State Bank
of
Pakistan

FINANCIAL STABILITY REVIEW-2017

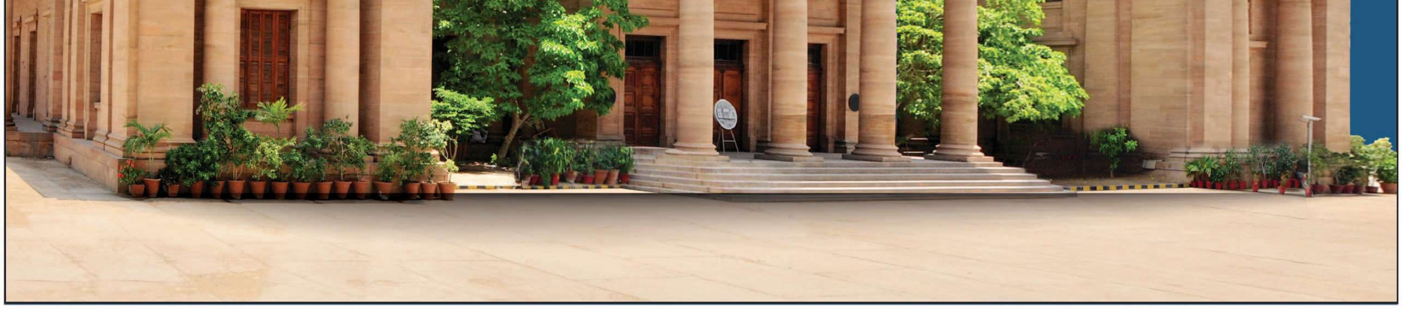


Table of Contents

Governor's Message

The global economic environment has been largely supportive in CY17 despite emerging challenges such as firming up of inflation and the policy normalization in some of the advanced economies. The past year has witnessed synchronized real growth in the global economy. While this is beneficial for international trade, risks pertaining to geopolitical tensions and protectionist tendencies in advanced economies continue to be major concerns.

On the domestic front, FY17 is characterized by a decade-high growth in GDP and the momentum has continued in FY18. Nevertheless, macroeconomic vulnerabilities such as stressed balance of payments position coupled with fiscal concerns remain critical going forward.

In this backdrop, the country's financial sector has remained resilient to emerging macrofinancial challenges and maintained its performance trajectory. Particularly, the broad based growth in private sector advances by the banking sector coupled with improved asset quality remain the key highlights. Nevertheless, SBP, cognizant of some emerging low to moderate level risks, is monitoring all developments closely and is taking appropriate measures where necessary.

The current edition of Financial Stability Review undertakes a detailed qualitative and quantitative assessment of the emerging risks to the financial sector and gauges the resilience of the country's banking sector to the hypothetical, but plausible, adverse scenarios. We hope that the stakeholders will find this report informative and useful. We welcome any suggestions and feedback.

Tariq Bajwa

Acknowledgements

The Financial Stability Review (FSR) team is highly indebted to Mr. Tariq Bajwa, Governor, State Bank of Pakistan (SBP) for his encouragement and guidance. The team is also grateful to members of Publications Review Committee (PRC) of the SBP Board of Directors and PRC of the Management for providing invaluable feedback on the report. We are also thankful to Mr. Jameel Ahmad, Deputy Governor (Banking and FMRM) and Dr. Inayat Hussain, Executive Director, Banking Supervision Group, for their continuous support and supervision in the preparation of this report.

The team would also like to thank various departments of SBP, especially Banking Policy and Regulations Department (BPRD), Offsite Supervision & Enforcement Department (OSED), Exchange Policy Department (EPD), Agricultural Credit & Microfinance Department (AC&MFD), Domestic Markets and Monetary Management Department (DMMD), Islamic Banking Department (IBD), Monetary Policy Department (MPD), Payment Systems Department (PSD) and Statistics and Data Warehouse Department (S&DWHD) for their support.

We are also grateful to the Securities & Exchange Commission of Pakistan (SECP), National Clearing Company of Pakistan (NCCPL), Pakistan Stock Exchange (PSX) and Pakistan Mercantile Exchange (PMEX) for providing relevant data, technical information and comments on the relevant chapters/sections of the report.

Publication Review Committee of the SBP Board of Directors

Mr. Ardeshir Khursheed Marker

Mr. Mohammad Riaz

Publication Review Committee of the Management

Dr. Saeed Ahmed (Chairman)

Dr. Inayat Hussain

Syed Irfan Ali

Syed Samar Husnain

Mr. Muhammad Ali Malik

Mr. Ali Choudhary

Mr. Azizullah Khattak

Mr. Muhammad Javaid Ismail

FSR Team

Team Leaders

Muhammad Javaid Ismail

Dr. Asif Ali

Team Members

Dr. Jameel Ahmed

Muhammad Sadiq Ansari

Muhammad Inaam Ashraf

Aqeel Ahmed

Rabia Zulfiqar

Faraz Karim

Waseem Abbas

Saba Abid

Mannan Zaheer

Anum Naeem

Muhammad Abdul Rehman Ansari

Hassaan Zafar

Mariam Abbas (Data Assistance)

Feedback and Queries: fsr@sbp.org.pk

Data Convention and Coverage

The FSR 2017 uses CY for the Calendar Year, FY for the Fiscal Year (starting in July of a CY and ending in June of the following CY), Q1-Q4 for the four quarters of the corresponding CY or FY and H1-H2 for the two halves of a CY or FY, as the case may be.

The review is, generally, based on the data reported in unaudited accounts or audited accounts (where available) of financial institutions for different components as follows:

- Banks (conventional or Islamic), Development Finance Institutions (DFIs), Microfinance Banks (MFBs) and Payment System are based on un-audited financial statements reported to SBP through Quarterly Reporting Chart of Accounts (RCOA) and various other returns.
- Data on Non-Bank Financial Institutions (NBFIs) is based on monthly reports submitted to SECP through Specialized Companies Return System (SCRS).
- Insurance is based on audited and un-audited financial statements for the year ending December 31, 2017.
- The data related to corporate sector has been taken from the financial statements of companies, SECP, SBP and PSX.

Overview

The pace of global output growth—aided by rebound in trade and investment—has remained above expectations as the world economy has delivered 3.8 percent growth in 2017 up from 3.2 percent in 2016.[1] The upturn remains synchronized with, approximately, three-quarters of the global economy sharing upswings in the economic cycle. With the rise in aggregate demand, inflation started inching-up in Advanced Economies (AEs) especially in the US, which compelled the Federal Reserve to initiate policy normalization. Despite gradual tightening, however, global financial conditions have remained supportive.

Short-term risks to global financial stability—after receding in 2017—have risen recently due to equity market volatility and trade disputes. Medium-term vulnerabilities remain at an elevated level arising from expected tightening of financial conditions, rising leverage, policy uncertainty, geopolitical tensions, cyber security concerns and extreme weather conditions **(see Chapter 1)**.[2]

The domestic economy has managed a decade-high growth of 5.37 percent during FY17, despite rising external sector vulnerabilities and fiscal slippages. The momentum in economic expansion has continued in FY18 with estimated growth of 5.79 percent. Until April 2018, LSM has expanded by 5.76 percent, reflecting broad based expansion across various sectors of the economy. Headline inflation has been subdued, though core inflation has remained at an elevated level **(see Chapter 1).**

The rising macroeconomic vulnerabilities have translated into short-lived **financial markets** volatility. FX market, in particular, has experienced continuous pressures resulting in exchange rate depreciation in the second half of CY17 and the first half of CY18. The equity market, after touching an historic high, has seen notable correction due to political uncertainty, unmet expectations of higher inflows from Pakistan's inclusion in MSCI's emerging market category, and rising yields in AEs **(see Chapter 2)**.

Table 1

Assets Composition of the Financial Sector

	CY13	CY14	CY15	CY16	CY17
Assets (PKR Billion)	14,661.0	16,888.6	19,448.4	21,979.9	24,800.5
Growth rate (Percent)	10.1	15.2	15.2	13.0	12.8
	Percent of Total Assets				
MFBs	0.4	0.4	0.5	0.8	1.0
DFIs	1.0	1.0	1.0	0.9	0.9
NBFIs	5.2	5.1	4.9	6.0	4.6
Insurance	4.8	5.2	5.1	5.3	5.3
CDNS	16.7	16.6	15.8	15.0	14.2
Banks	71.9	71.7	72.7	72.0	74.0
	Assets as Percent of GDP (Average)				
MFBs	0.2	0.3	0.3	0.6	0.7
DFIs	0.6	0.7	0.7	0.7	0.7
NBFIs	3.2	3.3	3.4	4.3	3.5
Insurance	3.0	3.3	3.5	3.8	4.0
CDNS	10.3	10.6	10.9	10.8	10.6
Banks	44.3	46.0	50.0	51.9	55.3
Overall assets	61.7	64.2	68.8	72.0	74.7

Source: Unaudited financial statements of banks, MFBs, NBFIs and insurance companies. SECP & SBP

In the wake of challenging operating environment, Financial Institutions have performed reasonably well; however, some low to moderate levels risks have emerged. **Financial sector's** consolidated assets have increased by 12.8 percent during CY17 (5-year average growth: 11.7 percent) resulting in greater financial depth. The financial assets to GDP

[1] IMF. (2018). World Economic Outlook. *Washington, April.*

[2] IMF. (2018). Global Financial Stability Report. *Washington, April*

ratio has been recorded at 74.7 percent in CY17 **(Table 1).**

The **banking sector**, a key player in financial intermediation, has performed fairly well. Its assets base has expanded by 15.86 percent on the back of broad-based 18.43 percent growth in advances. The key thrust in demand has come from textile, sugar, cement, and agribusiness sectors. Besides, the banking sector has remained sound and stable in CY17; Non-Performing Loans ratio (NPLR) at 8.4 percent has touched decade low level and Capital Adequacy Ratio (CAR) at 15.8 percent is well above the minimum regulatory requirement of 11.275 percent.[3] Nevertheless, declining profitability and deceleration in deposit growth are the key concerns, at the moment **(see Chapter 3.1)**.

In hypothetical but plausible domestic and global stress scenarios spread over the next 5-year horizon, the banking sector's solvency benchmark, however, falls below the local standards after showing resilience for three years. In case of severe and protracted downturn induced by the global macroeconomic conditions, the system even falls below the minimum global capital adequacy benchmark at the end of the simulation period. **(See Chapter 7)**.

The distinct business models of **Islamic Banking** and **Microfinance Banks (MFBs)** are gaining maturity with improved performance, expansion in advances, deposits and customer base and growing share in assets of the financial sector. Islamic banks have witnessed improvement in profitability, solvency, and asset quality; however, they continue to face liquidity management challenges due to dearth of Shariah compliant investment instruments **(see Chapter 3.2)**. While the performance of MFBs continues on an upward trajectory, improving financial literacy and enhancing outreach remain the key focus areas for realizing their actual potential and furthering the objective of financial inclusion **(see Chapter 3.3)**.

The challenging macrofinancial conditions, particularly in H2CY17, have influenced the performance of the **Non-Bank Financial Sector** as well.

Mutual Funds, dominating the **Non-Bank Financial Institutions (NBFIs),** in the wake of volatile prices and risk aversive sentiments, have shifted their portfolios away from equity towards shorter duration interest-based government securities. This not only provides them with risk free return but also a hedge against interest rate risk in the increasing interest rate environment. Nevertheless, the relative dominance of equity funds may still expose them to market volatility. The NBFIs have been growing from market-based structures while performance of the traditional intermediaries like modarabas, IFCs and leasing companies have been lagging behind due to structural inefficiencies and insufficient availability of low cost funds. However, increased focus on emerging segments like Microfinance institutions and availability of supporting framework is expected to facilitate the national commitment of promoting financial inclusion, in addition to enhancing market share of this segment in the NBFIs assets. **(see Chapter 4.2)**.

The **Development Finance Institutions (DFIs)** are reliant on short-term funding from financial institutions to support their growth. It is restraining them to graduate to a level where they can play the function of counter cyclical project financiers. The

[3] The current international benchmark for CAR is 9.875 percent https://www.bis.org/bcbs/basel3/basel3_phase_in_arrangements.pdf

limited intermediation role being played by DFIs have hindered their growth and adversely impacted the performance during the year. Making DFIs assume their true economic role is a key policy concern **(see Chapter 4.1)**.

The asset base of the **Insurance** industry has been estimated to expand by 12.09 percent in CY17 on the back of healthy increase in gross premiums, due to accelerated economic activity, easing of structural constraints, aggressive marketing, increasing acceptance of Takaful products, wider use of technology, etc. The industry, however, is exposed to concentration risk (due to the dominance of a few insurers) and market risk as adverse movement in interest rates or equity prices may affect its investment income. **(see Chapter 4.3)**.

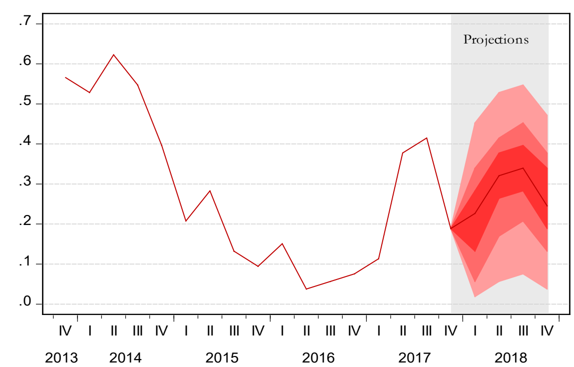
Exchange Companies (ECs)—with steady growth and improving profits during CY17—pose limited systemic risk to financial system. However, since few ECs are subsidiaries of banks, the upstream risk, though limited, still exists **(see Chapter 4.4)**.

The **Financial Market Infrastructure (FMI)** has remained resilient and operated smoothly and efficiently. Pakistan Real-time Interbank Settlement Mechanism (PRISM), a key FMI, has facilitated growing volume and value of wholesale settlement transactions. The concentration of payments via PRISM remains low. Nevertheless, increasing adoption of e-banking channels poses cyber security risks, particularly for retail transactions. Further, owing to increasing interconnectedness among the FMIs, the contagion risk, within the system, is growing. SBP—cognizant of the emerging cyber challenges—is putting in place adequate safeguards to protect the integrity of the country's FMIs **(see Chapter 6)**.

The performance of the non-financial **corporate sector**—in parallel to the financial sector—has remained upbeat. The estimates suggest broad based steady growth in assets and decent profitability in CY17. While large listed firms are self-sufficient in liquidity with low debt burdens and strong repayment capacity, small listed firms are vulnerable in this perspective. Moreover, the textile sector, being one of the largest borrowers of the banking sector, has relatively high leverage and low repayment capacity **(see Chapter 5)**.

Figure 1(a)
Financial Vulnerability has increased in CY17 as compared to CY16

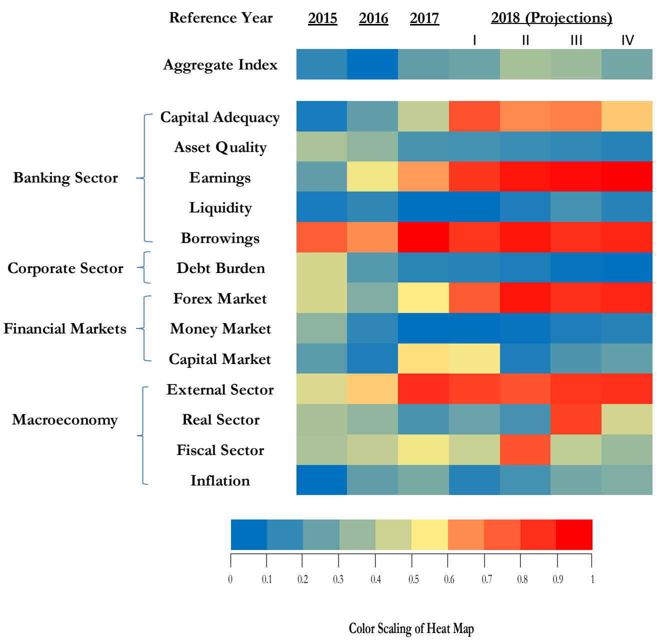
Financial Sector Vulnerability Index (FSVI)
(Probability of Risk)



Source: Staff Estimates

The consolidated picture of financial stability reveals bottoming out of vulnerability index in CY17 (**Figure 1a**). The tightening of macrofinancial conditions is driven by fragilities in the external account, fiscal slippages, increased inter-bank borrowings, and reduced banking sector's earnings (**Figure 1b).**

Figure 1(b)
Earnings, borrowings and external sector vulnerabilities dented the overall financial stability



Source: SBP

The Outlook …

In the short-term, risks to domestic financial stability may elevate further if external account challenges remain, fiscal imbalances persist, and savings in the economy (especially, deposit growth) stay low. Equity market volatility, within reasonable bounds, is essential to restore investor confidence. The projected path of financial vulnerability index does not show any major deviations in CY18. Nevertheless, the uncertainties surrounding the projections reflect rising odds of upside risk.

The first-hand information received from the market participants in January 2018 through SBP Systemic Risk Survey also suggests that political uncertainties and macroeconomic vulnerabilities such as deterioration in balance of payments and exchange rate dynamics pose a risk to the stability of financial system in the next six months **(see Box 1).**

Moreover, the Monetary Policy Committee of SBP, acknowledging the emerging near-term risks to the macroeconomic stability, has increased the policy rate by 50bps to 6.50 percent in May 2018. This rise has implications for the banking sector, in the short-term, through mark-to-market revaluation of large investment portfolio. Interest income on earning assets, however, could see a significant rise.

In the medium-term, risks to the financial system may decline in perspective of sustained growth momentum, rising opportunities from CPEC, improving energy availability, and expected increase in exports on the back of improving global demand.

State Bank of Pakistan (SBP), taking a proactive and holistic view of the emerging vulnerabilities, is not only strengthening its own regulatory and supervisory regime but is also collaborating with Securities and Exchange Commission of Pakistan (SECP) to address systemic concerns. **(See Box 2 on Regulatory Developments)**.

Box 1: SBP Systemic Risk Survey-1st Wave (January, 2018)

SBP, in pursuance of its Vision 2020, is committed to strengthen the financial stability regime in the country. This entails timely identification of existing and potential risks and vulnerabilities that may disrupt the smooth functioning of the financial system. Systemic Risk Survey (SRS) is a useful tool, used by central banks around the world, which helps in assessing and quantifying the risk perceptions of various market stakeholders.

In this regard, SBP has launched a biannual SRS to capture the risk perceptions of market participants and gauge their confidence in the stability of the financial system. The first wave of the SRS was conducted in January 2018. The respondents of the survey included risk management executives, financial journalists, academia and other experts. [4]

The survey intends to measure the present and future (over the next six months) risk perceptions of the respondents related to five broad categories including global, macroeconomic, financial markets, institutional and general risks. The overall response rate to the survey stands at 47 percent[5].

Summary Results[6]

1. At aggregate level, macroeconomic vulnerabilities are identified as the greatest risks to the financial stability at present; whereas financial market risks are perceived to be critical for the next six months (**Figure 1A & 1B**).[7]

2. Among all the risks, the highest cited, at present, are deteriorating balance of payments position, volatility in exchange rate, and widening fiscal deficit. For the next six months, respondents believe that political uncertainty, deterioration of balance of payments and uncertainty over exchange rate could potentially undermine financial stability (**Figure 2**).

3. The likelihood of occurrence of a high-risk event in the financial system of Pakistan over the short term is relatively higher than the medium term.

4. A higher proportion of respondents show confidence in the ability of regulators to ensure financial stability (**Figure 3**).

[4] The respondents included executives from commercial banks, insurance companies, exchange companies, MFBs, DFIs, financial journalists, members of academia and SECP officials.
[5] Out of 200 respondents of the first wave of the survey, 93 responded.
[6] The results presented here are based on responses received and do not necessarily reflect SBP's views on risks to the financial system.
[7] High risk is identified by aggregating the percentage of respondents choosing Very High or High as response to a particular risk category or type in the survey questionnaire.

Figure 1A

Perception on Sources of Systemic Risk -Present

(Percent)

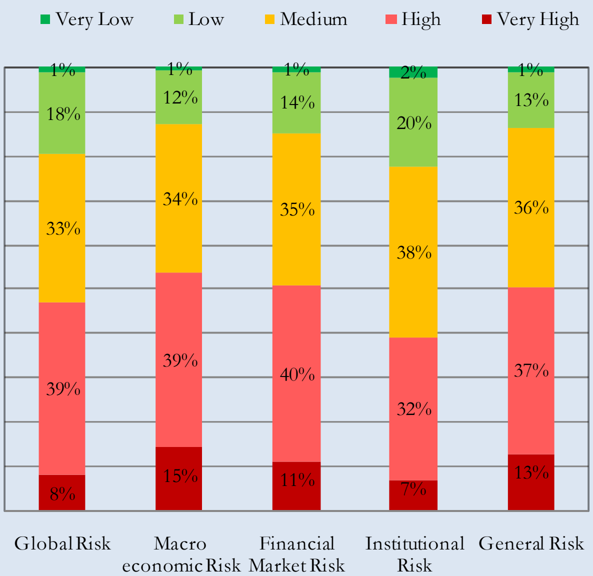


Figure 1B

Perception on Sources of Systemic Risk-Next 6 months

(Percent)

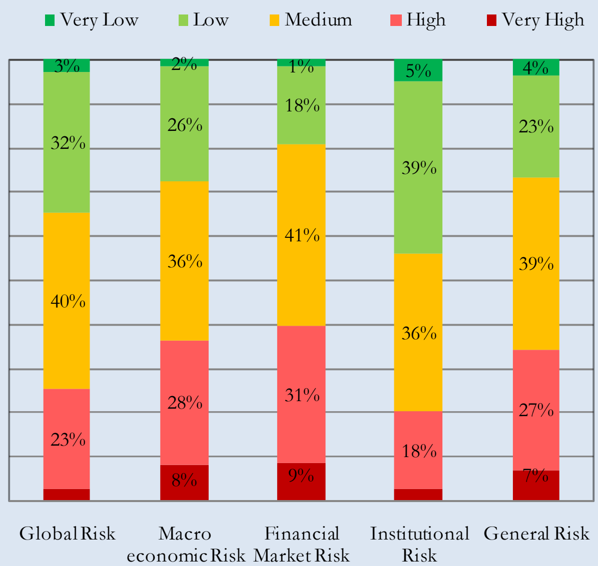


Figure 2

Top 10 Risks Identified

Perccent of Respondents Rating Very High & High

(Percent)

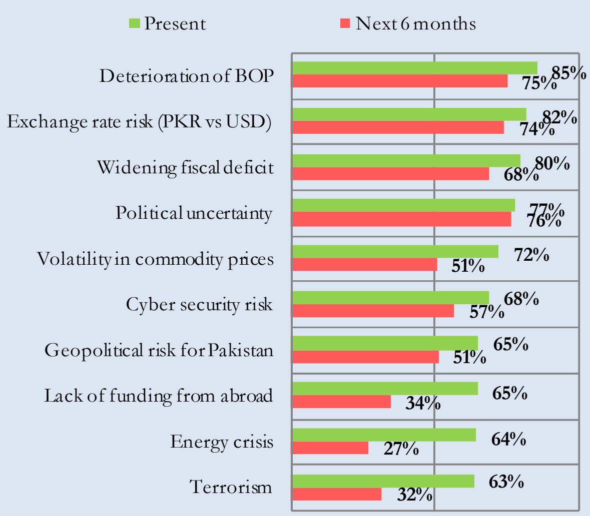
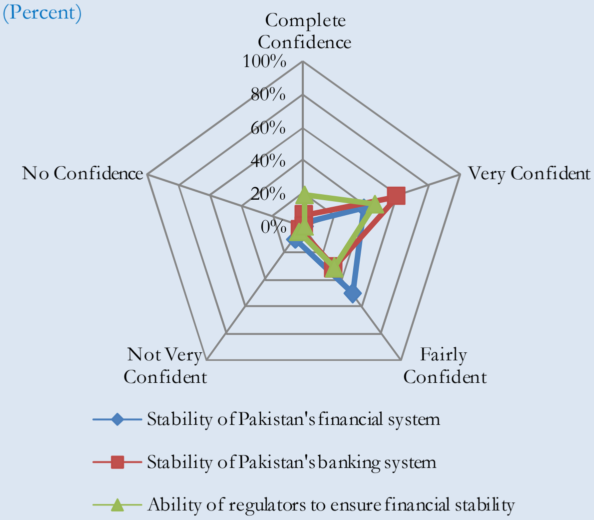


Figure 3

High level of confidence exhibited by survey results

Level of confidence on the stability of financial syatem

(Percent)



Source: SBP Systemic Risk Survey-1st Wave (January, 2018)

Box 2: Regulatory Developments-Perspective of Growth and Stability of the Financial Sector

SBP fosters stability and soundness of the banking system through its dynamic policy framework. This framework endeavors to provide a conducive environment for the banking sector to grow while protecting rights of financial consumers under an effective oversight function.

Recently—going beyond the banking sector—SBP has further embraced a holistic monitoring perspective of the financial sector under its **macro-prudential** regime. This is very much aligned with the SBP Vision 2020, which envisages designing and implementing a formal Financial Stability framework in the country. To this end, following institutional arrangements have been formulated to enhance regulatory cooperation and deliberations in the area of financial stability:

- Financial Stability Executive Committee (FSEC), which brings together Executives of key areas of SBP, has been established for in-house assessment of emerging risks under the Chairmanship of Governor-SBP.
- A Council of Regulators (CoR) has been established between SBP and SECP to provide a forum for deliberations on emerging issues having cross-market and stability implications, and come up with coordinated policy response.
- A Joint Task Force (JTF) of SECP and SBP officials is working on the financial conglomeration risk. The JTF reports its progress through the CoR.

A proposal for the establishment of a National Financial Stability Council (NFSC) comprising SBP, SECP and Ministry of Finance is presently under consideration for managing systemic level issues. Internationally, SBP is active in policy forums and contributes to International Consultative Documents/ surveys to provide required responses. The SBP continues to actively participate in Correspondent Banking Coordination Group (CBCG) formed by the Financial Stability Board (FSB) to assess and address the decline in correspondent banking.

The SBP has also participated in the Remittance Task Force (RTF) formed by the CBCG to coordinate work on identifying and addressing issues relating to remittance providers' access to banking services. SBP has participated in various international surveys including the World Bank's Survey on "Ease of Doing Business" in Pakistan, IMF's "Macro Prudential Policy Survey" and FSI Survey on "Organizational Arrangements for Financial Sector Regulation and Supervision" and Basel-III proportionality survey. In addition, SBP regularly provides input on various consultative documents issued by the BIS and FSB. SBP also voices its opinion on regulatory reform through its membership of various forums such as SEANZA (South East Asia, New Zealand, Australia Forum), Islamic Financial Services Board (IFSB), the FSB Regional Consultative Group for Asia and SAARC Finance.

SBP has been endeavoring to align its supervisory practices to international benchmarks. In order to assess further scope for improvement in its supervisory regime and establish a strategic baseline, SBP completed a self-assessment of **Basel Core Principles of Effective Banking Supervision**. Following the results of the assessment, SBP has taken necessary measures to bridge gaps from the setout standards to ensure continued relevance and effectiveness of its supervisory systems. To align its supervisory regime with the international standards, the SBP has taken following measures:

- SBP has developed a framework for designation and supervision of Domestic Systemically Important Banks (D-SIBs)[8]. The framework specifies the methodology for identification and designation of D-SIBs, enhanced regulatory and supervisory regime and implementation guidelines. The designated D-SIBs shall be required to meet both higher loss absorbency and enhanced supervisory requirements.

[8] BPRD Circular No. 04 of 2018 dated April 13, 2018

- Recovery plans for D-SIBs are being crystallized to ensure appropriate responses in crises to ensure seamless provision of banking services for the economy. Further, codification of procedures and processes for the banking industry to deal with crises are also under development.
- In view of the systemic significance of payment systems, SBP has introduced Payment Systems' Designation framework for enhanced supervision of Systemically Important Payment Systems (SIPs). The framework will ensure efficient management of various risks associated with the operations of payment systems and support compliance to global standards of Payment Systems to ensure safe and efficient operation of financial markets.
- Credit Risk Assessment Framework has also been strengthened with regular macro-level monitoring of credit concentration (Large Borrowers) across the banking sector.
- To strengthen proactive identification and early mitigation of systemic risks, the stress-testing framework for assessing resilience of institutions to various shocks is being enhanced to include modern econometric techniques. Moreover, under the ambit of macro-prudential analysis, work is underway to identify the Early Warning Indicators (EWIs) of systemic risk.
- To strengthen Consolidated Supervision (CS) framework, SBP has enhanced its engagement with the SECP on the financial conglomeration risk. SBP is also engaged with IMF's through a Technical Assistance (TA) to improve the CS regime and enhance supervisory capacities in this important area.
- The deposit insurance scheme is widely acknowledged as one of the key components of financial stability regime, which protects financially unsophisticated depositors from the loss of their deposits, create a formal protection mechanism and reduce the potential fiscal burden on the government. In line with the SBP Vision 2020, Deposit Protection Corporation (DPC) established under the Deposit Protection Corporation Act started its operation effective from 1st June, 2018, consequent upon appointment of its Managing Director and constitution of Board of Directors.

The Macro-prudential systems cannot function without proper backing of the legal powers and related safeguards. This aspect is also imperative for institution-level effectiveness of the **Micro-Prudential Supervision (MPS)**. SBP's micro-surveillance systems have been further strengthened under the Legal amendment in Foreign Exchange Regulations Act (FERA), 1947. These amendments has enhanced SBP's enforcement powers for supervision of Exchange Companies involved in FX sale and remittance business.

In addition, SBP conducts institution specific Off-site reviews on a periodic basis based on CAELS. To promote effective prudential conduct, SBP has started conducting annual prudential meetings with the Board of Directors, with focus on key risk areas. Apart from off-site activities, the SBP conducts regular on-site examinations and thematic reviews on high-risk areas. Credit risk management, Corporate Governance, AML/CFT and controls remained the key focus of these examinations and reviews. Further, technology risk has become the major focus area.

To further strengthen the control functions in the SBP regulated entities, SBP is pursuing a number of initiatives. It has developed a framework for Internal Audit, Risk Management and Compliance. This framework would form part of Control Assessments in Risk Based Supervision Framework-presently in development phase-and would support its effective rollout. With extensive use of technology platforms for delivery of banking services, SBP is finalizing the draft **Framework for Information System's Inspection and Branchless Banking.** In addition, a Framework for engagement of Bank's External / Internal Auditors to support supervisory assignments has been drafted.

Since effective regulatory compliance is a key determinant for financial institutions' performance and stability, SBP has developed guidelines[9] on **Compliance Risk Management** to provide the banking industry a uniform and systematic approach for identification, assessment and management of compliance risk. To enable the banks to minimize risks from excessive reliance on third party service providers, revised **Framework for Risk Management in Outsourcing Arrangements by Financial Institutions**[10] has been issued. Risks associated with the heightened use of technology has been addressed through issuance of a baseline **Enterprise Technology Governance & Risk Management Framework for Financial Institutions**[11]. To prevent use of banking channel for money laundering/ terrorist financing, SBP is continuously updating its **Anti-Money Laundering (AML)/Combating Financing of Terrorism (CFT)** Regulations to align with the Financial Action Task Force (FATF) recommendations (**See Box-3.1.3**).

While ensuring effective regulation and supervision of the regulated entities, SBP is also mindful of its developmental role. Accordingly, it is also playing a facilitative role in encouraging banking channels for promotion of **Emerging Areas of Finance** including renewable energy, resource efficiency and environmental protection. Under this initiative, SBP has issued **Green Banking Guidelines**[12] designed to induce modifications and improvements in risk management, business facilitation and own impact reduction.

SBP is in continuous pursuit of building customer confidence in the Islamic banking system through regulatory measures that deter risks from Shariah non-compliance. To this end, SBP has issued revised **Shariah Governance Framework**[13] with the objective to strengthen the overall Shariah compliance environment and explicitly define the roles and responsibilities of various organs of IBIs including the Board of Directors (BOD), Executive Management (EM), Shariah Board (SB), Shariah Compliance Department (SCD), Product Development (PD), internal auditors and external auditors towards Shariah compliance. To facilitate conventional banks desirous of converting their operations, a three-stage process for **Conversion of Conventional bank into an Islamic Bank**[14] has been issued. In its efforts to encourage capital formation in eligible sectors through Shariah-compliant financing, SBP has offered the Islamic counterpart of the LTFF i.e. the **Islamic Long Term Financing Facility (ILTFF)** for exporters[15].

To facilitate flow of credit to priority areas, sector-specific measures have been taken. To promote **microfinance** the following initiatives have been undertaken:

- In order to address funding constraints of the microfinance sector, SBP has set up a Line of Credit (LoC) with the funding support of the Government of Pakistan under World Bank's Financial Inclusion and Infrastructure Project.[16] This LoC will provide funds to Microfinance Banks (MFBs) and Non-Bank Microfinance Companies (NBMFCs) for onward lending to microfinance borrowers.
- MFBs that have graduated from pilot microenterprise lending programs to a commercial scale, have been allowed enhancement in the maximum loans size for Microenterprises from PKR 0.5 million to PKR 1 million. Exposure limit for borrowers who are able to avail both general and microenterprise loans have also been increased[17].
- Under a pilot project, some of the MFBs have been allowed to evaluate the feasibility for digital credit in the country by offering small ticket size loans for short span.

Further to government's budgetary initiatives for promotion of agriculture sector, SBP has assigned indicative agricultural credit disbursement targets to banks, microfinance banks and Microfinance

[9] BPRD Circular No. 07 dated Aug 09, 2017
[10] BPRD Circular No. 06 dated June 20, 2017
[11] BPRD Circular No. 05 of 2017 dated May 30, 2017
[12] IH&SMEFD Circular No. 08 dated October 09, 2017
[13] IBD Circular No. 01 dated June 07, 2018
[14] IBD Circular No. 01 of 2017 dated July 07, 2017
[15] IH&SMEFD Circular No. 01 of 2018 dated February 14, 2018
[16] AC&MFD Circular No. 01 of 2018 dated June 14, 2018
[17] AC&MFD Circular No. 03 dated December 22, 2017

Institutions/ Rural Support Programs (MFIs/RSPs). In addition, SBP has facilitated two pilot projects to test the feasibility of Warehouse Receipt Financing (WHRF) to develop physical trade and marketing system for commodities. Based on the results, SECP in consultation with SBP and other stakeholders has developed Collateral Management Companies (Establishment & Operations) Regulations for promoting WHRF system in Pakistan. SBP has further issued draft Framework for WHRF.

To facilitate the flow of credit to one of the country's priority sectors i.e. **SME sector**, SBP has introduced following measures:

- Prudential Regulations for SME Financing have been revised[18] to provide an enabling regulatory environment through relaxations in areas including requirements of obtaining insurance, Borrower's Basic Fact Sheet and maintenance of reserve against secured portfolio. Further, standardized loan application forms have been introduced along with prescribed reduction in turnaround time required for credit approval process.
- In consideration of the fact that majority of the SMEs lack expertise to professionally manage financial, technological, marketing and human resource aspects of their businesses ,banks have been advised to adopt Non-Financial Advisory Services (NFAS)[19] in their SME banking to better serve their existing and potential SME clients .
- In order to enhance the access of credit to Small and Medium Enterprises (SMEs), Refinance Scheme for Working Capital Financing of Small and Low-End Medium Enterprises[20] has been initially introduced for 8 selected economic sectors. Similarly, in an effort to improve financing access for Women Entrepreneurs in Underserved Areas, Refinance and Credit Guarantee Scheme has been launched. [21]
- The regulatory retail portfolio limit under Basel Capital Framework has been enhanced from PKR 75 million to PKR 125 million[22].
- SBP is also providing support to MoF in timely operationalization of the e-Registry, which will facilitate unincorporated entities especially the SMEs and agri borrowers to access formal credit against their movable assets.

Prudential Regulations (PRs) for **Housing Finance** have been revised[23] to provide a conducive regulatory environment for the Housing finance sector. Borrowers have been allowed to avail additional housing finance after the completion of two years instead of previous three years from the last date of disbursement. Moreover, the time to avail Balance Transfer Facility (BTF) has also been reduced to eighteen months from three years.

In the area of foreign exchange, **export financing** has been facilitated under a comprehensive policy[24] on grant of Export Loans under FE-25 scheme and instructions for settlement of outstanding (overdue) loans through interbank market.

Relief measures have also been adopted to facilitate **foreign borrowing and investments**. Resident insurance companies have been allowed[25] to issue US Dollar denominated insurance policies on notional basis to meet the condition of foreign lenders. Foreign investors have been allowed to meet margin requirements[26] (of ready cash transaction in PSX) from their SCRA account and to pledge securities in favor of NCCPL (in case of insufficient funds in the account) until settlement of transaction.

In order to enhance the **financial education and awareness** among the low income segment population,

[18] IH&SMEFD Circular No. 09 dated December 22, 2017
[19] IH&SMEFD Circular No. 10 of 2017 dated December 22, 2017
[20] IH&SMEFD Circular No. 11 dated December 22, 2017
[21] IH&SMEFD Circular No. 05 dated August 25, 2017
[22] BPRD Circular No. 08 dated Dec 22, 2017
[23] IH&SMEFD circular No 03 dated April 18, 2017
[24] FE Circular No. 05 dated May 10, 2017
[25] FE Circular No. 10 dated November 01, 2017
[26] FE Circular No. 03 dated March 24, 2017

SBP has launched "National Financial Literacy Program (NFLP)" to spread basic financial education to general public. As of December 2017, participating banks have conducted around 1300 programs at different geographies and imparted basic financial education to around 32,500 adults.

SBP has continued to deliver on an effective "Fair Treatment of Consumers" and an effective dispute resolution regime for **Financial Consumer Protection**. To sensitize consumers about their rights, comprehensive educational material, which covers customer rights /responsibilities and protection of payment Cards has been published. To enforce **market conduct** obligations and ensure omission-free resolution of consumer grievances, SBP has established a dedicated helpline for customers.

To mobilize savings towards the formal sector and further diversify **saving products** to cater to the wider financial consumer group new schemes have been launched:

- To facilitate low risk customers and encourage receipt of home remittances through proper accounts instead of the traditional cash over the counter transactions, SBP in collaboration with Pakistan Remittance Initiative (PRI) has launched the Asaan Remittance Account.[27]
- The Asaan Mobile Account (AMA) Scheme has been approved by the NFIS Council. Currently, governance, business and operational modalities are being finalized
- Home Remittance Account (HRA) has also been launched to receive home remittances through M-Wallet.

Further, because of recommendations made by SBP to the NFIS Council, FBR has approved adjustment of withholding tax on cash withdrawals by the BB agents to the extent of disbursements made to their clients.

To facilitate flow of funds within **Financial Market Infrastructure**, participation in payment networks has been expanded by accepting new participants. Accordingly, CDNS has been made a member of NIFT[28] to facilitate transferring profits from saving schemes directly into bank accounts of public while NCCPL has been allowed to settle net position of capital market transactions through PRISM[29]. In order to strengthen trade channels and remittance flows in CNY, a China-based bank has been allowed to establish a local CNY settlement and clearing setup in Pakistan.

Likewise, regulations that ensure transparency and alignments with international requirements have been issued. **Electronic Fund Transfer (EFT) Regulations**[30] have been issued to set forth the minimum information of originator and beneficiary to be required in a payment message and to address beneficiary responsibilities, Preauthorized Transfers, Compensation Policy for unauthorized / delayed EFT, Disclosure requirements, Dispute Resolution process etc. **PRISM Operating Rules (PORs)**[31] have been revised to cater to the evolving markets and **Guidelines for Clearing Operations**[32] have been issued to standardize the payment instruments' collection and swift receipt of funds by banking customers.

To improve efficiency of **Government Debt Market** operations and align with international standards, SBP has accommodated provision for conduct of special OMOs[33] for participation by Primary Dealers only. To accommodate NBFC's demand for investment in government paper, ceiling for participation in auction of government securities, limit of Non-Competitive Bidders has been enhanced from PKR 250 million to 500 million[34]. Further to GoP's decision to issue Floating Rate PIBs, SBP has issued guidelines and operational details of participation[35].

[27] BPRD Circular Letter No. 32 of 2017 dated December 06, 2017
[28] PSD Circular No. 03 of 2017 dated September 21, 2017
[29] PSD Circular No. 01 dated January 15, 2018
[30] PSD Circular No. 03 of 2018 dated May 09, 2018
[31] PSD Circular No. 02 of 2018 dated March 06, 2018
[32] PSD Circular No. 01 of 2017 dated Jan 11, 2017
[33] DMMD Circular No. 12 of 2017 dated July 03, 2017
[34] DMMD Circular No. 06 of 2018 dated March 15, 2018
[35] DMMD Circular No. 09 of 2018 dated May 07, 2018

SBP's evolving regulations adequately controls for emerging risks and is expected to augment the ongoing financing flows to private sector, specially the priority areas, without comprising the stability and soundness of the financial system.

1 Global and Domestic Macrofinancial Environment

The global economy has experienced a synchronized real growth. Besides the U.S, upside growth momentum has been witnessed in Europe and Asia—driven by rebound in trade and investment against the backdrop of supportive financial conditions. Short-term risks to financial stability—after receding in CY17—have slightly risen recently. Medium-term vulnerabilities—arising from tightening financial conditions, rising leverage, policy uncertainly, geopolitical tensions, cybersecurity breaches and extreme weather conditions—remain a concern. Domestically, the economic growth prospects remain challenging due to twin deficits. Moreover, rebound in global energy prices and strengthening of domestic demand conditions may give rise to price pressures. In the medium term, however, prospects are upbeat, due to opportunities arising from CPEC and positive developments on some structural issues like energy shortages, law and order conditions, etc. Encouragingly, the banking sector remains robust, profitable and resilient and continues to support the real growth with an uptick in advances to private sector.

1.1 Global Developments

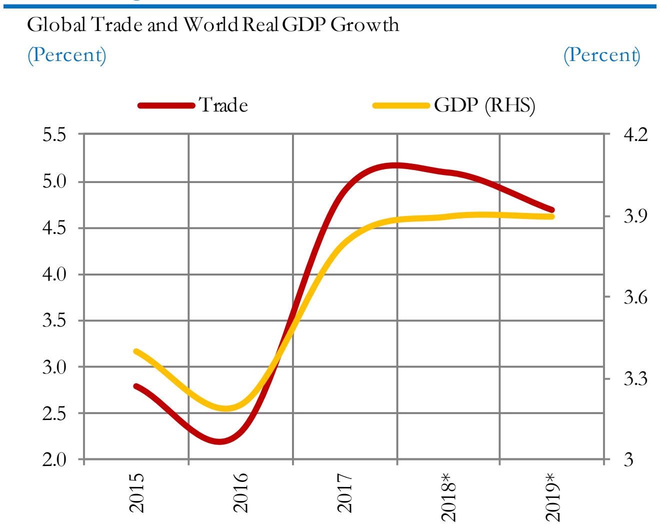
Synchronized firming up of economic activity…

Global economic growth reversed its course to recovery mid-way through 2016 and gained further momentum in the year 2017—aided by rebound in investment and trade against the backdrop of conducive financial conditions[36] (**Figure 1.1**). For the first time since global financial crisis (GFC), the upturn remains synchronized as approximately three-quarters of the global economy is sharing upswings in economic cycle.[37]

The world output has upsized by 3.8 percent in 2017 against the growth of 3.2 percent in 2016 (**Table 1.1**). The economic activity in advanced economies (AEs) surged by 2.3 percent in 2017 compared with a 1.7 percent growth a year earlier. The AEs are expected to gain further momentum in 2018.

