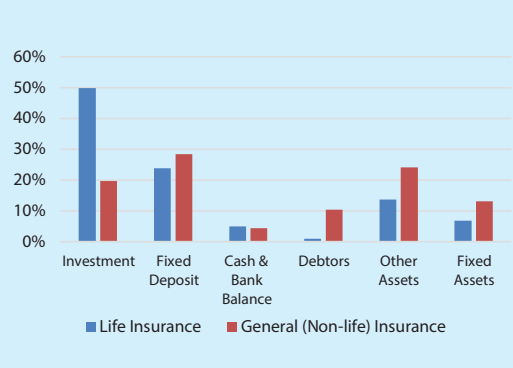
Source: *BIA, FSD calculations.*

CHART 9.5: SHARE OF INSURANCE SECTOR'S TOTAL ASSETS



Source: *BIA, FSD calculations.*

CHART 9.6: ASSET STRUCTURES OF LIFE AND GENERAL (NON-LIFE) INSURANCE COMPANIES (CY17)



Source: *BIA, FSD Calculations.*

Chart 9.6 shows the asset structure of the life and general (non-life) insurance companies in 2017. Investment and fixed deposit contributed the lion share of total assets of both types of insurance, where the contribution of investment was 50 percent for life insurance companies and 20 percent for general (non-life) insurance companies. Fixed deposit (FDR) contributed approximately 25 percent. The share of other assets and fixed assets was higher for general (non-life) insurance companies. Debtors constitutes 10 percent of the assets for non-life insurance companies while it was minimal for life insurance companies. Cash and bank balance, most liquid assets, contributed around five percent for both life and non-life insurance.

9.3 PERFORMANCE AND SOUNDNESS OF GENERAL INSURANCE SECTOR

Table 9.1 demonstrates the major performance and soundness indicators of general insurance companies in Bangladesh for CY17 and CY16. Profitability indicators showed overall improvement in general insurance sector. Claims ratio shows the underwriting expense of the insurer, whereas, commission and management expense ratio indicate the operating expenses as a percentage of the net premium. Both ratios decreased in CY17 compared to previous year contributing higher profitability.

Consequentially, combined ratio which considers both claim related losses and general business costs decreased reflecting higher underwriting profit in 2017. However, commission and expense ratio consume a substantial part of the underwriting premium, Approximately 60 percent. Other measures of profitability, return on assets (ROA) and return on equity (ROE) show the higher profitability of the insurance sector compared to the profitability of the banking and FI sector.

TABLE 9.1: PERFORMANCE AND SOUNDNESS INDICATORS: GENERAL/NON-LIFE INSURANCE

Profitability	**2016**	**2017**
Claims Ratio[1]	28.6%	26.2%
Commission Ratio[2]	26.5%	25.3%
Management Expense Ratio[3]	34.6%	33.2%
Combined Ratio[4]	89.7%	84.7%
ROA	5.0%	5.0%
ROE	8.1%	8.0%
Capital & Leverage	**2016**	**2017**
Capital to Asset Ratio	18.1%	16.7%
Net Premium to Capital Ratio	209%	219%
Gross Premium to Equity Ratio	48.9%	57.7%
Total Assets to Equity Ratio	170%	172%
Reinsurance	**2016**	**2017**
Risk Retention Rate[5]	70.4%	56.6%

1. Net claims as a percentage of net premium.
2. Commission as a percentage of net premium.
3. Management expense as a percentage of net premium.
4. Net claims+commission+ management expense as a percentage of net premium.
5. Net premium as a percentage of gross premium.

Source: *BIA, FSD calculations.*

Capital and leverage indicators are showing lower capital adequacy and higher leverage in the sector. Capital as a percentage of asset ratio decreased in 2017. Higher net premium to capital ratio in CY17 reflects higher level of net underwriting relative to capital. Similarly, gross premium to equity ratio shows more aggressive use of equity in 2017. Moreover, increase in total assets to equity ratio in 2017 indicates higher financial leverage.

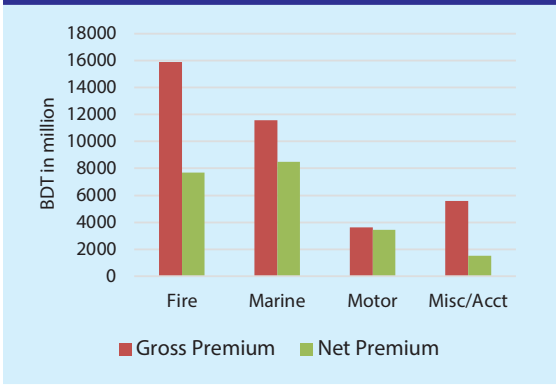
The risk retention rate (RRR) of general insurance sector significantly dropped in 2017.[79] It entails that risk sharing among the insurance companies increased substantially, which seems to be positive from the financial stability point of view. However, further investigation shows that maximum risks of private insurance companies mainly transferred to the public insurance company (i.e., Sadharan Bima Corporation), which amplifies risk to financial stability due to concentration of risks to a particular company. Besides, decline in RRR might reduce profitability of the insurance companies in future, although risk sharing may offset the reduction in profit.

79 RRR provides information regarding the share of risk retained by the insurer. Alternatively, it shows the level of risk passed onto the reinsurer.

9.4 DIFFERENT CATEGORIES OF GENERAL INSURANCE

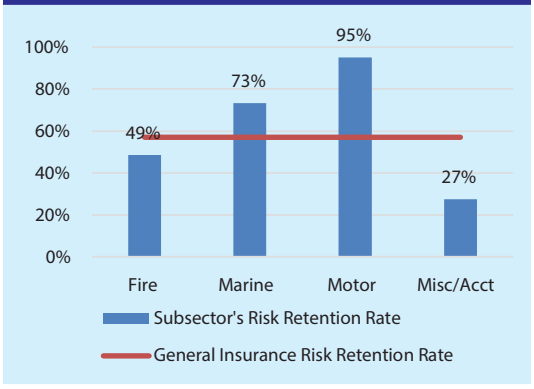
General insurance can be categorized as fire, marine, motor and miscellaneous insurance. The category-wise gross and net premium for 2017 is exhibited in Chart 9.7. The chart shows that fire insurance had the highest gross premium in CY17, followed by marine, miscellaneous and motor insurance. However, marine insurance took the lead in terms of net premium preceded by fire, motor and miscellaneous. The different ranking in terms of gross and net premium was due to their different level of risk retention rate. Chart 9.8 shows the risk retention rate by business category. It shows that reinsurance was least used by motor insurance followed by marine, fire and miscellaneous.

CHART 9.7: GROSS AND NET PREMIUM BY BUSINESS CATEGORY OF GENERAL INSURANCE (CY17)



Source: *BIA, FSD Calculations.*

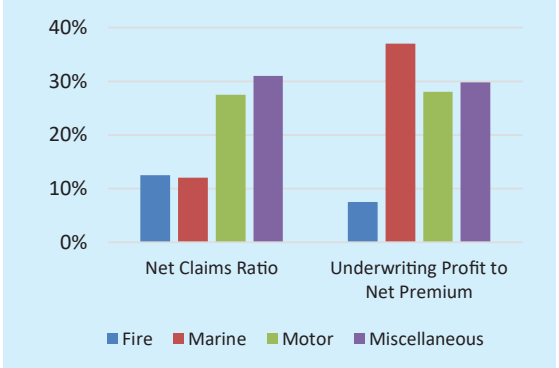
CHART 9.8: RISK RETENTION RATE BY BUSINESS CATEGORY OF GENERAL INSURANCE (CY17)



Source: *BIA, FSD Calculations.*

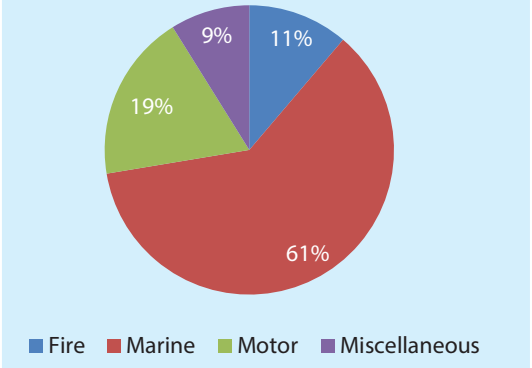
Chart 9.9 presents the net claim ratios and underwriting profit to net premium of general insurance by business type. The chart shows that marine and fire insurance incurred low expense claims in 2017 compared to that of motor and miscellaneous insurance. On the other hand, underwriting profit to net premium was highest for marine insurance in 2017 followed by miscellaneous, motor and fire insurance. Fire insurance had the lowest underwriting profit despite low claims expense, indicating high commission and management expense. The share of underwriting profit by business category is exhibited in Chart 9.10. The chart depicts that the marine insurance had the largest share, 61 percent of total underwriting premium while motor, fire and miscellaneous insurance captured 19 percent, 11 percent and 9 percent share respectively.

CHART 9.9: NET CLAIMS & UNDERWRITING BY BUSINESS (CY17)



Source: *BIA, FSD Calculations.*

CHART 9.10: SHARE OF UNDERWRITING PROFIT BY BUSINESS (CY17)



Source: *BIA, FSD Calculations.*

9.5 PERFORMANCE AND SOUNDNESS OF LIFE INSURANCE SECTOR

Table 9.2 presents the major performance and soundness indicators of life insurance companies in Bangladesh for CY17 and CY16. Overall, life insurance companies experienced underwriting loss in both CY17 and CY16 as the combined ratio was more than 100 percent. High claims and management expense relative to net premium was liable for such high combined ratio. However, profitability parameters, such as claims, management expense and combined ratios decreased in CY17 reflecting better performance compared to CY16.

TABLE 9.2 : PERFORMANCE AND SOUNDNESS INDICATORS: LIFE INSURANCE

Profitability	2016	2017
Claims Ratio	75%	67%
Management Expense Ratio*	44%	36%
Combined Ratio	119%	103%
Capital& Investment	**2016**	**2017**
Capital to Asset Ratio	4%	3%
Investment to Total Assets Ratio	54.4%	49.8%
Investment & Other Income to Total Assets Ratio	7.3%	7.0%
Investment & Other Income to Net Premium Ratio	33.8%	31.8%

*Management expense ratio contains commission expense.
Source: *BIA, FSD calculations.*

Capital to asset ratio reveals that capital contribution by the owner of the life insurance companies is small relative to the companies' assets. The ratio further decreased in CY17. Investment, the largest asset item of the life insurance companies' balance sheet, also decreased as a percentage of total assets in CY17. Lower investment relative to assets may have an adverse impact on investment income- an important income source of life insurance companies. The decline in investment & other income to total assets ratio in CY17 reflect the lower investment & other income generation from total assets. Similarly, investment & other income as a percentage of net premium declined in CY17 which might be less comfortable for companies which are incurring underwriting loss as indicated by the combined ratio.

9.6 CONCENTRATION IN INSURANCE INDUSTRY

Table 9.3 shows that insurance sector (both life and general) is highly concentrated both in terms of asset size and gross premium. Moreover, both in general and life insurance sector, a single public company in each sector lead the market with the lion share of asset and gross premium. Since insurance market is highly concentrated into top five insurers, these companies warrant close monitoring and supervision as they might create systemic risks.

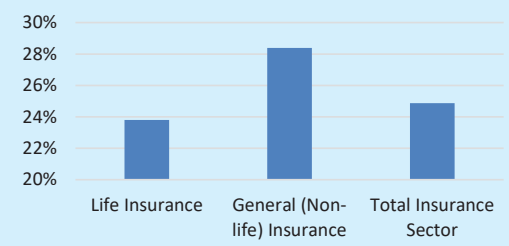
TABLE 9.3: INSURANCE CONCENTRATION (CY17)

Concentration in Life Insurance		
	Asset size	Gross premium
Total industry (BDT in million)	366,828.2	81,253.4
Top 5 insurance companies (BDT in million)	279,292.4	54,375.5
Concentration in top five companies	76.10%	66.90%
Concentration in Jibon Bima Corporation (JBC)*	34.60%	29.90%

Concentration in General(Non-life) Insurance		
	Asset size	Gross premium
Total industry (BDT in million)	109,292.0	36,688.5
Top 5 insurance companies (BDT in million)	60,452.1	19,502.2
Concentration in top five companies	55.30%	53.20%
Concentration in Sadharon Bima Corporation (SBC)*	31.10%	25.40%
* Jibon Bima Corporation (JBC) and Sadharon Bima Corporation (SBC) are public sector insurance companies and lead the life insurance and general (non-life) insurance respectively.		
Source: BIA, FSD Calculation.		