Among AEs, euro area and the U.S. have delivered strongest growth of 2.3 percent followed by 1.8 percent in U.K and 1.7 percent in Japan. The elevated momentum in AEs reflects improving private investment, firmer consumer spending and rising external demand as a result of policy induced monetary and fiscal stimuli.

Figure 1.1
Rebounding International Trade and GDP



*Projections
Source: World Economic Outlook, IMF, April 2018

In line with AEs upbeat economic performance and prospects, the emerging markets and developing economies (EMDEs) have grown by 4.8 percent during 2017 and could register a slightly better performance in 2018 (4.9 percent). Robust growth

[36] Financial conditions generally refer to the ease of obtaining financing. Conducive financial conditions imply narrower credit spreads, higher asset prices, lower volatility, increasing risk appetite, exchange rate appreciation and favorable commodity price movements.

[37] IMF (2018). World Economic Outlook Update. *Washington, January.*

in Asia - notably, China, India, Pakistan – and others e.g., Turkey, contributed towards overall upbeat activity in EMDEs. Improved external environment such as recovery in AEs and benign global financial conditions has reinforced economic momentum in EMDEs, supported also by sustained robust domestic demand.

Table 1.1

Global Economy: Real GDP Growth

	2016	2017	2018*	2019*
	Percent			
World	3.2	3.8	3.9	3.9
Advanced Economies	1.7	2.3	2.5	2.2
EMDEs	4.4	4.8	4.9	5.1
EMDEs - Asia	6.5	6.5	6.5	6.6
MENAP	4.9	2.6	3.4	3.7
USA	1.5	2.3	2.9	2.7
Euro Area	1.8	2.3	2.4	2.0
U.K	1.9	1.8	1.6	1.5
Japan	0.9	1.7	1.2	0.9
China	6.7	6.9	6.6	6.4
Turkey	3.2	7.0	4.4	4.0
Russia	-0.2	1.5	1.7	1.5
Saudi Arabia	1.7	-0.7	1.7	1.9
Pakistan	4.5	5.3	5.6	4.7

Source: World Economic Outlook, IMF, April 2018

* projections

Despite strong growth revival, a key global policy challenge is to boost potential output in the medium-term, as growth in several countries remain weak while inflationary pressures in most of the AEs have remained subdued.

Amid favorable tax policy changes – US economic outlook further improves…

The US economy has accelerated by 2.3 percent in 2017–up from 1.5 percent in 2016.[38] The notable pick-up in economic activity is attributed to strengthening private investment, robust consumption growth, rising corporate profits, weakening dollar and robust external demand.[39,40]

More recently, the favorable changes in the US tax policy have, inter alia, led IMF to revise growth projection upward by 60 basis points to 2.9 percent for 2018 and the benefits resulting from corporate income tax cuts are likely to continue till 2020.[41]

Besides improved real sector performance, U.S. financial system is becoming more resilient. The stock market achieved historic highs during CY17. The solvency and leverage in the U.S. banking system are at lowest level since 1990, while banks' profitability is gradually improving, backed by rising interest rates. The capital and liquidity requirements in the eight U.S. Global Systemically Important Banks (G-SIBs) are above minimum regulatory requirement, indicating reduced solvency risks. Moreover, largest banks have remained resilient in the stress tests recently conducted by the Federal Reserve.[42]

Global financial conditions remain benign despite Fed's tightening…

Despite gradual tightening of monetary policy by Federal Reserve (Fed), global financial conditions (ease of getting financing) have been supportive.[43] Since December-2016, federal fund rate have increased by 75 basis points but Chicago Fed's National Financial Conditions Index (NFCI) has further trended down[44] (**Figure 1.2).**

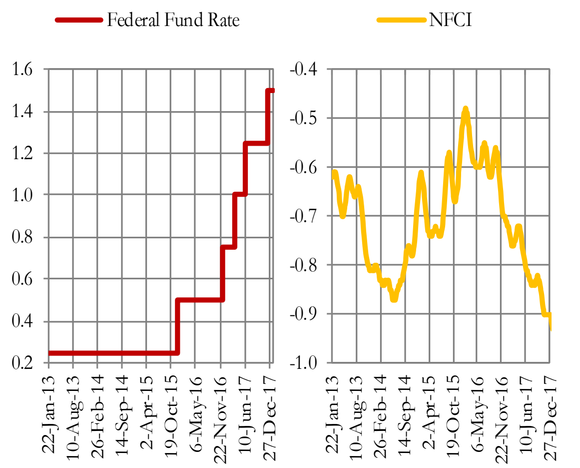
[38] IMF.(2018). World Economic Outlook Update. *Washington, April.*
[39] World Bank. (2018). Global Economic Prospects. *Washington, January.*
[40] U.S. Exports has risen by 5.6 percent in CY17 (Source: Federal Reserve Board)
[41] IMF.(2018). World Economic Outlook Update. *Washington, January.*
[42] Office of Financial Research. (2017). Financial Stability Report.
[43] Bank for International Settlement. (2017). BIS Quarterly Review. *December.*
[44] The Chicago Fed's National Financial Conditions Index (NFCI) provides a comprehensive weekly update on U.S. financial conditions in money markets, debt and equity markets and the traditional and

Figure 1.2

Despite Fed's tightening, Financial Conditions have further eased

Federal Funds Rate and National Financial Conditions Index

(Percent) (Index)



Source: Federal Reserve Bank of St. Louis

There appear to be two reasons behind such phenomenon. First, relatively accommodative stance of other major central banks has further helped ease financial conditions in USA and globally. Second, it might be due to monetary policy communication strategy of the Fed, which provided clear market guidance.[45]

With substantial growth momentum, euro area demonstrates notable progress in the banking sector…

Besides Asia, upside growth surprises have been particularly pronounced in the euro area –- with output growth of 2.3 percent in 2017. Policy stimulus (monetary) and improved global demand is driving the ongoing impressive broad based economic performance across member countries.[46] The fiscal stance was suggested to be neutral by the European Fiscal Board with re-composition of the government expenditures to investment spending.[47] Moreover, unemployment rate has dropped to its lowest level since 2009 while some member countries have increasingly been facing labor shortages.[48]

Despite such positive developments, European banking system remains vulnerable to adverse shocks such as reversal in global risk sentiment. Banks' profitability in several member countries remains under pressure due to prolonged economic weakness and slow progress on addressing structural challenges. Moreover, stock of NPLs, in response to improved economic growth and policy measures by the European authorities, is falling but still remains elevated at some banks.[49]

China continues on a steady economic course…

China's economy is treading on a faster than expected growth trajectory, although growth remains lower than historic standards. The economy expanded by 6.9 percent in 2017 owing to recovery in global trade, robust infrastructure spending, previous policy easing, and resilience in the real estate sector. Moreover, expectations of further slowing down of growth rates in 2018 and 2019, perhaps, reflects both natural economic transition and policy induced tighter financial conditions. The Chinese economy is rebalancing towards consumption and services; credit growth has been restrained while the fiscal stimulus has subsided.

Despite stable growth prospects, risks to China's financial stability remain high.[50] Driven by corporate

"shadow" banking systems. Positive values of the NFCI indicate financial conditions that are tighter than average, while negative values indicate financial conditions that are looser than average.

45 Bank for International Settlement. (2017). BIS Quarterly Review. *December.*

46 World Bank. (2018). Global Economic Prospects. *Washington, January.*

47 Eurpoean Fiscal Board. (2017). Assessment of the Prospective Fiscal Stance Appropriate for Euro Area. *June.*

48 Ayia et al.(IMF-2016) point out that the impact of refugees on Europe's growth in the medium and long-term depends on how well migrants are integrated in the labor market. In short-run, however, a modest increase in GDP is expected due to some fiscal expansion.

49 (i) IMF.(2018). Global Financial Stability Review. *April.*
(ii) ECB. (2017). Financial Stability Review. *November.*

50 Reserve Bank of Australia.(2017). Financial Stability Review. *October.*

borrowings, debt levels have increased notably over the past decade: debt to GDP ratio has shot-up to 253.0 percent in 2016 from 141.0 percent in 2006. Furthermore, China's corporate debt is more than three times higher than in economies with comparable per capita income. Vulnerabilities arise from the fact that many state-owned firms – with large holdings of banks' loans – have excess capacity (lower sales), which undermines firms' ability to service their debt. Moreover, increasingly complex wealth management products offered by banks and enhanced interconnectedness have made China's financial system more complex. These developments point towards credit, liquidity and contagion risks – making financial system vulnerable to adverse shocks.[51]

…however, the outlook for GCC economies is not encouraging …

The footprints of sustained increase in global economic activity are hard to trace in Gulf Cooperation Council (GCC) countries. The GCC economies have experienced 0.2 percent contraction in GDP during 2017—down from 2.1 percent expansion in 2016. It mainly reflects lower oil output resulting from production cuts, which outweighs the benefits of oil price recovery observed during 2017.

As a result of lower oil prices, GCC economies have experienced large fiscal and current account deficits leading to bleak growth prospects (**Table 1.2**). Modest recovery in oil prices during 2017 and fiscal consolidation efforts[52], however, are expected to ease fiscal burden. Medium-term growth prospects remain muted, emphasizing the need for diversified sources for economic growth and private sector development.

Table 1.2
GCC Macroeconomic Performance

	2016	2017	2018*	2019*
	Percent of GDP otherwise mentioned			
GDP (annual change, percent)	2.1	-0.2	1.9	2.6
Current Account Balance	-3.4	2.1	4.3	3.1
Fiscal Balance	-10.8	-5.5	-3.4	-1.9
Average Oil Price (US$ per barrel)	41.2	53.1	62.3	58.2
CPI (year avg - percent)	2.1	0.2	3.6	2.5

Source: Regional Economic Outlook, Middle East and Central Asia, IMF (May-2018); Bloomberg; World Economic Outlook, IMF, April 2018

*Projections

Note: Oil price for 2018 reflect IMF projection.

It is pertinent to highlight that the diplomatic rift between Qatar and other states (Saudi Arabia, UAE, Bahrain, and Egypt) is expected to have some impact on Qatar's economic growth during 2017.[53] The impact on the neighboring countries, however, remains limited.

Energy prices are rising for some time…

The IMF maintains that oil prices declined by 8.1 percent between Feb.-Aug. 2017 despite announcement of extension in production cuts by OPEC and some non-OPEC oil exporters in May-2017.[54] According to the World Bank, sustained lower oil prices primarily reflects stronger than expected production of shale oil, role of OPEC polices, and softening of oil demand due to technological improvements such as electric and energy efficient vehicles.[55]

51 Ibid.
52 Fiscal consolidation efforts are targeting both revenue and expenditures. Saudia Arabia and UAE have recently (Jan-2018) introduced value added tax (VAT) while other GCC economies are expected to introduce it in the year 2018.
53 Qatar's real GDP growth has slightly reduced to 2.1 percent in 2017 from 2.2 percent in 2016.
54 IMF. (2017). World Economic Outlook. *Washington, October.*
55 World Bank. (2018). Global Economic Prospects. *Washington, January.*

However, between Aug.-Dec. 2017, oil prices rebounded by USD 11.0 to USD 61/barrel, reflecting improved global growth, adverse weather conditions in US, extension of agreement between OPEC and the Russia to limit oil production, and geopolitical tensions in the Middle East. Moreover, in 2018, oil prices are expected to rise further with the average future contract trading at USD 77.09/barrel.[56] The medium-term prices for oil futures contracts in May 2018 average around USD 71.10/barrel.

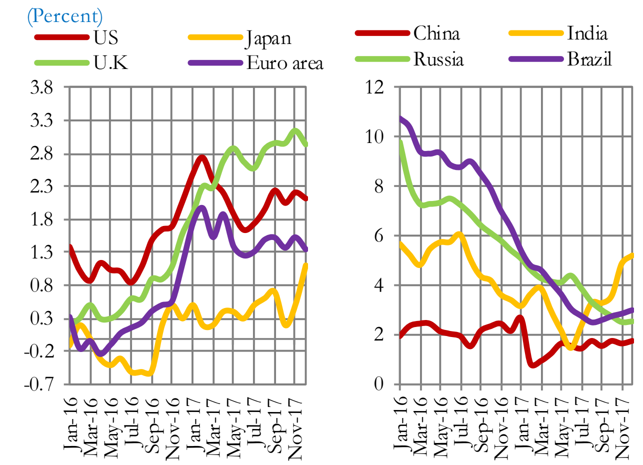
Inflationary pressures remained muted…

In AEs, inflation has remained at 1.7 percent during 2017 – up from 0.8 percent in 2016. In EMDEs, however, inflationary pressures have receded to 4.0 percent in 2017 from 4.3 percent in 2016 (**Figure 1.3**).

Figure 1.3

Inflationary Pressures have Remained Weak

Monthly-CPI Inflation (YoY) in Major Advanced and Emerging Economies



Source: Bank for International Settlement

Recently, rising oil prices have stimulated headline inflation in AEs but wage and core price inflation still remain weak. In EMDEs, headline and core inflation have risen slightly in later months of 2017 after experiencing a decline early in the year.

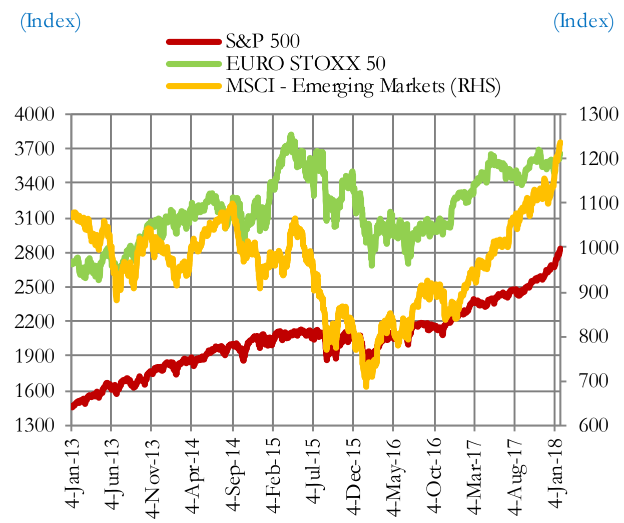
After receding in CY17, short-term risks to global financial stability have slightly risen recently…

Short-term risks to financial stability receded in CY17 in response to improved resilience of the global financial system, tighter regulatory oversight, and economic recovery. Recently, however, risks have increased, somewhat, reflecting volatility in equity prices in early February-2018 and decline in risky asset prices in March-2018 in the wake of escalating trade dispute between the U.S. and China.[57]

Figure 1.4

Rising Equity Variations across the Globe

Equity Prices in USA, Euro, and Emerging Markets



Source: Bloomberg, Federal Reserve Bank of St. Louis

…and medium-term risks remain alive …

The low for long interest rates and QE has intensified search for yield[58] in markets leading to

[56] Bloomberg, May 29, 2018.

[57] IMF. (2018). Global Financial Stability Report. *Washington, April.*

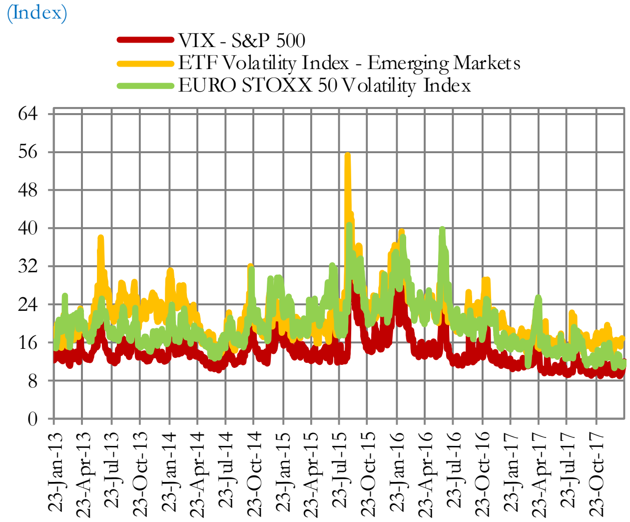
[58] About 80 percent of the fixed income index (US$ 15.8 trillion) offered yield over 4 percent in 2007 against less than 5 percent (US$

overstretched asset valuations, low volatility (**Figure 1.4 & 1.5**), and compressed spreads (**Figure 1.6**). While such financial conditions have helped firm up economic growth, they have also driven up sensitivity of the financial system to market and liquidity risks. The yield seeking investors have increased their exposure in companies with low investment grade rating in the US.[59]

It needs to be emphasized that vulnerabilities are migrating from the banking sector to the nonbank and market sectors of the financial system as the search for yield intensifies. An abrupt adjustment in monetary policy can lead to repricing of risks causing financial market turbulence and international spillovers. In contrast, gradual monetary policy normalization, as expected, is likely to aid further build-up of financial excesses and medium-term risks.

Figure 1.5
Ebbing Stocks Volatility across the Globe

Stock Volatility Indexes of USA, Euro and Emerging Markets
(Index)



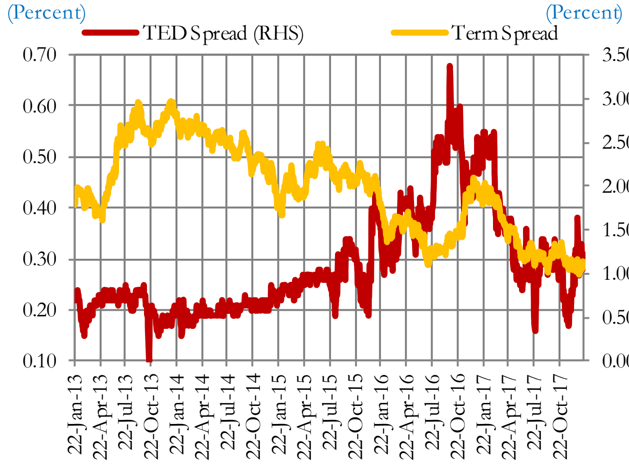
Source: Bloomberg, Federal Reserve Bank of St. Louis

With improving global recovery, the key stability challenge is to gradually rebalance central bank and private sector portfolios.

In this backdrop, the IMF estimates suggest that since 2010, around US$ 260 billion portfolio inflows to emerging economies can be attributed to unconventional Federal Reserve policy. The inflows, however, are likely to reduce by US$ 35 billion a year over next two years on account of monetary policy normalization in the US.[60]

Figure 1.6
Spreads have Remain Compressed in 2017

TED Spread and Term Spread
(Percent) (Percent)



Source: Federal Reserve Bank of St. Louis
Term spread is the spread between 10 year US treasury constant maturity and 3 months treasury constant maturity; TED spread is the spread between 3 month LIBOR and 3 month US treasury bill

Also, rising leverage is a particular concern…

Debt burdens have increased to considerable extent among G20: nonfinancial sector debt (borrowing by governments, households, and nonfinancial firms) has risen to more than US$ 135 trillion.[61] Among G20, rising leverage in AEs remains a particular concern as debt-to-GDP ratio in these economies has notably increased to 256 percent in 2016 from

1.8 trillion) in 2017. This indicates that too much money is chasing too few yielding assets.

[59] Reserve Bank of Australia. (2017). Financial Stability Report. *October.*

[60] IMF. (2017). Global Financial Stability Report. *Washington, October.*

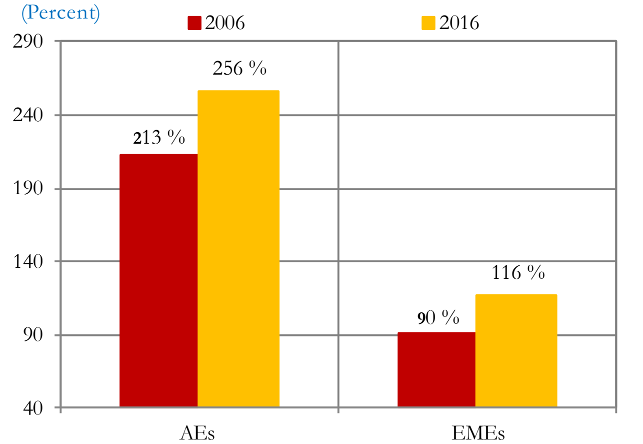
[61] Since 2006, most of the increase in debt-to-GDP ratio in AEs has been in government sector (30.2 percent) followed by nonfinancial firms (6.6 percent), and households (6.0 percent). On the contrary, in

213 percent in 2006. In EMEs, however, leverage ratio expanded by 26 percentage points to 116 percent in 2016 (**Figure 1.7**).[62]

Easy financial conditions have encouraged increased borrowing, which in turn helped stimulate aggregate demand. On the other hand, the downside risks emerge from the fact that with elevated debt burden, nonfinancial sector has increasingly become sensitive to changes in the interest rates. Debt servicing pressures are rising despite lower interest rates due to the increased stock of debt. While monetary policy is gradually normalizing in the USA, a build-up of further leverage could increase credit risk in the financial system.

Figure 1.7
Rising Non-Financial Sector Debt across G20

Non-Financial Sector Debt as Percent of GDP in G20
(Percent)



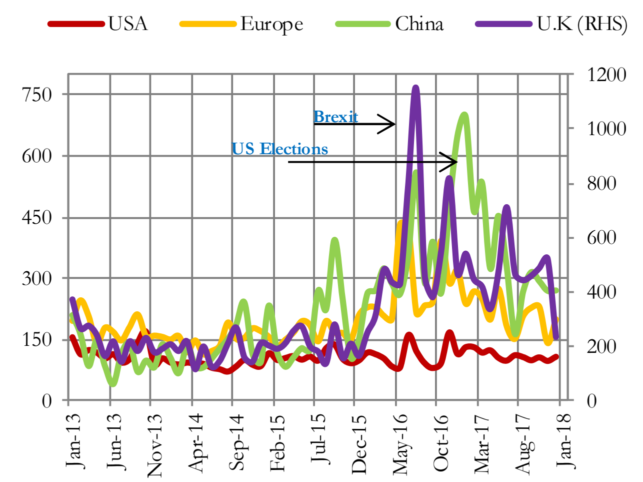
Source: IMF
AEs represent Japan, Canada, USA, UK, Italy, Australia, South Korea, France, and Germany.
EMEs represent China, Brazil, India, Turkey, Mexico, Russia, South Africa, Saudi Arabia, and Indonesia

Besides rising financial vulnerabilities, there are other critical risks in sight as well…

Policy uncertainty remains one of the potential medium-term risks to the global growth. For instance, uncertainty over anticipated US regulatory measures, the possibility of inward looking policies (trade restrictions), post-Brexit proceedings, cyber security breaches, and rising geopolitical tensions together appear to make medium-term growth prospects cloudy. Moreover, adverse climate changes taking place in certain regions of the world—such as rising temperature, more frequent natural disasters, rising sea levels, loss of biodiversity, and adverse spillovers from affected countries — could have serious implications for growth and stability.[63]

Figure 1.8
Policy Uncertainty has Receded in 2017

Economic Policy Uncertainty Index (EPU)
(Index)



Source: Federal Reserve Bank of St. Louis

Figure 1.8 shows that economic policy uncertainty in major economies has relatively receded in 2017 compared to the year 2016. Economic Policy Uncertainty Index (EPU), however, has remained well above the average (considering EPU data since 2013) in 2017 for Europe, U.K. and China. IMF (Oct-2017) observes that the near-term prospects of inward looking policies though have diminished in

EMEs nonfinancial firms have witnessed most of the increase in debt-to-GDP ratio (17.3 percent) followed by households (7.1 percent) and government (1.7 percent). Source:

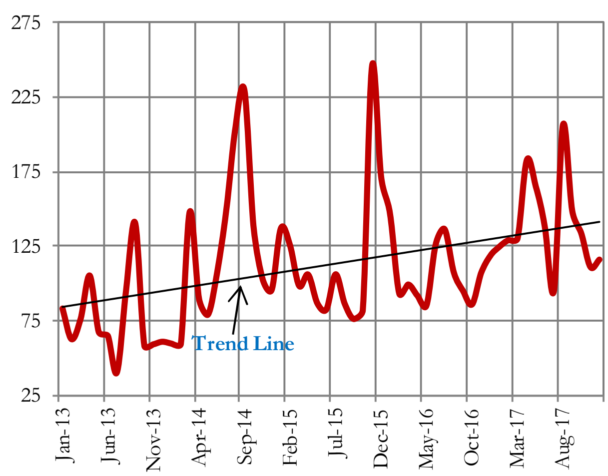
[62] IMF. (2017). Global Financial Stability Report. *Washington, October*
[63] IMF. (2017). World Economic Outlook. *Washington, October.*

AEs but increased pressures for protectionism still persist.

Geopolitical risks have risen notably in East Asia and the Middle East during 2017. The uptrend in Geopolitical Risk Index (GPR) reveals rising downside risks to global growth from geopolitical tensions (**Figure 1.9**). Caldara and Iacoveillo (2018) point out that increasing GPR is associated with adverse effects on a broad set of economic indicators.[64]

Figure 1.9
Geopolitical Risks have risen in 2017

Geopolitical Risk Index
(Index)



Source: Caldara and Iacoveillo (2018)

1.2 Domestic Developments

Domestic economy maintains growth momentum…

The domestic economy has expanded by 5.37 percent during FY17, recording highest growth in a decade (**Table 1.3**). The momentum in economic expansion continued in FY18 with estimated growth of 5.79 percent. Besides services, industry and agriculture have also contributed to the economic activity during FY18.[65]

Table 1.3
Pakistan: Key Economic Indicators

	FY15	FY16	FY17	FY18	FY18 Target
	Percent				
Real Sector					
Real GDP Growth	4.04	4.71	5.37	5.79	6.00
LSM Growth (YoY)	3.43	3.12	5.63	6.24	
Inflation (Average)	4.53	2.86	4.15	4.03	6.00
	USD billion				
External Sector					
SBP Reserves (End-of-Period)	14.8	19.4	16.1	11.6	
Current Account Balance	(2.8)	(4.9)	(12.60)	(12.0)	
Exports (Goods)	24.1	22.0	20.4	17.1	23.10
Imports (Goods)	41.4	41.3	52.9	44.5	48.80
Trade Balance	(17.3)	(19.3)	(32.50)	(27.4)	
Remittances	18.7	19.9	19.4	14.6	20.70
PKR/USD Rate (Year Average)	101.3	104.2	104.7	107.7	
	Percent				
Fiscal Sector					
Fiscal Deficit (as % of GDP)	(5.32)	(4.56)	(5.85)	(4.30)	(4.10)
Revenue Growth (YoY)	8.08	13.12	19.80	16.00	
	Percent				
Monetary Sector					
M2 (YoY)	11.89	13.25	13.69	4.82	
Currency to Deposit Ratio	29.32	35.20	36.66	36.64	

Source: Ministry of Finance, Pakistan Bureau of Statistics and State Bank of Pakistan

Note: For Real Sector, LSM growth and inflation data is up to February and April 2018, respectively. The External Sector data is up to March-2018. In Fiscal Sector, revenue growth and fiscal deficit represent Jul-Mar FY18 period. Monetary Sectory data is up to March-2018. Moreover, GDP growth for FY18 is a provisional number.

In FY18 (Jul-Feb), LSM has expanded by 6.24 percent—higher than the recorded growth of 4.4

[64] Caldara, D., & Iacoveillo, M. (2018). Measuring Geopolitical Risk. *International Finance Discussion Papers 1222.*

[65] Services, industry and Agriculture sectors have contributed 3.85 percent, 1.21 percent, and 0.73 percent, respectively, in GDP growth during FY18 (Pakistan Economic Survey 2017-18).

percent in the comparable period of last year. A broad based growth in LSM activity mirrors continued expansion across various sectors of the economy.

…amid a mixture of downside risks and upside potential …

A number of macroeconomic challenges pose risks to the recent upsurge in economic activity, the foremost being the pressures developing in the external sector. Rising machinery imports and higher crude oil prices have led to a larger current account deficit both in FY17 and FY18 (Jul-Mar), which—absent matching inflows—has resulted in decline in reserves. Consequently, PKR depreciated by over 5 percent against the USD during CY17 with further depreciation of 4.59 percent occurring in March 2018.

The rising international oil prices and the related upward pressures on the import bill may further strain the external balances, going forward. However, the recent positive turnaround in the growth of exports and remittances in FY18 (Jul-Mar) is a positive development and if the trend continues it may alleviate some of the concerns of the external sector.

Fiscal deficit has also worsened during FY17; reaching a four-year high of 5.85 percent of GDP, mainly due to lower revenues and higher development expenditures.[66] In FY18 till March, the fiscal deficit has surged to 4.3 percent against budgetary estimate of 4.1 percent for the full fiscal year. The revised SBP estimates suggest that fiscal deficit could expand to 5.5 percent of GDP.[67]

Regardless of the size of the fiscal deficit, the critical aspect for the banking sector is its financing. Government's heavy reliance on borrowing for budgetary support from commercial banks could impact financial intermediation and lead to tightening of financial conditions for the private sector.

Inflationary pressures, so far, have remained benign despite higher oil prices, as inflation has remained below the official target of 6 percent. Additionally, equity market, after remaining bearish in H2CY17, have picked up some momentum recently.[68]

Besides CPEC, the lagged impact of easy monetary stance resulting in a robust uptake of private sector credit; corporate tax rationalization[69]; incentive package for exports; government's focus on infrastructure development; and ameliorating law and order situation suggest stable medium-term outlook.

Nonetheless, in the short term, the balance of risks remains tilted towards the downside. Therefore, the policy challenge is to sustain the current growth momentum given the rising macroeconomic vulnerabilities.

…The external account exhibits weaknesses necessitating corrective actions…

International reserves remained under pressures during FY17 and FY18 (Jul-Mar) due to persistent rise in current account deficit (**Figure 1.10**). In FY18, imports (mainly petroleum and machinery) surged by 15.98 percent while exports posted 13.27 percent growth leading to current account deficit of USD 12.60 billion. In the absence of matching inflows, international reserves have fallen by USD 3.6 billion in FY18 to reach USD 17.8 billion. The

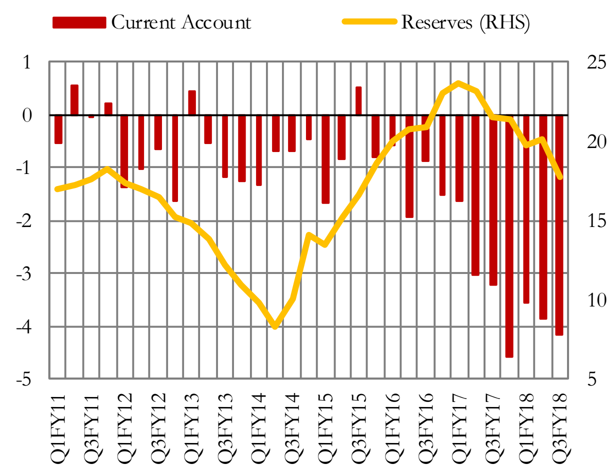
66 State Bank of Pakistan. (2017).The State of Pakistan's Economy, Annual Report, FY17, Chapter 4.
67 SBP. (2018). Monetary Policy Statement. *May.*
68 KSE-100 index has improved to 45,488.86 as of April 30, 2018 from a low of 40,471.48 as of December 29, 2017.
69 Ministry of Finance, Income Tax Ordinance, amended as of 30-06-2017.

stress in the external account has created pressures on the exchange rate as well (**Figure 1.11**).

Figure 1.10

Reserve have remained under pressure amid rising Current Account Deficit

Quarterly Current Account Deficit and Quarter-end Total Reserves
(USD billion)

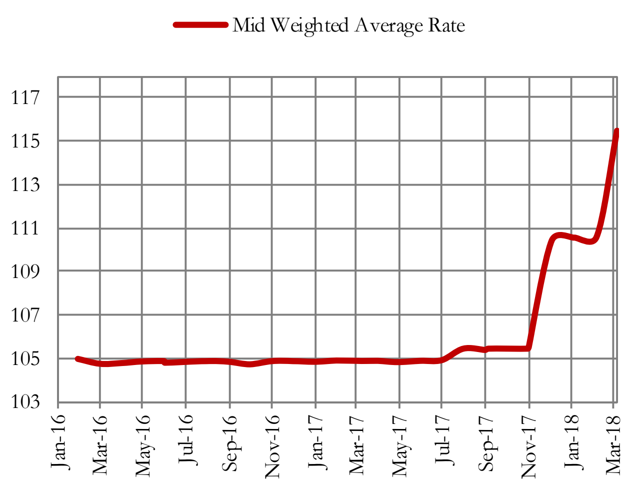


Source: SBP

Figure 1.11

PKR has Depreciated against the USD in December-17 and Mar-18

Monthly Trajectory of the Pakistani Rupee
(PKR/USD)



Source: SBP

In order to help stem deteriorating current account deficit, the government has imposed regulatory duties on certain import items in October-2017.[70] Moreover, on financing front, the government has introduced financial and regulatory measures to exporting industries to help lift-up exports growth.[71]

…yet if trade-offs are managed well, higher dividends are expected…

The imports of machinery continue to play an important role in widening the current account deficit. This reflects ongoing infrastructure development and economic expansion, which would help converge domestic economy to higher income level in the medium to long-term. Therefore, there is a need to manage the short-term challenges at the external front in order to realize higher growth in the future.

…the future direction of external account hinges on several factors…

Going forward, the scale of vulnerabilities in the external sector, among others, depends upon global demand, pace of remittances, policy response and commodity prices. Improving global demand, especially in AEs, may boost exports. Remittances inflows might increase from AEs that are showing faster economic growth (especially, U.S. and U.K.).

[70] http://download1.fbr.gov.pk/SROs/2017101712101357551SRO.(1035)-2017dated16.10.2017.pdf

[71] These include drawback of local tax and levies, tax rebates, export finance schemes and export incentive package worth PKR 180 million (State of Pakistan's Economy –Third Quarterly, FY17).

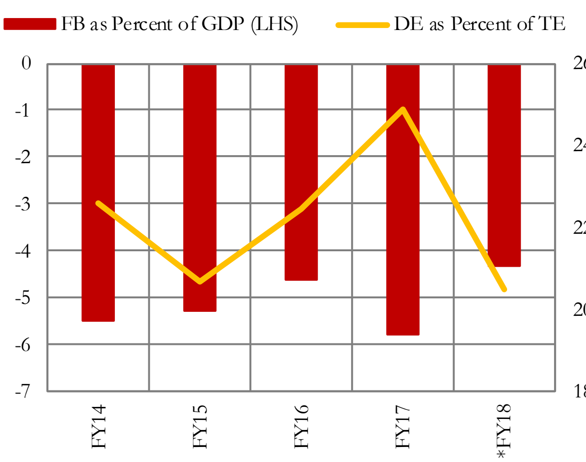
Also, the recent policy initiatives undertaken by Pakistan are likely to boost remittances inflows.[72]

Moreover, expected uptick in exports in response to incentive package announced by the GoP and the lagged impact of regulatory duties on imports may help contain the current account gap. A weaker currency (PKR) is also expected to increase exports. The recent uptrend in international oil prices, however, may impede recovery in external account.

Figure 1.12

Rising Developmental Expenditures have Widened Fiscal Deficit

Fiscal Balance and percent share of Developmental Expenditures in Total Expenditures



Source: SBP; Ministry of Finance
*Data for FY18 is up to Jul-Mar.

Fiscal deficit continues to be a key concern…

The fiscal deficit widened to 5.85 percent (of GDP) in FY17 from 4.56 percent in FY16, reaching a four year high. Rising deficit primarily reflected substantial increase in developmental expenditures (DE) which rose to 24.9 percent of total expenditures (TE) in FY17 from 22.45 percent in FY16 (**Figure 1.12**). Relatively contained interest payments in previous years provided fiscal space for elevated developmental expenditures.[73]

In Jul-Mar FY18, fiscal deficit has expanded to 4.3 percent—higher than 3.9 percent deficit recorded in the comparable period of previous year. Despite impressive growth in revenues during this period, widening fiscal deficit is due to higher expenditures especially developmental spending (29.70 percent growth).

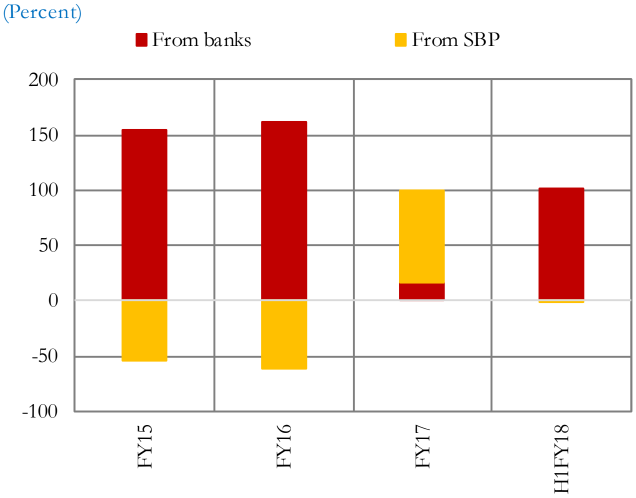
…Budgetary borrowing pattern defines financial conditions for the private sector…

In line with the widening fiscal deficit during FY17, total budgetary borrowing from the banking system surged by 37.41 percent (PKR 1,087.2 billion) in FY17. Borrowing from SBP explains around 84.0 percent of the total banking system borrowing during FY17 (**Figure 1.13**).

Figure 1.13

Shifting Pattern of Government Budgetary Borrowing

Budgetary Borrowing from Banks and SBP as percent of Total Budgetary Borrowing
(Percent)



Source: SBP

[72] Two schemes have been launched in December-2017: Asaan Remittance Account and m-wallets. Asaan Remittance Account is meant to facilitate beneficiary in opening bank account while through m-wallets, beneficiaries would be able to withdraw cash from ATMs, bank branches, and branchless banking agents.

[73] State Bank of Pakistan. (2017).The State of Pakistan's Economy, Annual Report, FY17, Chapter 4.

In H1FY18, however, government budgetary borrowing entirely shifted from SBP to scheduled banks. Total budgetary borrowing from the banking system reached at PKR 313.2 billion of which banks provided PKR 315.9 billion while PKR 2.7 billion were retired to SBP. Such shifting pattern towards banks could lead to tightening of financial conditions for the private sector.

Nonetheless, post H1FY18 (Jan-Mar), the pattern of budgetary borrowing has reversed again whereby the government has relied on SBP borrowing (PKR 2.2 trillion) while retiring to the scheduled banks (PKR 1.7 trillion).

In CY17, the private sector lending maintains its pace amid strengthening demand …

The advances to private sector have increased by 16.4 percent in CY17, with the largest rise in consumer financing (20.82 percent) followed by corporate advances (17.60 percent), SMEs (12.10 percent) and agriculture (4.70 percent). Moreover, corporate advances for fixed investment purpose have shown impressive growth of 15.24 percent (YoY) in CY17.

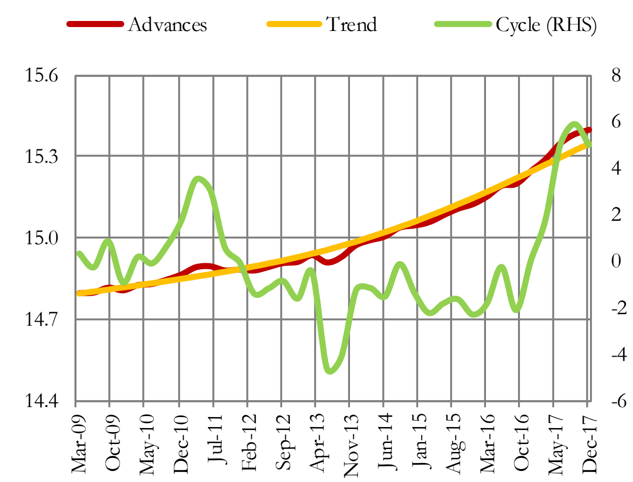
Sector-wise analysis reveals that cement sector observed highest growth (58.14 percent), followed by sugar (31.16 percent), textile (16.27 percent), and automobiles (13.0 percent). Broad based disbursement of advances reflects strengthening of demand conditions in domestic economy and increasing utilization of funds for capacity oriented projects. (**See Chapter 3.1 for detailed analysis**).

…and hovers above long-term trend …

The outstanding advances are hovering well above its long-run trend, with cyclical upturn starting in CY16 (**Figure 1.14**).[74]

Figure 1.14
Advances have grown

Trends of Advances
(Log Scale) (Percent)



Source: SBP

Nonetheless, given low credit incidence in the economy,[75] such an acceleration is a welcome sign for growth rather than a concern pertaining to financial excesses. Also, the trend is already reverting back to its long-run path.

…banking sector's performance remains encouraging…

In CY17, banking sector's assets expanded by 15.86 percent (PKR 2.5 trillion) – up from 11.93 percent (PKR 1.7 trillion) in CY16. Notable acceleration in total assets has been sourced by robust growth in advances (18.43 percent – YoY) and investments (16.24 percent – YoY). It is pertinent to outline that investments continue to dominate banks' assets (**Figure 1.15**). In CY17, investments and advances

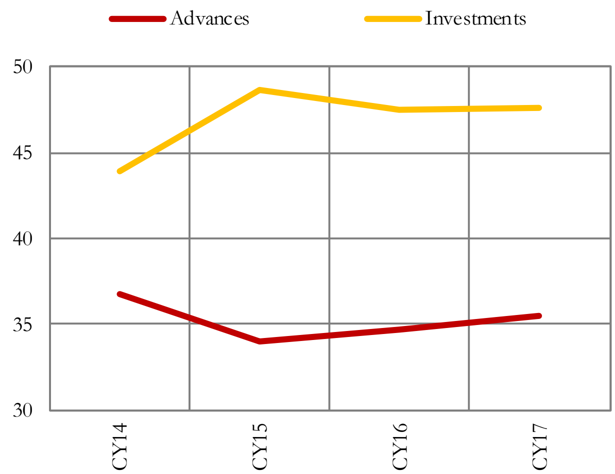
[74] The long-run trend has been calculated via Hodrick-Prescott filter. The cyclical component is the deviations from the this trend.

[75] Credit-to-GDP ratio is at 16.5 percent in 2016 compared with 49.8 percent in India, 44.4 percent in Bangladesh and 46.0 percent in Sri Lanka during the same period. (Source: World Bank)

explain expansion in total assets by 47.6 percent and 35.5 percent, respectively.

Figure 1.15
Investments continue to dominate Assets Expansion

Percent share of Advances and Investments in Total Assets
(Percent)



Source: SBP

On liability side, however, deposit growth remained less than encouraging. In CY17, deposits expanded by 10.29 percent – down from 13.56 percent in CY16. Deceleration in money supply (M2) – driven in part by contraction in Net Foreign Assets (NFA) of the banking system – seems to be one of the reasons behind slowdown in deposit. Other reasons include business strategy of some banks to limit the growth of domestic remunerative deposits and scaling back of operations by few banks in overseas market.

Encouragingly, asset quality continues to improve. In CY17, NPLR (non-performing loans to total loans ratio) has further moved down to 8.43 percent, which is lowest in a decade. Slowing profitability of the banking sector, however, remains a concern as Return on Assets (ROA – before tax) declined to 1.6 percent in CY17 from 2.1 percent in CY16. This reflects, apart from other factors, the impact of low interest rate environment.

On resilience front, banking sector is well positioned with Capital Adequacy Ratio (CAR) of 15.8 percent in CY17, which is well above the minimum regulatory requirement of 11.275 percent. (**see Chapter 3.1 for detailed analysis**).

…while the equity market has underperformed…

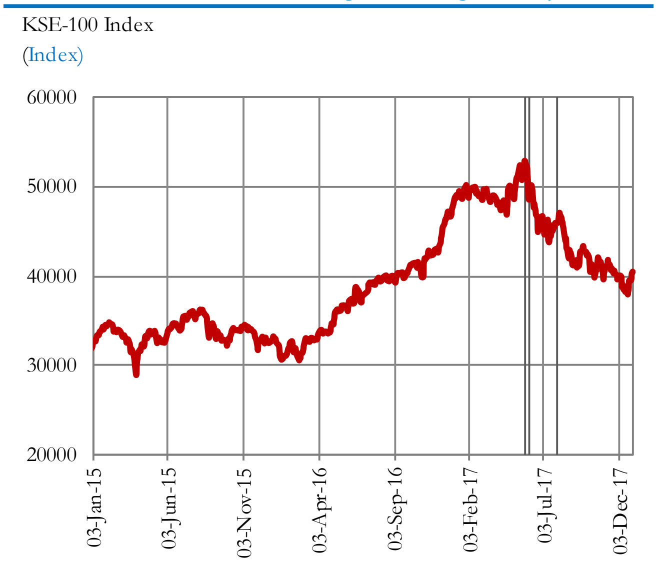
The KSE-100 index crossed 50,000 mark in CY17, touching its historical high on May 24, 2017 at 52,876 points. The growth in share prices was fueled by a bullish sentiment earlier in the year due to i) Pakistan's re-classification in the MSCI Emerging Market Index from the Frontier Market Index, ii) accommodative monetary policy stance throughout the year, iii) low inflation, iv) increased economic activity under CPEC and v) political stability.

However, the equity market began to decline towards end-May, dropping over 25 percent by the end of the year and closing 15.34 percent lower in CY17 on a YoY basis. The decline in equity prices began with the announcement of the budget 2017-18, which implemented new taxes on equity investments, and a smaller than expected take up of Pakistani bourses by international investors following the inclusion of Pakistan in the MSCI Emerging Market Index. The political uncertainty that followed in the second half of the CY17 and beyond may have dented the investor sentiments leading to an overall underperformance of the equity market during the year (**Figure 1.16**).

The index has, however, picked up some momentum recently and the volatility in the market is expected to taper further after the general elections as the political situation stabilizes. (**see Chapter 2 for detailed analysis**).

Figure 1.16

KSE-100 Index Slides after Reaching Record Highs in May 2017



Source: SBP

In short-term, domestic economic outlook is challenging while medium-term prospects look stable ….

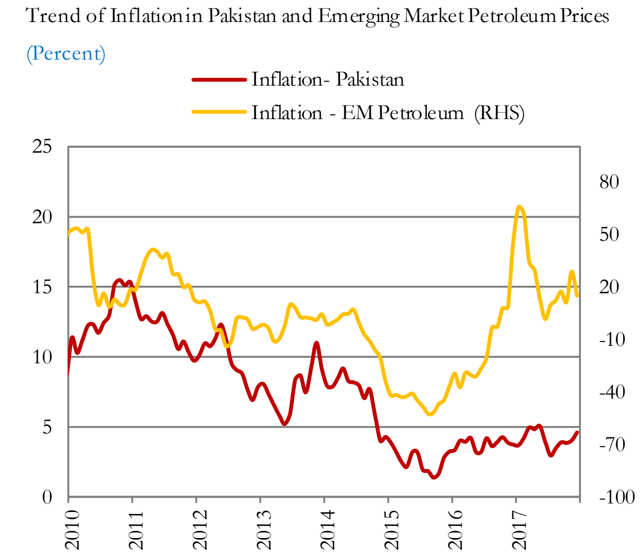
Global economy has followed robust economic course during CY17 aided by rebound in investment and trade. Financial conditions have remained largely supportive, however, with slight increase in short-term risks to financial stability.

At the domestic front, rising vulnerabilities in the external account—driven by increasing machinery imports and higher oil prices—have resulted in exchange rate depreciation and gradual build-up of inflationary pressures. Fiscal deficit remains a critical concern given its rising trend.

Further, the headline inflation has increased to 4.09 percent (on average) in CY17 compared to 3.76 percent last year, in the wake of increasing commodity and food prices. Energy prices have also added to the pressure as emerging market petroleum price index has increased by 13.79 percent in CY17 as the global oil price have rebounded **(Figure 1.17)**. Though inflation, despite pressures, is contained but if the stress in the external sector elevates, it could become a concern. These developments suggest that the domestic economy may experience tighter macro-financial conditions in the short-run.

Figure 1.17

Inflation in Pakistan is Rising with Petroleum Prices



Source The Wolrld Bank, Pakistan Bureau of Statistics

However, in the medium-term, economic outlook seems encouraging. CPEC, under the One Belt One Road (OBOR) initiative, is expected to yield positive dividends for economic growth via, inter alia, increasing Pakistan's connectivity to the rest of the world through a better highway network and development of the Gwadar port; establishment of industrial parks and technology transfers from China. Additionally, the ongoing construction of coal-based power plants and renewable energy farms are expected to alleviate the shortfall of power supply in the country.

Moreover, rising demand for fixed investment advances are likely to enhance the productive capacity of the firms, which in the wake of improving global demand may boost exports.

Effective management of macroeconomic vulnerabilities hovering at shorter horizon remains the key policy challenge, which in turn would determine medium-term economic prospects.

2 Financial Markets Risk Analysis

The financial markets in Pakistan have performed smoothly; though bouts of volatility did appear in CY17. The mounting pressure in the external sector has led to depreciation of local currency in the interbank market during July and December. Emergence of political uncertainty, non-realized expectations of Pakistan's inclusion in MSCI emerging market category, and bottoming out of yields in advanced economies has shaken the equity market in the mid of the year. The market corrections seem to be technical in nature because the fundamentals remain strong. Despite high Government borrowings from banks, the volatility in the money market remains low, primarily, through SBP calibrated liquidity management.

Global financial markets have been characterized by political uncertainty, low yield and improved investors' risk appetite

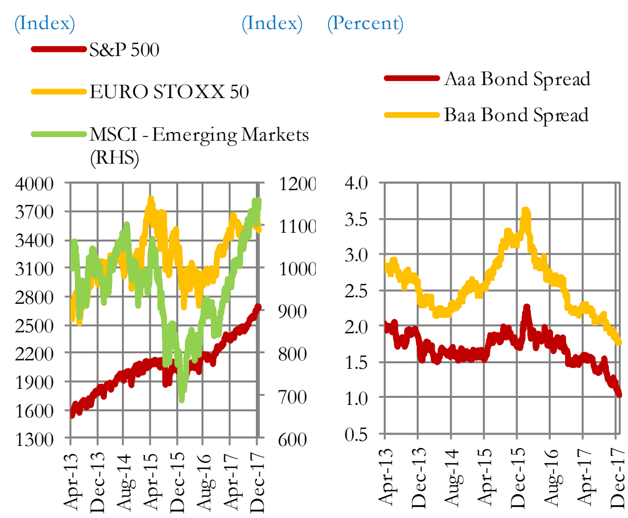
Global financial markets have continued to exhibit favorable sentiments on account of synchronized output growth, improved corporate profitability, and easy financial conditions. Resultantly, equity prices have remained buoyant while risk premium continued to decline **(Figure 2.1)**. The realized volatility in equity, bond, commodity, and foreign exchange markets across the globe (USA, euro area, EMEs, and Japan) has been at the lowest level since the global financial crisis (GFC).[76]

Financial markets, however, experienced some short-lived episodes of volatility in 2017 emanating from enhanced tension on the Korean peninsula and the growing uncertainty regarding expected timing and pace of monetary tightening in AEs.

The downside risks to financial markets arise from the combination of high asset values and low volatility, which might lead to disruptive corrections.[77] During such events, sharp increases in volatility can pose risks to financial stability by triggering demand for high premium on risky assets, which in turn would result in mark-to-market losses prompting outflows from riskier asset classes and regions.[78]

Figure 2.1

Financial Markets in Emerging and Advanced Economies have started to show sign of recovery



Note: Moody's seasoned corporate bond yield (10 Year) relative to yield on 10 Year Treasury Constant Maturity

Source: Bloomberg, Federal Reserve Bank of St. Louis

Volatility in domestic financial markets has increased…

---

[76] European Central Bank (2017), Financial Stability Report. ,*October (2017)* .

[77] As happened in early February-2018, rising inflation expectations in the US have led to sharp correction in equity markets momentarily while stocks volatility rose to the noticeable level.

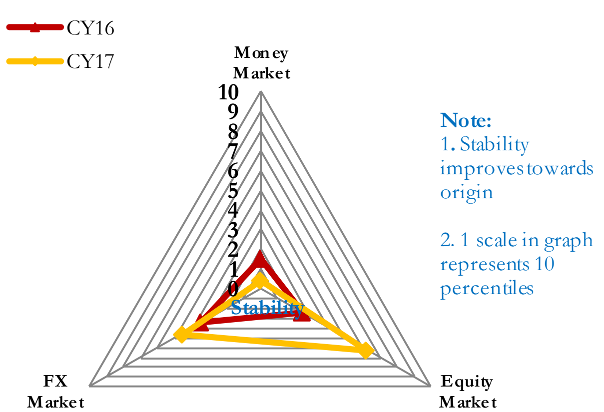
[78] In early February-2018, equity prices observed volatility due to higher inflation expectations in the U.S. Moreover, risky asset prices declined in March-2018 in the wake of trade dispute between the U.S. and China.

Domestic financial markets have witnessed higher volatility during CY17 though these episodes were short-lived and market sustained thereafter. The FX market observed bouts of volatility in July and December as PKR depreciated against USD, primarily, responding to pressures on the external front. Similarly, equity market (i.e. the dominant part of Pakistan's capital market) – after touching historical highs by end May 2017 - observed strong market corrections in the wake of political uncertainty and unfulfilled expectations **(Figure 2.2)**. The money market, by virtue of its structure after the introduction of SBP target rate in May 2016 (within the corridor) and SBP calibrated liquidity management, has remained calm. Almost throughout the year, average daily interbank overnight repo rate has hovered around SBP target rate.

Figure 2.2

Volatility has risen in equity and FX Markets during CY17

Financial markets stability map in Pakistan



Note: Volatility in respective markets are calculated using Exponential Weighted Moving Average (EWMA). Daily overnight repo rate, KSE-100 index and interbank PKR/USD Exchange Rate are used as indicators of the money, equity and foreign exchange market.respectively.
Source: SBP

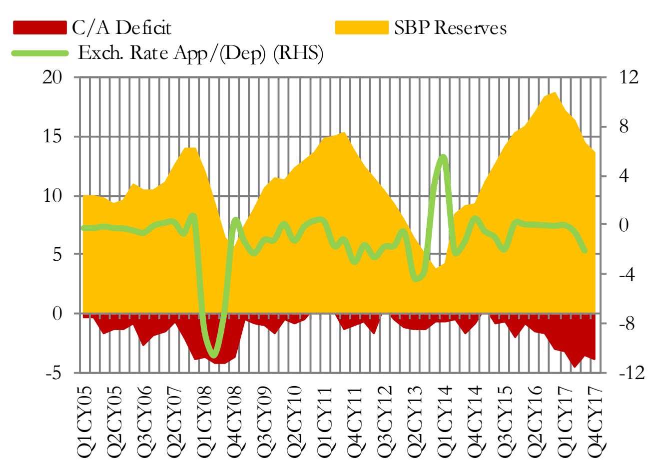
As external sector imbalances widen …

The expansionary phase of the economy has generated demand for capital goods resulting in higher imports of machinery and mechanical appliances during the year. This, coupled with rising import of oil products and increase in global oil prices, has expanded the overall import bill by 23.4 percent in CY17 (highest since 2008).[79] The unmatched FX inflows through key modes (such as exports, foreign direct investment (FDI), worker remittances, official inflows etc.) have stretched the overall trade deficit as well as balance of payment (BoP) position of the country. Consequently, FX market has observed higher but short-lived volatility. SBP's FX reserves have also dipped by 22.0 percent during the year **(Figure 2.3)**.

Figure 2.3

Exchange Rate has depreciated due to rise in current account deficit

Current Account Deficit, SBP FX reserves and ER appreciation /depreciation



Source: SBP

Relative interest rates are important in determining the value of local currency vis-à-vis others. However, SBP has preferred to keep the Policy Rate (PR) unchanged in all of its six Monetary Policy

[79] The import of machinery, mechanical appliances and oils products (41 percent of overall imports) has contributed 51 percent for increase in imports in CY17 over CY16.

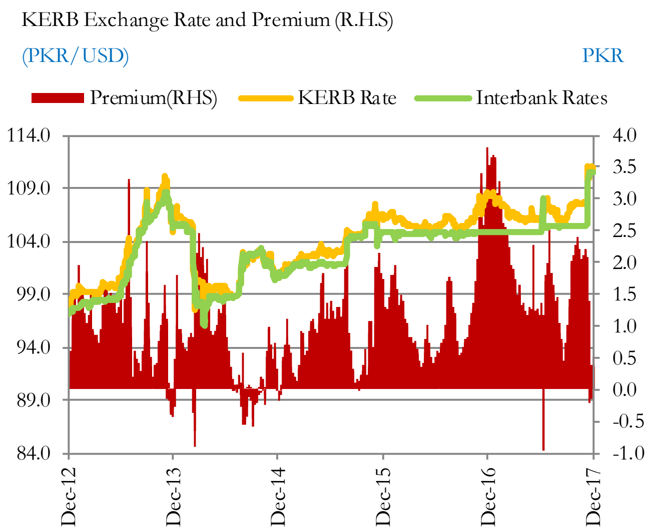
announcements during CY17. The intention has been to support the rising momentum of economic activity through growth in advances on the back of several favorable economic conditions including low and below target inflation, moderate inflation expectation and higher GDP growth, particularly, manufacturing activities (**see Chapter 1**).

The value of domestic currency adjusts to external sector developments …

Responding to external sector vulnerabilities, the PKR has depreciated by 5.1 percent in the interbank market and 2.2 percent in the open market against the greenback during CY17 **(Figure 2.4)**. Depreciation in the interbank has largely occurred during the months of July and December, while the Kerb market rates have been at the elevated levels during December. [80]

Figure 2.4

Domestic currency depreciation with relatively high KERB premium



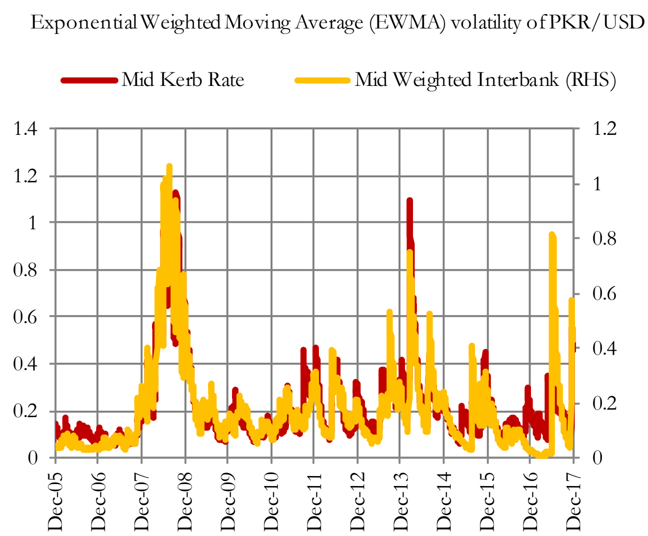
Source: DMMD, SBP

The open market appears to have factored-in the external sector vulnerabilities ahead of the interbank. The KERB premium, after remaining quite high during the first half of CY17 and peaking to 3.5 PKR/USD, has slid after the first episode of rupee depreciation in July 2017. The KERB premium almost touched zero after the second episode of PKR fall in December 2017, likely, due to dissipation of market expectations for further depreciation in PKR.[81]

The depreciation in the interbank market has been quite pronounced in CY17 compared to almost negligible change in CY16 (0.05 percent appreciation). On the other hand, PKR in KERB market has gradually depreciated in both years (2.2 percent in CY17 and 2.1 percent in CY16). However, the abrupt movements in the exchange rate in the interbank market has caused enormous jump in volatility **(Figure 2.5)**.

Figure 2.5

FX market has observed two short-lived episodes of elevated volatility during CY17



Source: SBP

The volatility, generally, raises the uncertainty about the future value of currency and, thus, impacts both

[80] Post CY17, PKR has further depreciated by 4.48 percent and 6.93 percent in interbank and KERB markets, respectively, till May 31, 2018

[81] See "The State of Pakistan's Economy - Second Quarterly Report 2017 – 2018", http://www.sbp.org.pk/reports/quarterly/fy18/Second/qtr-index-eng.htm

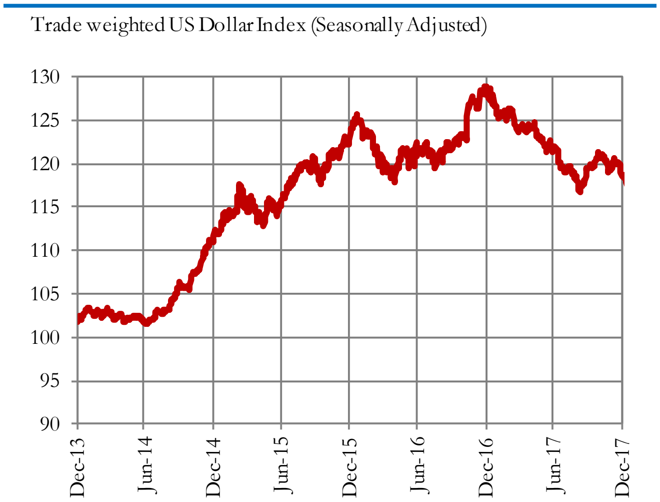
importers and exporters.[82] Therefore, a gradual adjustment in the exchange rate in response to evolving dynamics may be a more suitable option from market stability perspective.

FX market is likely to follow the economic fundamentals going forward…

In the near term, the extent of volatility in FX market will depend upon the key economic fundamentals, particularly, the balance of payments position. However, the following may be important from the perspective of FX market and its volatility:

a. SBP's liquid foreign exchange reserves have declined by 22.8 percent in CY17.[83] There is a need to focus on improving more stable sources of inflows (e.g. exports, FDI etc.).

Figure 2.6
USD is loosing ground against global currencies since inception of CY17



Source: Federal Reserve Bank of St. Louis

b. The export competitiveness of the country has improved as indicated by Real Effective Exchange Rate (REER), which has declined by 8.6 percent during CY17.[84] This improvement is primarily attributed to depreciation of local currency against the basket of currencies. PKR has depreciated by 5.1 percent against USD in CY17, 13.4 percent against JPY, 19.0 percent against Euro and 16.0 percent against GBP. Noticeably, the lesser depreciation of PKR against USD could be due to weakening of USD against global currencies (**Figure 2.6**).

c. The currency forward rates seem to follow traditional interest rate parity, particularly, post July 2017 **(Figure 2.7)**. The three-months PKR/USD forward rate spread has declined after July 2017 due to squeeze in spread between almost stagnant PKR yield (on 3-month's MTBs) and continuous rise in USD yield. The forward rate spread seems quite volatile during first half despite the rise in USD treasury yield. Such frictions were likely built on anticipation of PKR depreciation and disappeared post PKR depreciation in July.

[82] If there are expectations of local currency depreciation, the importer will benefit from earlier payments while exporter from delaying the realization of export receipts. This may create a supply-demand gap in the FX market.

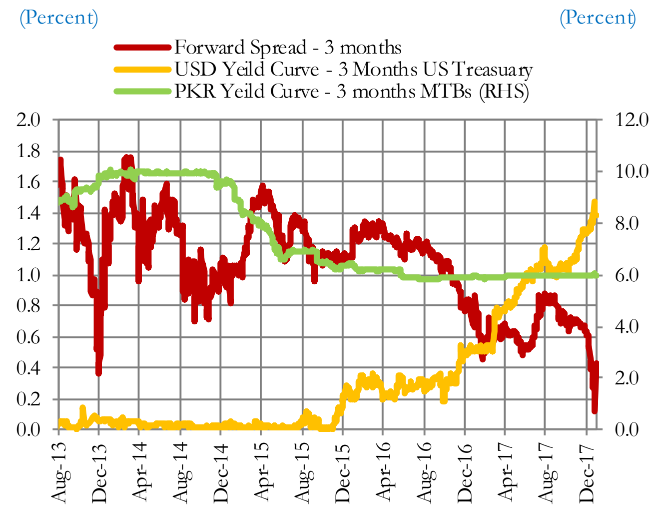
[83] The reserves have further dipped by 32.6 percent post CY17 (till May 31, 2018).

[84] Besides, SBP's monetary tightening with 25 bps rise in Policy Rate in January 2018 will further augment to PKR and, thus, stabilize the market.

Figure 2.7

Rising yields on USD has reduced forward spread of PKR

Mark to market revaluation exchange rates for Authorized Dealers

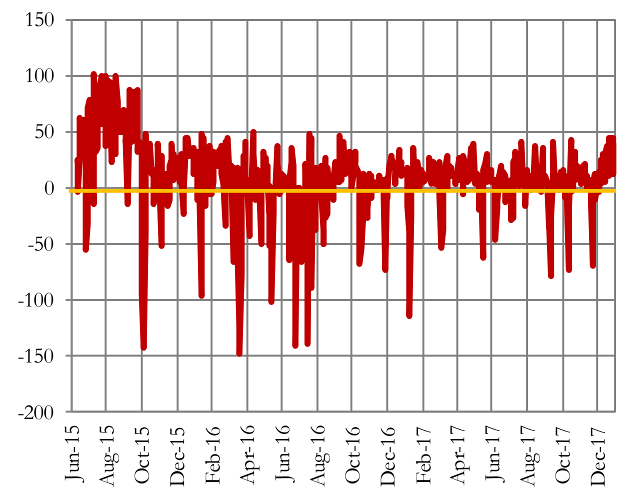


Source: SBP and US Department of Treasury

Figure 2.8

Interbank overnight repo rate has hovered around SBP target rate with low volatility

BPS Spread between daily O/N repo rate and SBP target rate



Source: SBP

It is likely that exports may improve due to (a) high growth in imports of machinery during CY16 & CY17, (b) rise in fixed investment advances **(see chapter 2)**, (c) improvement in export competitiveness with declining REER, and (d) positive growth prospects in advanced economies **(see Chapter 1)**.

Money market continues to perform smoothly…

CY17 is characterized by another year of easy monetary policy stance as SBP has not changed its corridor rates (i.e. reverse repo at 6.25 percent and repo rates at 4.25 percent) and kept the SBP target rate (i.e. policy rate) at 5.75 percent in all six monetary policy decisions. With SBP's calibrated liquidity management, the money market continues to perform smoothly with low volatility as weighted average O/N repo rate has hovered around SBP target rate. However, some liquidity pressures are seen during the last quarter with O/N rate approaching the SBP ceiling rate **(Figure 2.8)**.[85]

The overnight weighted average call rates has also remained low at 5.83 percent (on average) during CY17 compared to 5.87 percent in CY16. Due to liquidity ease, banks made lesser number of visits to SBP reverse repo facility (i.e. discount window) availing contained amount in CY17 compared to CY16 **(Table 2.1)**. The last quarter of CY17 has seen most of visits.

Table 2.1

Access to Overnight Repo/Reverse Repo Facilities

	Reverse repo		Repo	
	No of Visits	Amount	No of Visits	Amount
	Amount in PKR Billion			
CY16	107	1,824	61	425
CY17	73	715	33	366

Source: SBP

The existing mechanism of monetary policy provides an implicit shield to liquidity needs of the market. Based on the market liquidity needs, SBP carries out OMO (as and when required) and keeps

[85] The average daily O/N rate during December month has been observed at 5.97 percent compared to yearly average of 5.82 percent.

the short-term weighted average O/N rate closer to SBP target rate to give the market an unambiguous signal of its monetary policy stance.[86]

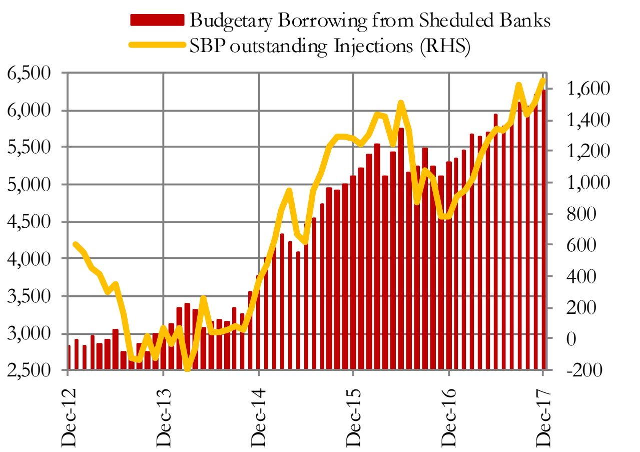
A deeper analysis reveals a synchronized pattern of SBP liquidity management and government budgetary borrowing from commercial banks. During CY17, government borrowing from commercial banks has remained high.[87] Resultantly, SBP has to deepen its liquidity injections to satisfy the market liquidity needs **(Figure 2.9)**.[88] This is in contrast to second half of CY16 when government borrowed from SBP and made net-retirement to commercial banks.

Figure 2.9

Government borrowing from commercial banks has continued to create liquidity demand in the money market

Government borrowing from commercial banks and SBP's liquidity injection through OMOs

(PKR billion)



Source: DMMD, SBP

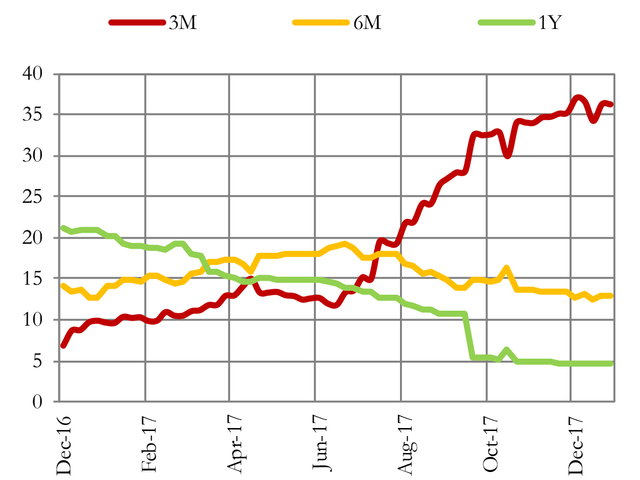
Government borrowing not only has seen an increase but also a tilt from longer term PIBs to short-term MTBs. This is due to changing course of interest rate expectation and, consequently, higher bid rates demanded by the banks as compensation on term instruments.[89] Within MTBs, instruments of 3-month maturity has appealed to the investors due to expectation of a rate hike **(Figure 2.10)**. Keeping in consideration the deceleration in deposit growth, current momentum of advances disbursement, expected budgetary expansion in CY18, continuity in development spending and rise in debt servicing cost, it is expected that government borrowings[90]—and hence SBP liquidity injections—may rise going forward. The higher portion of 3-monhts MTBs may enhance the rollover risk.[91]

Figure 2.10

Share of investment in 3-months MTBs jumps up

Share composition of MTBs in investment in Government securities

(Percent)



Source: FSD, SBP

The point-in-time term structure of sovereign papers as of end December 2017 reveals a flat curve up to one year, but a sharp increase thereafter. Further, if compared to YTM of last year, the yields on longer-term papers are higher in CY17 than CY16 **(Figure 2.11)**. This widening of term spread

86 The low volatility in short-term money market rates helps in ensuring stability in long-term rates (weighted average lending rate (WALR))

87 The outstanding amount of govt. budgetary borrowing from commercial banks has increased by PKR 966 billion to reach PKR 6.2 trillion as of 31-12-2017.

88 SBP's monthly average outstanding injections are recorded at PKR 1.3 trillion in CY17 compared to PKR 1.1 trillion during CY16.

89 The auction pattern of PIBs during second half of CY17 reveals rejection of all bids except one due to higher rates demanded by banks http://www.sbp.org.pk/ecodata/Pakinvestbonds.pdf

90 Please see SBP's 2nd Quarterly Report on State of Pakistan's Economy

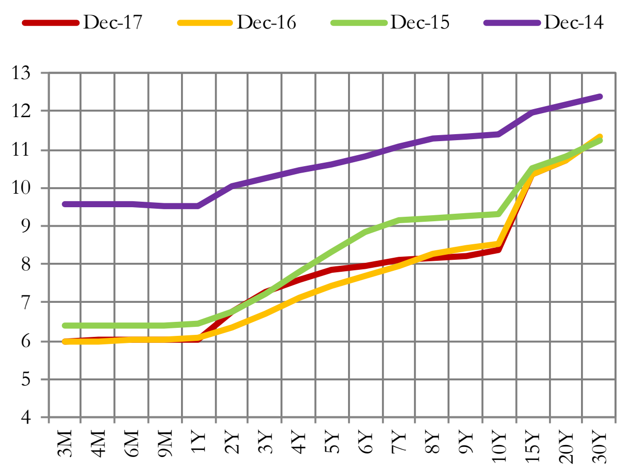
91 To avoid this risk, government has introduced floating rate PIBs in May 2018 (http://www.sbp.org.pk/dmmd/2018/C9.htm).

shows even stronger expectation of rate hike. These expectations are based on high oil prices in global markets and existing current account deficit prompting SBP to support local currency through interest rates rise.

The more frequent data of term spread (3 years minus 6 months) reveals, relatively, a sharp rise post June 2017. Further, the pattern of the term spread seems quite aligned with one month lagged CPI inflation (i.e. the latest information available to the investor) in the long term **(Figure 2.12).**[92]

Figure 2.11
Yield curve depicts rising inflation expectations in medium term

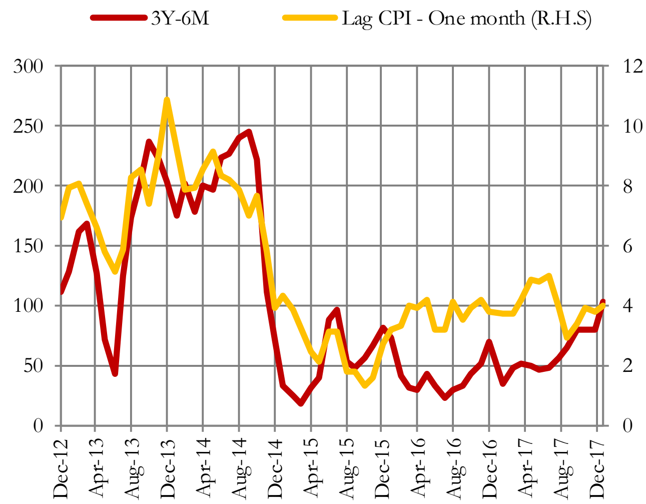
Term Structure of Interest Rates
(Percent)



Source: DMMD, SBP

Figure 2.12
Expected inflation picks up with concomitant rise in yield spread

BPS yield spread (3 years minus 6 month) and one month lag CPI inflation



Source: SBP

Expectation of interest rate rise and pressure on domestic currency may also be seen through the derivative deals carried out by Authorized Derivative Dealers (ADDs). The reviewed year observes a rising volume of pay float – receive fixed Interest Rate Swap (largely with corporate clients who are short in fixed rate and long in floating) and Cross Currency Swaps (CCS). Through IRS deals, clients intended to lock-in the prevailing low rate for the longer-term while ensuring the certainty related to future interest cost **(See Box 2.1).**[93]

[92] The long-term correlation coefficient between term spread and lag CPI turns out to be 0.32 which is statistically significant at 99 percent level of confidence.
[93] Example, if a local client borrowed in USD for a specific term, he will be required to convert USD in local currency for utilizing the amount and payback, again, in USD at maturity. In case of exchange rate uncertainty, CSS provides the client a hedge cover to lock the rate today for future date.

Table 2.2

Progress of Capital Markets in Pakistan during CY17

	31-12-2014	31-12-2015	31-12-2016	28-12-2017
Million PKR except companies, index and bond data				
Total No. of Listed Companies	557	554	558	559
Total Listed Capital - PKR	1,168,485	1,269,703	1,291,040	1,276,914.17
Total Market Capitalization - PKR	**7,380,532**	**6,928,497**	**9,628,514**	**8,513,478**
KSE-100™ Index	**32,131**	**32,811**	**47,807**	**40,371**
Growth (KSE-100 Index)		**2.1%**	**45.7%**	**-15.6%**
KSE-30™ Index	20,772	19,309	25,852	20,212
KSE Meezan Index (KMI-30)	50,735	55,647	81,795	68,634
KSE All Share Index	23,398	22,868	32,842	29,580
New Companies Listed during the year	6	8	4	7
Listed Capital of New Companies - PKR	26,973	29,941	5,490	12,549
New Debt Instruments Listed during the year	6	2	1	1
Listed Capital of New Debt Instruments - PKR	15,000	25,000	10,000	10,500
Average Daily Turnover - Shares in million	219	258	293	248
Average value of daily turnover - PKR	9,402	11,465	11,638	12,111
Average Daily Turnover (Future™) YTD	24	36	49	60
Average Value of Daily Turnover - YTD	2,205	3,142	3,057	4,303

Source: Pakistan Stock Exchange

Equity market observes corrections after touching historical high…

The equity market has experienced a roller-coaster ride during the year. KSE-100 index carried on the momentum of last year's growth, reaching historic high in the month of May, before suffering sharp corrections in June and July **(Table 2.2)**. Thereafter, market witnessed a partial recovery. Overall, the 15.3 percent decline in KSE-100 index in CY17 is the second largest fall after the 2008's crisis episode when equity market dropped by 58.3 percent.

The top-10 sectors (except tobacco) have observed a dip in market capitalization with the highest decline recorded in the "construction and material" (44.2 percent) followed by "pharma and bio tech" (24.2 percent), "commercial banks" (20.9 percent) and "chemicals" (17.4 percent). The oil and gas sector, which has highest share in terms of market capitalization (16.5 percent), observed only a decline of 4.7 percent due to favorable bounce-back in global oil prices.

The downward movement in equity prices in June and July may be linked to few key developments. First, the country observed high political uncertainty mid-year, which shook the confidence of local investor confidence. Second, in anticipation of higher inflows from abroad due to Pakistan's inclusion in MSCI's emerging market category in June 2017, local investors took aggressive positions that pushed the market up beyond its normal trend. However, when these expectations did not materialize, the market declined.[94] This led institutional investors such as Mutual Funds to switch to money market funds from equity funds. Third, foreign investors have remained net-seller in the market due to monetary tightening in advanced economies (thus, offering better risk free returns) and uncertainty about the value of PKR (i.e. possibly lower currency adjusted returns from Pakistan).

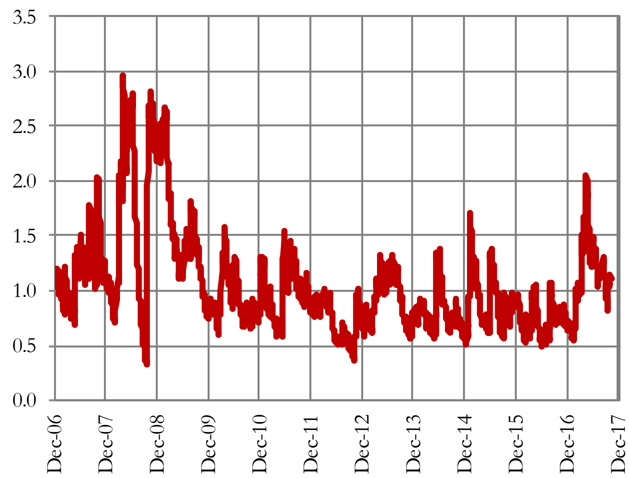
Amid high volatility, the downside risk of investment have risen in PSX…

The market returns have been quite volatile during CY17. In fact, the level of volatility has been the

[94] In the MSCI's frontier markets index, KSE-100 had a weight of 9.16 percent (as of end December, 2016) which came down to only 0.08 percent in the emerging markets category. Also, the number of scripts included in the index reduced from 16 in the former to 5 in the later. Perhaps, the lesser prominence of KSE-100 index in the emerging markets category resulted in lower foreign inflows.

highest since CY08 **(Figure 2.13)**.

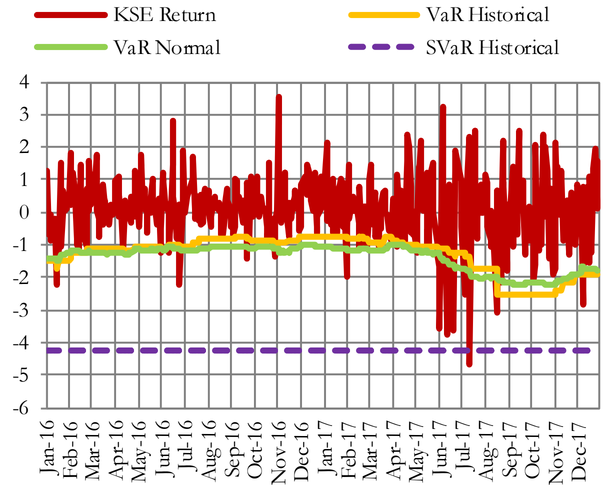
Figure 2.13
Volatility in equity market has increased during CY17
Exponential Weighted Moving Average of KSE-100 Index



Source: Pakistan Stock Exchange

The bearish sentiments of the market, post May 2017, have elevated the downside risk of the equity market returns. Within the short span of a few weeks (30th May till 11th July), the actual returns of KSE-100 index breached 7 times (out of 20 times over CY17) the Value at Risk (VaR) measure by a wide margin **(Figure 2.14)**.[95] The intensity of the daily fall may be gauged by the fact that, at one occasion, the return dropped even below the stressed VaR (SVaR).[96]

Figure 2.14
Downside risk of equity market returns rises
VaR and Stressed VaR of KSE-100 index
(Percent)



Source: PSX and SBP

Corrections in the market appear to be sentiment driven.

The mid-year corrections in the market have mostly been sentiment driven arising from unmet expectations. The fundamentals have generally remained unchanged for the reasons given below:

a. Except external sector pressures, the overall macroeconomic conditions of the country have remained stable (low and below target inflation, low interest rates, pick-up in LSM and GDP growth, improved investor confidence etc. **(See Chapter 1)**).
b. The alternative investment avenues have remained relatively un-attractive. Owing to monetary easing, profit rates offered by the banks and National Saving Schemes (NSS) have remained low.
c. The episode of high growth trajectory of KSE-100 index witnessed during January 2016 till

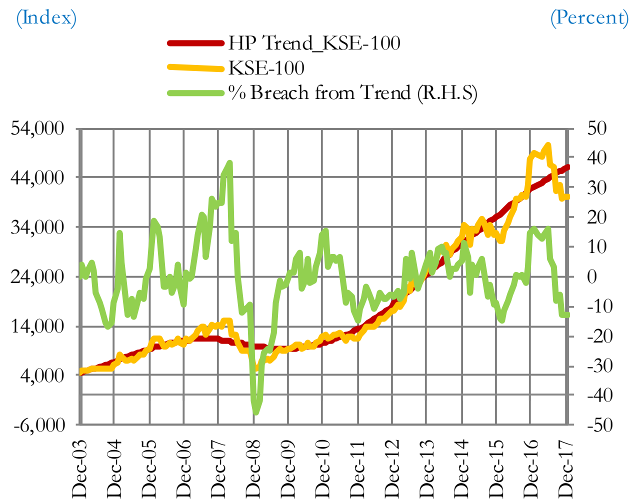
[95] VaR represents the probable amount (or percentage) of downside risk of investment at any given point in time. Here, to assess the riskiness of KSE returns, 100 days rolling Historical and Normal VaR along with stressed VaR (SVaR), at 95 percent confidence level, have been computed.

[96] Stressed VaR refers to minimum 100-days rolling value during the entire sample period (January 2001-December 2017). S-VaR was observed during May 2005.

May 2017 had an unparallel match with its own historic standards **(Figure 2.15)**. The Price-Earning (P/E) ratio had jumped to 11.74 in May 2017 compared to 5-year average of 9.67 during CY11-16. The FSR-2016 cautioned about the meteoric rise in equity prices. Therefore, the market corrections were not completely unexpected. The P/E ratio gradually reduced and touched 7.9 in December 2017.[97]

Figure 2.15
KSE-100 Index - Actual Vs. HP Trend

KSE-100 started to pick sharply since Jan-16 and breached long-term trend by a wide margin



Source: SBP

d. The corporate profitability has remained strong during CY17. The after-tax Return on Equity (ROE) of top-100 listed companies has in fact improved to 18.57 percent in CY17 as compared to 15.85 percent in CY16. **(See chapter 5)**.

Bearish trend in the market has declined equity-based investment…

Both institutional and retail investors have reacted to the slide in equity prices. Particularly, Mutual Funds have switched their investment towards less risky but lower yielding money market instruments. The value of mutual fund investment in equities has dropped by 26.5 percent from PKR 373 billion in May 2017 to PKR 274 Billion in December 2017. In contrast, investment in money market instruments has increased by 26.3 percent from PKR 89 billion to PKR 113 billion during the same period.

However, equity funds still dominate the mutual funds' portfolio. Noticeably, both net selling and net-redemption have observed a gradual fall since May 2017, perhaps, indicating investors following the "wait and see" policy. **(See chapter 4.2)**.

Banks have faced limited impact of equity market volatility…

Banks have remained insulated from the volatility in equity market owing to regulatory safeguards resulting in small equity investment relative to size of their capital.[98] **(See Chapter 3.1)**.

Corporate debt market constitutes a thin portion of Capital Markets…

The trading of debt instruments is marginal at the local bourse. Most of the outstanding TFCs and Sukuk are privately placed, thus, a very small portion of such instruments is traded in the market.[99] Therefore, yields on existing corporate debt instruments do not truly signal the market prices.[100]

[97] Source: Bloomberg
[98] As per R-6 (B) of Prudential Regulations (PRs) for Corporate/Commercial Banking, SBP has limited bank's aggregate investments in equity (including future contracts) up to 30 percent of their respective equity (35 percent for Islamic Banks), subject to certain stipulated conditions. Similarly, as per Basel III rules, under the Look-Through Approach (LTA), banks are required to assigned capital charge on their indirect equity exposure through AMC.
[99] In Past, various banks issued TFCs to meet Minimum Capital Requirement (MCR) stipulated by SBP.
[100] Though PIBs yield of residual maturity over one year is also a long-term yield, these sovereign bonds carries negligible credit risk, thus, may not substitute the yield of corporate bonds.