9.7 INTERCONNECTEDNESS BETWEEN INSURANCE AND OTHER SECTORS OF THE FINANCIAL SYSTEM

CHART 9.11: FIXED DEPOSIT AS A PERCENT OF TOTAL ASSETS (CY17)

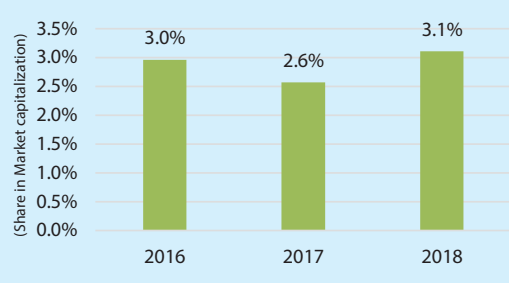


Source: *BIA.*

Insurance companies (both life and general) deposit a large amount of money as fixed deposit in banks and FIs (Chart 9.11), which is a significant component of assets of insurance company's balance sheet. In 2017, fixed deposit captured the highest percentage of total assets for general (non-life) insurance companies while it took the second highest percentage of total assets for life insurance companies. Overall, 25 percent of the total assets of the insurance sector amounting BDT 118,378.8 million was deposited in various banks, NBFIs and other depository institutions as fixed deposit in 2017. However, in terms of banking sector liabilities, this is only 2.3 percent of the total fixed deposits of the banking sector in 2017. As such, unexpected withdrawal of fixed deposits by insurance companies may not emanate any substantial risk for the banking sector. On the other hand, any shock or crisis in the banking sector will have a adverse effect on insurance sector as their significant portion of assets will be affected.

Moreover, insurance companies hold a significant amount of government securities in their investment portfolio. Therefore, variability in interest rate of government securities has impact on the earnings and security price. The current fall in yield curve of government securities (T-bill and T-bond) may affect the future income of insurance companies. Particularly, this low yield may create stress on life insurance companies as they have been experiencing underwriting loss and dependent on investment income. However, the lower yield might give the security price gain too.

CHART 9.12: INSURANCE SECTOR'S MARKET CAPITALIZATION IN DSE (CY16-CY18)



Source: *DSE.*

Similarly, investment in share market by the insurance companies is exposed to equity price risk. Therefore, poor performance of stock market may put the insurance sector under stress situation. However, any shock in insurance market would have limited impact on the stock market as the total market capitalization of insurance sector in Dhaka Stock Exchange (DSE) is around three percent (Chart 9.12).

Chapter 10

MICROFINANCE INSTITUTIONS (MFIs)

The microfinance sector is growing under the surveillance of the Microcredit Regulatory Authority (MRA) and the continuous support of the government of Bangladesh. The microfinance sector showed a resilient growth trend in FY2017-18, the total number of members of MFIs reached approximately 31.1 million in FY2017-18, an increase from 29.9 million in FY2016-17. In both years more than 90 percent of members were women.

10.1 OUTREACH OF MICROFINANCE SECTOR

Loan amounting up to BDT 50,000 are generally classified as microcredit and above this amount are considered as microenterprise loans. The MFI sector in Bangladesh is becoming more competitive. To attract clients, MFIs have developed a number of innovative financial products and services. The microfinance sector in Bangladesh has reached the grassroot level as it provides flexible access to extensive financial services with low transaction costs, low collateral requirements and less formality.

In FY18, it provided financial services to 31.1 million members through 18,088 branches all over the country. The sector also engaged a total of 152,506 employees.

TABLE 10.1: OUTREACH OF MICROFINANCE SERVICES

		FY2013-14	FY2014-15	FY2015-16	FY2016-17	FY2017–18	Growth (in %, based on 2016–17)
1	Total number of licensed institutions	742	753	759	784	806	2.8%
2	Number of branches	14,730	15,609	16,282	17,120	18,088	5.7%
3	Number of employees	109,628	110,781	124,992	137,607	152,506	10.8%
4	Number of members (millions)	25.1	26.0	27.8	29.9	31.08	4.0%
5	Number of borrowers (millions)	19.9	20.8	23.1	24.8	25.68	3.5%
6	Value of outstanding loans disbursed by licensed institutions (billions)	276.9	353.8	458.2	581.6	671.16	15.4%
7	Value of outstanding loans disbursed by top 20 institutions (billions)	212.0	278.0	348.0	478.0	528.32	10.5%
8	Outstanding savings balance of the licensed institutions (billions)	107.0	136.0	168.7	216.1	262.36	21.4%
9	Outstanding savings balance held in top 20 institutions (billions)	88.0	107.0	136.0	171.4	206.82	20.7%

Source: *Microcredit Regulatory Authority; Calculation: FSD*

At the end of FY18, the total numbers of MFIs grew by 2.8 percent (to 806) compared to the FY17 in spite of exit of 100 MFIs due to regulatory measures. Considering time trend (Table 10.1 and Chart 10.1), it is found that the total number of MFIs increased by 64 during the last five fiscal years (FY14 to FY18). During the same period, the number of members of this sector increased by 6.0 million.

In the reporting period, the total outstanding loans were15.4 percent higher than in FY 2016-17 (BDT 581.6 billion) and total savings were 21.4 percent higher (BDT 216.1 billion) (Chart 10.2). This sector also experienced an upward trend in terms of loans outstanding per borrower per branch and savings per client per branch in this period.

CHART10.1: NUMBER OF LICENSED INSTITUTIONS, BRANCHES, EMPLOYEES AND MEMBERS

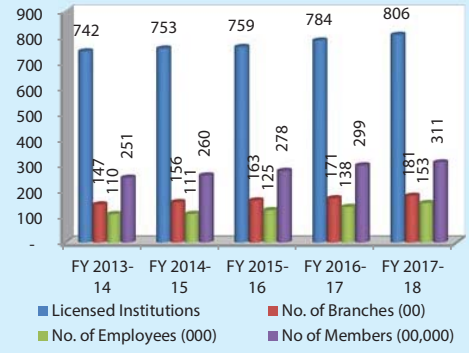
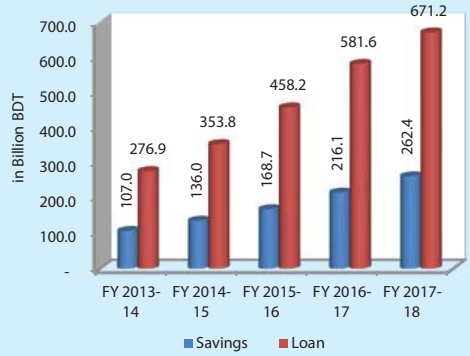


CHART 10.2: SAVINGS AND LOAN SCENARIO OF MFIs SECTOR



Source: *Microcredit Regulatory Authority, Calculation: FSD*

Chart 10.3 illustrates that the number of both borrowers and members of MFIs have been steadily increasing over time. In particular, the number of borrowers has increased by 0.9 million whereas the number of members has increased by 1.2 million in FY18 from the preceding corresponding period.

CHART 10.3: TREND OF SECTOR OUTREACH

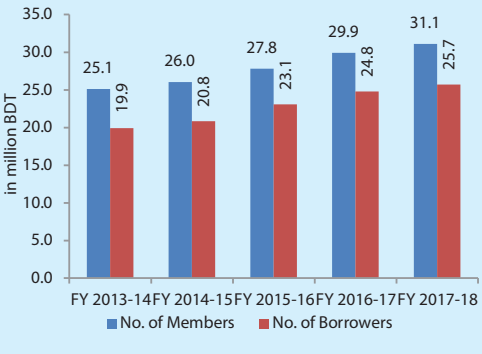
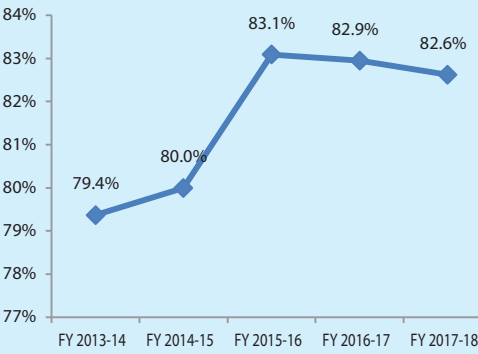


CHART 10.4: BORROWERS-TO-MEMBERS RATIO



Source: *Microcredit Regulatory Authority, Calculation: FSD*

The borrowers-to-members' ratio declined by 32 basis points from that of FY17 and stood at 82.6 percent at end-FY18 (Chart 10.4). The ratio declined mainly due to increase of members compared to borrowers.

The average loans and savings per institution (Chart 10.5) show consistently increasing trends over the last five fiscal years. The average loans and savings per institution increased by 12.2 percent and 18.1 percent respectively during FY 2017-18.

CHART 10.5: AVERAGE LOANS AND SAVINGS PER INSTITUTION

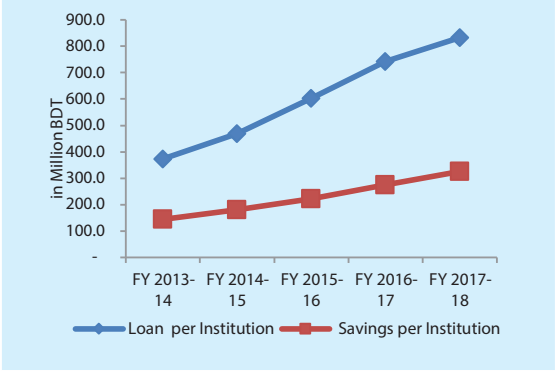
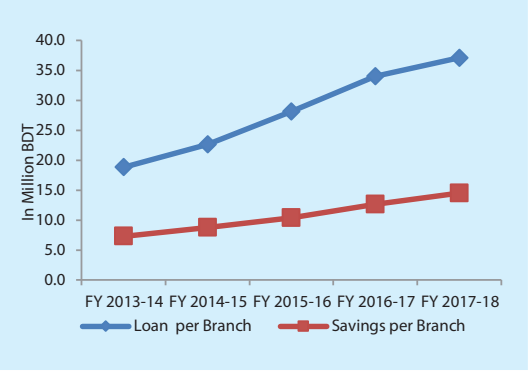


CHART 10.6: AVERAGE LOANS AND SAVINGS PER BRANCH



Source: *Microcredit Regulatory Authority, Calculation: FSD*

Similar trend was observed for per branch's growth of loans and savings. In particular, the average loans and savings per branch were BDT 37.1 million and BDT 14.5 million in FY18 respectively, which were 9.2 percent and 14.9 percent higher than those of FY17 (Chart 10.6).

Chart 10.7 depicts an upward trend in average loan size and savings per borrower/member in the last couple of years. In FY18, the average loan per borrower was 10.4 percent higher than the previous period, but it was almost double compared with FY14. Similarly, the average savings per member was 16.8 percent higher than the previous reporting period.

CHART 10.7: AVERAGE LOAN PER BORROWER AND SAVINGS PER MEMBER

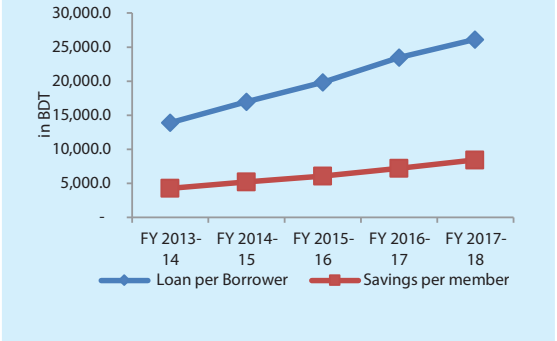
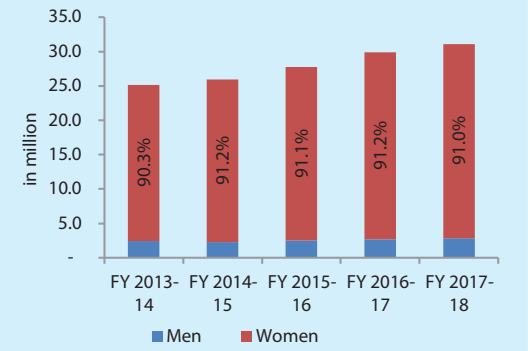


CHART 10.8: MEMBER STRUCTURE



Source: *Microcredit Regulatory Authority, Calculation: FSD*

Chart 10.8 shows that MFI sector is mostly dominated by women, and their number is increasing steadily with 3.7 percent growth in FY18 compared to FY17. The number of male members has reached 2.8 million, an increase of 6.7 percent from FY17. The proportion of male members increased by 0.2 percentage point in FY18.

Presently, 23.2 million out of the 28.3 million female members (82.0 percent) are using the credit facility. Around 2.5 million out of the 2.8 million male members (88.5 percent) enjoyed credit facility. These figures indicate that, in aggregate, the share of women participation in getting access to credit is considerably higher than their male counterpart.