The limited incidence of funds mobilization through debt market by corporates may be attributed to several factors including strong disclosure requirements and relatively lengthy procedure for listing. Also, the lack of appropriate pricing benchmark (such as corporate bond index) and thin volume of trading make them unattractive for perspective investors. There is a need to address the impediments for the development of corporate debt market so that corporate firms could tap the funding from investors directly. Once the debt market matures, the relevant bond indices could better serve the investors' risk-return apetite.

The outlook for financial markets is mixed…

Money market activities will primarily be driven by the size of fiscal needs and government's institutional preference for borrowing. The depreciation of PKR and rise in export competitiveness may positively impact financial inflows. However, there is a need to keep a watch on the quantum of FX flows during CY18.

The equity investors are likely to continue their "wait and see" strategy up until the outcome of general elections. Smooth transition of power to the next elected government will strengthen the positive investor sentiments. However, global regulatory environment, future monetary policy stance and external sector vulnerabilities may weigh-in on market direction.

Box 2.1: Derivatives Market in Pakistan

A derivative is an instrument whose value is determined from the value of underlying commodities, metal, index, currency, bond, stock etc. Derivatives are zero sum game (i.e. cost of one counter party is the benefit of other). Besides speculative motives, derivative also provides an opportunity to hedge against the potential risks.

A limited number of derivatives are permitted in Pakistan. For example, SBP has allowed few over the counter (OTC) derivative products for hedging purposes only subject to certain stipulated conditions and disclosure & reporting requirements.[101,102] Only Authorized Derivative Dealers (ADDs) and Non Market Maker Financial Institutions (NMI) can carry out derivatives.[103] SECP has allowed futures of listed equities through Future Market Act, 2016 where National Clearing Company of Pakistan Limited (NCCPL) plays its role as a clearing house.[104] Pakistan Mercantile Exchange (PMEX) has allowed futures of commodities.

Through SBP's Financial Derivative Business Guidelines (FDBR) - 2004, four types of derivative instruments have been allowed i.e. (a) Interest Rate Swap (IRS), (b) Forward Rate Agreement (FRA), (c) Third Currency Option, and (d) Cross Currency Swaps.[105] Derivative deals are conducted over the counter (OTC). Although the derivative trading in Pakistan is thin with limited number of well-aware clients, and, that is too for hedging only, such deals do signal the risk perception of the counterparties. Such signals may be treated as Early Warning Indicators (EWIs) and used as input, proactively, in formulating policy toolkit (e.g. monetary policy, macro-prudential policy etc). However, the underlying assumption holds that counterparties must have fundamental knowledge to understand the mechanics of the instruments in the context of their specific business needs.

The consolidated data of derivative transactions during CY17 depicts that major derivatives deals are carried out in Interest Rate Swap and Cross Currency Swaps. In IRS, the clients (generally corporate) enter into contract to either pay fix – receive floating (based on underlying loan) or vice versa on some notional amount.[106] The general trend of IRS deals in CY17 shows that clients have short (paying leg) the fix rate and long (receiving leg) the floating rate[107]. This could be attributed to expectation of bottoming out of low interest rate in near future where clients intend to lock-in low cost of borrowing for the term of their obligations. The ADDs, generally, factor in several risks associated with such transactions (e.g. credit risk, risk of rate rise, rate volatility etc) while determining the fix rate to be paid by the client. The current deals reveal fixed rate incorporate premium of around 200 bps over the floating rate.

The other major component of derivatives in Pakistan is CCSs, which, generally, provide a cover against the exchange rate risk.[108] The prevalent exchange volatility and external sector pressures have increased the quantum of CCSs in CY17. The data reveals the ADDs carrying out deals amongst themselves as well as with other institutional and corporate clients, both, for hedging as well as market making. The deals are mostly done in USD and PKR for a wide range of tenors.

Besides, a few ADDs have FX options on their derivative portfolio, mostly European in nature, for both

[101] See BSD Circular No.17 of 2004 (http://www.sbp.org.pk/bsd/2004/C17.htm)

[102] All derivative transactions are being reported through Derivative Transactions Reporting System (DTRS) to SBP on weekly basis (http://www.sbp.org.pk/dmmd/2015/C6.htm)

[103] See for ADDs and NMIs (http://www.sbp.org.pk/DFMD/FS-Dom.asp)

[104] Please see SECP's Future Market Act, 2016 (https://www.secp.gov.pk/document/futures-market-act-2016/?wpdmdl=14687)

[105] http://www.sbp.org.pk/DFMD/FS-Dom.asp

[106] The IRS may be used for both betting and hedging purposes (in Pakistan, only hedging is allowed). The party, which pay fixed rate (also called fix payer), expects the rate rise in future. At the same time, fix payer also know the stream of his payment outflows (i.e. cost) at the inception of contract. The fix receiver (float payer) expects rate changes in such a way that his receipt (fixed) would be higher than the payment (floating). IRSs are generally carried out for long tenor.

[107] Mostly, 3-months KIBOR is used as benchmark for floating rate.

[108] In CSS deals, counterparties exchange two different currencies at spot rate at the inception of the contract (also termed as borrowing and lending two different currencies). Both parties receive interest rates on lending currency and pay on borrowed currency, and exchange the original currencies at the end of the term with pre-specified exchange rate.

hedging and market making. However, FRA has been rarely seen in derivate contracts in CY17.

Besides the uncertainty arising from mark-to-market changes, the derivatives are prone to a number of others risks including liquidity risk (i.e. inability to unwind the deal at fair cost), legal risk due to ambiguous clauses in the deal etc.

Going forward, the size, number and types of derivative will depend upon the quantum of uncertainty in key economic variables, particularly, the exchange rate and interest rates. However, considering the lack of sophisticated customers and the fact that such instruments are only allowed to hedge the risks, the derivate deals are expected to remain limited in CY18.

Box 2.2: Commodity Market in Pakistan

Commodity exchanges operate in many countries around the globe, providing a platform to buyers and sellers for trade of commodities. Some of these commodity exchanges, having a long history and offering diverse products along with efficient and cost effective trading platforms, have become international/regional hubs. Leveraging upon the use of information technology, these exchanges offer the ease of trading irrespective of geographical location and time zone. While exchanges like Inter Continental Exchange (ICE), Chicago Mercantile Exchange (CME), Dubai Gold & Commodity Exchange are globally well known, exchanges of smaller scale operate in other countries as well.

In order to provide a regulated platform for trading of commodities and enhance the confidence of the investors, the Securities and Exchange Commission of Pakistan (SECP) allowed the creation of Pakistan Mercantile Exchange Limited (PMEX) (erstwhile National Commodity Exchange Limited) as the country's first demutualized exchange, where ownership and trading rights were completely segregated. The initial key stakeholders included Karachi, Lahore and Islamabad stock exchanges and leading financial institutions. In the beginning, only cash settled contracts of a few actively traded international commodities were listed and offered for trading, but, at present, both cash settled and deliverable (future) contracts are being traded.

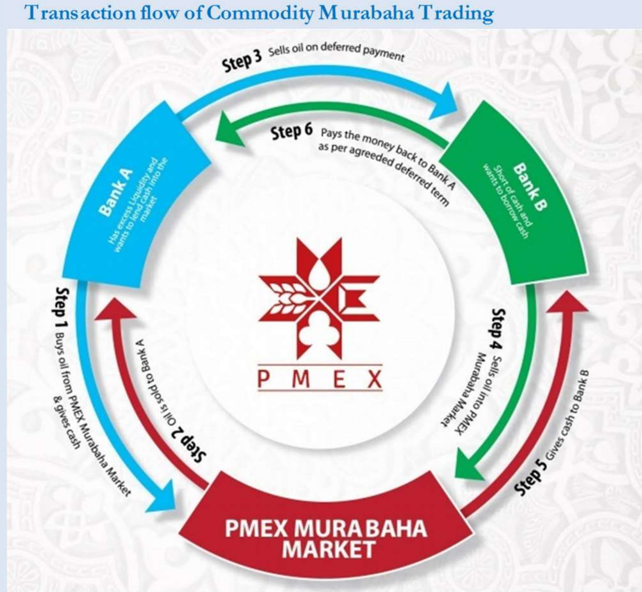
Currently, PMEX has 300 plus members[109]. During FY17 the total trading volume reached PKR 1.3 trillion with crude oil, currency pairs and gold constituting the major chunk of trading volume. [110] The healthy trading is reflected through the surge in PMEX index which touched 3,232 points at the end of CY17, depicting a YoY growth of 5.57 percent.

PMEX is designed to connect the participants of the real economy with the investors. Although various agri-based commodities are traded on the exchange, the direct participation of farmers seems to be low owing to lack of financial literacy, capital and access to the market itself.

Apart from that, PMEX can potentially become an important platform to manage the liquidity placement needs of Islamic financial institutions (IFIs) and mitigate settlement risk in some of the Islamic financial products.

In December 2017, SBP and SECP allowed the launch of three-month pilot commodity Murabaha trading product[111] facilitated through PMEX Shariah Compliant Murabaha Trading Platform (**Figure 1**). The country's first electronic Murabaha transaction was conducted between two Islamic Banks[112] in December 2017. Thus, PMEX can become an effective intermediary to cater to the long-standing issue of excess liquidity held by Islamic banks.

Figure 1
Transaction flow of Commodity Murabaha Trading



Source: PMEX Newsletter, Oct-Dec 2017

Besides, several products of Islamic modes of finance e.g. Salam, Murabaha, Istisna require that, in case of default, the underlying (promised) commodity be delivered through spot buying from the market. Thus, the development of wide ranged commodity market

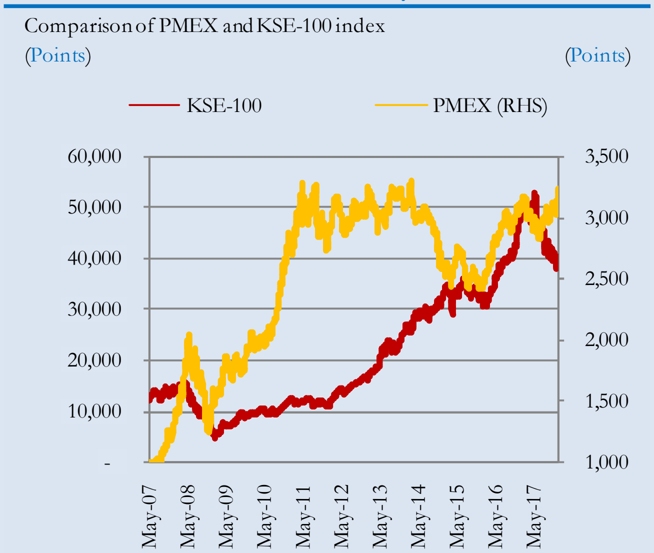
[109] http://www.pmex.co/wp-content/uploads/2018/04/PMEX-Membership-Database-Web-Site.pdf
[110] PMEX Annual Report, 2017 http://www.pmex.co/wp-content/uploads/2017/12/00-PMEX-AR-2017-web-version.pdf

[111] This is an Islamic alternative to traditional repo transaction (in Arabic: Bai Ina)
[112] PMEX Newsletter, Oct-Dec 2017 http://www.pmex.co/wp-content/uploads/2018/04/NL-PDF.pdf

exchange will also reduce the settlement risk (which is the risk due to unavailability of commodities in the market) and promote Islamic Banking as well.

In the context of financial stability, a robust commodity market (as an alternative investment avenue) may provide an effective hedge through diversification against downturns in the returns of traditional financial assets (e.g. equity, bonds, derivatives etc.).[113] In case of Pakistan, a comparison of historical data of PMEX and KSE-100 indices suggests that the correlation between the two (based on daily data) is negative 0.21 during the past five years (**Figure 2**). This reflects that during the period that witnessed a downturn (with high volatility) in KSE-100 index, the PMEX gained.

Figure 2
PMEX and KSE-100 index show countercyclical behaviour



Source: SBP, PMEX

Furthermore, prior to the commencement of formal commodity exchange in Pakistan, traders were more exposed to foreign exchange risk. In fact, they had to carry out trading through international exchanges involving payment in foreign exchange. PMEX offers an advantage in this respect as well because it allows the participants to pay margins in local currency despite the fact that the prices of many commodities are denominated in US Dollar.

An efficient technology based operational framework along with a strong risk management practices are the two prerequisites for a robust commodity market. It is worth mentioning that during CY17, PMEX has instituted a technology overhaul program whereby it has migrated its core technology architecture on cloud computing to provide efficient services to its members. Moreover, PMEX is also working towards strengthening its risk management regime. The Exchange has put in place a comprehensive 'Enterprise Risk Management' framework, developed a code of conduct for the brokers and elaborated market regulations to protect the interest of all the stakeholders.

In addition to providing a trading platform, PMEX also facilitates the clearing and settlement of transactions. As this entails settlement risk, PMEX requires its members to maintain historical Value at Risk (VaR) based margins with it and has also established a 'Settlement Guarantee Fund', which amounted to PKR 68.84 million at June 30, 2017[114] to mitigate the possibility of any systemic event.

Notwithstanding, there is a need to enhance the outreach of the market by bringing in more participants from the real sector (particularly farmers) within its domain to enable them to get the benefit from the fair-price mechanism. As PMEX develops, it could provide a risk-hedging platform especially during distress episodes in the financial markets.

[113] Source: Bhardwaj, Gorton and Rouwenhorst (2015): NBER Working Paper no.21243, "Facts and Fantasies about Commodity Futures Ten Years Later "
http://www.nber.org/papers/w21243

[114] PMEX Newsletter, Oct-Dec 2017
http://www.pmex.co/wp-content/uploads/2018/04/NL-PDF.pdf

Section A: Banking Sector

3.1 Performance and Risk Analysis of The Banking Sector

The banking sector's resilience has remained satisfactory. Capital adequacy has stayed strong with CAR at 15.8 percent and liquidity conditions at comfortable levels. A sharp pick up in financing has facilitated healthy growth in assets base, while asset quality has improved with NPL ratios declining to a decade low. On the funding side, slowdown in deposits have led to increase in the inter-bank borrowings to match the asset growth. Earnings have remained under pressure due to low interest rates and falling non-interest income, in addition to one-off settlement payment. Banks need to enhance their resource mobilization efforts, keep a close watch on the credit quality of fast growing lending portfolio and plan for ensuring compliance with gradually increasing capital requirements.

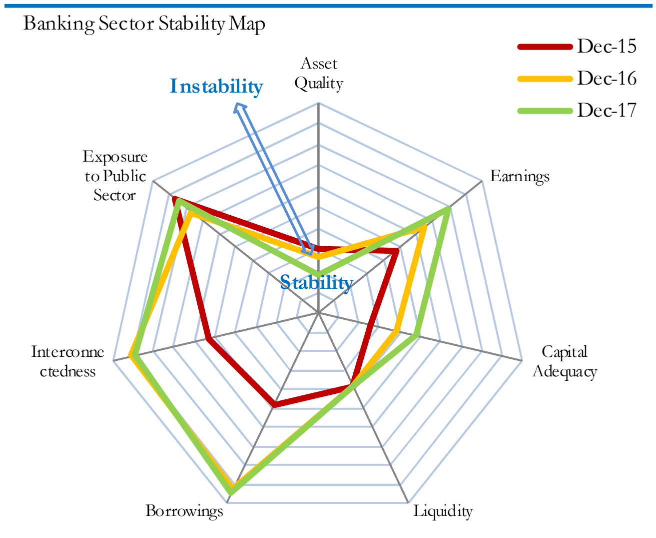
The performance and risk profile of the banking sector reflects challenging environment…

In terms of performance, the banking sector has responded to challenging financial conditions in a mixed way. On the one hand, low interest rates, moderate and below target inflation, pickup in economic activity, improved security situation, and better availability of energy supply to industry have strengthened the financing flows to private sector during CY17. On the other hand, profitability of the banking sector has declined due to sustained low interest rate environment. Moreover, idiosyncratic factors such as one-off settlement payment by a large bank also pulled back the profitability of the banking sector. On the funding side, deposit growth has decelerated triggering higher borrowing to support the asset growth.

In terms of risks, some dimensions have recorded improvements while others have depicted deterioration, as reflected in the Banking Sector Stability Map (BSSM) (**Figure 3.1).**[115] Particularly, asset quality has improved as the infection ratio has reached to a decade low level; capital adequacy remains well above the minimum regulatory benchmark and ample fund-based liquidity ensures banks' ability to meet unforeseen contingencies and obligations. Nevertheless, earnings have declined and moderation in deposit growth has led to rise in borrowings.

Figure 3.1.1

Banking sector perfoms better in some risk dimensions during CY17



Source: SBP

These developments, so far, do not raise any systemic concerns as earnings from core sources (interest earned on advances) are rising while borrowings from financial institutions (excluding

[115] The Banking Stability Map represents a comprehensive picture of stability in seven different dimensions. Risks in each dimension are measured by a weighted combination of key indicators. The percentile rank of each indicator gives the degree of stability relative to its history (since 1996). For details, please see Technical Appendix in FSR 2015. For methodology, please see Dattels, P., McCaughrin, R., Miyajima, K., & Puig, J. (2010). "Can you map global financial stability?" *IMF Working Papers*, 1-42.

SBP) have a small contribution in overall asset funding.

Below various dimensions of BSSM are discussed in detail.

3.1.1 Asset quality

Financing growth leads to reduction in infection ratio…

The quality of assets of the banking sector mainly emerges from advances as major chunk of investments is parked in credit risk-free government securities.

CY17 is marked with a sharp pick up in gross advances with YoY growth of 16.90 percent compared to 12.81 percent in CY16 [5-year (CY13-17) average: 10.92 percent]. Encouragingly, the key thrust has come from financing to private sector (domestic) which has surged by 16.40 percent in CY17 against 12.69 percent in CY16 (5-year average: 10.12 percent). Improvement in macroeconomic landscape with a positive growth outlook, lagged impact of monetary easing,[116] better energy supply and improved security conditions etc. have all played a role in accelerating the flow of advances.

The advances growth has remained broad based: textile (Y-o-Y growth: 16.23 percent), sugar (31.16 percent), cement (58.14 percent), agribusiness (10.17 percent). Segment-wise, the corporate sector has remained the key borrower with a growth of 17.60 percent in CY17 (13.02 percent in CY16). The SMEs' financing has also registered a decent growth of 12.10 percent in CY17 (29.22 percent in CY16). Noticeably, fixed investment advances (i.e. term finance) has seen a visible rise since last few years (5-year average: 13.96 percent). Moreover, the consumer finance has also surged by 20.82 percent in CY17 **(see Box 3.1.1 on consumer finance).**

Due to impressive advances growth, Non-Performing Loans (NPLs) to Gross Loans (infection) ratio has declined consistently to reach the level of 8.4 percent in CY17 (10.1 percent in CY16), lowest since 2008. Similarly, provision coverage ratio (Provisions to NPLs) has also improved to 87.2 percent (85.0 percent in CY16), while net-NPLs to net-loans ratio has declined to 1.2 percent in CY17 (1.6 percent in CY16). More importantly, the improvement in asset quality has been broad based across most of the banking groups **(Table 3.1.1)**.

Table 3.1.1
Asset Quality by Bank Category

Bank Category	CY14		CY15		CY16		CY17	
	Infection Ratio	Provision Coverage Ratio	Infection Ratio	Provision Coverage Ratio	Infection Ratio	Provision Coverage Ratio	Infection Ratio	Provision Coverage Ratio
	Percent							
PSCBs	17.82	71.20	18.28	79.05	15.90	81.43	13.40	87.03
LPBs	10.40	85.20	9.34	89.78	8.14	90.11	6.77	90.99
FBs	7.61	102.00	7.78	100.35	8.33	100.25	6.65	103.14
CBs	**11.94**	**80.90**	**11.13**	**86.29**	**9.72**	**87.28**	**8.09**	**89.75**
SBs	23.27	61.10	18.92	59.27	21.82	50.09	22.00	50.66
All banks	**12.27**	**79.80**	**11.36**	**84.95**	**10.06**	**85.05**	**8.43**	**87.24**

Source: SBP

NPLs in absolute terms have only declined marginally in CY17. Over the last few years, NPLs are hovering around PKR 600 billion with around 85 percent falling in the loss category. Though such past due loans are mostly provided-for (i.e. already expensed out) limiting the probability of further equity erosion, the provision expenses are, nevertheless, borne by banks. As such, efforts to recover the bad loans or settle through liquidating the pledged collaterals have largely been unfruitful. The recent initiatives at regulatory and legal fronts to resolve this issue create optimism for the future **(See Box 2 on regulatory developments)**.

The recent surge in advances does not raise any stability concerns…

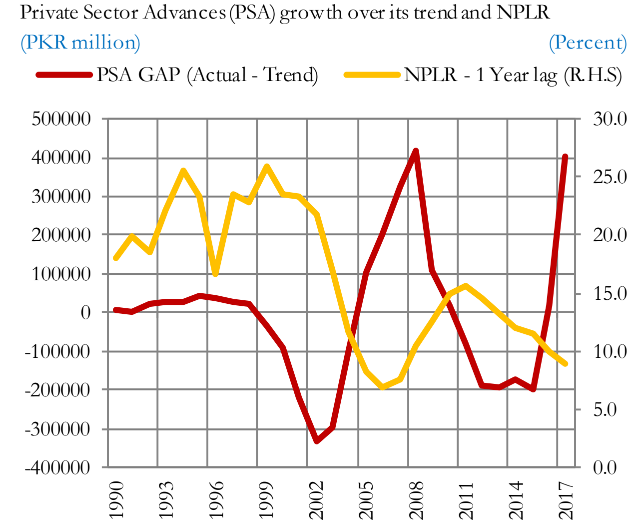
[116] WALR has reduced by 385 bps since November 2014 to 7.46 percent as of end December 2017.

Though the recent improvement in NPLR is a welcome sign, the question is whether this fall is permanent or not. Generally, during easy financial conditions, both borrowers and lenders optimistic behavior leads to excessive risk taking. But as soon as the conditions tighten borrowers repayment capacity shrinks and lenders become risk averse. This dual behavioral change leads to higher infection ratio. The long-term growth pattern of private sector advances gap and infection ratio reveals inverse relationship on few occasions **(Figure 3.1.2).**

Figure 3.1.2

Advances growth over its trend and Non-Performing Loans to Gross Loan (NPLR) ratio show contrasting pattern in different time slots

Private Sector Advances (PSA) growth over its trend and NPLR



Source: Monetary Survey, SBP

On other occasions, however, the trajectory of advances growth is not necessarily harmful as it may be the result of improving economic fundamentals resulting in better investing opportunities. Such financing upticks, generally, lead to permanent financial deepening.

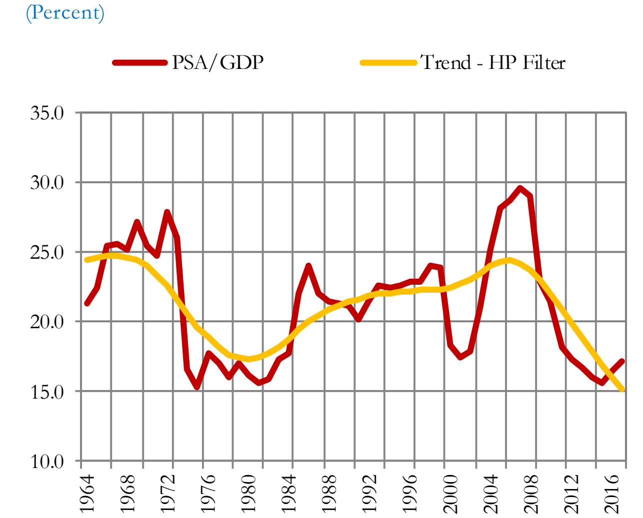
In this backdrop, a few facts may be worth considering in the context of the current rise in advances and behavior of NPLR:

1. In credit booms, advances, driven by optimistic sentiments, grow rapidly for an extended period not always supported by corresponding GDP growth.[117] The recent rise in advances, however, seems quite synchronized with the GDP growth. Private sector advances (PSA) to GDP ratio had been falling and remained below the long-term trend (HP Filter) until CY15 **(Figure 3.1.3)**. Thereafter, the ratio has started to pick up and just surpassed the trend in CY17. This means that the recent advances growth reflects genuine demand as economic activity has picked up pace.

Figure 3.1.3

Advances to GDP ratio has started to pick after long-lasting fall

Private Sector Advances (PSA) to GDP ratio and its Trend



Source; SBP

2. As highlighted earlier, there is a significant growth in fixed investment advances since last few years including CY17. Such long-term loans, generally, facilitate capacity building

[117] IMF classifies a credit expansion a boom if it exceeds the standard deviation of that country's credit fluctuations around a trend by multiple of a factor of 1.75 for more than 3-4 years (World Economic Outlook 2004, Chapter 4).

through investment in plants, machinery, technological upgradation and other capital goods. The enhanced capacity at firm's level brings in higher future production and profitability resulting in low probability of defaults.

3. Inflation has remained subdued and asset prices (e.g. equity instruments) has been fluctuating (instead of observing unidirectional upward trajectory) in the recent past. Absent any asset price bubbles, the "financial accelerator" impact is limited.

4. Banks have been lending to traditional sectors (such as textile, energy, sugar, agriculture etc.) and segments (e.g. corporate, SMEs, consumer etc.) of the economy as per their relative significance. They have not ventured into risky areas and exotic products (derivatives, securitization, alternative investments etc.) as generally associated with the availability of cheap liquidity.

5. Deposits, mostly the CASA, have provided the necessary funding support to meet the advances demand, though, some rise in borrowings has occurred in CY17.

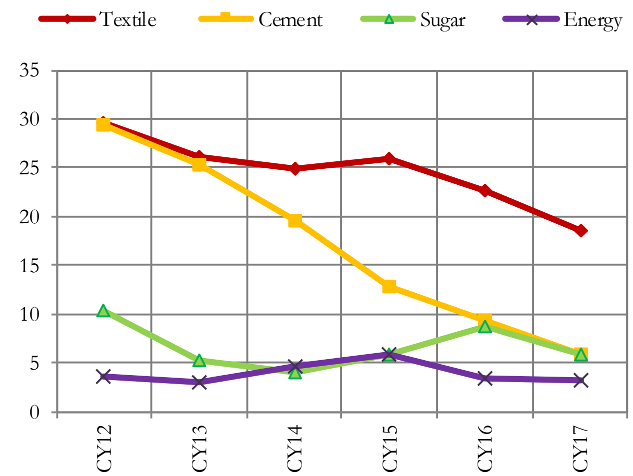
Concentration risk, though contained, needs close vigilance…

Since defaults of large borrowing groups/entities may impair banks' equity, SBP has taken several initiatives in this regard. This includes introduction of more stringent per party exposure limits (both, on entity and group level), ceiling on overall large exposure etc.[118,119] Because of such measures, the concentration risk has been assessed to be low in the banking sector.

Further, the size-wise analysis of listed corporates reveal that largest ones have the highest debt repayment capacity **(See chapter 5).** This provides additional comfort to the banking sector. Having said that, banks need to remain watchful of their large exposures due to their systemic significance.

Figure 3.1.4 (a)
Textile sector has the highest infection ratio

Sector-wise infection ratios
(Percent)



The asset quality improves across various sectors…

The recent improvement in asset quality is broad-based with decline in NPLRs of all major sectors and segments **(Figure 3.1.4 a & b)**. This is partly due to improving financials of corporates leading to higher repayment capacity and lower probability of defaults (**See Box 5.2 in Chapter 5**). Textile and cement sectors are showing sharp fall in NPLR since last few years and the momentum has continued during CY17. The decline in NPLR of energy sector is low, though; the ratio is already lowest amongst the major sectors. Segment-wise, SMEs, with highest NPLs ratio, have revealed a sharp decline in the ratio over the last few years.

118 http://www.sbp.org.pk/bprd/2017/CL11.htm

119 BIS has also addressed this issue and published detailed guidelines on large exposure (https://www.bis.org/publ/bcbs283.pdf)

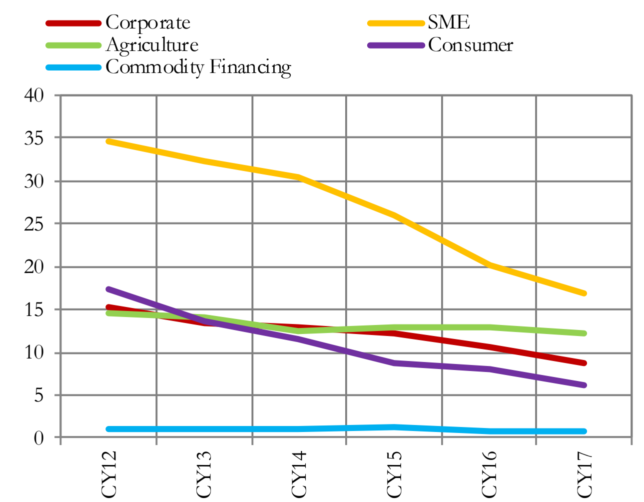
Besides, other segments are also showing gradual but continuous improvement in asset quality.

Figure 3.1.4 (b)

SME's infection ratio is falling yet highest

Segment-wise infection ratios

(Percent)



Source: SBP

Earnings

Declining profitability raises stability concerns…

Banking sector has witnessed a dip in profit (before tax) (PBT) of 15.05 percent during CY17. This is the second consecutive yearly decline in profits. The drop in PBT during CY17 has mainly resulted from decline in non-interest income (by 4.1 percent) and higher administrative expenses (of 8.9 percent). On top of that, one-off settlement payment by a large bank on its foreign operations during Q3CY17 has further dented the profitability.[120]

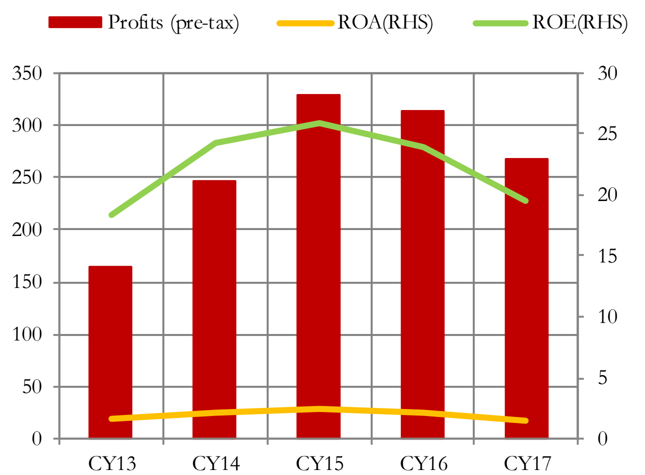
Resultantly, all profitability indicators have deteriorated during CY17; after tax - Return on Assets (ROA) has declined to 0.9 percent (1.3 percent in CY16), ROE to 11.5 percent (14.4 percent in CY16) and Net Interest Margin (NIM) to 3.3 percent (3.7 percent in CY16) **(Figure 3.1.5)**.

Figure 3.1.5

Profitability indicators slightly moved downwards

Trend in Banks Profitability

(PKR billion) (Percent)



Source: SBP

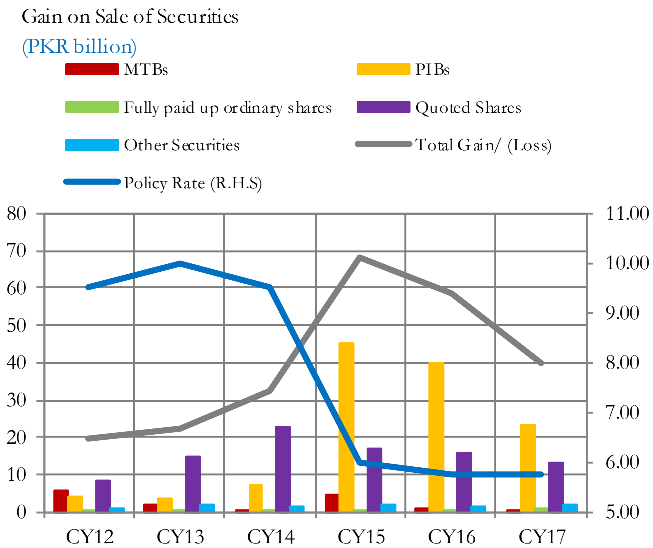
The non-interest income has declined, primarily, due to sharp reduction in gains on sale of securities. This is an outcome of persistent low interest rate **(Figure 3.1.6)**. Administrative expenses have surged, mainly, due to higher salary bills, allowances, expansion in the branch network, technology based initiatives for enhancing financial outreach etc.

In addition, low interest rates have also squeezed the net interest margin (NIM) of banks. High yielding GoP securities (mainly PIBs) have matured and are being replaced by short term MTBs or fresh PIBs, both having lower returns. While banks' investment in listed equity instruments is small due to the limit on exposure in equities, the sharp fall in equity prices during CY17 has also impacted the earnings through market-to-market losses **(See chapter 2)**[121].

[120] After adjusting this impact, the decline in profit (before tax) comes to 7.5 percent in CY17. This is still larger than the dip of 4.5 percent during CY16.

[121] During CY17, banks have observed loss of PKR 0.3 billion against sale of equity shares in sharp contrast to gain of PKR 5.9 billion in CY16.

Figure 3.1.6
Revaluation gains observed steep decline



Source: SBP

The DuPont analysis on ROE (after tax) of the banking sector reinforces the point that the key factor behind fall in earnings is sharp decline in non-interest income. There is 17.4 percent reduction in PBT/Net interest income (NII) ratio **(Table 3.1.2)**.

Table 3.1.2
Extended Du Pont Break of Banking Sector's ROE

	CY15	CY-16	CY-17
	Percent		
NI/PBT (a)	0.605	0.605	0.591
PBT/NII (b)	0.663	0.648	0.535
NII/Interest Income (c)	0.505	0.517	0.500
Interest Income/A (d)	0.075	0.063	0.058
A/E (e)	10.29	11.36	12.48
ROE (f = a x b x c x d x e)	15.63%	14.42%	11.53%

NI= Net Income, PBT=Profit before Tax, NII=Net Interest Income
A=Assets, E=Equity
Source: SBP

On the other hand, net interest income to gross interest income ratio is relatively stable (only decline of 2.3 percent) showing unwavering earning capacity of the banking sector from its earning assets. It may be worth noticing that the rise in leverage (including borrowings) has resisted the ROE from going further down in CY17. However, continuous rise in financial leverage (without a balanced growth in equity) may not be sustainable in the long-run.[122]

Government borrowing pattern also plays a role in the banking profitability…

The changing pattern of government borrowing from scheduled banks also affects their income stream. Switching of borrowing from banks to SBP (as observed during second half of CY16) or changing maturity preference of instruments (e.g. from PIBs to MTBs in CY17), leads to fluctuations in the path of return on investment (ROI).[123]

Profit of banking sector in future will depend on several factors…

The future profitability depends on a number of factors:

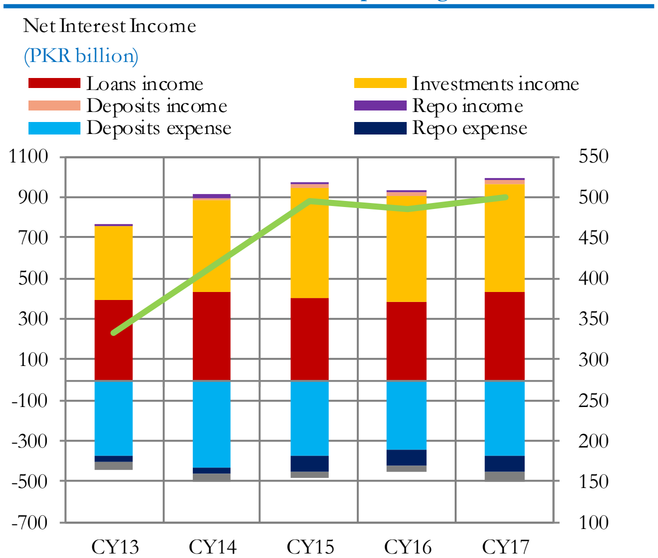
1. The continuity in the recent momentum of advances flows—particularly high yielding long-term loans—is the key for banks' earnings. Noticeably, the recent surge in financing volume has boosted Net Interest Income (NII) during CY17 **(Figure 3.1.7)**. NII has observed 2.9 percent growth during CY17 (2.3 percent decline in CY16) despite declining spread between average yields (on earning assets) and average cost (on interest bearing liabilities) throughout the year. The contribution of advances in interest income has

[122] Excessively high leverage raises the cost of borrowing and hence interest expenses. Eventually, this reduces the NII/Interest income ratio and hence ROE.
[123] It may be worth mentioning that the share of interest income from investments has increased from the low of 31.4 percent in Dec-10 to 58.3 percent in Jun-16 (53.6 percent in Dec-17). During the same period, government borrowing from schedule banks has increased from PKR 1,018.9 billion to PKR 5,752.6 billion.

risen to 43.1 percent in CY17 from 40.4 percent in CY16. On the contrary, investments' share has declined to 53.6 percent in CY17 from 56.2 percent in CY16. As such, earnings from the core intermediation function is accelerating, which may lift banks' earnings going forward.

Figure 3.1.7

Net Interest Income has witnessed a positive growth in CY17



Source: SBP

2. The reversion of equity prices may augment the banks' earnings, both, through direct (such as holdings of listed equities) and indirect exposure (through subsidiary AMCs etc.).

3. The recent tightening of monetary policy in January and May 2018 may further increase the net interest income.

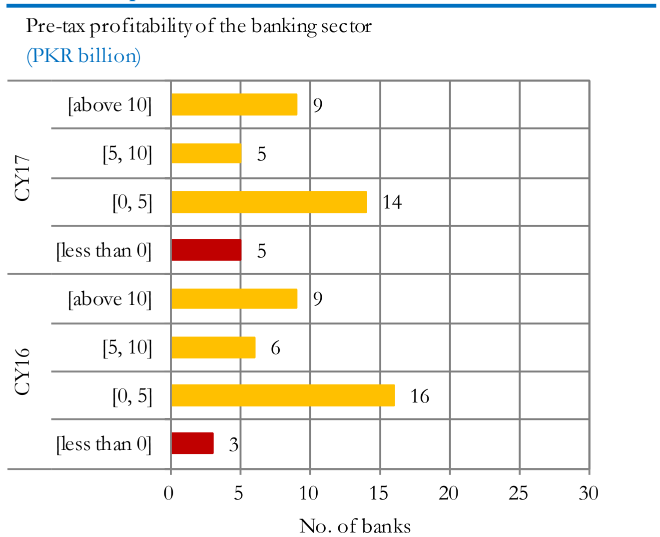
4. The idiosyncratic shock of settlement payment by a large bank is non-recurring in nature. After the imposition of penalty, the stock price of the relevant bank observed a sharp decline but recovered quickly. This indicates continuing stakeholders' confidence in the banking system. Moreover, the challenges being faced by overseas branches of domestic banks are being closely monitored and addressed (**See Box-3.1.2**).

The profitability has remained broad-based while loss making entities have negligible asset share in the industry …

The bank-wise distribution indicates a broad-based profit contribution as 29 banks posted profit with asset share of 97.60 percent in the industry **(Figure 3.1.8)**. On the other hand, the loss making banks (five) has asset share of only 2.40 percent. Further, a close analysis indicates that most of these banks are either under restructuring (or have recently gone through restructuring) or are newly established banks. Once restructuring concludes, these institutions are expected to support the profitability of the banking sector as a whole.

Figure 3.1.8

Bank-wise profit distribution has remained broad-based



Source: SBP

Solvency

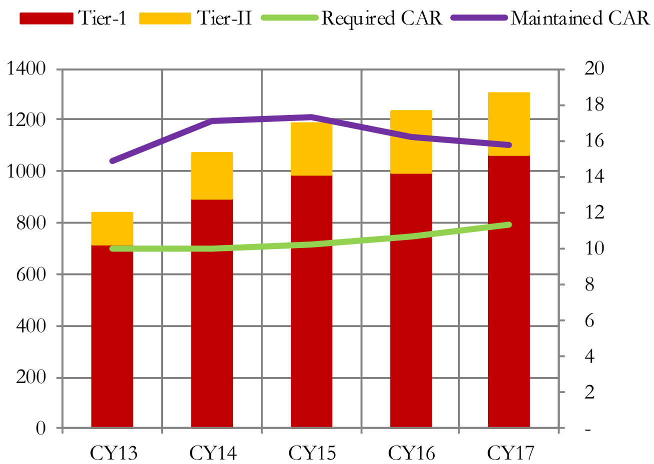
CAR remains robust despite rise in financing activity…

The capital adequacy ratio (CAR) of the banking sector has adjusted downwards from 16.2 percent in

CY16 to 15.8 percent in CY17 **(Figure 3.1.9)**. The fall in the CAR during CY17 is solely attributed to proportionally higher growth (11.7 percent) in total risk weighted assets (TRWA), on the back of rise in financing activity **(Figure 3.1.10)**.[124] Despite this, the existing CAR is still well above the local minimum required level of 11.275 percent and global minimum benchmark of 9.875 percent.[125]

Figure 3.1.9
CAR of the banks has remained well above the benchmark

Solvency profile
(PKR billion) (Percent)



Source: SBP

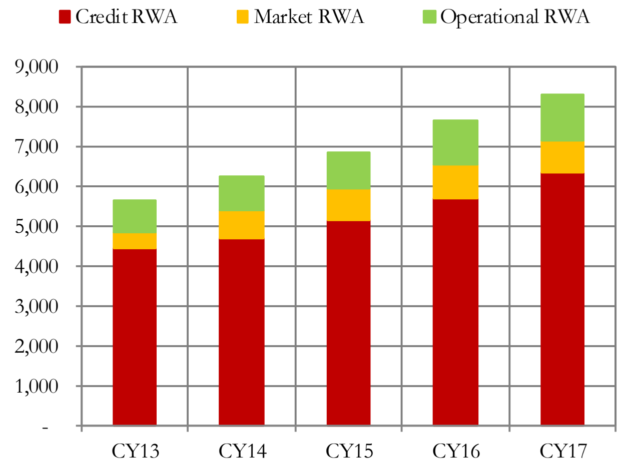
Moreover, the leverage ratio has also slightly declined to 4.7 percent in CY17 from 5.1 percent in CY16. This remains higher than the minimum required level of 3.0 percent.

High quality Tier I capital dominates eligible capital…

Tier I capital has increased in CY17 while Tier II capital has observed a marginal slide. The former has moved up due to rise in retained earnings, increase in share capital by few banks and issuance of perpetual debt (i.e. additional Tier I capital). Positively, the major portion of eligible capital comprises of Tier I capital; Tier I CAR is 12.9 percent. This high quality capital has the most loss absorbing capacity and serves as the first line of defense.