10.2 LOANS SCENARIO

Chart 10.9 shows the distribution of outstanding loans under different loan ranges. In FY18, loans were provided in the ranges of BDT up to 10000, 10001 to 30000, 30001 to 50000, 50001 to 100000, 100001 to 300000 and above 300000. These represented 5.0 percent, 25.2 percent, 22.9 percent,

22.5 percent, 17.1 percent and 7.4 percent respectively of the number of outstanding loans provided by MFIs. However, the total value of loans given in the ranges of BDT up to 10000 and 10001 to 30000 decreased by 1.3 percent and 0.5 percent respectively, while the total value of loans provided in the ranges BDT 30001 to 50000, 50001 to 100000 and 100001 to 300000 and above 300000 increased by 15.0 percent, 28.2 percent, 20.9 percent and 55.8 percent respectively (Chart 10.10).

CHART 10.9 : OUTSTANDING LOAN STRUCTURE IN FY18

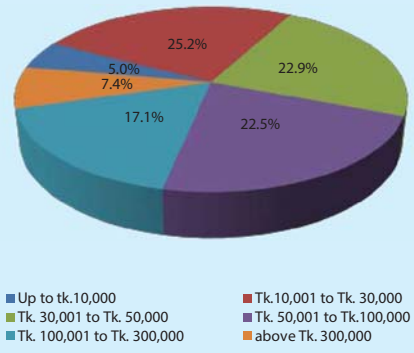
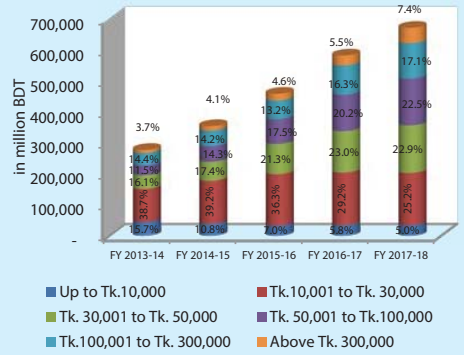


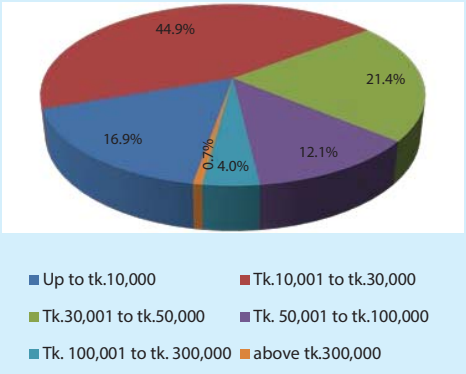
CHART 10.10 : OUTSTANDING LOAN STRUCTURAL TREND



Source: *Microcredit Regulatory Authority, Calculation: FSD*

Chart 10.11 shows the trend in the number of members taking loans in different loan ranges. In FY18, 10.5 million members (3.1 percent lower than that of FY17) took out loans in the range BDT 10000 to 30000, which constituted 44.9 percent of total borrowers using loan facilities, compared with 48.0 percent in FY17.

CHART 10.11: LOAN RECIPIENTS' COMPOSITION IN FY18



Source: *Microcredit Regulatory Authority, Calculation: FSD.*

The number of members availing loans in the ranges BDT 30001 to 50000, 50001 to 100000, 100001 to 300000 and above 300000 increased by 16.8 percent, 29.9 percent, 22.0 percent and 38.4 percent respectively.

Chart 10.12 shows a downward trend in the default rate during the last five consecutive years, except in FY2017-18, indicating that the sector is gradually becoming more resilient to shocks. In FY18, the non-performing loans (NPLs) ratio increased to 2.7 percent (40 basis points higher than in FY2016-17) which remains quite low, considering the NPLs of the banking and FIs sectors. The lower default rate of MFIs may be explained by improvement in repayment capacity of the borrowers as well as the efficiency of the employees of the MFIs in recovering loans.

CHART 10.12: NON-PERFORMING LOAN

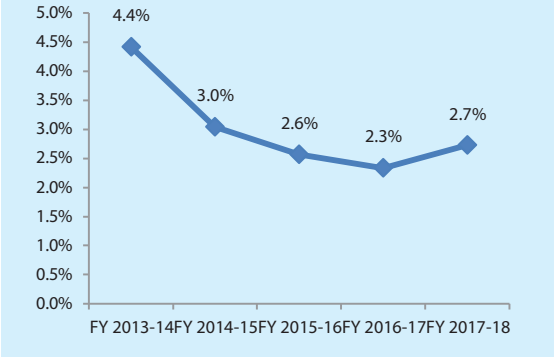
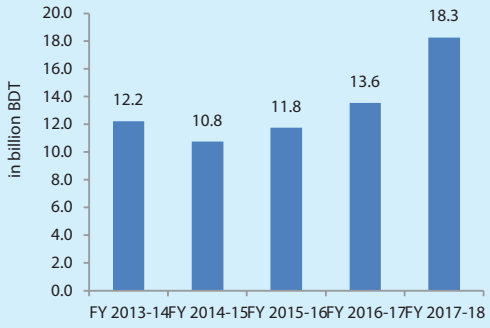


CHART 10.13: TREND OF NON-PERFORMING LOAN



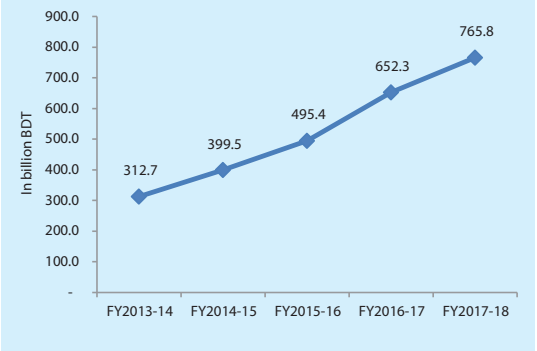
Source: *Microcredit Regulatory Authority, Calculation: FSD*

Chart 10.13 depicts the trend of NPL volume for the last five years. At the end of FY18, total default loan amount stands at BDT 18.3 billion which is 4.7 billion higher than the previous year. Impact of such an increase in NPLs is also visible in the NPL ratios shown in Chart 10.12.

10.3 SOURCES OF FUNDS AND ITS COMPOSITION

Over time, funding sources of MFIs have been shifting from donor dependent sources to self-reliant sources. By FY18, 36.5 percent of their total funds were derived from cumulative retained earnings. Loans from banks and Palli Karma Sahayak Foundation (PKSF), donors' fund and members' savings are the other major sources of capital funds. The contribution of foreign sources in the revolving funds of MFIs declined to 0.2 percent in FY2017-18 from 1.3 percent in FY2013-14.

CHART 10.14: TOTAL FUND OF MFIs



Source: *Microcredit Regulatory Authority, Calculation: FSD*

Chart 10.14 points out that total funds of MFIs was BDT 765.8 billion during FY2017-18, which was 17.4 percent higher than that in FY2016-17. This expansion was largely due to (1) significant increases in savings of the members of MFIs (20.9 percent higher in FY18 than in FY17), (2) increases in MFIs' equity (up by 18.0 percent from FY17), (3) increases in loan from PKSF and (4) increases in loans from commercial banks (up by 14.0 percent from FY17).

The total fund[80] was increased more than double in the five years from FY14. During these periods, the MFI sector enjoyed an average growth rate of more than 19.0 percent in total funds and it is still growing significantly.

In FY18 (Chart 10.15), equity, savings from members and loans from commercial banks constituted 36.5, 34.4 and 19.8 percent of total funding of the MFIs respectively. Loans from PKSF, donors' fund, other loans and other sources constituted 6.2 percent, 0.2 percent, 1.1 percent and 1.7 percent respectively. The contribution of capital as a source of funds increased to 36.5 percent from 36.4 during this period. The contribution of member savings increased from 33.4 percent to 34.4 percent. However, the contribution of loans from commercial banks decreased from 20.4 percent to 19.8 percent in this period.

80 The total fund mainly comprises MFIs' own capital, savings, loans from commercial banks, loans from PKSF, donors' fund, loans from government and others' loans.

CHART 10.15: MAJOR SOURCES OF FUND IN FY18

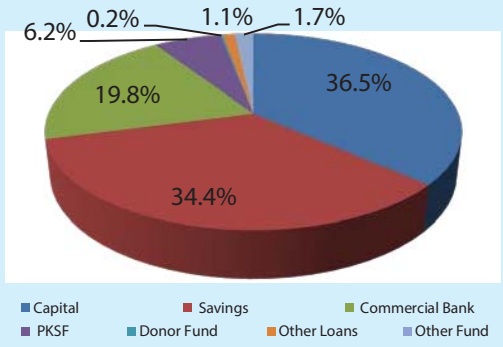
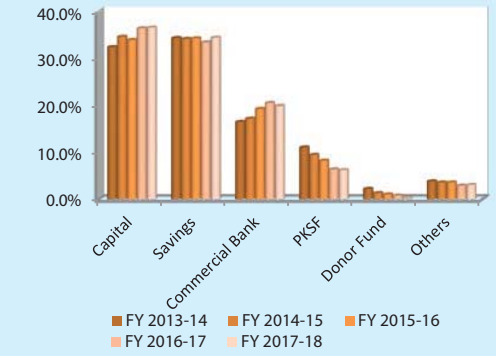


CHART 10.16: TREND OF MAJOR SOURCES OF FUND



Source: *Microcredit Regulatory Authority, Calculation: FSD*

10.4 FINANCIAL SUSTAINABILITY

Return on assets (ROA) and Return on equity (ROE) are two major indicators of operational sustainability of financial institutions. In FY18, ROA and ROE of MFIs were 4.4 and 19.5 percent, where the corresponding figures were 3.1 and 19.0 percent in FY17, indicating increases of 1.2 percentage points and 0.5 percentage point respectively (Chart-10.17).

CHART 10.17: OPERATIONAL SUSTAINABILITY

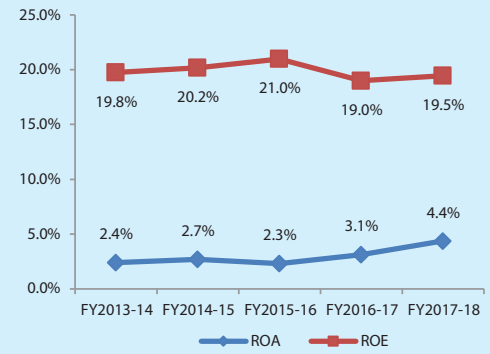
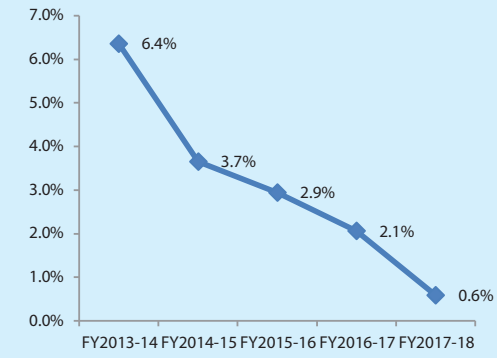


CHART 10.18: FINANCIAL DEPENDENCY



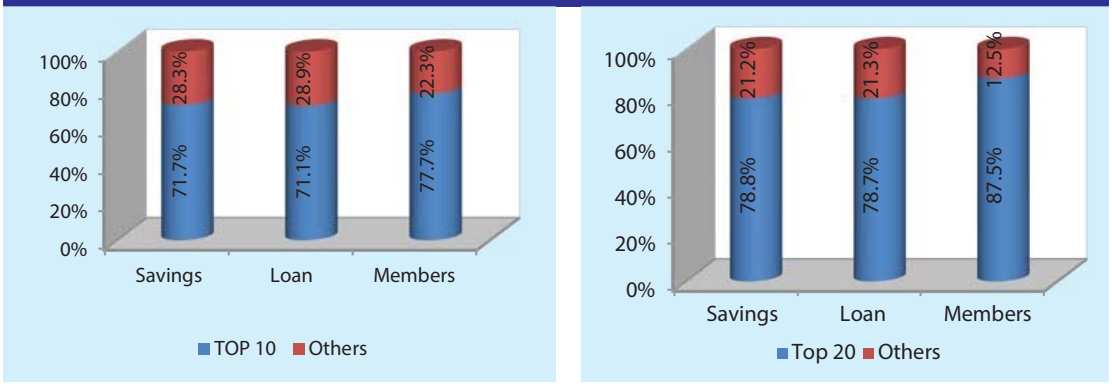
Source: *Microcredit Regulatory Authority, Calculation: FSD*

Donation-to-equity ratio (dependency ratio), also indicates gradual improvement in MFIs sector (Chart 10.18), which is an indication of the sector's sound sustainability.

The amount of donated funds decreased in FY18, but the equity increased substantially from retained earnings and members' savings, and were very important for the long-term sustainability of this sector, as well as for withstanding any financial shocks.