Figure 3.1.10
Credit risk dominates the overall risk

Riskiness of the banking sector
(PKR billion)



Source: SBP

Tier II capital, on the contrary, has slightly receded due to decline in revaluation reserves despite higher recognition rate (on revaluation reserves) and off-loading of mutual funds portfolio.[126]

As per SBP's capital requirements, banks are required to raise their CAR, in a phased manner, to 12.5 percent by year-end 2019. In this backdrop, some of the capital enhancement by banks could be attributed to this forthcoming regulatory compulsion **(Table 3.1.3)**.[127]

[124] If one-off settlement payment by one large bank (as discussed earlier) is adjusted, CAR would rise to 16.05 percent.
[125] https://www.bis.org/bcbs/basel3/basel3_phase_in_arrangements.pdf
[126] As per Basel standards, 45 percent of revaluation reserves are counted towards Tier II capital. For rest 55 percent, a recognition rate is applied for inclusion in Tier II capital. Recognition rate has been increased from 60 percent in CY16 to 80 percent in CY17 ((See Q13:http://www.sbp.org.pk/bprd/basel/FAQs-Basel-III.pdf)
[127] BP&RD Circular No.06 of 2013 (http://www.sbp.org.pk/bprd/2013/C6.htm)

Table 3.1.3

Banks need to enhance, phase-wise, CAR up till end year CY19

Ratio	Year End						As of Dec 31
	CY13	CY14	CY15	CY16	CY17	CY18	CY19
	Percent						
CET1	5.0	5.5	6.0	6.0	6.0	6.0	6.0
ADT-1	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Tier 1	6.5	7.0	7.5	7.5	7.5	7.5	7.5
Total Capital	10.0	10.0	10.0	10.0	10.0	10.0	10.0
CCB*			0.3	0.7	1.3	1.9	2.5
Total Capital Plus CCB	**10.0**	**10.0**	**10.3**	**10.7**	**11.3**	**11.9**	**12.5**

* Consisting of CET1 only

Source: SBP

Table 3.1.4

Capital Cushion CY17

	Existing	Simulated	Cushion
	PKR billion		
Capital	1,305.5	1,305.5	-
RWAs	8,282.2	11,578.7	3,296.5
CAR	15.8%	11.3%	

Source: SBP

Rise in credit risk weighted assets dominate…

Credit risk weighted assets (CRWAs) – having 77 percent share in total risk weighted assets (TRWA) – have surged by 11.0 percent during CY17. Noticeably, most of the credit portfolio falls in the bucket of unrated credit exposure, which attracts higher risk weight of 100 percent or more. However, the surplus CAR still provides available cushion for additional CRWA **(Table 3.1.4)**.

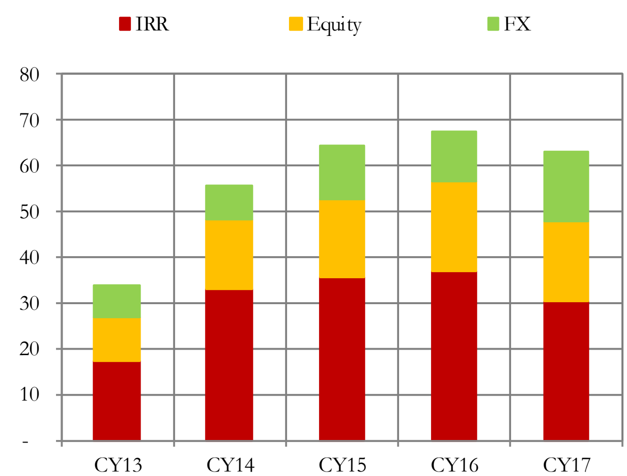
Lower duration of GoP securities reduces market risk…

Market Risk Weighted Assets (MRWAs), after observing consistent rise in the last few years, have reduced by 6.3 percent in CY17 **(Figure 3.1.11)**. There is marked reduction in capital charge for interest rate risk (market related). This is an outcome of reduced duration (i.e. risk sensitivity to bonds) owing to switching of banks' investment from long-term PIBs to short-term MTBs.[128,129]

Figure 3.1.11

Interest Rate Risk (IRR) has remained the major component of market risk

Market Risk Components



Source: SBP

Similarly, capital charge for listed equity instruments has reduced because of lower equity exposure of banks; an outcome of sharp decline in equity prices during CY17 **(See chapter 2).** On the other hand, the capital charge for FX has risen due to depreciation of PKR.

Operational risk weighted assets of the banking sector rise…

Operational Risk Weighted Assets (ORWAs) have observed a rise of 6.80 percent during CY17. Since most banks are using Basic Indicator Approach

128 As per Basel standards, capital charge is first calculated and then converted into MRWAs by multiplying the overall capital charge by 12.5.

129 As per Basel standards, interest rate risk has two components i.e. (i) issuer specific risk and (ii) general market related risk. The higher duration of the instruments, attract higher capital charge for general market related interest rate risk due to higher duration or interest rate risk sensitivity of the instrument.

(BIA), the ORWAs have risen due to increase in average audited income.

Considering banks are prone to a wide range of operational risks including frauds, forgeries, legal cases, IT failure, external issues etc., it may be desirable to assess the operational risk through actual loss data. SBP has been encouraging banks to develop operational risk management framework and gather actual loss data, which could then be used in advanced approaches to estimate ORWAs.[130]

Table 3.1.5

Distribution of Banks by CAR

	CY12	CY13	CY14	CY15	CY16	CY17
CAR<Required	5	5	3	3	4	4
Required < CAR < 15 percent	9	12	12	13	13	11
> 15 percent	24	21	22	19	17	18
Total	38	38	37	35	34	34

Source: SBP

Most of the banks have CAR well above minimum requirement…

Bank-wise distribution of CAR reveals that majority of banks have CAR above the required level **(Table 3.1.5)**. The number of CAR non-compliant banks has stayed at four in CY17. These banks have negligible asset share of 2.0 percent in the industry. Moreover, using tools such as stress testing, SBP continuously and proactively monitors the capital trend of the banking sector **(See Chapter 7)**. Besides, banks are actively pursued to implement their time bound capital enhancement plans.

Liquidity

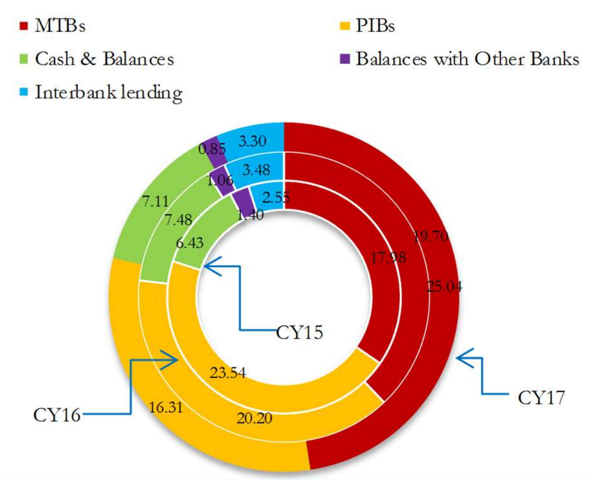
Banks have maintained strong fund-based liquidity due to their investment in government securities, which has observed addition of 18.5 percent during CY17 **(Figure 3.1.12)**. Further, placement of high portion of such securities in AFS and HFT categories ensures liquidity is at hand any time. The strong liquidity indicates banks' ability to meet obligations (including deposits) of wide spectrum of maturities.

Figure 3.1.12

High quality liquid assets ensure efficient liquidity management

Liquid Assets as a percentage of Total Assets

(Percent)



Source: SBP

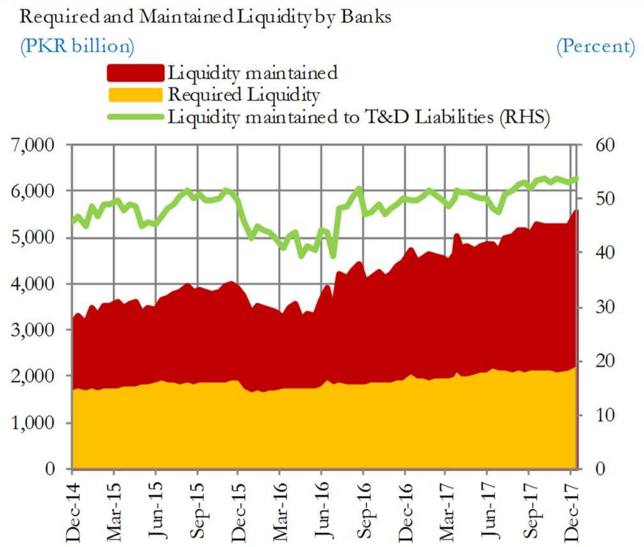
Liquidity indicators improve further…

Despite significant increase in asset base, liquid assets to total assets ratio has further strengthened to 54.0 percent during CY17 (53.7 percent in CY16). As of end December 2017, banks have maintained liquid asset to demand & time liabilities ratio of 53.8 percent (yearly average of 47.5 percent during CY17); much higher than required SLR and CRR

[130] BPRD Circular No.04 of 2014
http://www.sbp.org.pk/bprd/2014/C4.htm

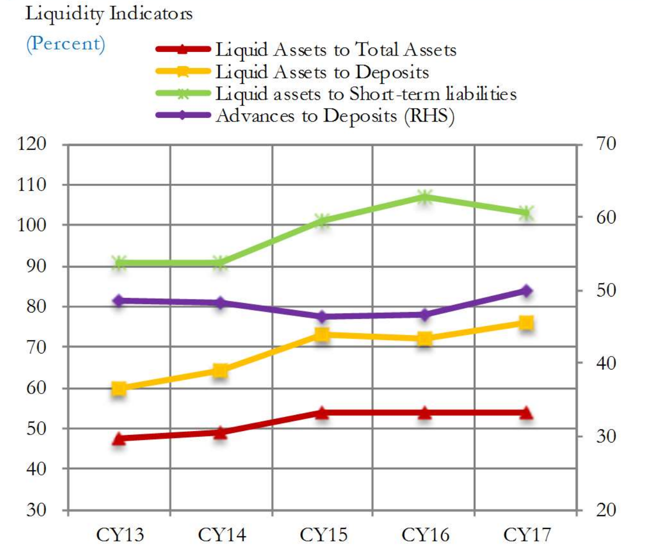
ratios of 19 percent and 5 percent, respectively (against demand liabilities) **(Figure 3.1.13)**.[131]

Figure 3.1.13
Banks have maintained surplus liquidity



Source: SBP

Figure 3.1.14
Liquidity Indicators have stayed healthy

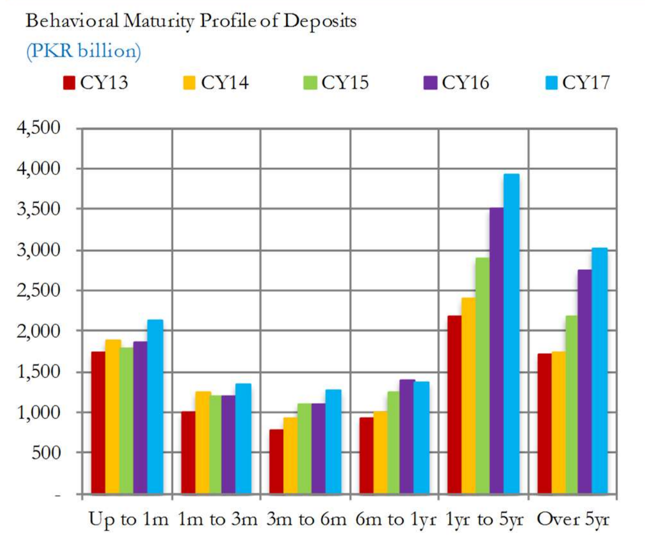


Source: SBP

Though liquid asset to short-term liabilities ratio has reduced somewhat, owing to large magnitude of financial borrowings during CY17, the ratio is still more than 100 percent **(Figure 3.1.14)**. All liquidity indicators are strong despite rise in "advances to deposit" ratio (advances are considered as less liquid assets).

Since last few years, banks have deployed bulk of funds in term finance (i.e. fixed investment advances) while share of fixed deposits (in overall deposits) has shrunk. The share of term advances has risen from 24.1 percent (in overall domestic advances) in CY13 to 34.1 percent in CY17. On the other hand, the share of fixed deposit has reduced from 26.7 percent in 2013 to 21.8 percent in CY17. The risk of maturity mismatch seems to emerge in this backdrop.

Figure 3.1.15
Longer behavioral maturities of deposits have shielded banks against potential liquidity risks



Source: SBP

However, the risk appears hedged from two perspectives. First, banks are loaded with liquid govt. securities, which provide an intrinsic quick and reliable liquidity support at all times. Second, the

131 Time liabilities are exempt from the requirements of SLR and CRR.

pattern of behavioral maturity suggest that most of the deposits fall within the category of maturity over one year including a significant portion placed in maturity over five years **(Figure 3.1.15)**

Borrowings

Borrowings rise, still cover small portion of liabilities…

The borrowings have moved up during CY17 owing to asset expansion in the wake of unmatched deposit growth. Noticeably, deposits have decelerated to 10.3 percent during CY17 compared to 13.56 percent in CY16 as well as 5-year average of 13.61 percent during CY12-16.

Lower deposit growth has occurred due to squeeze in the growth of domestic remunerative deposits and scaling back of operations by few banks in overseas market.[132] Thus, with shrinking support from deposits, banks have relied heavily on borrowings (growth: 60.9 percent) as an alternative funding source to meet the required liquidity needs. Banks' weekly average outstanding borrowing of PKR 2.9 trillion during CY17 has been larger than the weekly outstanding average of PKR 2.2 trillion during CY16. Excluding repo borrowing from SBP, call and repo borrowings within the banks have also moved up **(Figure 3.1.16)**.

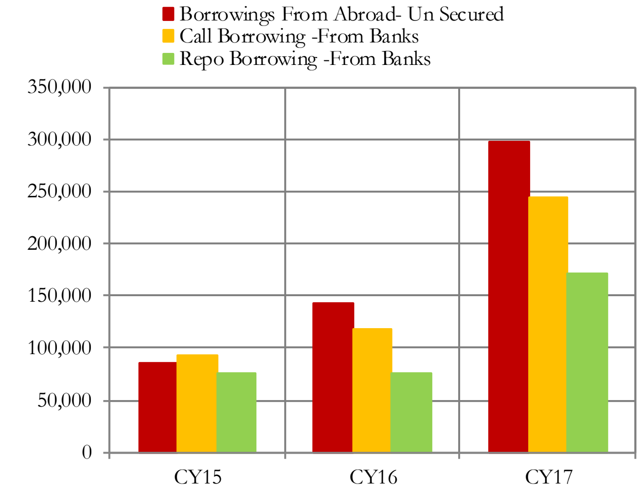
However, the pick-up in borrowings during CY17 does not reveal any immediate concerns because total borrowings still comprise small portion of overall liabilities and banks' ability to generate funds through core sources, i.e. deposits, remains intact **(Figure 3.1.17)**. Nevertheless, in case the borrowing momentum continues, the risk to financial stability would rise.

Figure 3.1.16

Banking borrowings have surged in all categories

Classification of Financial Borrowings

(PKR million)



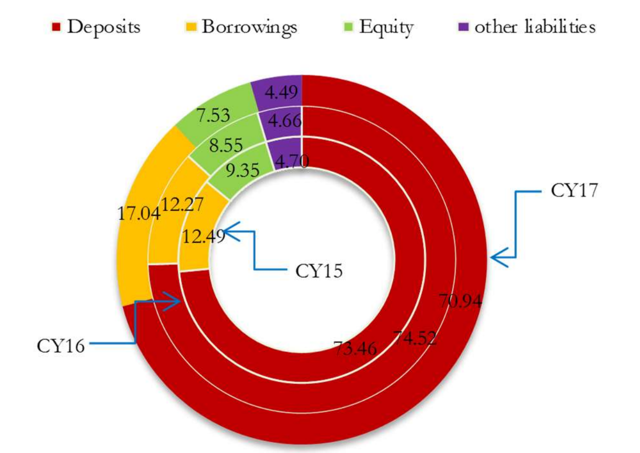
Source: SBP

Figure 3.1.17

Deposits continued to be the main funding source

Funding structure

(Percent)



Source: SBP

Interconnectedness

Interconnectedness, within the banking sector, has remained at an elevated level, primarily, on account of higher volume of interbank transactions (i.e.

[132] See Quarterly Performance Review of Banking Sector, (October-December, 2017).

lendings, borrowings and fund placements). However, like the borrowings, overall volume of such interbank transactions is just a small portion of overall assets or liabilities reflecting negligible contagion risk.

Public Sector Exposure

Public sector exposure on banking balance sheet has slightly increased owing to higher volume on investment in government securities as well as direct loans to Public Sector Entities (PSEs). Though public sector exposure carries a limited credit risk (and that too only for PSEs), other risks still prevail including market risk (particularly on long-term instruments), change in government borrowing preferences (as discussed earlier) etc.

The outlook portrays mixed expectations for the banking sector…

The advances flow to the private sector is contingent upon the demand and supply conditions in the economy. If the growth momentum of the economy sustains, energy availability improves, exports rise due to PKR depreciation and better global demand prospects, and supportive policy measures remain in place, the advances to private sector may accelerate. However, rising cost of borrowing, uncertainties associated with upcoming elections, external sector vulnerabilities and gradual tightening of global financial conditions could restrain investment.

The restoration in deposit growth to its long-term trend is fundamental to sustaining advances growth. Besides income levels, this depends upon factors such as return on deposits, transaction costs including taxes, return on alternate avenues and public preference for cash.

Asset quality is likely to remain satisfactory. However, given the recent increase in interest rates, banks need to be vigilant in managing their credit risk.

Earnings of the banking sector, apart from growth in advances, depends upon the borrowing pattern and institutional preference of government as well as legal challenges faced by few banks.[133] Further, the recent rate rise may lead to narrowing down of gain on sale of securities.

The CAR may experience some adjustment because of probable rise in CRWAs and moderation in revaluation reserves. However, it is expected to remain well above the minimum prescribed level.

Another important element that may impact the banking sector in the coming years is the inclusion of the country in the FATF's grey list. Although a well established AML/CFT regime exist in the country, it is being further strengthened to meet the international requirements (**See Box 3.1.3**).

[133] Few large banks could face sizeable payments because of pension claims which have been recognized in their financials as of March 31, 2018.

Box 3.1.1: Growth Issues in Consumer Finance and SBP Measures

Consumer finance (CF) in Pakistan is one of the financially underserved segments of the credit market. It has not been able to grow steadily and achieve some level of maturity despite witnessing historic growth during CY03-07. In recent years, the growth in CF has been robust but financing to additional consumers appears quite moderate.[134]

Moreover, CF to GDP ratio of Pakistan is considerably lower than other emerging market economies (**Table 1**). One of the factors is weak mortgage financing which contributes only 17.83 percent to total CF. This is in sharp contrast to other emerging market economies where mortgage finance generally contributes around half of the CF.[135]

Table 1

Consumer Finance as Percentage of GDP - Cross Country Comparison

Country	FY14	FY15	FY16	FY17
	Percent			
Pakistan	1.15	1.17	1.20	1.29
India	7.71	8.05	8.72	9.86
Indonesia	38.43	38.53	38.60	39.20
Malaysia	34.05	35.16	35.11	33.69
Mexico	2.99	3.10	3.31	3.34
Philippines	7.14	7.96	8.78	9.44
Thailand	28.12	29.05	29.11	28.78

Source: SBP & Haver Analytics

As a result, unlike other jurisdictions, from stability point of view, CF poses meager threat to Pakistan's economy at present. Given its importance for economic growth and limited stability risk concerns, SBP has made mortgage financing one of its top priorities.

Over the past few years, CF has picked up momentum with an average annual growth of 12.47 percent during CY13-17. Particularly in CY17, CF has grown by 20.62 percent (YoY basis), highest since CY07. This is largely driven by growth in auto loans (34.61 percent) followed by mortgage loans (29.82 percent). Other than the secured nature of auto loans, banks' growing attraction towards auto industry, in recent years, is the increase in demand of automobiles.[136]

Table 2

Component-wise distribution of Consumer Finance

	CY13	CY14	CY15	CY16	CY17
	PKR Billion Outstanding				
Credit Cards	21.4	22.8	24.7	28.3	34.2
Auto Loans	55.8	70.9	95.1	125.9	169.5
Consumer Durable	0.2	0.3	0.3	0.3	0.7
Mortgage Loan	53.1	52.3	54.4	61.6	80.0
Other Personal Loans	142.6	147.7	161.1	155.7	164.1
Consumer Finance	273.2	294.0	335.6	371.8	448.5
Total Advances	4,505.5	4,930.0	5,330.1	6,013.1	7,029.4
Consumer Finance as %age of Total Advances	6.06	5.96	6.30	6.18	6.38

Source: SBP

Historically, low interest rates have encouraged the banking sector to increase CF due to *search-for-yield* motive. With easy monetary policy in vogue recently, banks have opted to take on more risk to maintain their interest income.[137] Moreover, ease in repayment capacity of the borrowers (induced by low interest rates) has led to higher demand for CF as well. Resultantly, as the CF has increased the infection ratio has come down to 6.21 percent in CY17 from 8.11 percent in CY16. Lower credit risk has provided further impetus to banks to take on more exposure in CF.

Despite recent momentum in CF, there are numerous impediments that the banks face. Consumer's low level of income discourages them to extend CF beyond a small pool of salaried individuals.

134 The number of CF customers has increased by an average of 2.88 percent during CY14-17 as opposed to 13.30 percent increase in amount of CF.

135 Analysis reveals that by removing mortgage finance, total CF declines by around half in case of India, Malaysia, Philippines and Turkey.

136 According to the data published by Pakistan Automotive Manufacturers Association (PAMA), in CY17, the total number of automobiles produced has increased by 19.04 percent (39.97 percent in CY16), whereas, the number of automobiles sold has increased by 19.05 percent (40.67 percent in CY16).

137 Spread of the banking sector declined to 2.18 percent in CY17 from 2.52 percent in CY16.

Moreover, structural problems in housing industry have hindered the potential growth of mortgage finance in Pakistan. Weak foreclosure standards, lengthy judicial procedures and non-automation of documentation are dis-incentivizing banks from going into mortgage financing. Moreover, prevailing real estate prices along with unfavorable terms and conditions of existing mortgage products make mortgage finance affordable only for high net worth individuals.[138]

In light of the aforementioned issues in CF, within its domain, SBP is playing an active role to facilitate CF in Pakistan.

1. In CY17, SBP with the support of World Bank has established Pakistan Mortgage Refinance Company (PMRC) to improve access of housing finance in Pakistan. Besides dealing with the existing market failures, the purpose of PMRC is to encourage fixed rate mortgages and longer maturity loans to allow lower-middle and middle class households to have access to mortgage finance.

2. SBP has revised Prudential Regulations (PRs) for housing finance. The main purpose was to increase the extent of additional housing finance and remove restriction on the frequency of property revaluation.[139]

3. The regulatory retail portfolio (including CF) limit under Basel Capital Framework has been enhanced to PKR 125.0 million from PKR 75.0 million. This development is expected to support the growth of credit to the retail sectors as well as SMEs.[140]

4. SBP also takes into account customer complaints in order to retain consumer confidence in the financial system. For this purpose SBP has launched Consumer Grievances Handling Mechanism (CGHM) and a dedicated helpline for banking customers.[141,142]

5. Following the international best practices, SBP has developed *Product Disclosure Requirements* and *Know Your Rights and Responsibilities as a Banks' Consumer*.[143,144] This will assist consumers in making informed decisions over diversified and complex financial products.

6. SBP in collaboration with Pakistan Banks Association (PBA) established the Electronic Credit Information Bureau (e-CIB). SBP collects and consolidate the monthly information of individual borrowers, which is accessible on request to any bank. This facilitates assessment of the credit worthiness of borrowers.

---

[138] The World Bank: Pakistan Housing Finance Project (P162095): http://documents.worldbank.org/curated/en/277261492752441488/pdf/ITM00184-P162095-04-21-2017-1492752439147.pdf
[139] IH&SMEFD Circular No. 3, 2017
[140] BPRD Circular No. 08, 2017
[141] BC&CPD Circular No. 01, 2016
[142] BC&CPD Circular No. 04, 2017
[143] BC&CPD Circular No. 2, 2016
[144] BC&CPD Circular No. 1, 2017

Box 3.1.2: Analysis of the Overseas Operations of Banks in CY17

Banks, generally, provide cross-jurisdictional financial services through foreign branches, subsidiaries, representative offices etc. Besides trade facilitation, such operations enable banks to reap some benefits including diversification (geographical, financial product-wise or through different currencies etc.), technology transfer, investment in human capital, business expansion with expanded market etc.

The banking sector of Pakistan has presence in various jurisdictions around the world. As of December 31, 2017, nine (9) local banks, having 117 branches, 17 representative office (ROs) and eight subsidiaries are operating in 36 jurisdictions including Export Processing Zone in Pakistan. Largest number of branches are operating in

Bangladesh and UAE (18 in each country) followed by Bahrain and Sri Lanka (13 in each country).

Foreign operations of banks are, generally exposed, to various risks including non-compliance to laws and regulations of host countries as well as to their changing macro financial conditions. Besides, legal issues could also create significant stress. Other than monetary loss, any materialization of such risks can expose the banks to reputational loss.

The foreign branches of local banks, though performing reasonably well, have recently been exposed to some critical risks. In 2017, one-off settlement payment made by a large local bank resulted in sizeable impact on its bottom line.

In this backdrop, it is imperative to assess the performance and soundness of foreign operations, particularly, their loss absorbing capacity.

The consolidated financials reveal that, the scaling back of operations by some banks in response to emerging challenges, the **asset** base of the overseas branches has slightly contracted by 3.99 percent during CY17 (Average 5-years' growth: 8.15 percent) **(Table 1**). However, the overseas operations still contribute 4.49 percent to the overall asset base of the banking sector as of end December, 2017.

Table 1
Consolidated Position of Overseas Branches of Banks

	CY15	CY16	CY17
Key Variables			
Assets	883.6	867.0	832.3
Gross Loans	421.3	458.4	463.7
Investments	228.8	273.8	234.2
Deposit	641.0	626.4	594.0
Pre-Tax Profit (YTD)	9.4	10.5	5.3
After-Tax Profit (YTD)	8.3	8.6	5.9
NPLs	62.1	66.0	78.3
Provisioning	40.2	60.0	68.5
NPLs-Net	21.9	5.9	9.8
Financial Soundness Indicators			
ADR	59.50	73.19	78.07
NPLs to Total Loans	14.70	14.39	16.88
Net NPLs to Net Loans	5.70	1.48	2.47
ROA	1.10	1.00	0.70

Source: SBP

The foreign branches seems to be playing relatively better financial intermediary roles than their local counterparts with advances to deposit ratio of 78.1 percent. During CY17, **Gross loans** have slightly risen to PKR 463.7 billion from PKR 458.4 billion in CY16. The major chunk of advances is disbursed to sectors including financial, automobile and transportation as well as individuals.

On the contrary, **investments** have declined by 14.5 percent during the same period due to divestment in federal govt. securities as well as bonds/TFCs etc.

In line with the asset growth trajectory, **deposits** have also contracted to PKR 234.2 billion (primarily due to non-remunerative current deposits) in CY17 from PKR 273.8 billion in CY16.

The asset quality of the foreign operations has declined a bit with rise in absolute Non-**performing loans** (NPLs) to PKR 12.3 billion and infection ratio to 16.88 percent in CY17. However, most of the bad loans are already provided-for with net NPLs to net loans ratio at 2.5 percent. Moreover, investigations reveal that NPLs are not broad based as most of the banks are having negligible infection ratio.

Profitability of the overseas banks' branches is not that encouraging in CY17 as pre-tax profit has declined to PKR 5.3 billion from PKR 10.5 billion in CY16. This is mainly on account of increased provisioning and administrative expenditures in CY17. Accordingly, return on asset (ROA) has slowed down to 0.7 percent in CY17 from 1.0 percent in CY16.

Overall, the overseas branches are contributing positively to the operations of the banks. However, the risks emanating from such operations demand a careful and in-depth review of the system and controls of these branches by the banks. Also, keeping in view that a significant portion of foreign business pertains to remittances and correspondent banking, it is imperative to strengthen the AML-CFT regime at these branches in line with best international practices. SBP, in its supervisory capacity, is working closely with the banks to address any concerns.

Box 3.1.3: FATF and AML/CFT Regime in Pakistan

Background

Integrity of a financial system against the misuse for money laundering and terrorist financing has emerged as a key policy concern, and international agencies and policy makers all over the world are making serious efforts to cope with these anti-social activities. In this regard, Financial Action Task Force (FATF), an inter-governmental body established in 1989, has emerged as a pivotal policy making body. It sets the standards and promotes effective implementation of legal, regulatory and operational measures for combating money laundering, terrorist financing and other related threats to integrity of the international financial system. The FATF has developed a series of Recommendations that are recognized as the standard for combating money laundering and the financing of terrorism and proliferation of weapons of mass destruction. These recommendations form the basis for a coordinated response to different threats to the integrity of financial system and help ensure a level playing field for different stakeholders in the economies. First issued in 1990, the FATF Recommendations were revised in 1996, 2001, 2003, and then most recently in 2012 to ensure that they remain relevant to the dynamic environment and feasible for universal application.[145]

Pakistan's AML/CFT Regime and FATF

Policy makers in Pakistan have always appreciated the importance of financial system's integrity against misuse for money laundering and terrorist financing. The SBP introduced the policy framework on AML/ CFT in early 1990s, and since then it has evolved to address both international standards and dynamics of the local financial markets. The AML law, defining the legal obligations in respect of money laundering and terrorist financing and enjoining the roles and powers of different stakeholders and law enforcement agencies, was promulgated in 2007. To facilitate implementation of the law a full-fledged and independent Financial Monitoring Unit (a financial intelligence unit) has been established which, monitors suspicious transactions reports (STRs) from different economic agents, call reporting entities and, after carrying out due assessment, refers the potential cases of money laundering and terrorist financing to the respective investigation agency for further examination and prosecution. Besides, FMU shares financial intelligence with financial sector regulators when regulatory breaches are noted during analysis of STRs.

Pakistan is not a member of the FATF; the country is associated with the FATF through FATF-Style Regional Body (FSRB) i.e. Asia-Pacific Group on Money Laundering (APG), which assessed the country in 2005 and 2009 and followed up in the following years to address the identified observations. In Jul 2009, the last mutual evaluation report (MER) of Pakistan against the FATF's recommendations was published[146]. The report identified some deficiencies in the AML/CFT regime and suggested measures to overcome the underlying risks. In line with the assessment, Pakistani authorities has made strenuous efforts and introduced a number of reforms and improvements in legal, regulatory and operational frameworks to address the concerns with regard to compliance with international standards, and has been reporting progress to APG. Pursuant to third round of mutual evaluations under the FATF's revised standards and methodology, Pakistan's third assessment has also been initiated.

In recent years, the country has taken further measures to strengthen the AML/CFT regime, which include:

- Amendments in AML Act, 2010 (Dec 2015) to streamline it with international standards described by FATF.
- Addition of Fiscal offences under Sales Tax (Feb 2016).

[145] http://www.fatf-gafi.org/publications/fatfrecommendations/documents/fatf-recommendations.html

[146] http://www.apgml.org/documents/default.aspx?s=date&c=7&pcPage=6

- Addition of Directorate General (I&I Inland Revenue) of FBR as investigating and prosecuting agency under the AML law (Jun 2016).
- Addition of 'Insider Trading and Market Manipulation' as predicate offence in the schedule of AML Act, 2010 (Dec 2015).

Over the last year, SBP has taken additional measures to strengthen **Anti-Money Laundering (AML)/Combating Financing of Terrorism (CFT)** Regulations to align them with the international best practices. Some of the initiatives taken over the year include:

- SBP has issued revised Guidelines in Jun 2017 advising banks that the obligations/ prohibitions regarding proscribed entities and persons are applicable, on an ongoing basis, to proscribed/ designated entities and persons or to those who are known for their association with such entities and persons, whether under the proscribed/ designated name or with a different name.
- SBP has advised banks and Microfinance Banks to install biometric machines at all branches for instant customers' verification at the time of account opening.
- SBP has advised all financial institutions falling under its purview to refrain from dealing in or facilitate their customers to transact in Virtual Currencies / Initial Coin Offerings (ICOs) and to immediately report any such transaction to FMU as a suspicious transaction.
- SBP has revised AML/CFT regulations based on the findings of Pakistan's National Risk Assessment (NRA). The revisions require assessment of AML/CFT controls for asset side customers and products, placing adequate number of analysts to monitor and report suspicious transactions, assignment of AML/CFT compliance monitoring to Management Level Committee of bank responsible for risk and control; and putting in place procedures for maintaining data of account opening cases rejected, revision in customer risk ratings and accounts closed based on ML/TF risks.

Pakistan has a proactive, dynamic and robust AML/CFT regime, which comprises legal, regulatory, institutional and operational frameworks in line with international standards. The authorities have the required technical capacities to address challenges posed by the dynamic environment and adequately fulfill any international requirements.

3.2 Performance and Risk Analysis of the Islamic Banking

Compared to steady global growth, Islamic Banking continues to establish its foot print in the in Pakistan with a YoY growth of 22.60 percent in assets. With a broad based rise, Islamic finance has increased its share in total financing of all banks to 18.53 percent in CY17. While Diminishing Musharaka still holds the largest share, participatory modes of financing have gained some impetus. Majority of Islamic finance is extended to corporates, though consumer finance has also grown considerably. With deposits as the main source of funding, liquidity management remains a challenge for IBIs given the limited availability of Shariah compliant securities. NPFs have remained stagnant and profitability of IBIs has significantly improved which has strengthened their solvency. Given the continuous SBP efforts and favorable economic environment, IBIs should look to create diversified products across different sectors of the economy.

Growth in Islamic banking across the globe has remained consistent till Jun-17. As per the statistics[147] published by the Islamic Financial Services Board (IFSB), assets of Islamic banking have increased by 6.14 percent during the first six months of CY17[148] (**Table 3.2.1**).

Table 3.2.1
Global Islamic Banking Statistics

	CY14	CY15	CY16	Jun-17
	USD billion			
Total Assets	1,280.6	1,331.1	1,441.0	1,529.5
Sharīah-compliant Financing	809.5	854.1	936.2	992.8
Total Liabilities	1,180.1	1,238.6	1,320.4	1,406.7
	Number			
Islamic banks	165	169	169	172
Islamic banking windows	85	85	83	84
Islamic banks branches	28,787	29,855	29,788	29,681

Source: IFSB: http://www.ifsb.org/psifi_05.php?selfolder=

This seems encouraging when compared to 8.26 percent YoY growth in CY16 but is lower than average YoY growth of 7.4 percent during first six months of CY14 and CY15. Moreover, if the industry continues to follow the pattern observed in the last three years, the second half of CY17 could witness slowdown in growth.

Out of the total assets of the global Islamic banking, Shariah compliant financing has constituted around 65 percent by Jun-17.With regard to the Islamic banking structure, the contractionary phase of branch network growth, started in CY16, continues, which can be attributed to technological advancements and growing branchless banking.

In line with the growth trends published by IFSB, the Global Islamic Finance Report (GIFR), 2017 also iterates that the growth in global Islamic financial services industry seems to have stagnated in recent past[149]. This calls for all stakeholders to re-think the future strategy for growth and expansion. Using two different projections, the GIFR expects the assets of the Islamic finance industry[150] to be somewhere between US$ 3 trillion and US$ 4.3 trillion by the end of CY20.

[147] The aggregated data for total assets (16 countries), total Shariah-compliant financing (16 countries), and total funding/liabilities (15 countries) are calculated from available countrywide structural data from Islamic banks and Islamic banking windows of conventional banks, converting into U.S dollar terms, at the end period exchange rates. http://www.ifsb.org/psifi_05.php?selfolder=

[148] As defined in Islamic Financial Services Industry Stability Report 2017, Islamic banking window is that part of a conventional financial institution (which may be a branch or a dedicated unit of that institution) that provides both fund management (investment accounts) and financing and investment that are Shariah-compliant, with separate funds. It could also provide takāful or retakāful services.

[149] http://www.gifr.net/publications/gifr2017/intro.pdf

[150] Includes both banking and non-banking assets.

Table 3.2.2

Performance of Islamic Banking in Pakistan

	IBIs			Conv. Banks	
	CY15	CY16	CY17	CY16	CY17
	PKR billion				
Total Assets	1,610.0	1,852.9	2,271.8	13,978.1	16,069.8
Investments (net)	431.9	490.0	534.2	7,019.2	8,194.8
Financing (net)	645.3	820.9	1,206.7	4,677.9	5,305.7
Deposits	1,374.8	1,573.3	1,885.0	10,224.5	11,126.8
	Growth in percent (YoY)				
Total Assets	27.90	15.09	22.60	11.53	14.96
Investments (net)	21.07	13.45	9.03	8.84	16.75
Financing (net)	57.86	27.21	47.01	12.17	13.42
Deposits	28.52	14.44	19.81	13.42	8.82

Source: SBP

…while it flourishes in Pakistan due to enabling macroeconomic conditions

Islamic banking institutions[151] (IBIs) assets have continued to outpace their conventional counterparts registering a growth of 22.60 percent during CY17 (14.96 percent for conventional banks) (**Table 3.2.2**).

Unlike conventional banks, most of the growth in IBIs' assets has been contributed by 47.01 percent rise in financing against 13.42 percent for conventional banks. Encouragingly, IBIs contributed 38.07 percent of increase in the overall advances growth of the banking sector of PKR 1,013.7 billion. On the funding side, healthy growth in deposits (19.81 percent) has facilitated the IBIs to finance the healthy growth in assets.

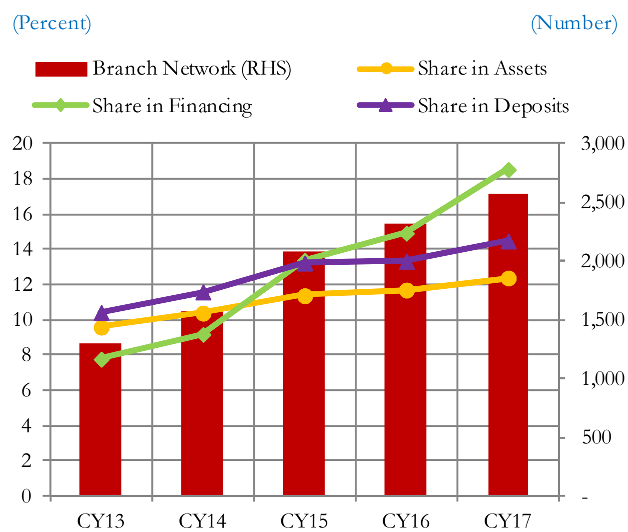
Share of Islamic banking continues to rise…

Healthy growth in assets has enhanced the share of Islamic banking in the overall banking assets by 69 bps to 12.39 percent during CY17. Though this share in assets falls short of the target of 15 percent set in Strategic Plan for Islamic Banking industry[152], the share of Islamic financing in overall financing has jumped to 18.53 percent in CY17 from 14.93 percent last year. Similarly, deposits of IBIs now represent 14.49 percent of total banking sector deposits and are expected to cross 15 percent by the end of 2018. (**Figure 3.2.1**).

Figure 3.2.1

Expansion of Islamic Banking continues

Share and Number of branches of Islamic Banking



Source: SBP

The target of 2000 branches set under the strategic plan has already been achieved in CY15 and IBIs network has reached 2,581 branches by end of CY17.

…as financing to both public and private sector rise

Significantly higher growth of Islamic financing has resulted from active participation of IBIs in public sector commodity finance (especially for wheat). With more than 150 percent growth, the share of

151 Islamic banking institutions include Islamic banks and Islamic banking branches of conventional banks.

152 The SBP's 5 year Strategic Plan for Islamic Banking industry (2014-2018) , inter alia, envisages Islamic banking industry to achieve a target of 2000 branches, increase the market share to 15 percent of the banking system, and improve "advance to deposit ratio' to be at least at par with that of conventional banking system by the end of 2018 http://www.sbp.org.pk/departments/pdf/StrategicPlanPDF/Strategy%20Paper-Final.pdf

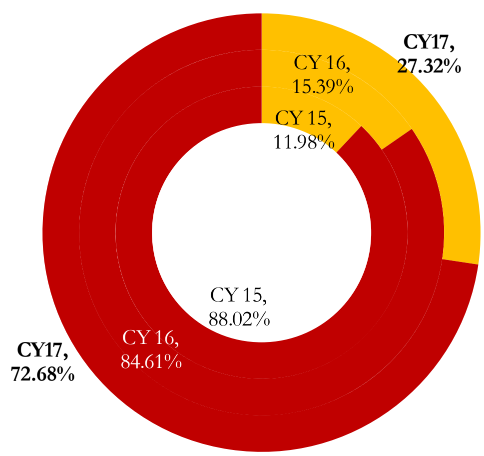
public sector financing has jumped to 27.32 percent in total Islamic financing in CY17 from 15.39 percent a year earlier. This extraordinary surge does not pose a significant credit risk due to the secured nature of commodity finance. Private sector financing has also surged by 24.93 percent in CY17 compared to 20.77 percent increase in CY16 (**Figure 3.2.2**).

Figure 3.2.2

Financing to public sector has significantly grown in CY17

Public and private sector Islamic Financing

(Percent)



Source: SBP

Diminishing Musharaka still holds the largest share…

Islamic banking across the world is characterized by a number of products that can be differentiated based on the underlying contract. In Pakistan, Diminishing Musharaka continues to hold the highest share in Islamic financing followed by trade-based[153] modes of financing. While financing in these modes is growing, both these modes of financing are shedding their share due to substantial growth in Musharaka Financing (**Table 3.2.3**).

Table 3.2.3

Islamic modes of financing

	CY15*		CY16*		CY17	
	Amount	Share	Amount	Share	Amount	Share
	amount in PKR billion, share in percent					
Murabaha	161.6	23.87	136.7	16.07	162.8	13.16
Salam	35.1	5.19	37.1	4.36	34.6	2.80
Istisna	56.8	8.39	75.0	8.82	101.0	8.16
Musharaka	92.1	13.60	133.4	15.68	272.1	21.99
Ijara	43.3	6.40	58.2	6.84	78.8	6.37
Car Ijara	27.5	4.06	37.5	4.41	46.6	3.76
Plant and machinery Ijara	9.2	1.36	11.1	1.31	13.8	1.12
Equipment Ijara	0.6	0.08	1.1	0.13	3.1	0.25
Others Ijara	6.1	0.90	8.6	1.01	15.4	1.25
Diminishing Musharaka	208.7	30.83	293.7	34.53	380.2	30.73
Other Islamic modes of finance	79.1	11.69	116.2	13.67	206.8	16.72
Mudarabah	0.2	0.03	0.1	0.01	-	-
Qard/Qard-e-Hasan	0.04	0.01	0.20	0.02	0.68	0.06
Total	677.0	100.00	850.6	100.00	1,237.0	100.00

* Revised

Source: SBP

…while Musharaka financing has gained some impetus

With a growth of 103.81 percent, share of Musharaka financing has significantly risen to 21.99 percent in CY17. Introduction of new products by the IBIs (like Running Musharaka[154]) has played a key role in the high growth in Musharaka financing.