The microfinance sector is highly concentrated in terms of loans, savings, and number of members - in a small number of institutions. The top 10 MFIs mobilized 71.7 percent of total savings, and disbursed 71.1 percent of total loans in FY18. They provided financial services to 77.7 percent of total MFI members (Chart 10.19). Compared to FY17, loan concentration decreased by 0.40 percentage points, while the concentration in terms of savings and members increased by 0.20 and 14.3 percentage points respectively. On the other hand, the top 20 MFIs mobilized 78.8 percent of total savings, disbursed 78.7 percent of total loans and provided financial services to 87.5 percent of total MFI members in FY18. The corresponding figures in FY17 were 79.3, 82.2 and 71.2 percent respectively.

CHART 10.19: CONCENTRATION OF MFI SECTOR IN TERMS OF LOANS SAVINGS AND MEMBERS HELD BY TOP 10 AND TOP 20 MFIs



Source: *Microcredit Regulatory Authority, Calculation: FSD*

The high degree of market dominance by the top MFIs indicate that they need to be dealt with caution because their poor performance may raise stability concerns for this sector.

The overall performance of MFIs in Bangladesh was quite stable during FY2017-18. All the indicators showed a positive and growing trend. Though total amount of NPL increased during FY2017–18, but compared to banking sector it remains quite low. However, overlapping of loans of individual borrowers would create credit trap in the long run, if the borrower selection and their credit needs are not justified properly. A technology-based monitoring system would reduce these problems. A sound microfinance policy might help achieving sustainable development goals, and contribute to various development strategies of the government in line with Vision 2021 and Vision 2041.

Chapter 11

DEVELOPMENTS IN THE FINANCIAL SYSTEM

Bangladesh has been experiencing over six percent GDP growth for more than a decade. A stable condition in the financial system supported the country's robust economic growth. To promote financial system stability, various regulatory initiatives, such as issuance of guidelines, policies, circulars, amendments of existing policies, and a range of significant initiatives have been taken by Bangladesh Bank in the CY18. Some important ones are as follows:-

11.1 ASSESSMENT OF FINANCIAL STABILITY

BB published 8th issue of annual Financial Stability Report (FSR-2017) and 3 (three) issues of Quarterly Financial Stability Assessment Report (QFSAR-2018Q1, 2018Q2 and 2018Q3) in the review year, with a view to revealing key trends in the financial system of Bangladesh, as well as communicating major risks and fragilities therein to the stakeholders of the financial system. Importantly, the last two QFSARs covered some contemporary issues like external debt situation of Bangladesh, USA-China trade tension, Household Indebtedness, Fintech to gauge their implication on financial stability. BB also published Bangladesh Systemic Risk Dashboard (June 2018) which took into account the relevant qualitative and quantitative indicators of systemic risks in the context of Bangladesh financial system.

11.2 REGULATIONS AND POLICIES FOR BANKING SECTOR

a) Bank Company (Amendment) Act, 2018

With a view to bringing changes in the process of nomination of the top officials of the bank and tenure of the directors, Bank Company Act 1991 was amended up to 2018. Notable amendments include change in the maximum number of persons eligible to be directors from the same family (from 2 to 4) under Sub-section 10 of Section 15 and change in the maximum tenure of a director at a stretch (from 3 to 9 years) under Section 15KaKa.

b) Re-fixation of Cash Reserve Ratio (CRR) and Repo rate

BB has re-fixed the Cash Reserve Ratio (CRR) from previous 6.5 percent to 5.5 percent of total demand and time liabilities of a bank on a bi-weekly average basis. Moreover, the CRR on a daily basis has been reduced to 5.0 percent of total demand and time liabilities from the previous 6.0 percent. The repo rate has also been reduced from 6.75 percent to 6.0 percent while the reverse-repo rate remained unchanged at 4.75 percent. The revised rate came into effect since 15 April, 2018.

c) Rationalization of Rate of Interest on Deposit and Lending

Observing rising interest rates of loans and advances, BB has instructed all banks to reduce the interest rate spread to 4 percent from the previous ceiling of 5 percent for all loans including SME loans and excluding loans to consumer and credit card loans.

d) Policy regarding establishment of banking booths by banks

Bangladesh Bank has issued circular allowing banks to operate 'banking booth' with a view to bringing unbanked and underprivileged people under the banking network. Banks are required to employ at least two officers at each booth.

e) Collection of Excise duty on Trade Facilities and Lending Facilities

BB has instructed all the scheduled banks for deducting applicable excise duty based on the maximum balance of each deal under loan against trust receipts (LTR) or similar financing arrangements.

f) Agricultural Loan Rescheduling

BB has the rescheduling policy for agricultural loan to facilitate country's agricultural sector. Under the new guidelines, the down-payment requirement for rescheduling a classified agricultural loan can be negotiated on a banker-customer relationship basis. This new rule will also be applicable for existing agricultural loans rescheduled under BRPD circular no. 5/2015.

g) Scheduling of "Probashi Kallyan Bank" and "Community Bank Bangladesh Limited"

BB has enlisted the "Probashi Kallyan Bank (PKB)" as scheduled specialized bank as per section 37(2)(a) of Bangladesh Bank Order, 1972 and "Community Bank Bangladesh Limited" as a scheduled bank as per BRPD circular letter no. 21/2018.

h) Guidelines on Internal Credit Risk Rating System for Banks

BB has issued the "Guidelines on Internal Credit Risk Rating System for Banks" to reduce the level of loan defaults in the banking sector. Implementation of the rating system will be mandatory for banks from July 1, 2019.

i) Rationalization of Schedule of Charges

In order to rationalise the charges for bank guarantee, BB has issued a circular stating that if any bank gives guarantee for a period of three months or less, banks may impose commission for a maximum period of three months. If the period of bank guarantee is more than three months, banks can impose commission for the full period, i.e., up to the maturity date of the guarantee.

j) Modification in provisioning against bank guarantee

BB has modified the requirement of maintaining general provision based on counter guarantee issued by bank/financial institution/organization against bank guarantee on behalf of their clients (BRPD Circular no. 07/2018). The new provisioning requirements are as follows:

BB rating grade equivalence of the bank/financial institution/ organization providing the counter-guarantee	Provision requirement (% of the exposure amount)
1	NIL
2	0.50
3 or 4	0.75
Others	1.00

k) Provision against L/Cs issued in favour of Fast Track Power Plant Projects

BB waived scheduled banks from maintaining 1(one) percent general provision against the liabilities of letter of credits (L/Cs) issued in favour of fast track power plant projects, which have already received letter of intent (LOI) from Bangladesh Power Development Board (BPDB).

l) Encouraging investment in ICB's subordinated bond

Through BRPD Circular 20/2018, BB has exempted scheduled banks from compliance of Section 26Ka(1)Kha of the Bank Company Act, 1991 (Amended up to 2018) in case of investment in a next issue of subordinated bond by Investment Corporation of Bangladesh (ICB).

m) Compliance of Guidelines on Risk Based Capital Adequacy (RBCA) for Banks

BB replaced paragraph 9 of "Annex 4: Criteria for Inclusion of Instruments of Regulatory Capital" of the Guidelines on Risk Based Capital Adequacy for Banks regarding implementation of Basel III. The paragraph was replaced as follows: "The surplus amount of subordinated debt is to be reckoned as liability for the calculation of net demand and time liabilities for the purpose of determining CRR/SLR. The surplus amount of subordinated debt is the amount that was

raised from issuing such bond(s) after deducting the amount bank invested in the similar bond(s) of other banks. If the figure is 'negative' then it will not be considered as net liability for determining CRR/SLR."

11.3 DEVELOPMENTS IN OFF-SITE SUPERVISION

a) Risk Management Guidelines for banks

BB has issued revised "Risk Management Guidelines for Banks" with a view to ensuring sound risk management culture effectively in the banking industry. All scheduled banks were instructed to prepare a comprehensive risk management guidelines following BB's revised guidelines. Banks have been instructed to get their comprehensive risk management guidelines approved by their board and submit a copy of the same to the Department of Off-site Supervision (DOS) of Bangladesh Bank.

b) Cash Reserve Ratio (CRR) and Statutory Liquidity Ratio (SLR)

Following BRPD circular letter No.15, dated 26/07/2018, DOS instructed all scheduled banks to consider Inter-bank items excluding surplus amount of subordinated debt in their reporting.

11.4 POLICIES FOR FINANCIAL INSTITUTIONS

a) Schedule of fee/charge/commission for FIs

BB has issued new directives, in order to protect customers' interest, regarding charges, fees and commissions imposed by FIs. As per the new directives, FIs can charge a maximum of BDT 200 for a loan application while charges for documentation and processing, CIB report, stamps, legal advice and security valuation, etc. will be collected on actual basis.

b) Refraining banks from offering high interest rate through mobile phone messaging for collecting deposit

BB has issued a circular prohibiting the use of short message service (SMS) in attracting deposits at lucrative interest rates from prospective clients stating the practice undesired and embarrassing.

11.5 DEVELOPMENTS IN DEBT MANAGEMENT

a) Policy for Treasury Bill/Bond Buyback Program

BB, on behalf of the Government, would execute the buyback program and to this end issued relevant terms and conditions with an aim to balance the redemption profile and to reduce the number of government treasury securities. It is mentionable that the terms and conditions include issues relating to operational framework, buyback amount, eligible participants in buyback program, price determination, settlement process, bid submission, rights of auction committee and other relevant matters. The buy-back of treasury bills or bonds will be accomplished in the face value of BDT1 (one) lakh or multiple of BDT1 (one) lakh and all banks and financial institutions (FIs), which maintain current accounts with Bangladesh Bank, can participate directly in the buy-back programme.

b) Issuance of Floating Rate Treasury Bond (FRTB)

The Government of Bangladesh has issued a new investment bonds offering a floating interest rate. FRTBs will be linked to short-term reference rate and will have minimal exposure to interest rate risk.

c) Resetting the Tenure of Repo Instruments

BB has introduced overnight repurchase agreement (repo) facility in addition to existing tenure of 7-day, 14-day, and 28-day in order to improve liquidity in the money market. For intervening holidays, the tenure of repo will automatically be extended by the number of holidays involved.

11.6 DEVELOPMENTS IN SMALL AND MEDIUM ENTERPRISE (SME) FINANCING

a) Amendment of the Operating Guideline of Islami Shari'ah Based Refinancing Fund

A refinance scheme under Islami Shari'ah based refinancing fund has been introduced to develop the industrial sector specially agro processing, small entrepreneurs, new entrepreneurs, renewable energy and environment friendly initiatives. BB amended the operating guideline of the fund and allowed Participating Financial Institutions (PFIs) to avail one year refinance facility instead of 03 (three) months.

b) Addendum of Operating Guidelines for JICA assisted Urban Building Safety Project (UBSP, BD-P84)

BB has issued a circular regarding addendum of operating guidelines for JICA assisted Urban Building Safety Project (UBSP, BD-P84). The revised guidelines amended the composition of Project Management Committee (PMC 1), added a clause as Project Implementation Committee (PIC) and modified the financial and technical procedures for the end-borrower.

11.7 DEVELOPMENTS IN THE AREAS OF AGRICULTURAL AND RURAL CREDIT

a) Issuance of Agricultural and Rural Credit Policy and Program for the FY19.

BB announced its agricultural and rural credit policy and program for the fiscal year (FY) 2018-19. The disbursement target for banks has been set at BDT 21,800 (Twenty one thousand eight hundred) crore, which is 6.86 percent higher than that of the previous FY. This policy mainly focuses on facilitating easier access to banking network and cheaper credit, which will ultimately help to stabilize the local economy.

b) Special Refinance Scheme for milk production:

With a view to attaining nutrition security and to reduce milk import, a special refinance scheme of BDT 200.0 crore has been undertaken by Bangladesh Bank. The tenure of the fund is 5 years.

c) Regarding CIB Reporting

According to ACD Circular Letter No.2 dated 3 December, 2018 any amount of outstanding crop credit has to be reported to CIB. But CIB report collection is not mandatory for new sanction or renewal of credit up to 2.5 lac.

11.8 PROGRESS IN THE AREA OF PAYMENT SYSTEMS

a) Alert for possible cyber attack in Banking system

On the backdrop of recent cyber-attacks on payment systems of our neighboring countries, Bangladesh Bank has issued an alert to all local banks to ensure proper cyber security measures.

b) Bangladesh Mobile Financial Services (MFS) Regulations, 2018

Bangladesh Bank has recently replaced the "Guidelines on Mobile Financial Services for the Banks" with "Bangladesh Mobile Financial Services Regulations, 2018". The newly issued guideline allowed bank-led MFS, a model where a scheduled bank may run the MFS as a product of the bank or a bank may form an MFS providing subsidiary with at least 51 per cent of the share held by the bank with control of the board.

c) Contactless Payment Services through Near Field Communication (NFC) Technology

In order to facilitate card-based transactions, BB has approved contactless payment services using Near Field Communication (NFC) technology with the maximum transaction limit of BDT 3000.0 only. Under this arrangement, transactions can be made using only 'EMVCo Compliant' credit cards.

11.9 DEVELOPMENTS IN CREDIT INFORMATION

a) Resetting the threshold of submission of credit information

To monitor and strengthen credit discipline in the banking sector explicitly, BB instructed that information of all loans including credit cards having outstanding balance of Taka 1 (one) and above has to be uploaded to the CIB database by banks and financial institutions on a monthly basis.

b) Developing Collateral Information system

BB has taken an initiative to develop a database of collaterals offered to banks and financial institutions by their borrowers as security against loans and advances. Banks and FIs have been asked to upload information of collateral securities against their loans and advances on a quarterly basis.

11.10 ESTABLISHMENT OF FOOD PROCESSING & AGRO-BASED AND ICT PROJECTS UNDER ENTREPRENEURSHIP SUPPORT FUND (ESF) LOAN

BB has issued the "Entrepreneurship Support Fund (ESF) Policies, 2018", in which the previous 'Equity and Entrepreneurship Fund' has been renamed as 'Entrepreneurship Support Fund'. The fund has been remodeled from equity-based to a credit-based model with a very low interest rate (2%) for setting up projects in food-processing, agro-based and ICT sectors.

11.11 FINANCING FACILITY UNDER IPFF II PROJECT

The Government of Bangladesh signed a Financing Agreement with International Development Association (IDA) to carry out Investment Promotion and Financing Facility II (IPFF II) project with a view to increasing long-term financing for infrastructure development and to build capacity of the local financial institutions for promoting private sector-led infrastructure financing in Bangladesh. BB, on behalf of the government, developed a detailed Operations Manual (OM) including terms and conditions for availing the financing facility.

11.12 INVESTMENT BY NON-RESIDENT INVESTORS IN ALTERNATIVE INVESTMENT FUNDS

BB allowed investment by non-resident investors in Alternative Investment Funds (AIF) registered under Bangladesh Securities and Exchange Commission (Alternative Investment) Rules, 2015 to widen the scope for foreign investment in our country. Eligible investors in terms of BSEC (Alternative Investment) Rules, 2015 may invest in units of AIF and transactions relating to such investments may be made through Non-resident Investor's Taka Account (NITA).

11.13 SECURITIES LAWS/ ORDER/ NOTIFICATION/ DIRECTIVE/ GUIDELINE ISSUED BY BANGLADESH SECURITIES AND EXCHANGE COMMISSION (BSEC)

BSEC has issued a number of securities laws/ order/ notification/ directive/ guideline during the year 2018. Some of the key initiatives are as follows:

i) On the backdrop of quoting unjustified prices for IPO, BSEC has issued a directive setting some codes of conduct for eligible investors (EIs) in the bidding process to ensure 'justified' price of IPO (initial public offering) under the book building method.

ii) BSEC has amends the second paragraph of the notification no. BSEC/CMRRCD/2009-193/184/Admin/67 dated 13 March 2016, that was published in the Bangladesh Gazette on 16 May 2016. The amendment is following manner:

"Shares, not allotted at the time of according consent for IPO, but allotted after listing, in favor of sponsors, directors or shareholders having 10 percent or more shares, other than alternative investment funds, through stock dividends, shall be subject to a lock-in period of 02 (two) years from the date of issuance of the prospectus for IPO."

iii) BSEC has imposed some additional conditions to the consent already accorded by it, or deemed to have been accorded by it, or to be accorded by it in future regarding issuance of capital by the companies listed with any stock exchange in Bangladesh.

iv) BSEC has issued a directive with necessary instructions to all the registered merchant bankers to keep the provision against unrealized losses arising from investment in mutual fund.

v) BSEC has exempted fully (100 percent) foreign owned companies whose total capital shall not exceed taka one thousand million from certain provisions of the Securities and Exchange Ordinance, 1969 (XVII of 1969) subject to submission of the encashment certificate.

11.14 DEVELOPMENTS IN MICRO CREDIT OPERATIONS

In 2018, Microcredit Regulatory Authority (MRA) issued a circular to all NGO-MFIs stating that they may acquire fixed assets by using up to 35 percent of their cumulative surplus maintaining balance with their total assets as continual support for sustainable and customer friendly micro credit program. In another circular, MRA suggested all NGO-MFIs to get prior approval before conducting any social activities by using cumulative surplus of their micro finance operation.

Appendix

APPENDIX I: BANKING SECTOR AGGREGATE BALANCE SHEET						
Particulars	*(Amount in Billion BDT)*				***Change (%)***	
	2015	**2016**	**2017**	**2018**	**2016 to 2017**	**2017 to 2018**
Property & Assets						
Cash in Hand (including FC)	92.3	106.5	117.6	139.7	10.4	18.8
Balance with BB & SB (including FC)	666.3	760.2	833.1	853.9	9.6	2.5
Balance with other Banks & FIs	428.9	506.1	684.7	851.9	35.3	31.3
Money at Call & Short Notice	49.6	47.8	71.5	62.1	49.6	(13.1)
Investments						
Government	1,136.4	1,174.6	1,104.7	977.2	(6.0)	(11.5)
Others	938.0	964.9	814.2	980.4	(15.6)	20.4
Total Investment	**2,074.4**	**2,139.5**	**1,918.9**	**1,957.6**	**(10.3)**	**2.0**
Loans & Advances						
Loans, CC, OD etc.	5,904.1	6,787.5	8,050.8	9,226.8	18.6	14.6
Bills purchased & Discounted	287.0	348.5	436.4	458.2	25.2	5.0
Total Loans & Advances	**6,191.1**	**7,136.0**	**8,487.2**	**9,685.0**	**18.9**	**14.1**
Fixed Assets	224.4	225.2	226.7	229.0	0.7	1.0
Other Assets	584.4	696.8	715.8	783.8	2.7	9.5
Non-banking Assets	3.3	3.7	3.7	3.9	0.0	5.4
Total Assets	**10,314.7**	**11,621.7**	**13,059.3**	**14,566.9**	**12.4**	**11.5**
Liabilities						
Borrowings from other Banks/FIs/Agents	398.7	488.7	711.1	876.1	45.5	23.2
Deposits & Other Accounts:						
Current Deposit	1,495.8	1791.0	2,048.1	2,245.0	14.4	9.6
Savings Deposit	1,442.4	1773.6	2,015.1	2,255.9	13.6	11.9
Fixed/Term Deposit	4,524.2	4765.0	5,174.2	5,676.5	8.6	9.7
Inter-bank Deposit	138.6	169.9	285.1	387.8	67.8	36.0
Other Deposits	431.0	562.4	596.8	620.9	6.1	4.0
Total Deposit	**8,032.0**	**9,061.9**	**10,119.3**	**11,186.1**	**11.7**	**10.5**
Bills Payable	87.6	150.4	138.0	146.9	(8.2)	6.4
Other Liabilities	951.7	1065.5	1,180.6	1,431.4	10.8	21.2
Total Liabilities	**9,470.0**	**10,766.6**	**12,149.0**	**13,640.5**	**12.8**	**12.3**
Capital/Shareholder's Equity	**844.7**	**855.1**	**910.3**	**926.4**	**6.5**	**1.8**
Total Liabilities & Shareholder's Equity	**10,314.7**	**11,621.7**	**13,059.3**	**14,566.9**	**12.4**	**11.5**
Off-balance Sheet Items	2,685.3	2,966.7	4,535.5	4,941.8	52.9	8.9

Source: *Department of Off-site Supervision, Bangladesh Bank.*

APPENDIX II: BANKING SECTOR AGGREGATE SHARE OF ASSETS

(Amount in Billion BDT)

Particulars	2016	% of Total Assets	2017	% of Total Assets	2018	% of Total Assets
Property & Assets						
Cash in Hand (including FC)	106.5	0.9	117.6	0.9	139.7	0.9
Balance with BB & SB (including FC)	760.2	6.5	833.1	6.4	853.9	5.8
Balance with other Banks & FIs	506.1	4.4	684.7	5.2	851.9	5.8
Money at Call & Short Notice	47.8	0.4	71.5	0.5	62.1	0.4
Investments						
Government	1,174.6	10.1	1,104.7	8.5	977.2	6.7
Others	964.8	8.3	814.2	6.2	980.4	6.7
Total Investments	**2139.4**	**18.4**	**1,918.9**	**14.7**	**1,957.6**	**13.4**
Loans & Advances						
Loans, CC, OD etc.	6,787.5	58.4	8,050.8	61.6	9,226.8	63.3
Bills purchased & Discounted	348.5	3.0	436.4	3.3	458.2	3.1
Total Loans and Advances	**7,136.0**	**61.4**	**8,487.2**	**65.0**	**9,685.0**	**66.5**
Fixed Assets	225.2	1.9	226.7	1.7	229.0	1.6
Other Assets	696.8	6.0	715.8	5.5	783.8	5.6
Non-banking Assets	3.7	0.0	3.7	0.0	3.7	0.0
Total Assets	**11,621.7**	**100.0**	**13,059.3**	**100.0**	**14,566.9**	**100.0**

Source: *Department of Off-site Supervision, Bangladesh Bank.*

APPENDIX III: BANKING SECTOR AGGREGATE SHARE OF LIABILITIES

(Amount in Billion BDT)

Particulars	2016	% of Total Liabilities	2017	% of Total Liabilities	2018	% of Total Liabilities
Liabilities						
Borrowings from other Banks/FIs/Agents	488.7	4.5	711.1	5.9	876.1	6.4
Deposits & Other Accounts:						
Current Deposit	1791.0	16.6	2,048.1	16.9	2,245.0	16.5
Savings Deposit	1773.6	16.5	2,015.1	16.6	2,255.9	16.5
Fixed/Term Deposit	4765.0	44.3	5,174.2	42.6	5,676.5	41.6
Inter-bank Deposit	169.9	1.6	285.1	2.3	387.8	2.8
Other Deposits	562.4	5.2	596.9	4.9	620.9	4.6
Total Deposit	**9,061.9**	**84.2**	**10,119**	**83.3**	**11,186.1**	**82.0**
Bills Payable	150.4	1.4	138.0	1.1	146.9	1.1
Other Liabilities	1065.5	9.9	1,180.6	9.7	1,431.4	10.5
Total Liabilities	**10,766.6**	**100.0**	**12,148.9**	**100.0**	**13,640.5**	**100.0**

Source: *Department of Off-site Supervision, Bangladesh Bank.*

APPENDIX IV: BANKING SECTOR AGGREGATE INCOME STATEMENT						
Particulars	(Amount in Billion BDT)				Change (%)	
	2015	2016	2017	2018	2016 to 2017	2017 to 2018
Interest Income	**636.6**	**639.5**	**706.1**	**861.8**	**10.4**	**22.1**
Less: Interest Expense	490.7	460.6	480.5	585.3	4.3	21.8
Net Interest Income	**145.9**	**178.9**	**225.6**	**276.5**	**26.2**	**22.6**
Non-Interest/Investment Income	279.3	283.5	292.4	278.3	3.2	(4.8)
Total Income	**425.2**	**462.4**	**518.0**	**554.8**	**12.1**	**7.1**
Operating Expenses	208.3	246.4	271.5	288.5	10.1	6.2
Profit before Provision	**216.9**	**216**	**246.5**	**266.4**	**14.3**	**8.1**
Total Provision	77.0	72	73.6	146.2	2.1	98.6
Profit before Taxes	**139.9**	**144**	**172.9**	**120.2**	**20.4**	**(30.5)**
Provision for Taxation	60.7	60.9	77.8	79.8	28.6	2.6
Profit after Taxation/Net Profit	**79.2**	**83.1**	**95.1**	**40.4**	**14.5**	**(57.5)**

Source: *Department of Off-site Supervision, Bangladesh Bank.*

APPENDIX V: BANKING SECTOR ASSETS, DEPOSITS & NPL CONCENTRATION (CY18)				
			(Amount in Billion BDT)	
Assets*	**Top 5 Banks**	**Other Banks**	**Top 10 Banks**	**Other Banks**
Amount (in billion BDT)	4479.1	10087.6	6457.7	8109.2
Share (%)	30.7%	69.3%	44.3%	55.7%
Deposit**	**Top 5 Banks**	**Other Banks**	**Top 10 Banks**	**Other Banks**
Amount (in billion BDT)	3,529.7	7,268.6	4,985.7	5,812.6
Share (%)	32.7%	67.3%	46.2%	53.8%
NPL***	**Top 5 Banks**	**Other Banks**	**Top 10 Banks**	**Other Banks**
Amount (in billion BDT)	478.1	461.0	620.0	319.1
Share (%)	50.9%	49.1%	66.0%	34.0%

Source: *Department of Off-site Supervision & Banking Regulation and Policy Department, Bangladesh Bank*

* Based on assets in descending order;
**Based on deposits in descending order excluding interbank deposits;
***Based on nonperforming loans in descending order.