Growth in financing remains quite diversified…

Concentration risk, in terms of sectors, remains low as sector-wise distribution of Islamic financing reveals adequate diversification (**Figure 3.2.3**). With over 50 percent growth and 16.36 percent share, energy sector is the largest user of Islamic finance in CY17, followed by textile and individuals[155]. Moreover, highest growth has been observed in case

153 Murabaha, Salam & Istisna

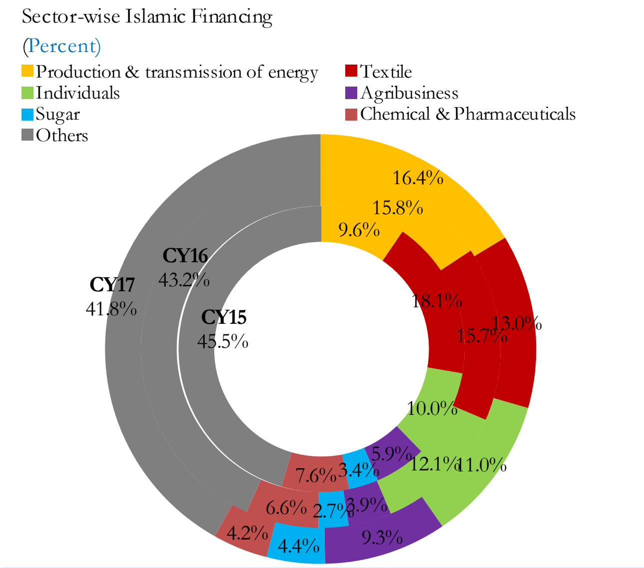
154 Based on Shirkat-ul-Aqd, Running Musharakah is used to finance customer's operating activities.

155 Individuals sector includes financing to consumers, sole proprietorships, and any business owned by a single individual, irrespective of the size of its operations.

of agribusiness due to rise in public sector commodity finance as discussed earlier.

Figure 3.2.3

Islamic financing is diversified across sectors



Source: SBP

...with major part of financing availed by corporates

In terms of segments, most of the financing by IBIs has been availed by corporates (**Table 3.2.4**). However, it is encouraging to note that despite 32.64 percent growth, share of financing to corporates has come down to 70.64 percent in CY17 from 77.45 percent in CY16 mainly because of rise in financing to the public sector. In contrast, conventional banks' concentration in corporates has risen to 68.29 percent in CY17 from 65.82 percent in CY16.

IBIs have provided both long term (Fixed Investment) and short-term (Working Capital and Trade Finance) financing to the corporate sector. In terms of tenor, the financing seems well diversified (48.70 percent long term versus 51.30 percent short term). It is encouraging to note that the fixed investment remains the prime avenue for both IBIs and conventional banks, which is a good omen for future productive capacity of the economy.

Table 3.2.4

Segment-wise Islamic financing

	IBIs			Conv. Banks	
	CY15	CY16	CY17	CY16	CY17
	PKR billion				
Corporate Sector:	503.3	658.8	873.8	3,397.9	3,955.8
Fixed Investment	215.1	339.5	425.5	1,571.7	1,803.8
Working Capital	228.7	260.4	360.5	1,111.3	1,326.7
Trade Finance	59.5	58.8	87.7	715.0	825.3
SMEs:	20.8	29.0	40.6	375.6	411.8
Fixed Investment	6.0	7.4	12.3	80.9	86.1
Working Capital	13.2	20.3	26.5	250.6	284.2
Trade Finance	1.6	1.4	1.9	44.2	41.5
Agriculture	4.3	6.8	5.6	287.5	310.6
Consumer Finance	67.7	89.7	122.1	282.1	326.4
Commodity Financing	58.2	47.4	172.0	571.9	563.4
Staff Loans	8.8	10.0	11.8	94.1	103.7
Others	13.9	8.8	11.1	153.4	120.9
Total	677.0	850.6	1,237.0	5,162.5	5,792.4

Source: SBP

SME finance has registered decent growth while agri-finance remains neglected

With its share hovering around 3 percent, SME finance has grown to PKR 40.6 billion in CY17 from PKR 29.0 billion in CY16. Unlike the past trends where only working capital finance grew, growth in fixed investment has also been observed.

IBIs continue to elude agriculture finance as it has declined by 18 percent to PKR 5.6 billion in CY17. Share of agriculture finance in total financing provided by IBIs is well below 1 percent while it holds 1.77 percent share in total agri-finance provided by all banks. IBIs need to focus on developing products tailored to the needs of agriculture segment since this untapped segment presents huge potential for Islamic finance.

Consumer finance continues to grow…

Islamic consumer finance has grown by more than 30 percent each year during the last three years with highest growth of 36.08 percent in CY17 (**Table 3.2.5**). Auto finance and mortgage finance are the major contributors, which have grown by 38.87 percent and 31.73 percent, respectively. Growth in these two sub-segments has been so impressive that Islamic auto and mortgage finance constitute 44.81 percent and 55.13 percent of the total auto and mortgage finance provided by all banks. On the other hand, 'personal loans' is the biggest product of consumer finance for conventional banks, which is negligible in case of IBIs.

Table 3.2.5

Consumer Financing

	IBIs			Conv. Banks	
	CY15	CY16	CY17	CY16	CY17
	PKR Billion				
Total Consumer Finance	67.7	89.7	122.1	282.1	326.4
Credit Card	0.3	0.4	0.4	27.9	33.8
Auto Finance	40.3	54.7	75.9	71.2	93.5
Consumer Durable	0.2	0.2	0.5	0.1	0.2
Mortgage Finance	25.0	32.3	42.5	29.3	37.5
Other Personal Finance	1.8	2.2	2.8	153.5	161.3
	Growth in percent (YoY)				
Total Consumer Finance	33.87	32.63	36.08	9.99	15.70
Credit Card	27.81	28.76	8.15	15.30	21.16
Auto Finance	35.20	35.54	38.87	30.17	31.34
Consumer Durable	(4.58)	(2.42)	100.42	(2.43)	119.81
Mortgage Finance	31.53	28.98	31.73	60.58	27.71
Other Personal Finance	47.36	23.39	27.95	(3.55)	5.10

Source: SBP

…with manageable risks and asset quality

The inherent structure of the Islamic finance products is the main factor contributing to the success of consumer finance. At the same time, this also minimizes the incidence of NPFs to some extent as indicated by NPFs to financing ratio of 2.94 percent in CY17 (3.31 percent in CY16). For instance, mortgage finance is normally structured as a Diminishing Musharaka product. The terms and conditions of such a product are such that at any point in time, both the bank and customer are clear about their share in the property, which improves the confidence of the customer.

GoP Sukuk dominate the investment portfolio of IBIs

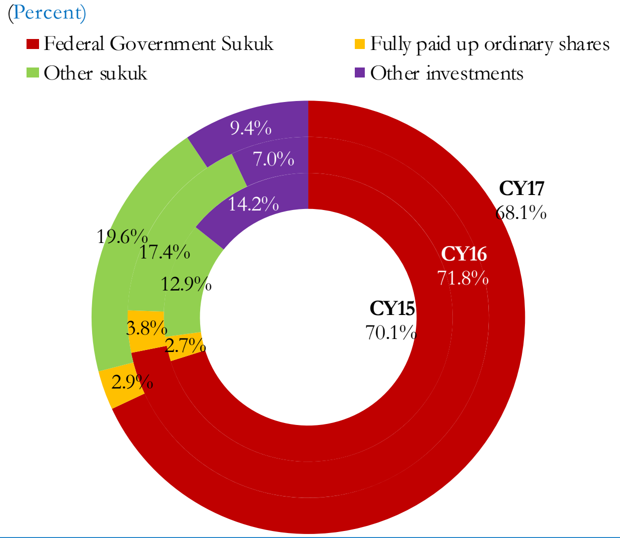
The deceleration in growth of investments observed in the last year has continued in to CY17 as the portfolio grew by only 9.02 percent. Limited availability of Shariah compliant instruments (Sukuk) is the main factor behind slower accumulation of investments. Hence, the decline in share of investments in total assets is not surprising. On the other hand, this binding constraint is incentivizing the IBIs to venture more into financing avenues.

Figure 3.2.4

GoP Sukuk dominate the investment portfolio of IBIs

Breakdown of Investments of IBIs

(Percent)



Source: SBP

Composition of the investments has not changed much with GoP Sukuk holding majority share (68.05 percent) in CY17 (**Figure 3.2.4**). Encouragingly, consistent growth has been observed in corporate/ privately placed Sukuk over the last few years, which now constitute 19.58 percent of the total investments of IBIs.

Deposits remain the key funding source

IBIs are mainly reliant on deposits for meeting their funding requirements with share remaining above

80 percent of the overall liabilities for the last few years (**Table 3.2.6**). Deposits of IBIs have seen accelerated growth of 19.81 percent, which among other things, is facilitated by fast expanding branch network of the IBI (**Table 3.2.2**). In stark contrast, growth in deposits of conventional banks has decelerated, amid slower growth in their branch network (2.71 percent) during CY17.

Table 3.2.6

Funding profile of IBIs vs Conventional Banks

	IBIs			Conv. Banks	
	CY15	CY16	CY17	CY16	CY17
	Share in Percent				
Bills Payable	0.93	1.14	1.22	1.16	1.19
Due to financial institutions	3.72	3.75	5.30	13.40	18.70
Deposits	85.39	84.91	82.97	73.15	69.24
Sub-ordinated Sukuk	0.44	0.45	0.60	0.36	0.32
Deferred Tax Liabilities	0.03	0.16	0.06	0.42	0.27
Other Liabilities	2.89	2.87	3.65	2.73	2.57
Net Assets	6.60	6.72	6.19	8.79	7.72
Total liabilities & equity	100.00	100.00	100.00	100.00	100.00

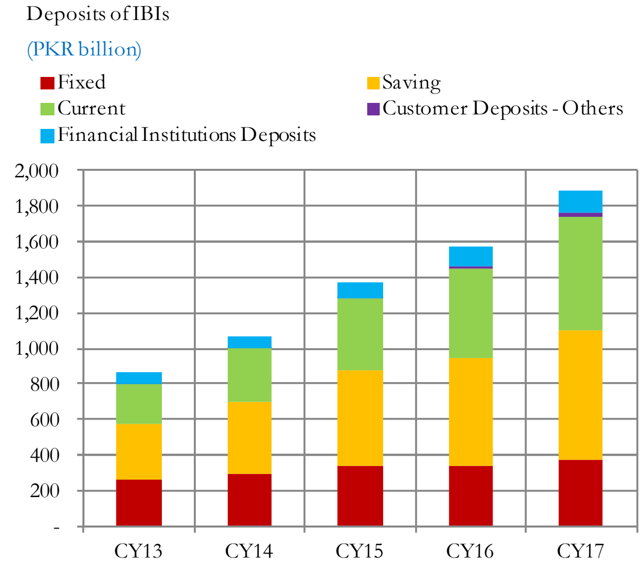
Source: SBP

Profit sharing accounts have a larger share in deposits of IBIs

In the last few years, growth in Qard based current accounts has outpaced the growth in saving and fixed deposits. In order to manage their profit expenses and stay competitive, IBIs have focused on raising current deposits much like their conventional counterparts. However, profit sharing accounts (saving and fixed) primarily based on the Mudaraba contract still have more than 58 percent share in deposits of IBIs (**Figure 3.2.5**). In order to improve transparency and disclosures and bring standardization in IBIs' profit and loss distribution policies and practices; SBP has in place detailed instructions for Profit & Loss Distribution and Pool Management for IBIs that were issued back in CY12[156].

Figure 3.2.5

Profit sharing accounts have a larger share in deposits of IBIs



Source: SBP

While dearth of instruments continue to challenge liquidity management…

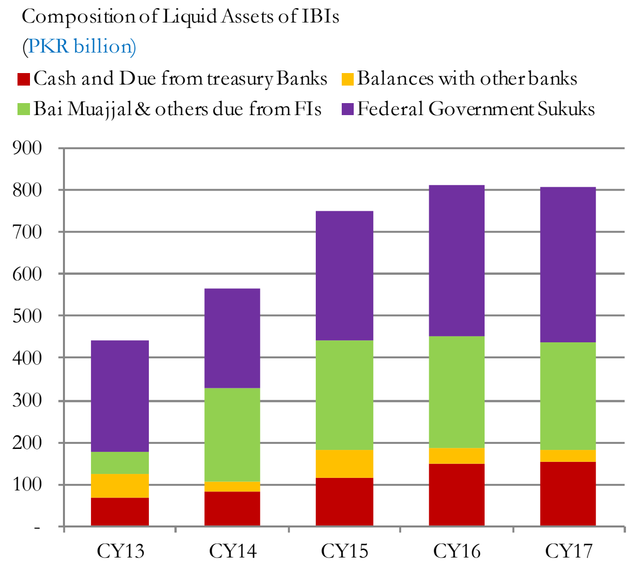
Owing to limited availability of approved Shariah compliant instruments, IBIs have kept higher amount of assets in the form of cash and with treasury banks (25.09 percent) compared to their conventional counterparts (12.38 percent) (**Figure 3.2.6**). Major share of the IBIs liquid assets represent the GoP Sukuk (60.03 percent), though is much lower than the share of Government Securities in Liquid Assets of conventional banks (82.70 percent).

Dearth of approved Shariah compliant instruments also reflects in relatively lower liquidity ratios maintained by IBIs as compared to conerntional banks. Due to modest rise in liquid assets of IBIs both liquid assets to total assets and liquid assets to deposits ratios have dipped by 5.88 pps and 6.18

[156] IBD Circular No. 03 of 2012: http://www.sbp.org.pk/ibd/2012/C3.htm

pps to 27.03 percent and 32.57 percent respectively as of end CY17(**Figure 3.2.7**). While Statutory Liquidity Requirement (SLR) set by SBP has remained above the required level[157] throughout the year, the ratio at 28.21 percent as of end CY17 is much lower than the 60.44 percent maintained by the conventional banks.

Figure 3.2.6
Liquid assets of IBIs are well diversified

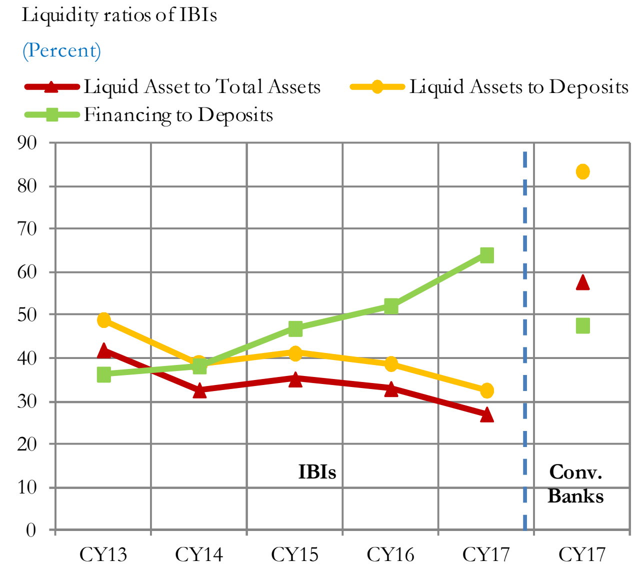


Source: SBP

…it allowed IBIs to improve the intermediation

Robust growth in Islamic financing has improved the financing to deposits ratio by 11.84 pps to 64.02 percent in CY17, which is well above the ratio of 47.68 percent maintained by the conventional banks. (**Figure 3.2.7**). Actually, availability of additional liquidity allowed IBIs to use this extra space for enhancing the financing activity. As such, IBIs have been fostering financial intermediation by extending Islamic finance to various sectors of the economy.

Figure 3.2.7
Liquidity indicators continue to decline



Source: SBP

Asset quality of IBIs has further improved…

Asset quality of IBIs is much better than conventional banks due to lower growth in fresh Non-performing Financing (NPF) and high financing growth. NPF to total financing ratio (NPFR) of 2.97 percent in IBIs is far less as compared to NPLR of 9.60 percent of conventional banks in CY17. With a decline of 2.16 pps, Provisions to NPF ratio stands at a comfortable level of 82.51 percent, which has resulted in Net NPFR of 0.53 percent in CY17 down from 0.66 percent a year earlier. . While conventional banks have higher provisions coverage (87.56 percent), their Net NPLR is also higher (1.30 percent) than Net NPFR of IBIs as of end CY17 (**Figure 3.2.8**).

…though prolific growth in financing may increase NPFs in future

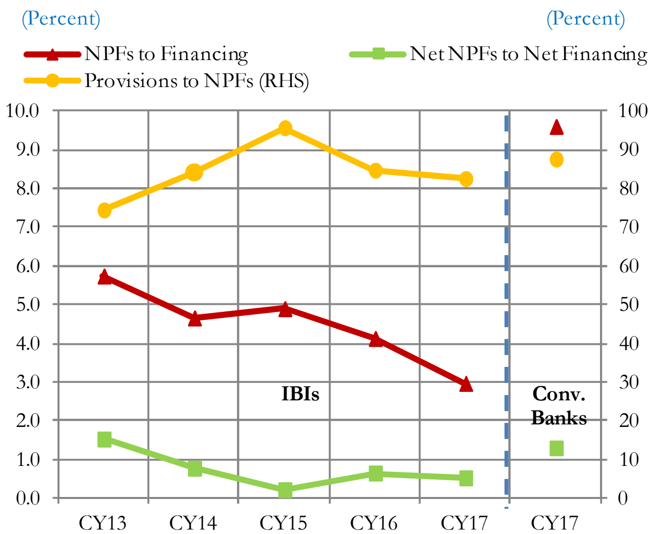
[157] Islamic Banks/Islamic Banking Branches are required to maintain the liquid assets (excluding Statutory Cash Reserve maintained under section 36(1) of the SBP Act, 1956) at 14 percent of their total demand liabilities and time deposits with tenor of less than one year in Pakistan (DMMD Circular No. 5 of 2018: http://www.sbp.org.pk/dmmd/2018/C5.htm

Credit risk management becomes all the more important whenever financing in any banking sector is growing and there is potential for subsequent infection. Hence, it is imperative that IBIs keep a watch on the sectoral and economic developments, in order to timely manage any potential risks in the future. Moreover, SBP has put in place various micro and macro prudential measures for checking buildup of credit risk.

Figure 3.2.8

Asset quality of IBIs has further improved

Asset quality indicators of IBIs



Source: SBP

Profitability of IBIs has picked up…

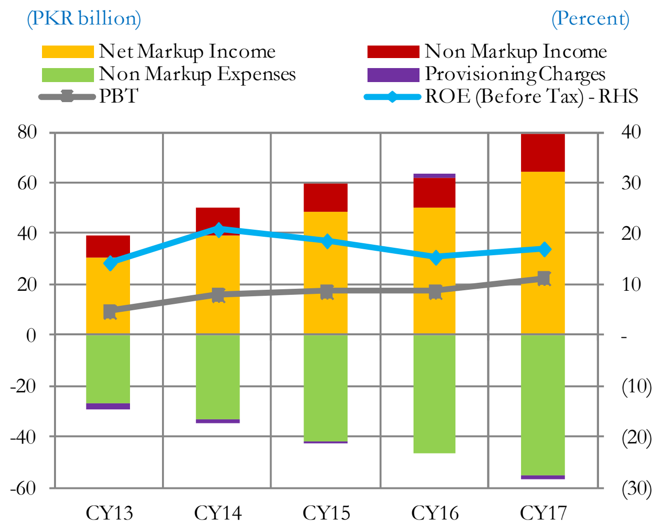
Profitability of IBIs has significantly improved as profit before tax (PBT) has increased to PKR 22.6 billion in CY17 from PKR 17.2 billion in CY16 (**Figure 3.2.9**). Both profit and non-profit incomes have increased with profit income contributing the major portion of earnings.

Net profit income has grown by 28.41 percent in CY17 compared to a meager rise of 2.84 percent in CY16. Comparatively higher increase in gross profit income (20.06 percent) compared to profit expenses (10.81 percent) has improved the net profit income. While IBIs have earned much higher profit income primarily from financing activities (33.04 percent growth), they have been able to limit expenses on deposits (7.07 percent rise) to some extent, by attracting higher amount of Qard based current deposits in CY17.

Figure 3.2.9

Profitability of IBIs has improved

IBIs' Earnings and Expenses



Source: SBP

Similarly, non-profit income of IBIs has increased by 25.53 percent in CY17 compared to 6.14 percent in CY16, mainly on the back of improvement in fee and commission income (40.91 percent rise). Growth in both profit and non-profit income have been more than sufficient to account for the 18.72 percent rise in non-profit expenses.

…which has boosted the profitability indicators of IBIs

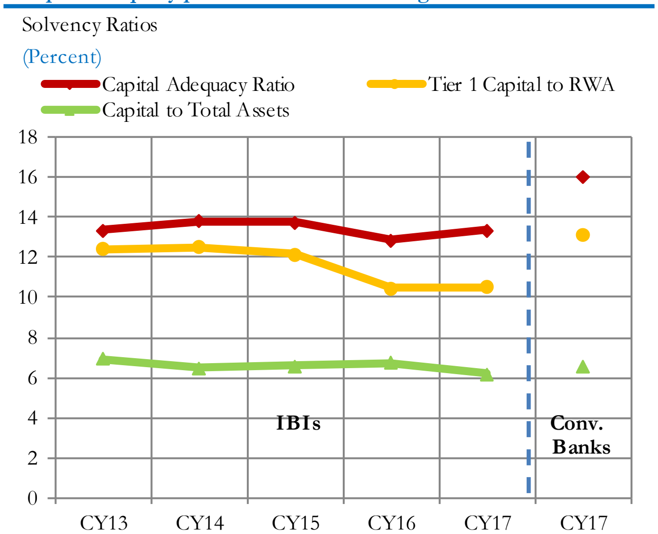
In terms of profitability indicators of IBIs, both ROA before tax and ROE before tax have risen to 1.12 percent and 17.09 percent in CY17 from 1.00 percent and 15.45 percent in CY16 respectively, compared to decrease in both indicators for conventional banks. Despite considerable rise, profitability indicators of IBIs are at somewhat lower levels compared to conventional banks. This is due to the higher operating cost of IBIs and limited availability of risk-free Shariah compliant securities.

Better earnings and fresh capital injection have strengthened the solvency of IBs[158]…

As discussed in FSR 2016, Islamic banks (IBs) considerably expanded their operations during CY16 that affected their overall solvency as RWAs increased. However, during CY17, continued growth in financing has begun to yield profits, which in turn has increased the capital of IBs. The plowing back of profits coupled with fresh capital injection has resulted in a growth of 15.47 percent in Tier 1 capital of IBs in CY17 compared to a small increase of 1.23 percent in CY16.

Figure 3.2.10

Capital adequacy position of IBIs has strengthened



Note: Capital Adequacy Ratio and Tier 1 Capital to RWA ratio are for Islamic Banks only, while Capital to Total Assets include both Islamic Banks and Islamic Banking Branches.
Source: SBP

Given the comparatively larger volume of public sector financing, RWAs did not increase by the same proportion (14.76 percent) as the total assets of IBs in CY17 (17.82 percent). As a result, CAR of IBs has risen to 13.36 percent in CY17 from 12.85 percent in CY16 (**Figure 3.2.10**). However, it is still lower than CAR of conventional primarily due to huge portfolio of risk free Government securities on their books that attract zero risk weight.

…while leverage has slightly gone up

Compared to CAR, Capital to total assets ratio (CTAR) is a broader measure of leverage as it includes all on-balance sheet assets. Considering the level of growth across the entire banking sector, it is not surprising that CATR of IBIs has declined to 6.19 percent in CY17 from 6.72 percent in CY16 and CTAR of conventional banks has also dipped by 69 bps to 6.61 percent in CY17.

In order to avoid building-up excessive on- and off-balance sheet leverage in the banking system, SBP introduced a simple, transparent and non-risk based Leverage Ratio as part of its instructions for Basel III implementation in Pakistan[159]. As of end CY17, leverage ratio of IBs stands at 4.79 percent against the minimum requirement of 3 percent, which indicates sufficient cushion for further portfolio expansion.

IBIs are exposed to operational risks that are different from conventional banks

In addition to the general operational risks[160] faced by both conventional and Islamic banks, IBIs are subject to additional risks arising from documentation of the asset-based Islamic financing products. Moreover, IBIs also face Shariah non-compliance risk defined as "the risk of non-compliance resulting from the failure of an IBI's Shariah governance mechanism (systems and personnel) to ensure its compliance with Shariah

158 Solvency of only Islamic Banks (IBs) has been discussed here.
159 BPRD Circular No. 06 of 2013: http://www.sbp.org.pk/bprd/2013/Basel_III_instructions.pdf
160 Operational risk is the risk of losses from inadequate or failed internal processes, people and systems, or from external events.

rules and principles as determined by its Shariah board or other relevant body[161]".

SBP, cognizant of the risks associated with Shariah non-compliance, has put in place detailed Shariah Governance Framework for IBIs[162]. The comprehensive framework covers the areas of corporate governance, Shariah board, resident Shariah board member, Shariah Compliance Department, both internal and external Shariah audit and conflict resolutions. Through effective implementation of the Shariah Governance Framework, IBIs can greatly minimize the risks associated with the Shariah non-compliance.

Way forward

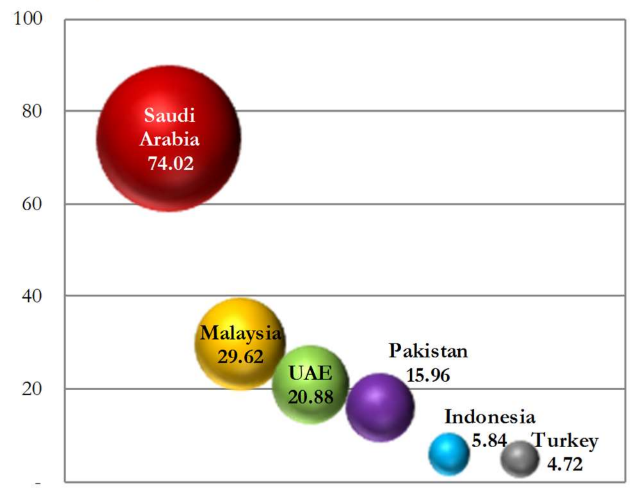
While Islamic banking has grown steadily across the globe in CY17, IBIs have grown rather aggressively in Pakistan. Share of Shariah compliant financing in total financing has significantly grown in Pakistan from 14.93 percent in CY16 to 18.57 percent in CY17 (15.96 percent in Q2CY17). Despite this growth, latest statistics reveal that Pakistan was ranked fourth in terms of share of Shariah compliant financing in total financing as of end Q2CY17 (**Figure 3.2.11**). Moreover, considering the fact that Islamic banking assets of Pakistan constituted less than 2 percent of the global Islamic banking assets in Q2CY17[163], the potential for further growth is huge.

As of end CY17, 40.50 percent of Islamic banking assets belong to the Islamic banking branches of conventional banks, which proves the growing popularity and adoption of Islamic finance in the country. Given the size of their Islamic banking windows, some of these conventional banks can convert these to Islamic banking subsidiaries in the near future[164]. Moreover, SBP has issued detailed guidelines for conversion of a conventional bank into an Islamic bank in CY17[165] in order to facilitate banks desirous of converting their entire banking operations from conventional to Islamic.

Figure 3.2.11
Share of Shariah compliant financing has been growing in Pakistan

Share of Shariah compliant financing in total financing - Q2CY17

(Percent)



Source: IFSB: http://www.ifsb.org/psifi_05.php?selfolder= & IMF: http://data.imf.org/regular.aspx?key=61404590

SBP has been playing its role in promotion of the Islamic banking through implementation of action plans as per SBP's Strategic Plan (2014-18) for the Islamic banking industry[166].Using the unique characteristics of Islamic finance, IBIs should look to innovate and create diversified products across

161 IFSB-15: Revised Capital Adequacy Standard for Institutions Offering Islamic Financial Services Excluding Islamic Insurance (Takāful) Institutions and Islamic Collective Investment Schemes - http://www.ifsb.org/standard/2014-01-28_eng_IFSB15%20Revised%20Capital%20Adequacy_(Jan%202014).pdf

162 IBD Circular No. 01 of 2018: http://www.sbp.org.pk/ibd/2018/C1.htm

163 IFSB: http://www.ifsb.org/psifi_05.php?selfolder= and http://www.ifsb.org/psifi_03.php?selfolder=

164 MCB Bank converted its Islamic banking window in to an islamic banking subsidiary in 2015 (MCB Islamic Bank Limited): http://www.sbp.org.pk/notifications/bprd/2015/ntf5.pdf

165 IBD Circular No. 01 of 2017: http://www.sbp.org.pk/ibd/2017/C1.htm

166 http://www.sbp.org.pk/departments/pdf/StrategicPlanPDF/Strategy%20Paper-Final.pdf

different sectors of the economy with specific focus on the untapped agriculture and SME segments.

3.3 Performance and Risk Analysis of Microfinance Banks

Microfinance Banks (MFBs) continue to witness a significant growth. With expansion in rural advances, growing customer base and improving profitability, the lending model is heading towards maturity. Advances have seen broad based surge across enterprises, agriculture and livestock segments, while accelerated expansion in deposits have provided the necessary funds. Asset quality has improved, solvency remains comfortable with high capital ratios and liquidity stays at adequate level. Branchless Banking, as an alternate cost-effective solution to bricks and mortar model, has witnessed a prolific growth. However, lack of financial literacy represents a major hurdle in attaining the goals of financial inclusion and growth of MFBs.

Microfinance plays a critical role in financial inclusion as it targets underserved segment of population, which, generally, does not have access to traditional collateralized and documented mode of finance.

MFBs grow substantially…

Although the asset base of MFBs stands at 1.33 percent of the total assets of the banking sector as of end CY17, they have immense growth opportunities owing to their alternative lending mechanism and outreach in far-flung and remote areas. This is evident from the fact that MFBs have shown higher growth (300 percent) since CY13 compared to commercial banks (74 percent). Moreover, MFBs have witnessed 45 percent expansion in balance sheet size in CY17 alone.

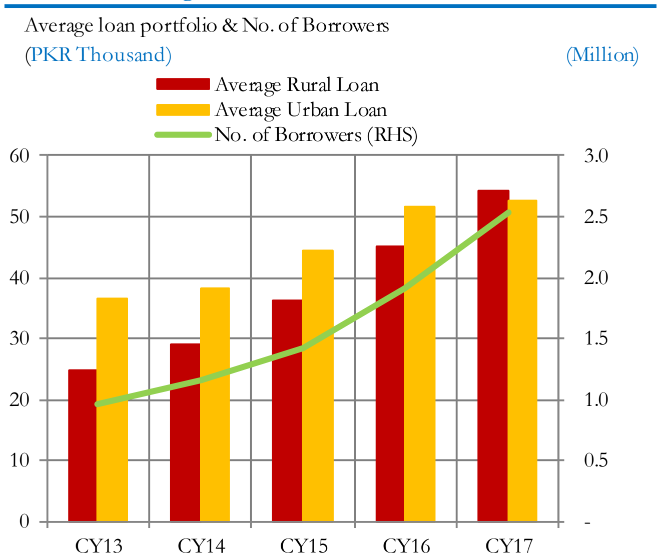
…mainly driven by rise in advances

Advances have surged by 52 percent in CY17, reaching PKR 133.0 billion. This is driven by increased average loan size (14 percent) and broadened customer base (33 percent) (**Figure 3.3.1**).

Moreover, the pace of growth in rural loans is more than that of urban ones. Average annual rise in rural loans during CY13-17 is 61.19 percent as compared to 44.15 percent average annual rise in urban loans. Moreover, the average size of rural loans has jumped from PKR 20,437 in CY13 to PKR 54,208 in CY17, against rise in urban loans from PKR 33,416 in CY13 to PKR 52,637 in CY17.

In terms of outreach, the branch network has expanded by 12 percent (from 792 in CY16 to 893 in CY17) along with 22 percent rise in workforce, during the year.

Figure 3.3.1
Increase in Average Loan Size and Customer Base



Source: SBP

Two-third of MFB's loans comprise of rural borrowers…

In the context of Pakistan, where more than half of the population lives in rural areas, MFBs are of paramount importance for economic development. Rural areas are difficult to approach by commercial banks due to high operational cost arising from remote access and sparse population. MFBs, on the contrary, with alternate delivery channels and extensive field force are well suited to cater to the needs of these underserved areas. This is the reason that more than two third of MFBs' loans portfolio comprises of rural loans.

The success of MFBs in rural areas is attributed to their unique lending methodology. MFBs put social pressure on borrowers using Group Lending mechanism to enforce financial discipline. More than one third of the disbursed loans are on group basis.

MFBs are catering to the needs of borrowers having shorter horizon…

More than 85 percent of the loans of MFBs have maturity of less than 1 year. MFBs provide financing to sectors (i.e. agriculture and livestock) that have shorter production cycles, which, generally, leads to higher turnover of loans. MFBs exposure to agriculture and livestock sectors is 69.17 percent.

Despite their smaller share in assets, investments of MFBs have increased significantly

MFBs have just 20 percent of their assets parked in investments (mostly in government securities). However, these investments have registered 46 percent growth in CY17. The major portion of the investments is required for meeting the Statutory Liquidity Requirements prescribed by SBP.

Deposits remain the mainstay of funds mobilized…

Deposits and borrowing stand at PKR 185.8 billion and PKR 13.5 billion, respectively, as of end CY17. Deposits have increased by more than 50 percent in CY17. (**Table 3.3.1**). However, more than half of the deposits are in the form of Term Deposits that are costly, which may influence the profitability of MFBs.

Table 3.3.1

Financial Soundness Indicators

	CY13	CY14	CY15	CY16	CY17
Key Variables (PKR Million)					
Total Assets	58,197	70,060	97,476	170,244	247,218
Investments (net)	12,913	14,579	13,334	33,433	48,869
Advances (net)	28,073	36,505	54,733	87,772	133,707
Deposits	33,580	42,730	63,105	120,172	185,827
Borrowing from FIs	8,002	8,665	10,893	13,714	13,563
Lending to FIs	1,518	1,150	3,276	2,452	4,693
Equity	12,770	14,869	18,332	24,309	32,577
Profit Before Tax	895	1,529	2,956	4,213	7,548
Profit After Tax	538	1,090	1,997	2,709	5,247
NPLs	289	426	730	2,200	2,043
NPLs (Net of Provisions)	30	48	86	300	(503)
Key FSIs (Percentage)					
NPLs to Loans (Gross)	1.02	1.16	1.32	2.45	1.50
Net NPLs to Net Loans	0.11	0.13	0.16	0.34	(0.38)
Net NPL to Capital	0.25	0.34	0.47	1.20	(1.49)
Provision to NPL	90%	89%	88%	86%	125%
ROA (Before Tax)	1.07	1.74	2.45	2.08	3.01
ROE (Before Tax)	7.78	11.18	17.75	19.46	29.44
CAR	42.6	37.7	29.1	23.7	21.4
Advances to Deposit Ratio	83.6	85.4	86.7	73.0	72.0

Source: SBP

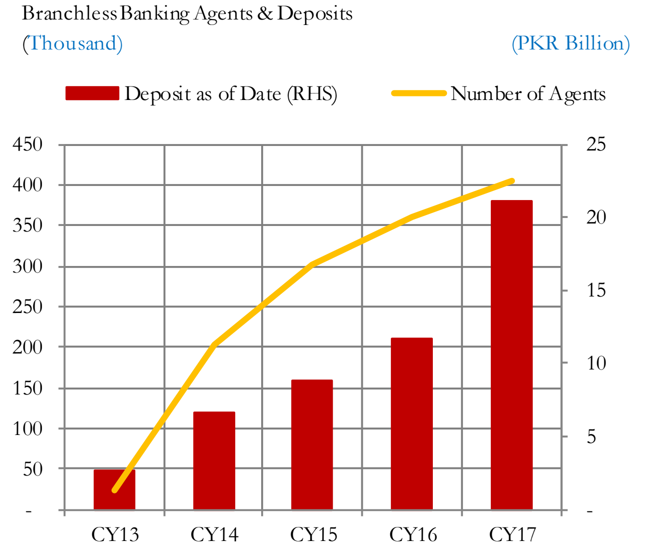
…while equity base has also grown considerably

Equity of MFBs has grown by more than 33 percent in CY17, due to gradual growth in profits and increase in share capital.

Branchless Banking has witnessed prolific growth…

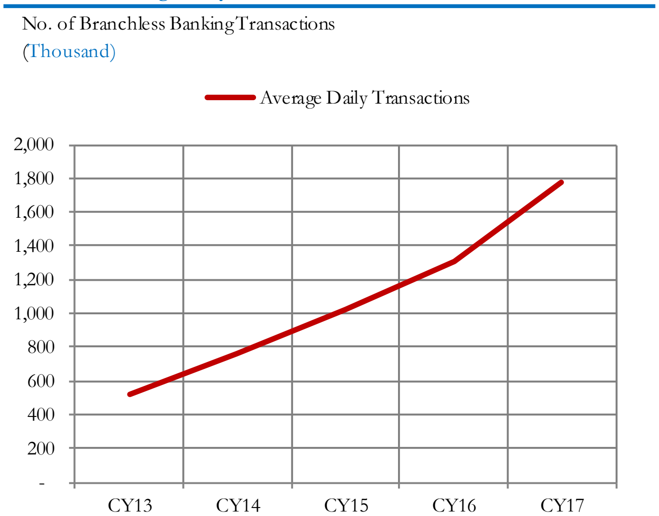
With the introduction of Branchless Banking (BB), the outreach of MFBs has expanded exponentially and this channel has shown considerable growth over the past few years. The number of BB agents have grown from 24,214 in CY13 to 405,673 as of December 2017. BB account deposit base has also grown over eight times during the period reaching to PKR 21 billion (**Figure 3.3.2**).

Figure 3.3.2
Growth in Branchless Banking Agents and Deposits



Source: SBP

Figure 3.3.3
Growth in Average Daily Transactions



Source: SBP

…as average daily transactions tripled in last four years

With the increase in BB agents, there has been a steady increase in average daily transactions of BB and the number has more than tripled since CY13. This channel has facilitated more than 1.7 million daily transactions, on average, (**Figure 3.3.3**). With average transaction size of less than PKR 5,000, majority of the BB customers are those who have otherwise no or limited access to financial services.

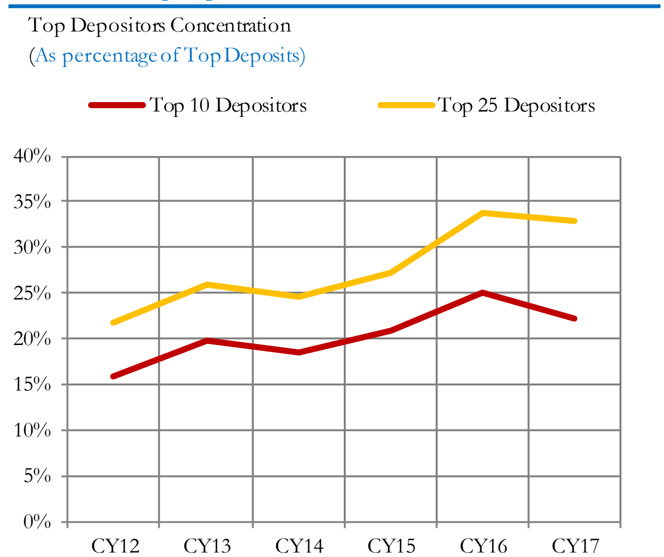
Asset quality of MFBs has improved

Infection ratio, a key determinant of asset quality, has declined during CY17 and stands at 1.5 percent as of end CY17. MFBs have already secured themselves by making excessive provisions against the NPLs. The provision coverage ratio is 125 percent in CY17.

Concentration in deposits may increase liquidity risk for MFBs

Despite growth and better performance, MFBs are still exposed to concentration risks on the liability side. Contribution of top 10 depositors in total deposit base has increased to 22 percent in CY17 from 15 percent in CY12. Similarly, the share of top 25 depositors has jumped from 22 percent to 33 percent over the same period (**Figure 3.3.4**). MFBs' reliance on few depositors creates liquidity risk. They need to diversify their funding sources by exploring alternate avenues.

Figure 3.3.4
Increase in Top Depositor Concentration



Source: SBP

Key Liquidity ratios have followed downward trend

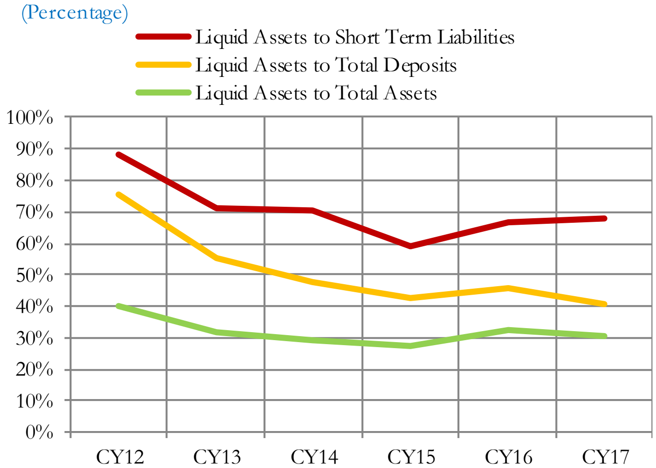
Due to prolific growth in the loans during the past few years, the key liquidity ratios have experienced downward trend, but are still at comfortable levels (**Figure 3.3.5**). MFBs need to be vigilant about liquidity risk.

Figure 3.3.5

Deterioration in Key Liquidity Ratios

Key Liquidity ratios

(Percentage)



Source: SBP

Profitability of MFBs rises …

With increased lending and financial services, both interest and non-interest income have contributed to the overall profitability of MFBs. Profit (after tax) has almost doubled in CY17; PKR 5.2 billion as compared to PKR 2.7 billion in CY16. Resultantly, ROA and ROE have inched up to 3.01 percent and 20.46 percent, respectively, as of end CY17 **(Figure 3.3.6)**.

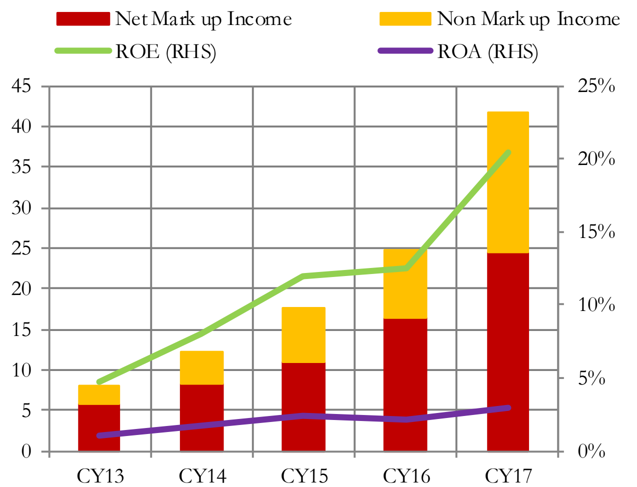
Return on advances has improved in CY17 to 24.13 percent as compared to 23.79 percent in CY16. However, cost of funding also increased from 5.04 percent to 5.65 percent over the same period. Greater increase in term deposits as compared to total deposits can be the reason of increased funding costs.

Figure 3.3.6

Growth in Income and ROE

Interest/Non-Interest Income & ROE/ROA

(PKR Billions) (Percentage)



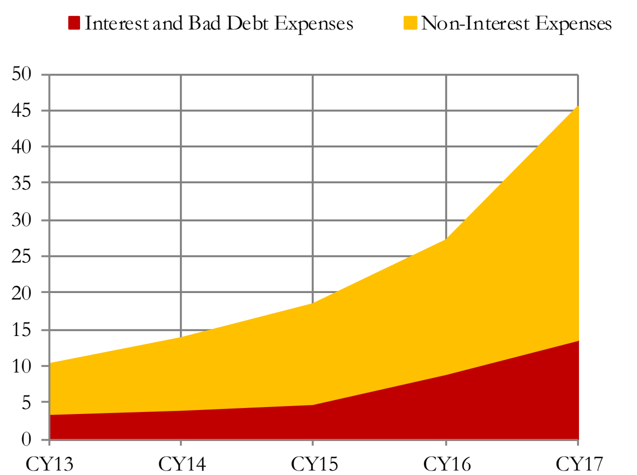
Source: SBP

Figure 3.3.7

Growth in Non-Interest Expense

Interest & non-Interest Expense

(PKR Billion)



Source: SBP

Non-interest expense is the major cost driver…

Non-interest expense is the key cost constituent for MFBs because of their business model. As they cater to the needs of people residing in remote and far-flung areas, they have to bear higher administrative costs (such as for credit administration). Therefore, non-interest expenses amount to more than two-third of the total expenses of MFBs (**Figure 3.3.7**).

Capital Adequacy Ratio of MFBs has adjusted downward…

Due to higher growth in loan portfolio, the Risk Weighted Assets have also increased, which has pushed the CAR down to 21.44 percent in CY17 from 23.7 percent in CY16. However, it is still well above the minimum requirement of 15 percent. If this growth trend continues, MFBs may have to strengthen their capital base by either injecting more capital or retaining profits.

Low financial literacy, AML CFT concerns and technological risks are major challenges to financial inclusion…

BB Account holders require some level of digital literacy to carry out transactions. However, according to a survey of 6,000 people, conducted by Financial Inclusion Insights, merely 16 percent people are financially literate and more than half of the adult population has low or no digital literacy (http://finclusion.org, 2018). This suggests that initiatives need to be taken to enhance the level of knowhow among BB users.

The number of BB Accounts has reached to 37 million, around half of which are active. With rising outreach and presence of BB services in distant areas, the risk of misuse of these channels by nefarious elements increases. In addition, technological risks related to cyber security, data and identity theft remain.

SBP is committed to increase financial inclusion…

SBP, in line with its Vision 2020, has taken a number of steps to increase the financial outreach in the country. In this regard, SBP has developed/adopted a broader National Financial Inclusion Strategy (NFIS), which aims to enhance formal financial access to 50 percent of the adult population by 2020.

SBP has increased maximum loan limit to PKR 1 million for microenterprises from PKR 0.5 million, which will help in meeting the needs of microenterprise segment[167].

During 2008-17 SBP supported wholesale funding by offering guarantees through the Microfinance Credit Guarantee Scheme. The scheme completed its term with the establishment of Pakistan Microfinance Investment Company (PMIC), which has started catering to liquidity needs of the industry[168].

To guard against AML/CFT concerns, SBP has instructed MFBs to use technological innovations like biometric identification machines and transactions monitoring system[169].

Further, to increase the outreach of Microfinance Industry, NFIS Sub-committee on MF is working on digitization of the Microfinance sector by linking the MF industry with digital platforms. In addition, to improve the microfinance outreach, development of Credit Scoring Model for Micro & Small Enterprises is in progress to help the MF institutions for better risk management, improve the loan approval processes and reduce operating costs.

Way forward…

After providing basic financial services through agents, the next step in financial inclusion is to make users self-sufficient in making transactions by their

167 AC&MFD Circular No. 03 0f 2017 dated December 22, 2017
168 AC&MFD Circular No. 01 0f 2017 dated April 13, 2017
169 AC&MFD Circular No. 02 0f 2017 dated June 19, 2017

own BB Accounts. Owing to its flexibility and low operating cost as compared to traditional brick and mortar branches, BB has a huge growth potential. This is evident from the fact that there are 139 million registered cellular phone users in Pakistan, among which only 37 million have BB Accounts. Moreover, BB model has wide outreach when compared to traditional banks because, by using the vast network of cellular agents; MFBs could potentially increase their presence even in the remotest locations in the country.

Moreover, SBP has started various programs under National Financial Literacy Initiative including Student Ambassador Program, Financial Literacy Program for Youth and working with third parties on curriculum development to be included in schools. These programs will help in increasing financial literacy among masses.

With women comprising more than 28 percent of borrowers and 21 percent of BB Account holders, MFBs are promoting gender equality and women empowerment. This could help reach the NFIS target of 25 percent of women having formal accounts by 2020.

Section B: Non-Banking Financial Sector

4.1 Risk Analysis of Development Finance Institutions (DFIs)

DFIs have yet to achieve the performance maturity that triggers the next phase of fund deployment focusing on countercyclical financing. Reliance on financial institutions for funding confines their asset expansion and diminishes their possible role in scaling up lending during contractionary phase of credit cycle. However, net advances of DFIs, over the last three years, have observed double digit growth (16.5 percent on average). Integration of DFIs in national level planning of the government, enhanced engagement of stakeholders to broaden their scope of activities, and operational support from the regulators could enable them to measure up to their due role in financial intermediation from a developmental perspective. This effort would further reflect upon the national commitment of ensuring economic and financial stability in the country.

DFIs importance is fading in the overall financial sector…

Internationally, many of the DFIs have attained their objective of contributing to the developmental process and now their existence is being justified for their role in providing counter-cyclical financing.[170,171] The purpose of creation of DFIs in Pakistan, majority of whom are jointly owned by GoP and other sovereigns[172], was to contribute to economic development by channelizing funds to economically significant sectors, industrial and infrastructure projects, and to facilitate trade flows between Pakistan and other jurisdictions. However, even after lapse of decades[173], DFIs are still to assume the developmental role.

Pursuit of risk free returns overwhelms developmental objectives but bolster soundness indicators …

DFIs' assets of PKR 228.0 billion, as of end CY17, account for only 0.92 percent of total financial sector's assets **(See Overview)**. Advances have observed growth of 16.5 percent (over the last three years on average) graduating their share in total assets from 26.7 percent in CY14 to 33.6 percent in CY17. But the DFIs are more active in the capital and money market activities[174] as investments account for 53.6 percent of their assets. Although these investments (34.4 percent of investments in government securities) undermine the developmental finance objective of DFIs, they have supported the soundness indicators of DFIs. Return from investments (48.7 percent of total income in CY17) have bolstered the profitability indicators while utilization of assets in credit-risk free liquid securities has led to a CAR of 47.04 percent and the liquid assets to total assets ratio of 40.4 percent. The NPLR, seemingly higher at 17.2 percent, reflects the non-performing mortgage portfolio of one DFI active in house finance. Excluding this outlier, the sector's NPLR is low at 9.5 percent. (**Table 4.1.1**).

170 Global Symposium on Development Financial Institutions (http://www.worldbank.org/en/events/2017/09/19/global-dfi-symposium/aspx)
171 By countercyclical financing, we mean scaling up of lending operations when private institutions experience temporary difficulties in granting credit thus contributing to economic recovery efforts.
172 With the exception of one DFI (out of total 8) which is wholly owned by the Government of Pakistan.
173 The first of the currently existing DFIs was established in 1952, while the first joint-venture DFI was established in 1978 and the latest one was established in 2007.
174 One of the DFIs is also a licensed Primary Dealer of government securities. To maintain its license status the DFI must remain active in market making of government securities. In CY17, this DFI alone has accounted for 45.3 percent of the total investments of the sector in government securities funding them through borrowing from financial institutions (44.4 percent of the sector's borrowing).

Advances to strategic sectors remain insufficient

DFI's gross advances to private sector constitute only 1.72 percent of the advances of the banking sector. The inadequacy of their advances is also apparent from the fact that in CY17, they have made disbursements of PKR 4.0 billion to key sectors of the economy (such as textile, sugar, cement, agribusiness and energy) against PKR 397.2 billion by the banking sector.

Table 4.1.1

Key Variables and Financial Soundness Indicators of DFIs

	CY12	CY13	CY14	CY15	CY16	CY17
	PKR billion					
Investments	80.2	79.5	108.3	115.3	108.9	122.1
Advances	47.7	45.3	48.6	56.8	68.6	76.7
Total Assets	143.2	149.4	176.1	190.5	208.8	228.0
Borrowings	58.2	67.3	74.4	86.5	98.4	100.5
Deposits	13.5	8.9	15.0	12.0	10.9	17.1
Equity	62.6	62.3	76.4	79.3	82.2	99.5
NPLs	18.2	17.1	15.1	15.0	13.9	15.0
	Percent					
CAR	55.18	50.33	44.85	43.62	40.78	47.04
NPLs to Advances	31.69	30.04	25.27	21.98	17.48	17.15
Net NPLs to Net Advances	17.50	12.41	7.93	6.21	4.51	5.52
ROA (After Tax)	2.21	3.05	4.48	3.36	3.56	2.36
ROE (After Tax)	5.35	7.00	10.64	7.92	8.66	5.77
Cost to Income Ratio	40.20	40.25	30.96	32.59	38.78	37.28
Liquid Assets to Short-term Liabilities	81.31	84.77	84.80	86.31	90.23	90.90
Advances to Deposits	352.71	506.85	323.92	471.61	627.65	447.93

Source: SBP

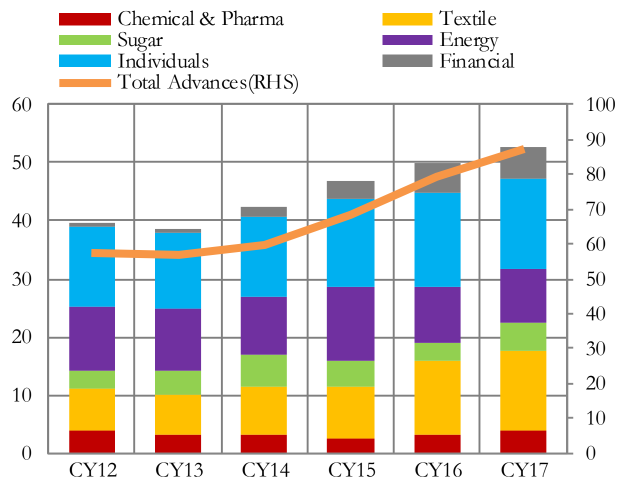
In terms of sectoral concentration, financing to individuals[175], textile and energy production /transmission dominates; but remains meager in comparison with flow of advances by banks[176]**(Figure 4.1. 1)**.

Figure 4.1.1

Insufficient advances to strategic sectors

Breakdown of advances by major sectors

(PKR billion)



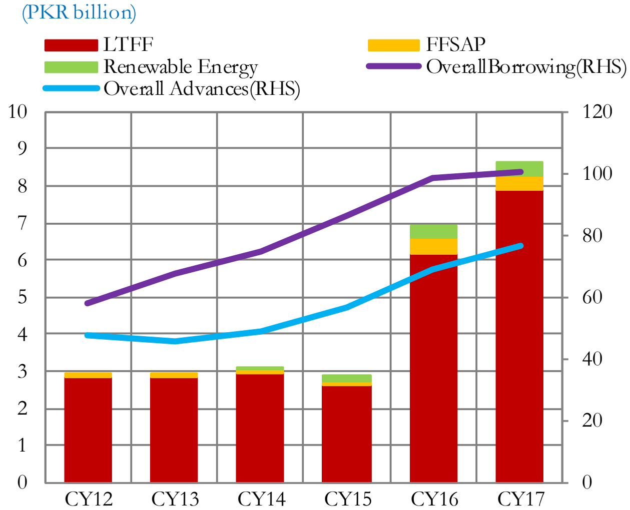
Source: SBP

Figure 4.1.2

Outstanding borrowing under SBP concessional credit is also small

Breakdown of borrowing under SBP major refinance schemes

(PKR billion)



Source: SBP

SBP has introduced various refinance schemes for sustainable and inclusive economic growth. All the institutions regulated by SBP can participate in the scheme for provision of finance to strategic

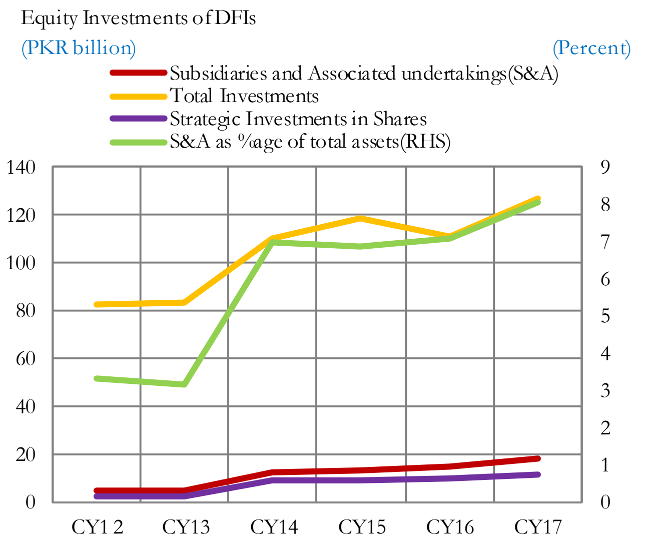
[175] These are only sourced in mortgage lending of one house finance based DFI, which accounts for almost 96.0 percent of total individual portfolio.

[176] Gross advances (CY17) by Banks: Individuals (PKR 618.9 billion), textile (PKR 989.9 billion), energy production/transmission (PKR 1,043.5 billion).

sector[177]. However, the extent of participation of DFIs in these refinance schemes is quite meager as the related liability accounts for only 8.6 percent of the overall borrowing. Hence, the current profile of DFIs is insignificant to build sufficient economic momentum that the DFIs aspire to achieve (**Figure 4.1.2**).

Figure 4.1.3

Investments in related companies are rising



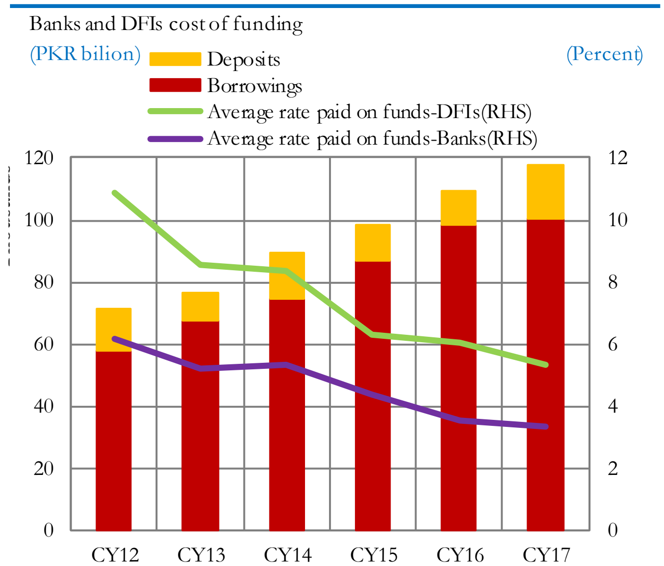
Source: SBP

Although sector's development through equity investments is a worthwhile channel, higher capital charge is a constraint…

Most DFIs have equity investments (through subsidiary/associate relationships or other investments in shares classified as strategic) in many sectors including commercial banks, microfinance banks, asset management companies, leasing, modarabas, real estate, insurance and power generation. Such investments are currently a small part of total assets and investments. Since equity investments can also be a worthwhile channel for supporting growth of significant sectors, stakeholders may consider supporting this avenue. Key stakeholders may consider capacity building programs and operational support to DFIs to enhance their scope of operations while regulators may support this channel through relaxations in limits on per-party exposures and capital charge[178] (**Figure 4.1.3**).

Figure 4.1.4

Costly sources of funds restrict asset expansion



Source: SBP

Lack of viable funding avenues continue to constrain funding…

Deposit base of DFIs, which mainly comprise of remunerative deposits[179] in the form of Certificates of Investments (COIs), represent only 6.7 percent of total assets. Consequently, DFIs heavily rely on borrowing from financial institutions to funds their assets (44.1 percent of total assets). Hence, higher

177 Four long-term refinancing schemes i.e. Long Term Financing Facility (LTFF) for import of machinery and purchase of locally manufactured plants; Modernization of SMEs; Financing Facility for Storage of Agriculture Produce (FFSAP); and Scheme for Financing Power Plants Using Renewable Energy are available for capacity development of the industrial sector.

178 Under the Basel requirements, risk weight of 1000 percent is to be charged for investment in the equity of commercial entities (which exceeds 10% of the issued common share capital of the issuing entity) or where the entity is an unconsolidated affiliate.

179 DFIs cannot raise checking deposits (BPRD circular No. 2 of 2015)

costs of remunerative deposits and dependence on borrowing raises funding costs for DFIs, which limit DFIs asset expansion. The average rate paid on funds mobilized by DFIs has been higher than the banking sector by 200 bps (**Figure 4.1.4**).

…. reliance on secured short-term borrowing further drive DFIs towards unsustainable asset growth

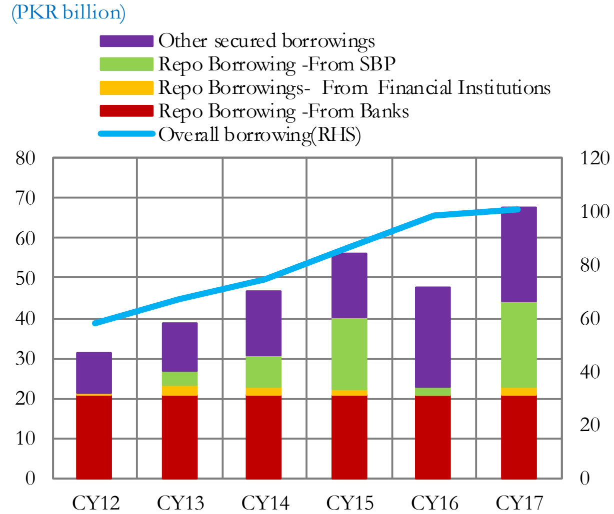
Although the participation of DFIs in government debt market is not a concern per se, the use of borrowings to fund these investments may be unsustainable. The availability of financial securities makes DFIs reliant on secured borrowing to fund asset expansion. Such a channel allows DFIs to get economical rates based on the credit/liquidity quality of underlying securities; these short-term borrowings do not help build a sustainable asset base. Maturity of securities and settlement of outstanding borrowings drive sharp changes in DFI's asset base. DFIs need to develop alternative funding sources for sustainable assets growth (**Figure 4.1.5** & **4.1.6**).

Figure 4.1.5

Reliance on secured borrowing discourage long-term advances

Breakdown of secured borrowings

(PKR billion)



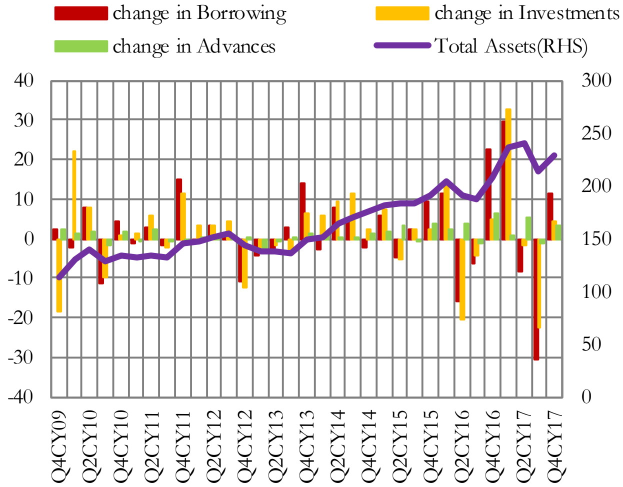
Source: SBP

Figure 4.1.6

Borrowings being utilized for investments-Quarterly flows

Passive intermediation model of DFIs

(PKR billion)



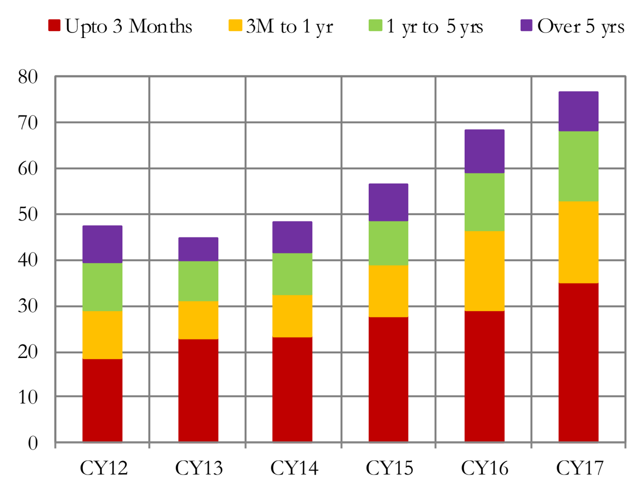
Source: SBP

Figure 4.1.7

Short-term advances dominate

Maturity composition of Advances

(PKR billion)



Source: SBP

…. which leads to increase in short-term lending….

DFI's reliance on short-term secured borrowing is shifting the lending portfolio towards the shorter end, downplaying the unique role of DFIs as providers of long-term growth financing to projects of national significance. In repo borrowing, maturity of the underlying securities must be greater than the term of the repo agreement. Given the inclination towards short-term securities, the borrowings secured through them are also short-term (**Figure 4.1.7**).

Some recalibration of policy is required to scale up DFIs' presence in the financial sector…

As one of the core objectives of the policy-makers is to achieve sufficient depth in the financial sector enabling it to sustain shocks, it is imperative that alternative lending institutions exist to plug the gaps and provide back up. Therefore, there is a need to establish a significant role of DFIs. On the policy front enhanced engagement with the DFIs, development of medium to long term plan for enhancing the scope of activities, discussions at bilateral level and encouraging participation of the private sector in shareholding of DFIs are some possible measures. Government may consider DFIs role in national level long-term development planning. In addition, DFIs may need to be supervised separate from commercial institutions.

The current solvency indicators- CAR at 47.04 and NPLR at 17.2 percent[180] in CY17 reveal sufficient cushion to scale up lending. With the required boost from the stakeholders, DFIs, as representative of governments, can play their role in providing countercyclical financing, if ever there is a need to safeguard financial stability.

[180] The NPLR is relatively higher than the banking sector (8.4 percent) due to mortgage lending by one house financing-based DFI, which accounts for almost 44 percent of the sector's NPLs.

4.2 Risk Analysis of Non-Banking Financial Institutions (NBFIs)

CY17 tested the resilience of the NBFIs to major macroeconomic developments from stock market volatility to interest rate expectations and even exchange rate losses booked by the dominant foreign group in the deposit taking/lending segment. Even though investor confidence seems disturbed, availability of alternates has maintained the market inflows. Investors earlier pursuing "capital appreciation" motives in the equity markets have diverted most of the fresh investments towards the "capital preservation" quality of the income and money market funds. Big investors seem too cautious; they have preferred to rest their savings under professional advice switching towards the discretionary-type portfolios. Market prices of REIT reflect relatively mild co-movement with the broader equity indices while its net assets are building-up from unrealized gains on underlying property. Diversification from introduction of microfinance segment and private equity funds may reduce the NBFI's assets dependence on the performance of the public markets.

Diversification is a key element of financial depth in an economy. An ideal financial system has a variety of institutions that provide a range of products and services to the end users. Such a setup promotes competition and leads to efficiency and low cost of financial services.

The NBFI[181]sector helps in achieving this ideal. It has continued to add diversity to the available business models; e.g. CY15 witnessed introduction of a REIT fund; CY16 the inclusion of NBFMCs segment and CY17 the addition of Pakistan Microfinance Investment Company (PMIC), an important entity in the IFC segment, that is to serve as a sector developer for the NBMFCs and the first PE fund. With these recent additions, the NBFIs have added the social welfare component to their portfolio; while the PE segment taking a more commercial route will possibly benefit merger and acquisition activities in the corporate sector that could build some momentum for public listings of companies (**Table 4.2.1**[182,183]).

Table 4.2.1

Asset Profile of NBFIs

	FY12	FY13	FY14	FY15	FY16	FY17	Dec-17
	PKR billion						
AMCs/IAs	40.2	42.7	29.8	31.9	37.3	40.9	37.3
Mutual Funds	410.0	402.2	452.0	492.2	546.2	710.0	654.2
Pension Funds	2.8	4.9	8.3	13.9	19.3	25.8	24.1
Portfolios	44.4	56.5	72.1	96.6	139.2	141.1	139.0
Total AUMs	457.2	463.6	532.4	602.7	704.8	876.9	817.3
RMCs	-	-	0.1	1.5	1.5	1.5	5.0
REITS	-	-	-	23.2	27.2	40.9	40.6
PE & VC Firms							0.2
PE Funds	-	-	-	-	-	-	0.6
MMCs	-	-	-	-	2.4	3.3	3.3
Modarabas	29.3	31.7	30.0	31.1	36.5	44.1	48.1
Leasing Companies	33.0	34.5	35.7	40.3	42.3	43.3	44.6
IFCs	17.3	12.4	11.1	10.2	9.9	20.7	25.1
NBMFCs	-	-	-	-		61.5	70.3
Total Assets	**576.9**	**584.8**	**639.0**	**741.0**	**861.8**	**1,133.2**	**1,092.4**

Source: SECP

181 NBFIs for our analysis purpose include NBFCs, REITs and Modaraba Companies. As per section 282A of Companies Ordinance,1984, Non-banking finance companies (NBFCs) include companies licensed by the Commission to carry out any one or more of the following forms of business, namely Investment Finance Services, Leasing, Housing Finance Services, Venture Capital Investment, Discounting Services, Investment Advisory Services, Asset Management Services and any other form of business which the Federal Government may by notification in the official Gazette specify from time to time. Non-Bank Microfinance Companies are also included in NBFCs.

182 AMCs/IAs(Asset Management Companies/Investment Advisors), AUMs(Assets Under Management), RMCs(REIT Management Companies), REIT(Real Estate Investment Trust), PE & VC(Private Equity & Venture Capital), MMCs(Modaraba Management Companies), IFCs(Investment Finance Companies), NBMFCs(Non-Banking Microfinance Companies)

183 Financial Year (FY) for NBFIs ends in June. but for the purpose of complete analysis of CY17 and to give due coverage to the experienced changes in the asset management segment, the six month period from July-December 2017 has also been included in the analysis.

The sector has also been spreading the vision of an Islamic financial system by offering business models such as modarabas in the past. Overtime, the sector has included more Shariah compliant offerings such as mutual/pension funds and REITs in its list. The performance of the pioneering structure i.e. modarabas has remained sub-par, though, with 25[184] MMCs offering only 27 Modaraba funds. However, newer structures have been gaining more traction as their share in total assets has expanded from 8.9 percent in FY12 to 32.4 percent in FY17 (30.3 percent in December 2017). Among these, Shariah-compliant mutual and pension funds have been most popular accounting for 26.6 percent of total assets in December 2017[185].

Risk averse sentiments prevail…

Over the last few years, NBFIs have surfaced as a growing segment in the financial sector achieving average growth of 14.9 percent during FY13-17. Almost all of this growth is sourced in the expanding mutual fund segment, which has dominated the NBFI assets with an average share of 66.4 percent from FY13-17.

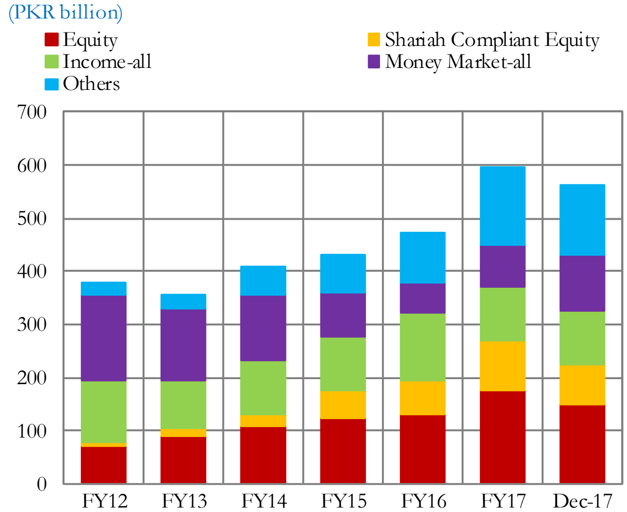
Within the mutual fund segment, the top three fund categories i.e. Equity funds, Income fund and Money Market Funds (MMFs) together have accounted for 78.7 percent of the overall net assets. Equity mutual funds constituting 45.3 percent of total mutual fund net assets in June 2017 have been the mainstay, growing at average rate of 28.1 percent from FY13-17. However, with bearish trend in the equity market during second half of CY17, the share equity funds' has decline to 39.9 percent by end December 2017. Net assets of conventional and Islamic equity funds have declined at relatively higher rates of 15.9 percent and 19.0 percent respectively, suggesting lower fresh inflows besides valuation effects. The initial decline did trigger liquidation from some cautious investors but the bulk seems to have occurred after the market recovered partially (**Figure 4.2.1**).

Figure 4.2.1

Equity Funds share in net assets diluted by almost five percent

Money Market funds are substituting the equity funds

(PKR billion)



Source: MUFAP

Large redemptions from mutual funds are a norm at half year and annual closings. This is associated with financial institutions' redeeming mutual fund units to realize profits over these periods. In previous years, despite these redemptions strong equity market performance enticed sufficient fresh inflows leading to a net increase in equity fund assets. This year, however, risk-aversion has prevailed due to

184 Only three of the MMCs are offering more than one modarabas fund. SECP has suggested a Draft Modaraba bill in May 2017 that is currently open for pre-legislative debate of stakeholders. If the industry professionals are able to suggest some enabling changes to the regulatory regime, it may provide the needed impetus to modarabas.

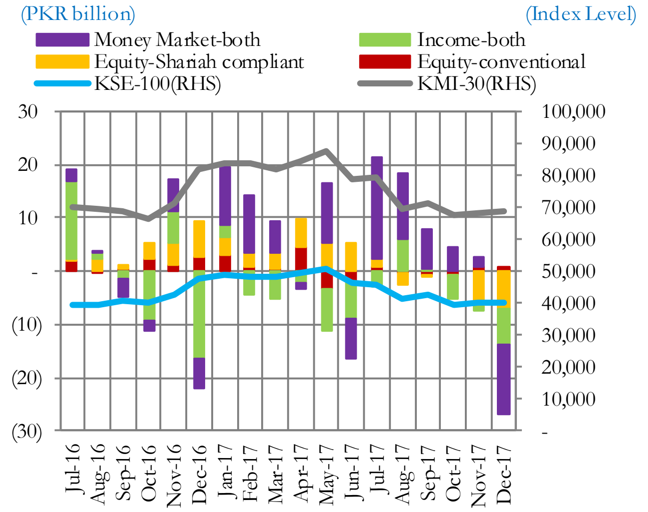
185 SECP has been making efforts to facilitate growth and promote credibility of Islamic financial services. Accordingly, SECP has notified i) Draft Shariah Advisors Regulations in September 2017, ii) Draft Shariah Governance Regulations, 2018 which cover Shariah-compliant companies and entities, Shariah-compliant securities and Islamic financial institutions for public consultation .SECP is also gradually adopting accounting and Shariah standards issued by Accounting and Auditing Organization for Islamic Financial Institutions (AAOIFI).

market weakening as investors have avoided making fresh investments in equity funds (**Figure 4.2.2**).

Figure 4.2.2

Net sales from top three mutual fund categories

Diversion of fresh inflows towards safer funds have helped maintain size



Source: MUFAP & PSX

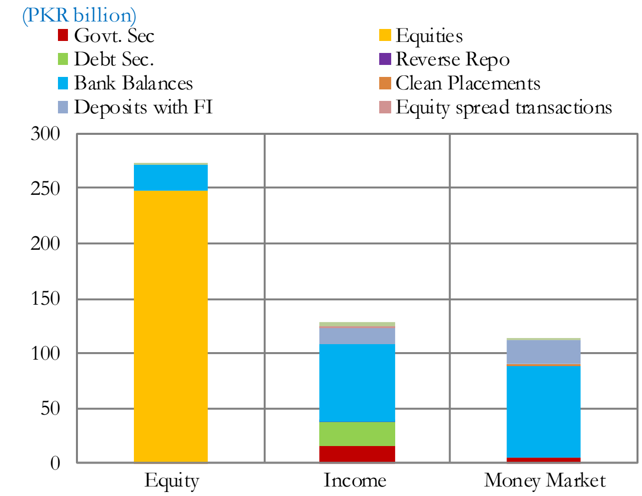
…diverting fresh flows towards the money market funds…

Availability of diverse products like equity and money markets funds have given investors freedom to quickly switch their investments based on changing market dynamics, expectations and risk appetite[186]. This flexibility has helped contain the size of the industry's AUMs despite volatility in equity returns. Over the last six months of CY17, MMFs have increased their presence by 6 percent; against an overall outflow of PKR 7.5 billion (May to Dec 2017) from the equity category, the money market funds have received a net inflow of PKR 36.4 billion (**Figure 4.2.2**).

Figure 4.2.3

Asset allocation of dominating fund categories in CY17

Relative safety of Money Market funds



Source: SECP

….with investments mainly in shorter tenor instrument due to changing interest rate expectations…

Despite international literature, which highlighted the systemic dimension of MMFs and lessons learnt following the GFC, which suggest MMFs may pose stability risks[187], these funds prove to be the safest in domestic market. Firstly, in the absence of corporate debt, the primary interest rate based investment avenues remain either risk free government paper or deposits and placements with the financial institutions. Further, under SECP's regulatory requirements, requirements on maintaining liquidity buffers and maturity caps (on both individual asset and weighted average for the overall portfolio) exist which cover for risks from liquidity/maturity mismatches. [188] Analysis of net inflows into the income and MMFs reveal that investors have confined themselves to the shorter-duration

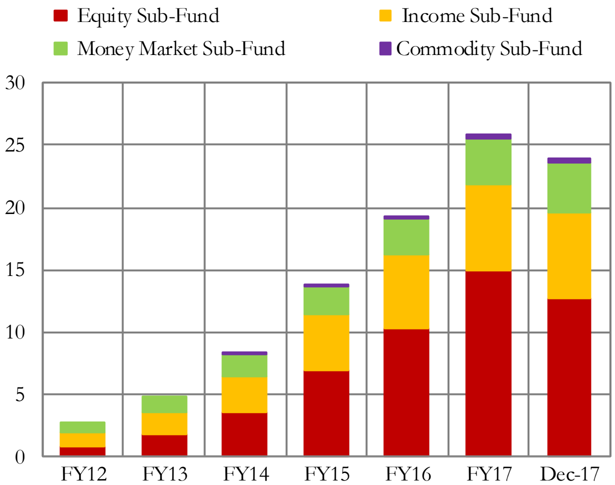
[186] Equity funds target capital appreciation, while money market funds focus on capital preservation.
[187] Policy recommendation on money market funds (http://www.csrc.gov.cn/pub/csrc_en/affairs/AffairsIOSCO/201210/P020121010500138903810.pdf)
[188] https://www.secp.gov.pk/document/categorization-of-open-end-collective-investment-schemes-3/?wpdmdl=13058

instruments to avoid the repricing losses due to expected changes in interest rate.[189,190] (**Figure 4.2.3**).

Figure 4.2.4

Equity sub-funds in Pension Funds have also witnessed outflows

Change in pension fund assets from ensuing volatility in equity market (PKR billion)



Source: SECP

Equity market performance has also reduced pension coverage …

Pension funds too have witnessed similar compositional change with their pension participants switching away from sub-equity funds. While availability of sub-money market funds has contained some of the outflow, there has been a decline of 19.3 percent in H2CY17 in average pension coverage per pension account[191]. Of this decrease, 12.8 percent is attributable to increase in number of accounts while 7.5 percent is due to the overall decrease in pension fund AUMs. The pension fund segment currently hold a small share of NBFI's assets but their significance emanates from their socio-economic benefits. In view of the need to promote this segment to extend pension coverage to a wider market, closer vigilance of performance and enhanced risk management of pension funds are warranted (**Figure 4.2.4** and **Box 1**).

Portfolios of eligible investors have witnessed changes that may reduce panic trading in the market…

Investment advisory services has been a growing segment of NBFIs and holds a share of 12.7 percent (highest after Mutual Funds). Both the discretionary/non-discretionary portfolios[192] have observed growth as large investors are relying on professional advisors to cope with the uncertainty in capital markets.

Table 4.2.2

Portfolios classified by responsibility of investment decision-making

	FY12	FY13	FY14	FY15	FY16	FY17	Dec-17
	PKR million						
Discretionary Portfolios	14.3	23.3	35.9	53.1	89.3	97.4	104.3
Non-Discretionary Portfolios	30.1	33.2	36.3	43.6	49.9	43.7	34.7
Total Portfolios	**44.4**	**56.5**	**72.1**	**96.6**	**139.2**	**141.1**	**139.0**

Source: SECP

But recently, in the face of the market disturbance, this trend has gained momentum as is reflected in continuous switching towards discretionary portfolios. This is a positive development for the sector as high net worth investments of the portfolios can be flighty in nature, as these clients

[189] This is primarily due to the expectations of increase in interest rates, which has already actualized to some extent with the upward revision in the policy rate.

[190] The shorter maturity investments will shield investors from both re-pricing losses on traded debt if interest rates were to rise and opportunity loss of coupon/interest income on bonds/deposits/placements if funds are committed for longer-tenor at the currently lower rates.

[191] Since Pension accounts are not unique, they may not represent pension participants accurately. Hence, a rough estimate of provision coverage has been used.

[192] Portfolios are investments of eligible investors (person offering a minimum of PKR 3 million investment) managed by Investment Advisors. Under "Discretionary Portfolios", investment decisions are made and executed by the Investment Advisor on behalf of clients. While under a "Non-Discretionary Portfolio", investment decisions are made as per the written instructions of the clients.

tend to exit markets at the earliest signs of trouble. Placing investments in the hands of professionals may contain panic sell-outs under episodes of political/macroeconomic uncertainty adding some length to the investment-holding period (**Table 4.2.2**).

Table 4.2.3

Two Major heads of REIT Earnings

	Jun-15	Jun-16	Jun-17
	PKR million		
Rental Income	193.7	2,526.6	2,841.6
Change in Fair Value of Property	-	15,422.0	1,181.0
Total Profits	2,776.8	17,724.6	3,787.1

Source: Annual Audited Accounts of REIT

REIT share prices indicate relatively insignificant co-movement with the broader equity indices

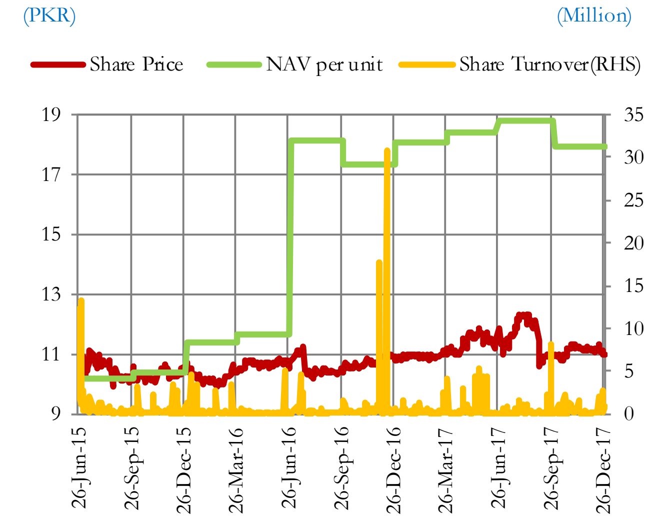
Since inception, the asset base of REIT funds has expanded by PKR 17.7 billion increasing the NAV from PKR 10.2 per unit in June 2015 to PKR 17.53 per unit in December 2017. Most of this expansion is sourced in the unrealized property valuation gains of PKR 16.6 billion from underlying property (**Table 4.2.3**). The REIT's property valuation is based on projected net operating incomeand as the rental income and occupancy levels thrived in FY16, property valuation rose to reflect the underlying prospects[193].

Quality of a REIT is reflected in higher occupancies (which reduce opportunity costs of lost rentals) and longer lease terms (which dilute risks of downward revision in rental rates upon term expiry). As of FY17, the REIT had an occupancy rate of more than 97.0 percent while the average lease expiry stood at 3.4 years[194]. In terms of its share price, the REIT shows a relatively lesser correlation with the broader equity indices and despite the high quality of the underlying property and cashflows generated from it continues to trade at a discount to its NAV i.e. 38.7 percent as of December 29, 2017(**Figure 4.2.5**).

Figure 4.2.5

REIT share's closing price, turnover and NAV per unit

NAV per unit is gaining traction from property valuation



Source: Audited accounts of REIT and PSX

Revival of the PE segment may dilute the sector's vulnerability to market volatility by promoting "private equities"

Amidst the volatility in the public markets this year, Private Equity and Venture Capital firms have again made their way into the sector. The first Venture Capital (VC) firm started its operations in Pakistan back in 2001. And even by 2006 there were only three VC firms in Pakistan with an asset base of PKR 4.13 billion (less than 1 percent of NBFI assets). The performance of the firms had been below par mainly due to losses from high financial charges (on financing obtained for acquisitions of

[193] To value the property, income capitalization approach has been used wherein the projected Net Operating Income (based on existing rental agreements and expected rent for the vacant area) has been capitalized at the rate of 7 percent. Two other approaches are cost-basis and sales-comparison basis, which look at selling prices of other similar deals to arrive at the property value.

[194] Annual audited accounts of the REIT for FY17.

companies). Consequently, the VC companies ceased to exist until new licenses were issued under a broader category to establish "Private Equity and Venture Capital Firms".

As of November 30, 2017, there are three licensed PE firms (two new players and one existing NBFC) with a total asset size of PKR 1.1 billion. One of these firms has launched a PE Fund of PKR 590 million and is currently in the stage of calling commitments from investors while PE funds from the other two PE firms are in pipeline. Growth of this segment is desirable in our market for diversification of institutional players so as to compete against the current dominance of the mutual funds, stabilization effect on the the equity markets due to longer-term investments and probable revivial of corporate in financial distress thereby faciliating stability of the financial sector (**See Box 2**).

A number of enabling factors including current low valuation of the stock market[195] and investments in Pakistani companies under the CPEC project utilizing the PE vehicle as the Chinese PE investors dominate the Asian PE market. However, on the down side, there is a dearth of institutional investors that can provide long-term funding to PE. In view regulatory concern of protecting public savings, the regulatory framework for institutional investors (mutual funds, pension funds and insurance)[196] has contained many of the key sources of risks through prescribing liquidity and maturity characteristics of their allowed investments. Further, interest from high net worth individuals also seems low because the share of "discretionary/non-discretionary portfolios" targeting a similar clientele, although growing, is still relatively small to provide meaningful resources to sufficiently support the PEs.

An enabling regulatory environments needs to be developed to promote a strong segment of long-terms / institutional investors in our financial sector and PE can be a strong vehicle for it. Efforts in this regard may be targeted towards mobilizing corporate sector's resources by allowing various tax concessions etc. In addition, the existing institutional investors may be allowed to invest some portion of their investments in PE funds to provide some initial support for the sector.

Financing momentum for NBFIs with establishment of PMIC ….