APPENDIX VI: BANKING SECTOR LOAN LOSS PROVISIONS			
			(Amount in Billion BDT)
Year	**Required Provision**	**Provision Maintained**	**Surplus/(Shortfall)**
2009	134.7	137.8	3.1
2010	150.8	146.8	(3.9)
2011	139.3	148.9	9.6
2012	242.4	189.8	(52.6)
2013	252.4	249.8	(2.6)
2014	289.6	281.6	(8.0)
2015	308.9	266.1	(42.8)
2016	362.1	307.4	(54.7)
2017	443.0	375.3	(67.7)
2018	570.4	504.3	(66.1)

Source: *Banking Regulation and Policy Department, Bangladesh Bank.*

APPENDIX VII: BANKING SECTOR YEAR-WISE GROSS NPL RATIO & ITS COMPOSITION

(In percentage)

Year	Gross NPL to Total Loans Outstanding	Sub-Standard Loans to Gross NPL	Doubtful Loans to Gross NPL	Bad Loans to Gross NPL
2009	9.2	12.2	8.4	79.4
2010	7.1	13.4	8.4	78.1
2011	6.2	14.8	11.5	73.8
2012	10.0	19.1	14.2	66.7
2013	8.9	11.2	10.1	78.7
2014	9.7	11.0	11.2	77.8
2015	8.8	8.9	6.5	84.6
2016	9.2	10.2	5.4	84.4
2017	9.3	7.5	5.5	87.0
2018	10.3	9.4	4.7	85.9

Source: *Banking Regulation and Policy Department, Bangladesh Bank.*

APPENDIX VIII: BANKING SECTOR NPL COMPOSITION (CY18)

(Amount in Billion BDT)

Particulars	Amount		% of Gross NPL	
	CY17	CY18	CY17	CY18
Sub-Standard	55.6	87.8	7.5	9.4
Doubtful	41.2	44.3	5.5	4.7
Bad & Loss	646.2	806.9	87.0	85.9
Total	**743.0**	**939.0**	**100.0**	**100.0**

Source: *Banking Regulation and Policy Department, Bangladesh Bank.*

APPENDIX IX: BANKING SECTOR DEPOSITS BREAKDOWN EXCLUDING INTERBANK DEPOSIT (CY18)

(Amount in Billion BDT)

Items	Amount	% of Total Deposit
Current deposits	2,245.0	20.8%
Savings deposits	2,255.9	20.9%
Term deposits	5,676.5	52.6%
Other deposits	620.9	5.7%
Total deposit	**10,798.3**	**100.0%**

Source: *Department of Off-site Supervision, Bangladesh Bank.*

APPENDIX X: BANKING SECTOR SELECTED RATIOS

(In percentage)

Ratio	CY14	CY15	CY16	CY17	CY18
ROA	0.7	0.8	0.7	0.7	0.3
ROE	8.1	9.4	9.7	10.4	4.4
Net Interest Margin	1.8	1.7	1.9	2.0	2.2
Interest Income to Total Assets	6.9	6.2	5.5	5.4	5.9
Net-Interest Income to Total Assets	1.5	1.5	1.5	1.7	1.9
Non-Interest Income to Total Assets	2.8	2.7	2.4	2.2	1.9
Non-interest expense to Gross Operating Income	46.5	48.6	53.3	52.4	52.0
CRAR	11.4	10.8	10.8	10.8	10.5
Tier-1 capital to RWA ratio	8.6	8.2	7.9	7.6	6.8
Gross NPL to Total Loans Outstanding	9.7	8.8	9.2	9.3	10.3
Gross NPL to Capital	67.7	60.8	74.2	81.6	101.4
Maintained Provision to Gross NPL	56.2	51.8	49.4	50.5	53.7

Source: *Department of Off-site Supervision & Banking Regulation and Policy Department, Bangladesh Bank*

APPENDIX XI: BANKING SECTOR ROA & ROE

ROA (%)	Number of Banks		ROE (%)	Number of Banks	
	2017	2018		2017	2018
Up to 2.0	52	51	Up to 5.00	14	14
> 2.0 to 3.0	4	4	> 5.00 to 10.00	15	13
>3.0to 4.0	0	0	>10.00 to 15.00	18	23
>4.0	1	2	>15.00	10	07

Source: *Department of Off-site Supervision, Bangladesh Bank.*

APPENDIX XII: BANKING SECTOR YEAR-WISE ADR AT END-DECEMBER

(In percentage)

Year	Advance-Deposit Ratio (ADR)
2014	71.0
2015	71.0
2016	71.9
2017	75.9
2018	77.6

Source: *Department of Off-site Supervision, Bangladesh Bank.*

APPENDIX XIII: BANKING SECTOR ADR (CY18)

Range	Number of Banks
Up to 70%	07
> 70% to 85%	29
> 85% to 90%	09
>90% to 100%	09
>100%	03
Total	57

Source: *Department of Off-site Supervision, Bangladesh Bank.*

APPENDIX XIV: YEAR-WISE BANKING SECTOR LCR AND NSFR AT END-DECEMBER		
		(In percentage)
Year	**LCR**	**NSFR**
2016	197.6	109.3
2017	174.9	107.5
2018	173.3	109.4

Source: *Department of Off-site Supervision, Bangladesh Bank.*

APPENDIX XV: BANKING SECTOR LEVERAGE RATIO - SOLO BASIS (CY18)	
Range	**Number of Banks**
<3%	09
>=3% to 10%	32
> 10% to 20%	11
>20%	05
Total	57

Source: *Department of Off-site Supervision, Bangladesh Bank.*

APPENDIX XVI: ISLAMIC BANKS AGGREGATE BALANCE SHEET						
Particulars	(Amount in Billion BDT)				Change (%) 2016 To 2017	Change (%) 2017 To 2018
	2015	2016	2017	2018		
Property & Assets						
Cash in Hand (including FC)	15.9	19.2	24.8	27.0	29.2	8.9
Balance with BB & SB (including FC)	151.8	187.9	206.4	162.2	9.8	(21.4)
Balance with other Banks & FIs	86.3	79.7	111.1	124.9	39.4	12.4
Money at Call & Short Notice	0.5	0.5	0.5	0	0	(100)
Investments						
Government	35.9	42	49.4	49.6	17.6	0.4
Others	116.5	77.9	58.8	69.8	(24.5)	18.7
Total Investments	**152.4**	**119.9**	**108.2**	**119.4**	**(9.8)**	**10.4**
Investments & Advances						
Investments & Advances	1311.0	1531.2	1819.2	2117.8	18.8	16.4
Bills Purchased & Discounted	74.0	96	129.8	115.1	35.2	(11.3)
Total Investments & Advances	**1384.9**	**1627.2**	**1949.0**	**2232.9**	**19.8**	**14.6**
Fixed Assets	34.8	35.3	35.9	37.3	1.7	3.9
Other Assets	70.3	77.2	82.4	79.5	6.7	(3.5)
Non-banking Assets	1.0	1	1.1	1.1	10.0	(0.0)
Total Assets	**1897.9**	**2148**	**2519.4**	**2784.4**	**17.3**	**10.5**
Liabilities						
Borrowings from other Banks/FIs/Agents	47.5	74	139.2	182.0	88.1	30.7
Deposits & Other Accounts						
Current Deposit	92.0	115.4	118.4	118.3	2.6	(0.1)
Savings Deposit	282.3	335.1	378.2	437.1	12.9	15.6
Fixed/Term Deposit	1042.9	1109.4	1303.3	1375.4	17.5	5.5
Interbank Deposit	47.5	27.74	71.9	116.3	159.2	61.8
Other Deposit	139.7	197.4	191.7	204.8	(2.9)	6.8
Total Deposits	**1785.04**	**1757.3**	**2063.5**	**2251.9**	**17.4**	**9.1**
Bills Payable	11.2	18	20.8	18.0	15.6	(13.5)
Other Liabilities	153.5	136.6	157.4	187.7	15.2	19.3
Total Liabilities	**1769.1**	**2013.6**	**2380.9**	**2639.6**	**18.2**	**10.9**
Capital/Shareholder's Equity	**128.8**	**134.5**	**138.5**	**144.8**	**3.0**	**4.5**
Total Liabilities & Shareholder's Equity	**1897.9**	**2148.1**	**2519.4**	**2784.4**	**17.3**	**10.5**
Off-balance Sheet Items	**369.2**	**425.1**	**507.9**	**523.9**	**19.5**	**3.2**

Source: *Department of Off-site Supervision, Bangladesh Bank.*

APPENDIX XVII: ISLAMIC BANKS AGGREGATE INCOME STATEMENT						
Particulars	(Amount in Billion BDT)				Change (%) in 2017	Change (%) in 2018
	2015	2016	2017	2018		
Profit Income	146.8	156.9	159.8	209.5	1.8	31.1
Less: Profit Expenses	95.9	94.1	105.1	135.4	4.4	28.8
Net Profit Income	**50.9**	**62.8**	**65.3**	**74.1**	**4.0**	**13.5**
Non-Profit/Investment Income	19.0	20.2	24.3	25.7	20.3	5.8
Total Income	**69.9**	**83**	**89.6**	**99.9**	**8.0**	**11.5**
Operating Expenses	33.3	40.7	44.0	49.4	8.1	12.3
Profit before Provision	**36.52**	**42.2**	**45.6**	**50.5**	**8.1**	**10.7**
Total Provision	9.3	8.8	10.4	15.6	18.2	50.0
Profit before Taxes	**27.2**	**33.4**	**35.2**	**34.9**	**5.4**	**(0.9)**
Provision for Taxation	12.3	15.8	17.0	19.4	7.6	14.1
Profit after Taxation/Net Profit	**14.9**	**17.6**	**18.2**	**15.5**	**3.4**	**(14.8)**

Source: *Department of Off-site Supervision, Bangladesh Bank.*

APPENDIX XVIII: SHARE OF ISLAMIC BANKS IN THE BANKING SECTOR (CY18)			
			(Amount in Billion BDT)
Particulars	All Banks	Islamic Banks	Share of Islamic Banks (%)
Property & Assets			
Cash in hand	139.7	27.0	19.3
Due from BB & other banks/FIs	1,705.9	287.1	16.8
Money at Call & Short Notice	62.1	0.0	0.0
Investments in securities	1,957.6	119.4	6.1
Investments (Loans & advances)	9,685.0	2,232.9	23.1
Other Assets	783.7	79.5	10.2
Total Assets	**14,566.9**	**2,784.3**	**19.1**
Liabilities			
Due to financial institutions	876.11	182.0	20.77
Total deposits	11,186.2	2,251.9	20.1
Bills Payable	147.0	18.0	12.3
Other liabilities	1,431.3	187.7	13.1
Total Liabilities	**13,640.5**	**2,639.6**	**19.4**
Capital/Shareholder's Equity	926.3	144.8	15.6
Total Liabilities & Shareholder's Equity	**14,566.9**	**2,784.3**	**19.1**
Off-balance Sheet Items	4,941.8	523.9	10.6

Source: *Department of Off-site Supervision, Bangladesh Bank.*

APPENDIX XIX: SELECTED RATIOS OF ISLAMIC BANKS AND THE BANKING SECTOR (CY18)		
		(In percentage)
Ratio	**Overall Banking Sector**	**Islamic Banking Sector**
ROA	0.3	0.6
ROE	4.4	10.7
Net Profit Margin	3.0	2.2
Profit (Interest) Income to Total Assets	5.9	7.5
Net Profit (Interest) Income to Total Assets	1.9	2.7
Non Profit (Interest) Income to Total Assets	1.9	0.9
Investment (Advance)-Deposit Ratio	77.6	90.81
CRAR	10.5	11.6
Classified Investment (Advances) to Investments	9.3	4.8
Classified Investment (Advances) to Capital	52.6	71.9

**Data on ICB Islami Bank Ltd. is excluded for Islamic Banking Sector*
Source: *Department of Off-site Supervision & Banking Regulation and Policy Department, Bangladesh Bank*

APPENDIX XX: ISLAMIC BANKS' CRAR (CY18)	
CRAR	**Number of Islamic Banks**
Below 10%	1
10% to 12%	4
>12%	3
Total	8

Source: *Department of Off-site Supervision, Bangladesh Bank.*

APPENDIX XXI: ISLAMIC BANK'S INVESTMENT (ADVANCE)-DEPOSIT RATIO (AS OF END-DECEMBER 2018)			
			(Amount in Billion BDT)
Items	**Islamic Banks**	**Islamic Branches/ Windows**	**Islamic Banking Sector**
Deposits (Excluding Interbank)	2,196.7	124.6	2,321.3
Investments* (Excluding Interbank)	2,153.8	110.8	2,264.6
IDR	91.5	78.4	90.8

**Credits are termed as investments in Islamic Banking.*
Source: *Department of Off-site Supervision, Bangladesh Bank.*

APPENDIX XXII: OVERSEAS BRANCHES AGGREGATE SHARE OF ASSETS & LIABILITIES

Assets	CY17	% of Total Assets	CY18	% of Total Assets	Liabilities	CY17	% of Total Liabilities	CY18	% of Total Liabilities
Cash & Balance from Central Banks	145.5	22.5	173.1	20.5	Customer Deposits	167.7	27.9	193.3	24.3
Balance with other Banks & FIs	394.5	60.9	523.3	62.1	Dues to head office & branches abroad & other liabilities	432.6	72.1	600.8	75.7
Loans & Advances	75.8	11.7	90.6	10.7	Total Liabilities	599.8	100.0	794.1	100.0
Property & Equipment and other assets	31.5	4.9	55.4	6.6	Capital/ Equity	47.5	7.9	48.3	6.1
Total Assets	647.3		842.4		Total Liabilities & Equities	647.3		842.4	

Source: *Scheduled Banks of Bangladesh*
R= Revised

APPENDIX XXIII: STRESSED ADVANCES RATIO IN DIFFERENT SEGMENTS

(Amount in Billion BDT)

Sl No.	Segments	Year 2018				Gross NPL to Total Advances (1)	Rescheduled (STD) & Restructured Advances to Total Advances (2)	Stressed Advances Ratio (3) = (1) + (2)
		Unclassified Advances	Gross NPL	Total Advances	Rescheduled (STD) & Restructured Advances			
1	Large	3976.1	352.3	4328.4	701.5	8.1%	16.2%	24.3%
2	Medium	1233.4	168.9	1402.3	103.9	12.0%	7.4%	19.5%
3	Small	924.0	117.1	1041.1	34.4	11.2%	3.3%	14.5%
4	Micro & Cottage	263.5	25.5	288.9	10.4	8.8%	3.6%	12.4%
5	Others	1778.2	275.3	2053.5	79.3	13.4%	3.9%	17.3%
	Total	8175.2	939.1	9114.3	929.5	10.3%	10.2%	20.5%

Source: *Scheduled Banks of Bangladesh*

APPENDIX XXIV: YEAR-WISE STRESSED ADVANCES IN BANKING SECTOR

(In percentage)

Year	Gross NPL to Total Advances	Rescheduled (STD) & Restructured Advances To Total Advances	Stressed Advances
2014	9.7	3.4	13.1
2015	8.8	7.3	16.1
2016	9.2	8.0	17.2
2017	9.3	9.7	19.0
2018	10.3	10.2	20.5

Source: *Scheduled Banks of Bangladesh*

APPENDIX XXV: STRESSED ADVANCE CONCENTRATION IN BANKING SECTOR (CY18)				
Stressed Advances	**Top 5 Banks**	**Other Banks**	**Top 10 Banks**	**Other Banks**
Amount (in billions)	811.1	1057.5	1180.4	688.2
Share (in percent)	43.4	56.6	63.2	36.8

Source: *Scheduled Banks of Bangladesh*

APPENDIX XXVI: FIs' AGGREGATE BALANCE SHEET					
					(Amount in Billion BDT)
Items	**CY14**	**CY15**	**CY16**	**CY17**	**CY18**
Property & Assets:					
Cash in hand	0.02	0.01	0.02	0.02	0.02
Balance with other banks and FIs	85.0	94.7	86.7	133.6[R]	134.7
Money at call & short notice	1.2	0.1	1.4	0.4	0.8
Investment in government securities	2.2	0.8	1.5	0.5	0.5
Other investments	16.2	19.4	21.4	21.7[R]	19.9
Total loans & leases	371.0	448.5	534.2	614.6	722.5
Fixed assets	6.0	7.0	10.3	11.5	12.4
Other assets	38.3	39.9	49.2	59.2	65.2
Non-financial assets	0.2	0.8	0.7	2.5	1.1
Total assets	**520.1**	**611.1**	**715.0**	**843.9**[R]	**957.2**
Liabilities & Equity:					
Borrowing from other banks and FIs	127.9	132.4	158.7	185.8[R]	256.0
Deposits	245.7	318.1	383.7	467.1[R]	482.1
Other liabilities	50.7	60.3	65.9	76.2[R]	98.9
Total liabilities	424.3	510.8	608.3	729.1[R]	836.9
Shareholders' equity (capital)	95.8	100.3	106.8	114.8[R]	120.2
Total liabilities and shareholders' equity	**520.1**	**611.1**	**715.0**	**843.9**[R]	**957.2**

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

R- Revised

APPENDIX XXVII: FIs' AGGREGATE INCOME STATEMENT

(Amount in Billion BDT)

Items	CY14	CY15	CY16	CY17	CY18
Interest income	**50.9**	**57.4**	**55.1**	**68.5**[R]	**79.8**
Less: Interest expense	(33.8)	(37.4)	(39.2)	(45.8)[R]	(57.6)
Net interest income (Net II)	**17.1**	**20.0**	**15.9**	**22.8**[R]	**22.2**
Investment income	1.2	2.0	1.8	2.7[R]	1.0
Add: Commission, exchange and brokerage	0.3	0.3	0.2	0.5[R]	0.7
Add: Other operating income	5.2	5.6	3.9	3.3[R]	4.4
Non-interest income (Non II)	**6.7**	**7.9**	**5.9**	**6.6**[R]	**6.2**
Total operating income (Net II + Non II)	**23.8**	**27.9**	**21.8**	**29.3**[R]	**28.4**
Operating expenses	(5.5)	(6.6)	(7.5)	(9.7)[R]	(10.3)
Profit before provisions	**18.3**	**21.3**	**14.3**	**19.7**[R]	**18.1**
Total provisions	(2.6)	(4.6)	(3.6)	(4.6)[R]	(3.8)
Profit before taxes	**15.7**	**16.7**	**10.7**	**15.1**[R]	**14.3**
Tax provisions	(6.2)	(7.0)	(5.6)	(5.6)[R]	(5.4)
Net profit after taxes	**9.5**	**9.7**	**5.1**	**9.5**[R]	**8.9**

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

R-Revised

APPENDIX XXVIII: FIs' LIQUIDITY POSITION

(Amount in Billion BDT)

Items	End-Dec 2014	End-Dec 2015	End-Dec 2016	End-Dec 2017	End-Dec 2018
Total liabilities	242.9	289.6	342.8	394.5	451.1
Total term deposits	155.5	191.3	232.2	260.5	296.9
Industry CRR (required)	3.9	4.8	5.8	6.5	7.4
Industry CRR (maintained)	8.8	5.2	6.2	7.1	7.1
Industry SLR (required)	12.1	14.5	15.5	18.0	20.5
Industry SLR (maintained)	65.6	68.0	64.9	81.5	94.9

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

APPENDIX XXIX: FIs' OTHER INFORMATION					
					(Amount in Billion BDT)
Items	**CY14**	**CY15**	**CY16**	**CY17**	**CY18**
Tier-I Capital	98.0	94.6	91.3	87.3	92.6
Tier-II Capital	5.3	6.7	9.7	11.0	13.2
Total Capital	**103.3**	**101.3**	**101.0**	**98.3**	**105.8**
Classified loans & leases	19.7	40.0	39.2	45.2	54.6
Loan loss provisions (required)	10.0	19.8	25.2	24.6	33.3
Loan loss provisions (maintained)	11.0	14.2	19.8	19.7	27.5
Loan loss provision (surplus/shortfall)	**1.0**	**(5.6)**	**(5.4)**	**(4.9)**	**(5.8)**
No. of government-owned FIs	3	3	3	3	3
No. of local FIs	18	19	19	19	19
No. of FIs under foreign joint venture	10	10	11	12	12
Total no. of FIs	**31**	**32**	**33**	**34**	**34**
No. of branches	198	211	225	257	271

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

APPENDIX XXX: FIs' SUMMARY PERFORMANCE INDICATORS					
					(In percentage)
Indicators	**CY14**	**CY15**	**CY16**	**CY17**	**CY18**
Profitability & Efficiency:					
Return on Assets (ROA)	1.8	1.6	0.7	1.1	0.9
Return on Equity (ROE)	9.9	9.8	4.7	8.3	7.4
Net Interest Margin (NIM)	4.6	4.4	2.4	2.9	2.5
Asset Quality:					
Classified Loans & Leases to Total Loans & Leases	5.3	8.9	7.3	7.3	7.9
Capital Adequacy:					
Capital Adequacy Ratio (CAR)	21.2	18.7	18.4	13.5	13.9
Liquidity:					
SLR maintained	27.0	23.5	19.0	20.7	21.1
CRR maintained	5.7	2.7	2.7	2.7	2.4

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

APPENDIX XXXI: FIs' SECTOR-WISE DISTRIBUTION OF LOANS AND LEASES

(In percentage)

Major Sectors	CY14	CY15	CY16	CY17	CY18
Trade & Commerce	16.4	17.3	17.1	13.5	15.3
Housing	17.5	17.7	16.8	15.0	19.2
Power, Gas, Water and Sanitary Service	10.5	9.8	9.5	7.9	8.8
Textile	4.4	4.7	4.9	4.0	4.9
Iron, Steel and Engineering	4.7	5.2	5.4	5.2	5.1
Transport & Aviation	4.7	3.9	4.2	8.9	4.0
Food Production and Processing Industry	4.1	4.2	4.8	3.6	4.3
Garments & Knitwear	4.0	4.1	4.5	4.8	4.7
Margin Loan	3.3	3.3	2.4	1.7	2.0
Merchant Banking	4.1	3.7	4.4	3.3	3.7
Agriculture	1.9	1.8	2.0	2.6	3.1
Others (including other sectors with minor share)	24.4	24.3	24.0	29.5	24.9

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

APPENDIX XXXII: INTERBANK REPO VOLUME, INTERBANK REPO RATE AND CALL MONEY RATE

Month	Interbank Repo Volume (In Billion BDT)	Interbank Repo Rate (%)	Call Money Rate (%)
January 2018	101.34	4.17	3.90
February 2018	149.81	5.98	4.11
March 2018	149.77	5.62	4.40
April 2018	146.70	2.07	4.31
May 2018	83.44	1.40	2.96
June 2018	116.37	2.37	3.41
July 2018	116.51	0.70	2.17
August 2018	126.66	4.52	3.31
September 2018	157.27	3.17	4.22
October 2018	77.46	1.43	3.65
November 2018	103.74	2.08	3.50
December 2018	208.74	5.19	4.09

Source: *Bangladesh Bank Website, Economic Data.*

APPENDIX XXXIII: BB BILL AND TREASURY SECURITIES YIELD

Securities	December 2017	June 2018	December 2018
30 Day BB Bill	2.97%	No Auction	No Auction
91 Day T-Bill	3.38%	3.67%	2.18%
182 Day T-Bill	3.86%	4.20%	2.96%
364 Day T-Bill	4.35%	4.27%	3.40%
2 Years T-Bond	5.03%	4.71%	4.33%
5 Years T-Bond	5.90%	5.98%	5.35%
10 Years T-Bond	7.17%	7.41%	7.53%
15 Years T-Bond	7.93%	7.99%	7.69%
20 Years T-Bond	8.25%	8.82%	8.42%

Source: *Major Economic Indicators, February 2019 Issue, Bangladesh Bank.*

APPENDIX XXXIV: EQUITY MARKET DEVELOPMENT			
Quarter	DSEX Index	Market Capitalization (In Billion BDT)	Market P/E
March 2018	5597.44	3917.19	15.7
June 2018	5405.46	3847.35	15.2
September 2018	5368.96	3876.84	15.2
December 2018	5385.64	3872.95	15.2

Source: *Dhaka Stock Exchange website*

APPENDIX XXXV: AUTOMATED CHEQUE CLEARING OPERATIONS						
Category	CY16		CY17		CY18	
	Number (in thousands)	Amount in Billion BDT	Number (in thousands)	Amount in Billion BDT	Number (in thousands)	Amount in Billion BDT
High Value (HV)	1,987.0	11,479.5	2,222.5	12,969.2	2,414.63	14,732.77
Regular Value (RV)	20,215.5	6,518.3	20,950.7	7,462.5	20,849.23	8,214.20

Source: *Payment Systems Department, Bangladesh Bank.*

APPENDIX XXXVI: VOLUME OF ELECTRONIC BANKING TRANSACTIONS				
				(In Billion BDT)
Year	Using ATM	Using Debit Card	Using Credit Card	Internet Banking
2016	1107.3	1179.0	192.1	307.5
2017	1194.7	1239.5	199.8	364.8
2018	1385.3	1420.8	164.6	324.7

Source: *Statistics Department, Bangladesh Bank.*

APPENDIX XXXVII: NUMBER OF BANKS PROVIDING ELECTRONIC BANKING SERVICES			
Year	Internet Banking	Credit Card	ATM/Debit Card
2016	41	37	50
2017	36	37	53
2018	46	39	53

Source: *Statistics Department, Bangladesh Bank.*

APPENDIX XXXVIII: COMPARATIVE PICTURE OF MOBILE FINANCIAL SERVICES (MFS) IN LAST 3 YEARS			
Particulars	2016	2017	2018
Number of agents	710,026	777,179	886,473
No. of Banks authorized for MFS	19	18	18
No. of Banks in operation for MFS	17	18	18
Number of registered clients (in millions)	1.0	58.6	67.5
Number of active accounts (in millions)	15.8	23.1	37.3
Number of total transactions (in million BDT)	1,473	1,876	2,273
Volume of total transaction (in billion BDT)	2,346.7	3,147	3,789

Source: *Payment Systems Department, Bangladesh Bank.*

APPENDIX XXXIX: BANKING SECTOR MONTH-WISE DEPOSIT & ADVANCE RATE (CY18)

(In percentage)

Month	Deposit Rate	Advance Rate	Overall Spread
Jan'18	5.01	9.42	4.41
Feb'18	5.18	9.55	4.37
Mar'18	5.30	9.70	4.40
Apr'18	5.43	9.89	4.46
May'18	5.51	9.96	4.45
Jun'18	5.50	9.95	4.45
Jul'18	5.40	9.71	4.31
Aug'18	5.36	9.63	4.27
Sep'18	5.27	9.54	4.27
Oct'18	5.25	9.47	4.22
Nov'18	5.30	9.50	4.20
Dec'18	5.26	9.49	4.23

Source: *Bangladesh Bank Website.*

APPENDIX XL: EXTERNAL CREDIT ASSESSMENT INSTITUTIONS (ECAIS)

Sl. No.	Rating Companies	Subsidiary/Technical Partner of	Date of Issuance of Registration Certificate
1.	Credit Rating Information and Services Ltd (CRISL)	Rating Agency Malaysia Berhad	28/08/2002
2.	Credit Rating Agency of Bangladesh Ltd. (CRAB)	ICRA Limited of India	24/02/2004
3.	Emerging Credit Rating Ltd. (ECRL)	Malaysian Rating Corporation Berhad	22/06/2010
4.	National Credit Rating Ltd. (NCRL)	The Pakistan Credit Rating Agency Ltd	22/06/2010
5.	ARGUS Credit Rating Services Ltd. (ACRSL)	DP Information Group, Singapore.	21/07/2011
6.	WASO Credit Rating Company (BD) Limited	Financial Intelligence Services Ltd.	15/02/2012
7.	Alpha Credit Rating Limited (ACRL)	Istanbul International Rating Services Inc.	20/02/2012
8.	The Bangladesh Rating Agency Limited (BDRAL)	Dun & Bradstreet South Asia Middle East Ltd.	07/03/2012

APPENDIX XLI: MICROCREDIT FINANCE SECTOR						
Sl No.	**Particulars**	**2013-14**	**2014-15**	**2015-16**	**2016-17**	**2017-18**
1	Total Number of Licensed Institution	742.0	753.0	759.0	784.0	806
2	Number of Branches	14,730.0	15,609.0	16282.0	17,120	18088
3	Number of Employees	109,628.0	110,781.0	124,992.0	137,607.0	152,506
4	Number of Members (in millions)	25.1	26.0	27.8	29.9	31.1
5	Number of borrowers (in millions)	19.4	20.8	23.1	24.8	25.7
6	Outstanding Loan Disbursed by Licensed institutions (in billions)	276.9[R]	353.8	458.2	581.6	671.2
7	Outstanding Loan Disbursed by top 20 Institutions (in billions)	212.0	278.0	348.0	478.0	528.3
8	Outstanding Savings Balance of the Licensed institutions (in billions)	107.0	136.0	172.0	216.1	262.4
9	Outstanding Savings Balance Held in Top 20 Institutions (in billions)	88.0	107.0	136.0	171.4	206.8
10	Particulars of Outstanding Loan (in millions)					
	Up to BDT. 10,000	43,493.2	38,317.5	32,213.9	33,688.5	33,264.8
	BDT. 10,001 to 30,000	107,147.1	138,605.0	166,294.3	169,997.8	195,094.7
	BDT. 30,001 to 50,000	44,522.5	61,505.1	97,682.6	133,677.0	322,847.1
	BDT. 50,001 to 100,000	31,797.1	50,514.6	80,186.7	117,640.8	304,540.8
	BDT. 100,001 to 300,000	39,797.9	50,389.1	60,553.1	94,791.5	265,478.7
	Above BDT. 300,000	10,157.4	14,465.5	21,247.1	31,805.2	164,202.0
11	Total Number of Loan Recipients (in thousands)					
	Up to BDT. 10,000	7,809.4	6,114.1	5,128.7	4,825.8	4,337.6
	BDT. 10,001 to. 30,000	9,263.1	10,727.8	12,212.5	11,896.1	14,825.6
	BDT. 30,001 to 50,000	1,715.3	2,383.0	3,451.3	4,714.0	17,038.0
	BDT. 50,001 to 100,000	692.1	1,043.5	1,615.5	2,397.7	8,621.6
	BDT. 100,001 to 300,000	403.8	468.9	594.9	841.2	4,140.0
	above BDT. 300,000	45.9	63.1	83.4	122.2	169.2
12	Average Loan per Recipient	13,894.6	17,009.2	19,846.3	23,486.0	26,130.0
13	Default Loan (outstanding amount in millions)	12,231.0	10,755.0	11,771.0	13,556.27	18,281.1

Source: *Microcredit Regulatory Authority.*

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APPENDIX XLII: LIST OF INDICATORS USED TO PREPARE CFSI				
Category	**Indicator**		**Interpretation**	**Data Source**
Banking Soundness Index (BSI)				
Capital adequacy	Capital to risk-weighted assets ratio (CRAR)	BS1	Indicates banks' strength to absorb unexpected losses. Higher CRAR implies better health of the bank concerned.	Bangladesh Bank Quarterly (BBQ)
Asset quality	Gross NPL ratio	BS2	Indicates problems with asset quality in the loan portfolio and the degree of credit risk.	BBQ
Liquidity	Credit to deposit ratio (CDR)	BS3	Indicates banks' ability to finance lending with deposits. A high ratio reflects banks are borrowing to lend thereby raising the funding cost and impacting profitability.	Monthly Economic Trends (MET)
	Weighted interest rate spread	BS4	Higher spread leads to higher liquidity as well as more probability of higher profitability. Lower spread also indicates higher market competition.	MET
Profitability	Return on assets (ROA)	BS5	Measures banks' efficiency in using its assets	Department of Off-site Supervision (DOS)
	Return on equity (ROE)	BS6	Measures banks' efficiency in using its capital	
	Net interest margin (NIM)	BS7	Higher ratio implies higher ability to absorb losses; also indicates banks with high capital requiring lesser deposits to finance lending.	
Financial Vulnerability Index (FVI)				
External Sector	Current account balance to GDP ratio	FV1	Indicates vulnerability on the external sector of the economy if the deficit widens. A large current account deficit means an equivalent capital account surplus. The funds flowing in may be contributing to the economy overheating and asset price booms by financing speculative asset purchases. It also precipitates probability of a currency depreciation.	MET & Bangladesh Bureau of Statistics (BBS)
	Ratio of M2 to foreign exchange reserves	FV2	Indicates the extent to which banking system liabilities are backed by international reserves; measures the ability to withhold external shocks and ensures the convertibility of the local currency.	MET
	Real effective exchange rate (REER)	FV3	Indicates export competitiveness of an economy.If it appreciates, the competitiveness of the export sector increases.	Monetary Policy Department (MPD)

Category	Indicator		Interpretation	Data Source
Financial Sector	M2 multiplier (broad money, M2/base money, M0	FV4	Measures how much an increase of base money leads to the expansion of money supply through the banking system. A high and increasing M2 multiplier may be indicative of over-borrowing and accompanied deterioration in asset quality.	BBQ
	Domestic credit to GDP ratio	FV5	A high value can indicate overheating and excess risk taking if it's too high. A low ratio may be indicative of credit constraints and a possibility of credit crunch in the near future.	MET & BBS
	General stock price index movement (DSE)	FV6	Indicates investors' confidence in an economy as well as potential vulnerability of the economy when stock prices go out of line from the fundamentals.	BBQ
Real Sector	Fiscal balance to GDP ratio	FV7	Indicates the stress imposed by government borrowing; high fiscal deficit raises interest rates and impacts repayment capacity if not supported by high economic growth. It could also leave the country exposed to inflation if the deficit is monetised by the Central Bank.	BBQ & BBS
	CPI inflation	FV8	Indicates overheating of the economy from a mismatch between aggregate demand and supply situation of an economy.	BBQ
	Global petroleum price	FV9	when the price of petroleum goes up, Bangladesh economy experience pressure in the foreign exchange market to meet additional demand for foreign exchange.	BBQ
Regional Economic Climate Index (RECI)				
Exports	Weighted average GDP growth of major export partners (USA, UK, Canada, Germany, Italy, France, Spain)	RE1	A high GDP growth rate in the major export partners implies better export prospects for Bangladesh.	OECD, Singapore Department of Statistics & Bank Negara Malaysia
Imports	Weighted average CPI inflation of major import partners (China, India, Japan, Korea, Malaysia, Singapore)	RE2	Higher inflation in major import countries would be likely to translate into higher import payments for Bangladesh as well as higher domestic inflation.	

APPENDIX XLIII: FINANCIAL STABILITY MAP					
Components	**Major Indicators**	**Standardized Scores (0 to 1 Scale)**		**Change w.r.t. 2017**	**Comment**
		2017	**2018**		
External Economy	Trading partners' real GDP growth (export weighted)	0.093	0.105	↑	Reverse ratio. Score = 1-standardized score
	Import Weighted avg. Inflation (Countries from which Bangladesh imports)	0.351	0.330	↓	
	Weighted avg. unemployment rate (countries with highest inward remittance for Bangladesh)	0.368	0.391	↑	
	International Oil Price	0.340	0.557	↑	Oil price started to decline in 2019.
	3 month LIBOR rate	0.403	0.813	↑	
	Current account deficit to GDP	0.492	0.685	↑	
	Reserve Adequacy (Import coverage in months)	0.080	0.337	↑	Reverse ratio.
	Overall component Score	***0.294***	***0.404***	↑	
Domestic Economy	Output gap	0.10	0.30	↑	
	External debt to GDP	0.211	0.208	↓	
	Exchange rate movement	0.107	0.083	↓	
	Inflation	0.263	0.247	↓	
	Overall component Score	***0.170***	***0.209***	↑	
Households	Household borrowing to GDP	0.126	0.126	→	
	Household Credit quality (H.H NPL to H.H Loans)	0.114	0.114	→	
	Inward Remittance to GDP	0.830	0.821	↓	Reverse ratio.
	Overall component Score	***0.354***	***0.351***	↓	
Non Financial Corporations	NFC credit to GDP	0.218	0.249	↑	
	NFC loans to Banking Sector Loans	0.737	0.756	↑	
	D/E ratio of large NFCs	0.896	0.956	↑	
	Credit portfolio quality (NPL % of NFCs)	0.257	0.396	↑	
	Overall component Score	***0.53***	***0.59***	↑	
Fiscal Condition	Public debt to GDP	0.376	0.380	↑	
	Sovereign Risk Premium	0.250	0.291	↑	
	Govt. budget balance to GDP	0.259	0.291	↑	
	Tax revenue to GDP	0.747	0.677	↓	Reverse ratio
	Overall component Score	***0.341***	***0.356***	↑	

Components	Major Indicators	Standardized Scores (0 to 1 Scale)		Change w.r.t. 2017	Comment
		2017	2018		
Financial Market Condition	Asset Concentration of top 3 D-SIBs	0.286	0.277	↓	
	Gross NPL Banking Sector	0.606	0.713	↑	
	RWA density ratio	0.678	0.671	↓	
	Banking Sector resilience map	0.277	0.293	↑	
	Deposit covered by DITF	0.756	0.770	↑	Reverse ratio
	NPL of FIs	0.066	0.103	↑	Weights for FI and capital market indicators are finalized using their proportional size in the financial system (Bank + FI + Capital Market)
	Price Earnings Ratio	0.426	0.381	↓	
	DSEX	0.337	0.416	↑	Reverse ratio
	Overall component Score	***0.496***	***0.542***	↑	
Capital & Profitability	CRAR	0.597	0.657	↑	Reverse ratio
	TIER 1	0.475	0.669	↑	Reverse ratio
	NIM	0.634	0.599	↓	Reverse ratio
	ROA	0.576	0.838	↑	Reverse ratio
	Overall component Score	***0.571***	***0.691***	↑	
Funding & Liquidity	ADR	0.618	0.676	↑	
	LCR	0.166	0.367	↑	Reverse ratio
	NSFR	0.123	0.149	↑	Reverse ratio
	Overall component Score	***0.306***	***0.399***	↑	

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