The NBFIs have been growing from market-based structures while performance of the traditional intermediaries like modarabas, IFCs and leasing companies have been lagging behind due to insufficient availability of funding. But the financial intermediation function may get the necessary boost under the NBMFCs model spurred by the country's strategic vision which is focused on enhancing financial inclusion. SECP is taking steps to bring the non-deposit taking microfinance institutions, non-governmental organizations (NGOs) and Rural Support Programs (RSPs) under the NBFC framework. So far, out of the 27 microfinance providers (other than MFBs), 22 entities have been licensed. This recognition as a financial institution will benefit the NBMFCs in fundraising opportunities through greater donor confidence. Further, the establishment of PMIC, which has been licensed as an IFC, will mobilize resources for

195 Low valuations allow PE firms to purchase the companies at a relative discount supplementing the IRRs on investments

196 Mutual funds have limits on illiquid investments and an elaborate criteria for investments that effectively limits their trading within the most liquid segment of the market. Weighted average maturity of investments for pension funds is capped at 5 years. For Insurance, specified percentages regarding admissibility of assets under solvency requirements have been prescribed. Shares in unlisted companies (aggregate) are admissible to the extent of only 5 per cent in case of non-life insurer and only two and half percent in case of life insurer. This will effectively hamper insurance companies' involvement in unlisted shares.

microfinance services by attracting funding from commercial lenders as development agencies, financiers, commercial banks and capital markets. As PMIC starts to build resources to meet the funding needs of the microfinance sector (with a potential demand of USD 3 billion.[197]), it will simultaneously support financing function of both the IFCs and NBMFCs.

Nevertheless, concentration risk in modarabas and leasing remains …

The deposit-taking/lending segment[198] of NBFIs is highly concentrated and has continued to be dominated by one leasing company (57.1 percent of the overall deposits and 57.7 percent of loan portfolio in CY17). Profile of the dominating company has indicated vulnerability from external shocks and solvency position and may serve as a possible pass-through of external macro-economic changes to the domestic financial sector to the detriment of the financing segments that are already barely thriving[199]. As the entity is foreign-owned, it is active in overseas operations through associated undertakings (ten percent of its total assets in FY17) and has booked losses on its foreign associates in the MENA region and Egypt.[200] Further, its CAR[201] (11.1 percent in FY17) might become borderline with the applicability of the new benchmark of 10 percent (**Table 4.2.4**).

Table 4.2.4
Concentration of foreign and bank-owned entities in NBFIs sector

	Advances	Deposits	Borrowing	Total Assets
	PKR billion			
Foreign entities in Leasing	33.2	6.1	13.0	38.5
Bank sponsored entities in leasing	2.9		0.2	3.2
Total Leasing Segment	**36.7**	**6.1**	**13.4**	**44.6**
Foreign entities in Modarabas	5.0	3.0	0.9	14.7
Bank sponsored entities in Modarabas	9.2	4.9	1.4	13.1
Total Modaraba Segment	**16.9**	**8.6**	**4.2**	**48.1**
Foreign entities in IFCs	11.4	-	-	12.8
Bank sponsored entities in IFCs		-	-	-
Total IFC Segment	**12.6**	**1.3**	**2.5**	**25.1**
	Mutual Funds	**Pension Funds**	**Portfolios**	**Total AUMs**
Foreign entities in Asset Management	6.6	-	8.2	14.8
Bank sponsored entities in Asset Management	497.4	21.4	79.1	597.9
Total Asset Management Segment	**654.2**	**24.1**	**139.0**	**817.3**

Source: SECP

….. there is no indication of risks from regulatory arbitrage

Although risks from inter-connectedness and the need to have diversity in ownership in the financial sector cannot be ruled out, banks need to facilitate development of an alternate credit system that would actually lend stability to the financial sector in the long run. However, segments offering similar products may give rise to regulatory arbitrage as banking sector is generally more tightly regulated. Even internationally, greater presence of NBFIs sector has been spurred from regulatory arbitrage. But in our system, firstly, the NBFI sector is also adequately regulated and for the banking sector companies which have ventured into NBFIs this looks like a matter of offering a whole suite of financial products (particularly the asset management function) rather than the motive of arbitrage.

Further, although banks including Islamic banks that have active leasing portfolios can take

[197] http://pmic.pk/who-we-are/
[198] Only three of the eight leasing companies have deposit-taking permission with total deposits of PKR 6.1 billion in CY17. One of the bank-owned leasing company obtained deposit-taking permission in September 2017 and so as of CY17, it had no deposit liability.
[199] In February-2018, re-licensing of this leasing company as an IFC has resulted in diminution of the leasing sector from PKR 44.6 billion to PKR 8.5 billion.
[200] Economic and political turmoil in the MENA region, depressed oil prices and losses from devaluation from free float of the currency in Egypt were the primary reasons impacting the overseas operations of the entity.
[201] As per clause 17(A) of Non-Banking Finance Companies and Notified Entities Regulations, 2008 updated up to November 25, 2015, deposit-taking NBFC shall be required to maintain CAR of eight per cent (8) for the first two years from coming into force of these regulations and ten per cent (10) for subsequent years.

advantage of CAR differentials[202] between the two sectors, only three of the bank-owned companies have leasing companies (representing only 9.1 percent of leasing sector's asset base in CY17). In the modarabas segment, five banks have floated modarabas.

Table 4.2.5

NBFIs flow of funds & exposure to the banking sector

	Total Value (i)	Banks share (ii)	Banks share in Total* (iii= ii/i)	Total Value (iv)	Banks share (v)	Banks share in Total* (vi= v/iv)
	Jun-17			Dec-17		
	PKR billion		Percent	PKR billion		Percent
1. Equity of AMCs/ IAs	24.0	12.0	50.00	23.7	11.9	50.22
2. Assets Under Management of AMCs/ IAs	876.9	637.9	72.74	817.3	597.3	73.07
3. Mutual Funds size	710.2	32.4	4.56	654.2	30.0	4.58
4. Mutual Fund exposure in Financial Institutions	229.5	221.5	96.51	254.2	230.6	90.70
5. Mutual Funds exposure in top 20 equity securities	122.9	3.8	3.08	91.8	3.8	4.18
6. Mutual Funds exposure in top 10 debt securities	11.7	7.9	67.91	15.0	9.0	59.74
7. Top 20 holders of mutual fund units	68.9	21.1	30.58	68.7	13.1	19.10

Source: SECP

*Banks share for the respective head means:

1.Equity of Bank-owned AMCs /IAs

2.Mutual/Pension Funds and Portfolios being managed by bank-owned AMCs /IAs

3.Banks' investments in mutual fund units

4.Mutual Funds' investments in deposits, COD/TDR/COI and money at call/placements with banks

5.Mutual Fund investments in ordinary shares of banks

6.Mutual Funds investments in TFCs/Commercial Paper/Sukuk etc. issued by banks

7.Banks(investment value) in the top 20 holders of mutual fund units

Inter-connectedness with the banking sector may further increase…

The banking sector has been a key facilitator for development of the NBFI sector as more than 70 percent of the mutual fund assets have been mobilized by bank owned AMCs. Besides ownership links, banks have also invested directly in mutual fund units. On the flip side mutual funds also have exposure on banking sector through deposits maintained with banks and investments in securities issued by the banking sector e.g. shares, TFCs, Sukuk etc. (**Table 4.2.5**).

The existing interconnectedness may further increase from the flow of funds and dependence on common clients channels as: i) investor's tendency towards money market funds, which are mostly invested in bank deposits and given the government's deteriorating acceptance of bids[203] for short-term government paper leading to their lower availability for investment , more money market funds will be invested in deposits/placements with the banking sector, and ii) establishment of PMIC which will seek commercial funding to pass on to microfinance providers. If such funding, which is to be passed on to MFBs/MFIs, is solicited from banks, it will make the banks credit quality portfolio dependent on the credit quality of the NBMFIs.

This channel primarily represents interconnectedness through flow of funds from the point of view of NBMFIs, but may also present inter-connectedness through common market, as the target group of MFBs and NBMFIs are similar. The overlap in targeted beneficiaries especially if

202 Currently, Desposit-taking NBFCs have applicable CAR requirement of 10 percent while there is no CAR requirement for Deposit-taking Modarabas.

203 GoP's acceptance-to-pre-auction target ratio for T-Bills has declined from 1.0 in CY16 to 0.8 in CY17.

borrowing is concentrated in particular sectors/segments can turn out to be a growing source of inter-connectedness. Any indication of deterioration in quality of micro-borrowers is bound to affect IFCs, NBMFIs and MFBs simultaneously and iii) In case of insufficient mobilization for PE funds from private investors, PE firms may decide to lever the available funds through bank debt.

Box 4.2.1: Pension Funds in Pakistan

Pension Funds in the Context of Social Safety Nets

Social pension systems continue to be relevant to nations worldwide as they strive to ensure economic stability and security of their aging populations. Countries grapple with adopting a Multi-Pillar Pension System that has some participant-funded elements but also includes other options that allow States to extend effective old-age protection in a fiscally responsible manner.

Pakistan has been making efforts to strengthen its social security program to support the vulnerable. At the federal level, the Benazir Income Support Program complemented by smaller programs as the Zakat and Bait-Ul-Mal programs provide non-contributory social protection to alleviate general poverty. While state-mandated contributory retirement plans offered by employers in the formal sector provide consumption smoothing to the retired workforce.

The current pension system is considered ***inadequate*** as its coverage is confined to the formal sector employees, while a large portion of the labor force in Pakistan, either employed in the informal sector (especially the agriculture sector) or self-employed, remains uncovered. Another major issue is the system's ***sustainability***. Most of the pension schemes in our system are the unfunded Defined Benefit[204] wherein servicing burden lies with the employers.

The situation has led many employers (specially the private sector employers) to curtail pension benefits and switch to the defined contributory system wherein employers are liable to only pay out the defined amount and the financial risks of retirement savings are passed onto the employees who are themselves responsible for their investments and returns.

In case of public sector too, much of the pension liability remains un- funded. The future monetary obligations are taken to be met from future taxation, which places undue fiscal burden and responsibility on future generations. Age analysis of population suggests growing state pension expenses given the expected increase in the older age group. These conditions have led to reforms in the pension system increasingly stressing "funded" pension arrangements. Pension system reforms are focused on extending coverage to funded pension systems, which are professionally managed, extend to the informal sector, and facilitate switching from the existing employer schemes. While in the public sector, funds have been created at the provincial level to pre-fund the future liability.

Pakistan's Pension system -Regulatory perspective

The employer sponsored pension programs (called the Occupational Savings Schemes) are a product of Labor Laws and have been formulated with the core objective of increasing pension coverage. And FBR only regulates these schemes from a tax standpoint. Underlying different objectives, these regulations failed to address the peculiarities of a pension legislation- most importantly safeguarding pension savings by laying out criteria to discipline investments in a way that curtail risks without compromising returns.

SECP assumed the role of a Pension regulator with an amendment in Securities and Exchange Commission of Pakistan Act, 1997 in 2003[205], which expanded its

[204] There are two types of pension schemes i) Defined Contribution (DC) and ii) Defined Benefit (DB). In a DC plan, only fixed contributions (determined on the basis of the worker's age, earnings, contribution rate, investment return and normal retirement age) are made into individual accounts of employees by both employer and employee. Accumulated retirement amount is paid out by employer but this amount may be insufficient to cover the remaining life of the covered employee. Hence, the risk of insufficiency of funds in the future is borne by the employee. In a DB the retirement benefits are known (e.g. they will be provided for the entire period that the employee lives) throughout. Contributions depend on the amount that will be required to fund the future benefits that the employer has promised. Even if the investments returns are below par, employer must pay the promised benefit. An actuary determines the amount that shall be contributed to produce the desired benefits taking into account factors as length of service, level of wages etc. Regular pension amounts that are paid for the entire life of an employee and medical benefits are defined benefit plans. Unfunded plans refer to those wherein pension assets are less than pension liability/obligation.

[205] https://www.secp.gov.pk/document/secp-amendment-act-1997-for-your-information-and-record/?wpdmdl=17801

responsibilities to include promotion and regulation of Private Pension Schemes and Funds. Accordingly, the Voluntary Pension Rules were introduced in 2005, which more tightly regulate the pension products sold to individuals or institutions.

Mapping Pakistan's Multi-Pillar Social Pension system to the World Bank Model

Table 1

Multipillar Pension Taxonomy- World Bank

Pillar	Target Group			Main Criteria			Pakistan's System of Social Pension
	Lifetime Poor	Informal Sector	Formal Sector	Characteristics	Participation	Funding or collateral	
0	X	X	x	"Basic" or "social pension," at least social assistance (universal or means tested)	Universal or residual	Budget or general revenues	Benazir Income Support Program(BISP), Pakistan Bait-ul-Mal
1			X	Public pension plan, publicly managed (defined Mandated Contributions, benefit or notional defined contribution) perhaps with some financial reserves	Mandated	Contributions with some financial reserves	Mandatory State pension ,State-mandated registration with EOBI(industrial and commercial enterprises employing more than 5 employees)
2			X	Occupational or personal pension plans (fully Mandated Financial assets funded defined benefit or fully funded defined contribution)	Mandated	Financial assets	Occupational Saving Schemes with Private sector employers, Workers Welfare Fund(WWF)
3	x	X	X	Occupational or personal pension plans (partially or Voluntary Financial assets fully funded defined benefit or funded defined contribution)	Voluntary	Financial assets	Voluntary Pension Scheme
4	X	X	X	Access to informal support (family), other formal Voluntary Financial and social programs (health care), and other individual nonfinancial assets financial and nonfinancial assets (homeownership)	Voluntary	Financial and nonfinancial assets	Pakistan Poverty Alleviation Fund(PPAF), Microfinance Institutions

Source: World Bank

Note: Size of x is reflective of the importance of each pillar for each target group in the following increasing order of importance: x, X, X

Parallels can be drawn between the social pension systems in Pakistan to that of the five-pillar model suggested by the World Bank in 2005 (**Table B3.5.6**). The model suggests that ideally in low-income countries, the zero pillar should be the dominant form of protection against old-age risk. But since in many of these countries, both the public and the private sector are unable to deliver sufficient coverage, the model suggests that the third pillar (voluntary pensions) should be promoted with the basic zero pillar confined to providing for the basic needs of the most vulnerable.

Voluntary Pension Scheme in Pakistan

The Voluntary Pension Scheme (VPS) in Pakistan was established to move beyond the conventional concentration on the first and second pillars so as to i)provide for effective old age protection in a fiscally responsible manner, ii) extend coverage to the workforce of the informal sector and iii) allow differential amounts of coverage for employees than those available under EOBI .

Features of the VPS

VPS is a tax-advantaged defined contribution scheme under which contributions can be made in lump sum or regularly, to provide regular income during retired life. The scheme is available to employed/self-employed individuals wherein besides the employees their employers may also contribute to provide regular income during their retired life. Tax credit can be availed at the average rate of tax on the amount of actual contribution or 20 percent of annual taxable income whichever is lower. For those joining at 41 or above an additional credit of 2 percent is allowed for every year over 41 years of age, up to a maximum credit of 30 percent of the taxable income of the preceding year. Contributions can be made in lump sum or regularly with annual tax credit of 20% of taxable income. Further, the Contributions made by the Participants and/ or their employers (if any), plus the investment income, are accumulated tax free in the Sub-Funds until the Participant retires.

Participants of VPSs can change their Pension Fund Manager or the Pension Fund, once a year by giving 21 days prior notice. Further, participants can choose to change their selected Allocation Scheme, twice a year.

Individuals can choose among the specified allocation schemes a as per their risk appetite to achieve desired diversification. A pension fund must offer four pension allocation schemes for three or four sub-funds[206] as tabulated below (**Table 2 & 3**):

Table 2

Three Sub-Fund allocation schemes allowed to Pension Funds

Allocation Scheme	Equity Sub-Fund	Debt Sub-Fund	Money Market Sub-Fund
High Volatility	Min 65%	Min 20%	-
Medium Volatility	Min 35%	Min 40%	Min 10%
Low Volatility	Min 10%	Min 60%	Min 15%
Lower Volatility	-	Min 40%	Min 40%

Source: SECP

Table 3

Four Sub-Fund allocation schemes allowed to Pension Funds

Allocation Scheme	Equity Sub-Fund	Debt Sub-Fund	Money Market Sub-Fund	Commodity Sub-Fund
High Volatility	Min 40%	Min 20%	-	Max 25%
Medium Volatility	Min 20%	Min 40%	Min 10%	Max 15%
Low Volatility	Min 05%	Min 60%	Min 15%	Max 05%
Lower Volatility	-	Min 40%	Min 40%	-

Source: SECP

Besides this, some pension funds can also offer other allocation schemes as lifecycle products. Under these products, younger individuals can choose riskier/aggressive investments portfolios that are inclined towards equity funds and vice versa. Further, in the event that no allocations are chosen by an individual, pension fund manager shall allocate preferably to an approved lifecycle allocation scheme if available based on the age and risk profile. A typical lifecycle scheme may look like this (**Table 4**):

Table 4

A typical Life Cycle Allocation scheme

Plan	Equity Sub-Fund	Debt Sub-Fund	Money Market Sub-Fund
18-30 years	75%	20%	5%
31-40 years	70%	25%	5%
41-50 years	60%	30%	10%
51-60 years	50%	30%	20%
61 and above		50%	50%

At retirement, a participant can choose any one of the following:

- Encash up to fifty per cent of the amount accumulated in Pension Account tax free and remaining by paying tax as per Income Tax Ordinance 2001.
- Purchase i) an Approved Annuity Plan from a Life Insurance Company that pays regular income; or ii) an Income Payment Plan with Pension Fund Managers for monthly installments for fifteen years. This option is more suited for those willing to take some risk to earn incremental returns.

Performance and trends in Pension Funds

Pension funds have steadily been increasing with ten pension fund managers managing 19 funds. In CY17, the pension funds' AUMs stood at PKR 24.1 billion with investor accounts of 27,725. Islamic fund were the dominating category with PKR 15.2 billion assets.

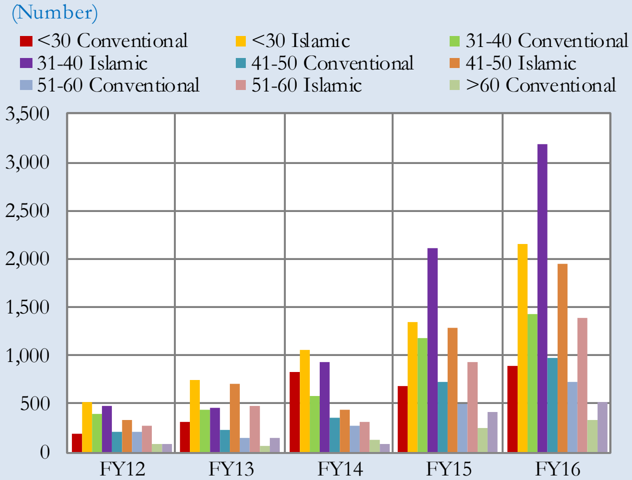
[206] Besides the equity, income and money market sub-funds, the commodity sub-fund was introduced in a pension fund under circular No. 6 of 2013 dated May 09, 2013. This commodity sub-fund shall invest in only commodity future contracts that are traded at the PMEX and are cash-settled futures (except gold which can be invested in a deliverable future contract).

Age analysis of the participants reveals that in terms of number around 34 percent of the participants are in the middle age bracket (31-40 years) which is an encouraging sign (**Figure 1**). In terms of amount, the total amount invested by the 51-60 year category dominates (43.4 percent of total AUMs) suggesting build-up over time. Comparison of retirement funds' investments in mutual funds with the size of VPS reveals that retirements funds prefer investments in mutual funds rather than their specialized product available for old-age security i.e. VPS. The size of the VPS is almost a third of the provident/pension funds' investments in mutual funds (**Figure 2**). This is probably due to difficult administrative burden for employers to manage an individualized pension plan for an employee. Until employers take the initiative to invest their retirement funds in VPS, or employees make the choice of opting for putting their employment fund contribution under the VPS, growth of this segment will remain subdued.

Figure 1
Age-wise analysis of Pension Fund Investors

Islamic products are more popular with pension funds

(Number)

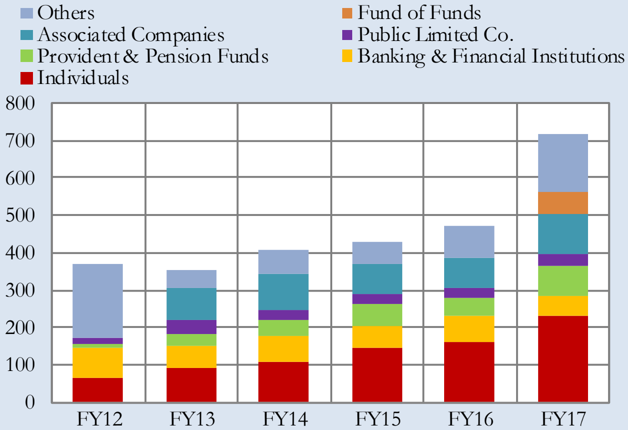


Source:MUFAP

Figure 2
Investor composition of mutual funds

Provident/Pension funds' investments in mutual funds is more than double the size of VPS

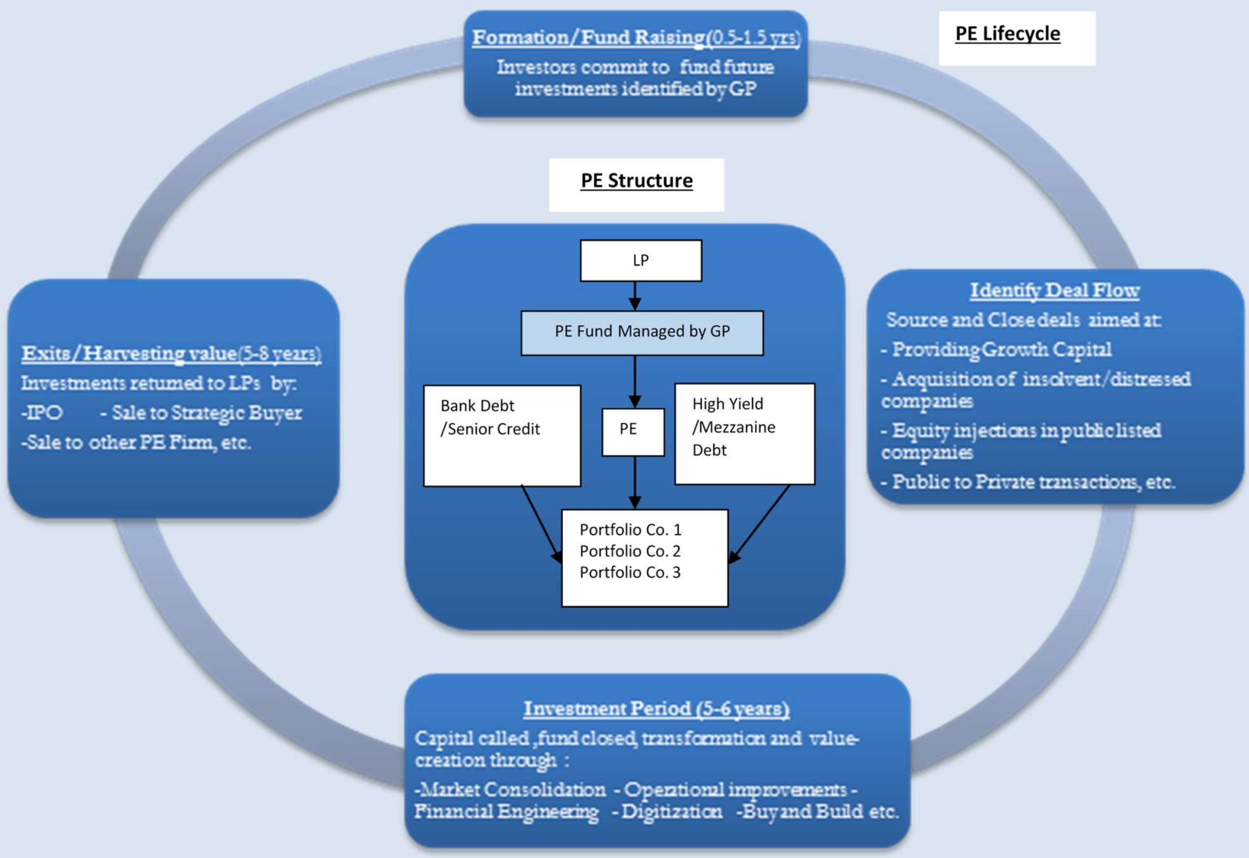
(PKR billion)



Source:MUFAP

Box 4.2.2: Private Equity Funds in Pakistan

Figure 1: PE Lifecycle and PE Structure



Private Equity (PE) Fund-Structure and Lifecycle

PE is a buy-to-sell business model that allows high-net-worth individuals and institutional investors[207] to directly acquire ownership interest in companies. These funds are commonly structured as limited partnerships; PE Firms (General Partner) obtain capital commitments from limited partners (LPs/ investors) and manages a portfolio of companies generally charging management fees which is typically 2 percent of AUMs and 20% performance fees(on profits after accounting for hurdle rate).

Besides equity investments, PE funds may also engage in Leveraged Buy-Outs (LBOs) wherein they supplement equity investments through bank debt, senior credit facility or mezzanine (hybrid) debt.

PE is a source of patient capital for companies. Unlike mutual funds that have infinite lives, a PE fund has finite but longer lives generally spanning 7-12 years. The firms are continually involved in identifying deal flow or potential companies that could be invested in to create value. A number of investment philosophies guide a PE firm in choosing its target. It may buyout companies, provide expansion capital, undertake PIPE (Private Investment in Public Companies) or de-list and privatize them. Globally, in CY17, buyouts have been the popular category (**Table 1**).

[207] E.g., pension funds, university endowments, insurance companies etc.

Table 1

Global Private Equity Backed Buyout Deals and Exits in 2017 by Type

	US$ billion		US$ billion
Deal Type		**Exit Type**	
Add-on	50.3	Trade Sale	145.0
Buyout	159.6	Sale to GP	65.2
Growth Capital	17.6	IPO & Follow-On	39.6
PIPE	17.9	Restructuring	0.2
Public-to-Private	101.6		
Recapitalization	0.1		
Total Assets	**347.1**		**250.0**

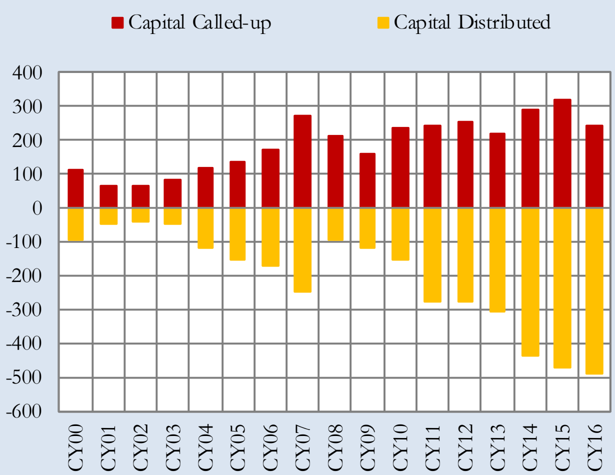
Source: Preqin

Figure 2

Global PE Capital Called and Distributed

Sizeable distributions were channeled back into the funds

(US$ billion)



Source: Preqin

These firms may invest at any stage of a company i.e. start-ups, expanding or mature. After a target is identified, PE firms may provide financial resources, strategic guidance, technical expertise through its professional team, technological support, cost cutting, or other operational improvements to create value and help companies actualize their potential. Such support is especially valuable for public sector companies that typically have outdated business philosophies and are in dire need of operational and strategic revamping. After enabling a company to reach its potential, harvesting this value through deciding on the most productive exit option is a crucial decision. Globally, sale to strategic buyers has been the popular exit option (**Table 1**).

Global trends in fundraising, acquisitions and exits[208]

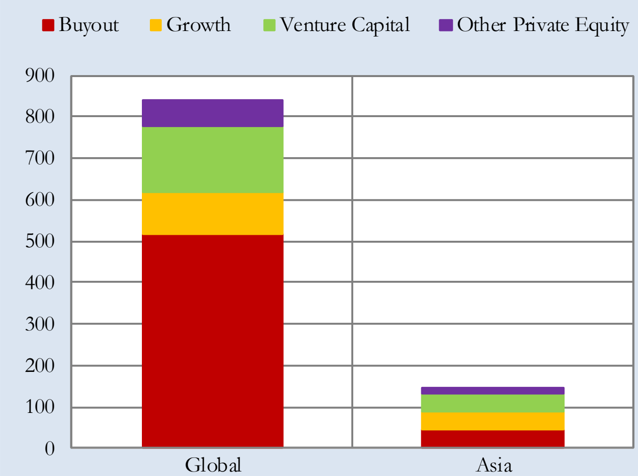
Globally, AUMs of PE stood at US$ 2.83 trillion as of end June-2017. The financial crisis had led to a build-up of huge inventory of companies with the PE funds. As market conditions became favorable in 2013-14, PE firms started exiting their pre-crisis huge inventory of companies at a brisk pace and distributed massive amounts of capital back to their LPs. Most of the distributions have ploughed back to the PE leading to a record year of fund-raising that remained strongest in 2017 witnessing an influx of US$ 453 billion (**Figure 2**). On the other hand, high valuations of firms, competition from corporate acquirers, and increased macro and geopolitical uncertainty had curtailed new acquisitions making the industry's Dry powder (unused commitments) reaching historic highs. Now the global PE industry is all set to begin a new fund deployment phase (**Figure 3**).

Figure 3

Dry powder with PE Firms

Global and Asian Composition in CY16

(US$ billion)



Source: Preqin

[208] Preqin Private Equity Online

Asian PE Industry

The Asian private equity and venture capital market had an AUM of US$484 billion as of end December 2016. China and Japan account for a major portion of investors (51 percent) followed by South Korea (12 percent), India and Hong Kong (10 percent each), Singapore (7 percent), Taiwan (4 percent), others (7 percent).

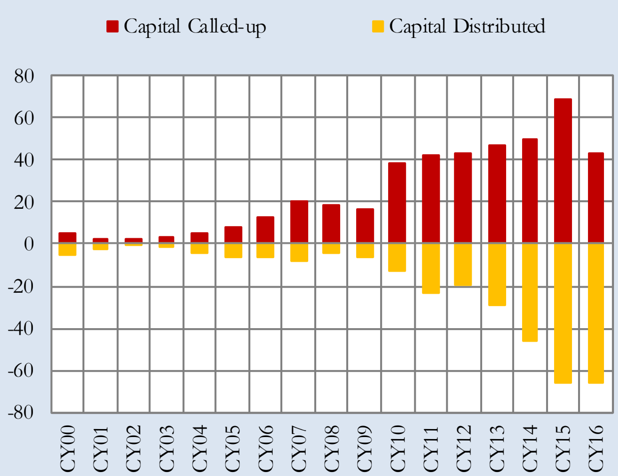
The Asian industry has raised total capital of US$ 562 billion since 2010 (South Asian[209] countries raised US$ 16.2 billion in 2017[210]), and has completed buyout and venture capital deals of US$521billion since 2010 (South Asian countries completed deals of US$ 78.8 billion in 2017[211]). In CY17, out of the global deal value of US$ 347 billion, deals worth US$ 62.5 billion have been managed by Asian PE while of the US$ 250 billion exits; exit deals worth US$ 22 billion have been managed by Asain PEs. China remains the dominating player representing 75 percent and 44 percent of venture capital and buyout deals completed. IT and health care have been the top industries accounting for 19 percent and 15 percent of global deal value, respectively.

Figure 4

Asia Focused PE & VC Capital Called and Distributed

Sizeable distributions channeled back into the funds

(US$ billion)



Source: Preqin

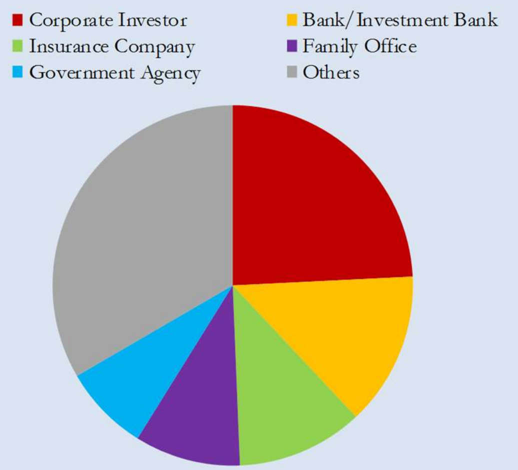
Although the fund-raising/ distribution patterns are similar in the global and Asian market, there is a marked contrast in investor composition. As against the developed markets of US and Europe where educational foundations and pension funds are the dominant investors, corporate investors, banks and insurance companies dominate the Asian industry. In China, recent regulatory changes in the framework for insurance companies has allowed them to launch PE funds increasing their presence in the sector (**Figure 5**).

Figure 5

Asia based PE &VC Investor Type

Insurance companies and Asset Managers account for 19 percent of investor base

(Percent)



Source: Preqin

Regulatory environment for PE in Pakistan

Initially, the Venture Capital Fund regulations were provided for in the Non-Banking Finance Companies (Establishment and Regulation) Rules, 2003 wherein a business entity could undertake all businesses allowed under the NBFC framework subject to compliance with the progressively tiered capital requirements. However, in 2008 the regulatory framework for NBFCs was revamped by creating firewalls between asset management and other services. Henceforth, companies, which could undertake asset management and advisory services, could not simultaneously offer leasing, discounting, housing finance, investment finance services or venture capital investment, simply by complying with the minimum capital requirements. SECP notified the regulatory framework for the registration and regulation of Private Equity and Venture Capital Fund Regulations

209 Bangladesh, India, Nepal, Srilanka and Pakistan

210 Up to September-2017.Source: Preqin

211 Up to September-2017.Source: Preqin

in Pakistan in 2008 later to be replaced with Private Funds Regulations in 2015.

The regulations[212] define PE & VC Fund to be an unlisted closed-end fund established under trust structure and offered for subscription only to eligible investors[213] (capped at thirty).The fund may:

- Invest in securities of an unlisted company
- Turn around a listed company or a company listed on SME board
- Invest in an unlisted company engaged in business of investing in developing a new product or process or expansion of business

The Private Fund Management Company must have at least PKR 30 million in minimum equity. Utilization of borrowing for the funds has only been recognized for the Alternative Fund[214].

Bottlenecks towards successful adoption of the PE model in Pakistan

Worldwide PE firms have played a vital role in helping companies realize their potential and have either spurred or capitalized on industry's Mergers &Acquisition activities. A great variety of businesses in different industry sectors and development stages (start-up or large established companies) like high technology, industrial, healthcare, consumer services, financial and other sectors have benefitted from additional financial or intellectual resources offered by PE experts. For our local industry, it can serve as an impetus for the financial and real sector in the following ways:

i) As the funds have a longer investment horizon and are relatively illiquid they stay invested across market cycles. This tends to be a stabilizing feature for markets as the deployment of funds is sustained across boom/bust episodes.

ii) By offering long-term investment products to match long-term liabilities, it tends to mitigate the risk of maturity mismatch in the financial system. Secondly, by mobilizing resources from large investors it might provide another vehicle to direct resources towards the active/organized financial sector (as against the passive real estate investments or cash/gold hoardings).

iii) The PE funds can act as a potent force for improving standards of corporate governance, disclosure and transparency for the unlisted sector and the small-tier enterprises as they compete for funds from the private investors.

iv) Building momentum for corporate sector's exchange listing if IPOs turn out to be a profitable exit strategy.

v) Since China is leading the Asian PE industry, Chinese PE firms may invest in Pakistan further through local corporate acquisitions. The firms may provide capital to local unlisted corporations to expand further catalyzing the domestic momentum that is being generated under the CPEC collaboration. By bringing in the necessary technology, it may further dilute the country's need for imports, which are currently burgeoning under the pickup in domestic aggregate demand.

However, some challenges exist, which may hamper growth prospects of PE sector with the primary one being the PE firms' inability to mobilize funds from large investors. The trend in the growth of the discretionary/non-discretionary portfolios under management of AMCs when assessed as an indicator of funds that could be mobilized from wealthy families/individuals suggests a rather bleak picture. Although there has been a growth of around 26.9 percent over the last five years, the portfolio size still

[212] The regulations cover two types of Private Funds: "Private Equity and Venture Capital Funds (PE & VC)" and "Alternative Funds". Alternative Funds are defined to be those that invest in Portfolio of securities and other financial assets other than a Private Equity and Venture Capital Fund.

[213] A person who offers a minimum of three million rupees for investment in a Private Fund and furnishes a declaration to the PE Company that he understands the risk of investment.

[214] A Private Fund, which invests in portfolio of securities and other financial assets other than a Private Equity and Venture Capital Fund.

remain small at PKR 139 billion to offer meaningful funding to promote the sector up to the level required to realize the above benefits.

Secondly, although it is highly desirable that savings of institutional investors be mobilized towards long-term investment, a rather conservative regulatory approach (specification of investment criteria for mutual/pension funds and insurance companies) has been adopted to protect resources of insurance and pension funds clientele. The pension funds' defined investment allocation are confined to mutual funds while for the insurance sector, the allowed assets classes only allow a limited percentage in unlisted securities(indirect capital related sanctions on unlisted investments). These restrictions limit availability of funds to PE from institutional investors.

Also, equity investments from abroad in unlisted companies are to be repatriated on book-value as certified by an auditor. The option for repatriation at share market price is available when the exit route of PE is through an IPO. But many of the private corporations remain shy of public listing given the transparency, disclosures and regulatory formalities associated with such listings.

Currently, the PE industry has been vying the regulators for relaxation on these fronts to open doors for more investments in the industry and success of the sector depends on availability of such key enablers.

4.3 Performance and Risk Analysis of Insurance Sector

Global life and non-life insurance sectors have grown mainly on the back of the momentum in the emerging markets. In Pakistan, the insurance industry's asset base has increased by 12.09 percent due to the accelerated economic activity, ease of structural constraints, aggressive marketing and sales (including bancassurance), increasing acceptance of Takaful products, wider use of technology, etc. These factors coupled with the low insurance penetration ratio may help sustain growth in the future.

Emerging markets driving global insurance growth …

Global life and non-life premiums have grown by 3 percent in 2017. Emerging markets, particularly emerging Asia, continue to provide growth opportunities for insurers.

In the non-life insurance sector, large natural catastrophe events in AEs (particularly in the US and Mexico) have drained capital out of the property and casualty insurance sector. There have been price increases in loss-affected segments/ regions where profitability was already strained (such as the motor segment). Emerging markets have witnessed non-life premium growth of 6 percent in 2017.

Global life insurance premiums have grown based on robust performance of savings products in emerging markets. However, profitability remains challenging due to the low interest rate environment, which is putting downward pressure in investment returns. In emerging markets, growth in premium is estimated to be at 17 percent in 2017.[215]

The insurance industry in Pakistan has expanded in CY17

Insurance, constituting 5.3 percent of total financial sector assets, is the second largest sector in the financial industry. Its asset base has registered an increase of 12.09 percent and the gross premium has grown by 12.18 percent during CY17[216]. (**Table 4.3.1**)

Table 4.3.1

Overview of Insurance Industry (as of December 31, 2017*)

	Life	Family Takaful	Non-Life	General Takaful	Total
	(PKR Million)				
Assets	1,007,123.6	22,640.2	179,611.9	2,403.2	1,211,778.8
Investments	787,923.8	13,233.7	89,013.3	534.8	890,705.6
Shareholders' Equity	15,365.6	1,526.3	85,955.8	914.9	103,762.6
Profitability	8,547.9	181.7	11,836.8	(185.7)	20,380.6
Gross Premium	185,298.0	9,576.3	74,340.5	1,472.4	270,687.3
Net Premium	183,130.8	1,632.5	41,651.6	529.5	226,944.4
Net Claims	76,745.1	1,090.1	21,146.1	575.0	99,556.3
	(Percent)				
Claims Ratio	41.91	66.77	50.77	108.59	43.9

*Estimated Figures

Source: Unaudited/Audited published financial statements of insurance/ Takaful companies.

The accelerated economic activity, ease of structural constraints (such as allowing conventional insurers to transact window Takaful business, issuing relevant regulations to achieve uniformity, etc.),

[215] Swiss Re's Global insurance review 2017 and outlook 2018 /19

[216] The analysis is based on the data of 5 life insurers and 28 non-life insurers covering approximately 97 percent and 78 percent of the life and non-life insurance sectors, respectively. The analysis covers data up to period ending December 31 2017. Data for December 31, 2017 has been estimated, where necessary. The financial close for insurers is December of the corresponding year. All growth ratios are on year-on-year basis.

relatively low inflation and use of technology based distribution channels, among others, have facilitated the increase in assets and premiums for the insurance industry.

The insurance industry's profitability, while adequate, has declined due to subdued investment income - an outcome of low interest rate environment - and restructuring of a few general insurers. The industry maintains adequate equity to underwrite new policies.

In addition, the Takaful segment's asset base has increased by 15.09 percent to PKR 25 billion[217]. Overall, the segment has witnessed growth in gross premium by 7.61 percent to PKR 11 billion despite a decline in gross premiums for General Takaful.

Due to the overall improvement in the insurance industry, Pakistan's insurance penetration ratio has also improved slightly from 0.79 percent in 2016 to 0.82 percent in 2017.[218]

The life insurance sector has continued its growth momentum

Life insurance leads the industry with 83.11 percent share in total insurance assets and 68.45 percent share in gross premium. Its assets have increased by 13.43 percent to PKR 1,007.1 billion in CY17 (**Table 4.3.2**).

Investments constitute about 78.24 percent of total assets for the sector with majority of investments in government securities. The sector has further increased its investments in government securities by 15.44 percent to PKR 679.8 billion (total investments of PKR 787.9 billion) in CY17.

Table 4.3.2

Profile of Life Insurance

	Dec-13	Dec-14	Dec-15	Dec-16	Dec-17*
	(PKR billion)				
Gross Premium	101.7	119.4	145.1	160.4	185.3
Net Premium	100.0	117.6	143.3	158.1	183.1
Net Investment Income	60.6	68.2	75.5	97.0	61.0
Net Claims	35.2	43.8	54.6	68.4	76.7
Expenses	34.9	35.4	40.3	43.4	50.1
Profitability	4.1	4.9	6.4	7.9	8.5
Assets	516.9	626.0	746.5	887.9	1,007.1
	(Percent)				
Capital to Assets	1.72	1.74	1.69	1.61	1.53
Claims Ratio	35.26	37.26	38.10	43.27	41.91
Combined Ratio	70.14	67.40	66.21	70.71	69.28
ROA	0.79	0.78	0.85	0.89	0.85

Source: Unaudited/Audited published financial statements of life insurance companies.
*Estimated Figures

The growth in the life insurance sector can be observed in the increase in Gross Premium, which, in part, may be attributed to the increasing use of bancassurance, uptick in business underwritten by WTOs, new business underwritten for governments' health insurance programs, etc.

While Subsequent Year Renewals still forms the largest component of Gross Premiums, its share has slightly fallen to 49.11 percent. The share of Group Premiums in Gross Premiums has slightly risen from 8.55 percent to 9.82 percent for the year ended December 31, 2017. (**Figure 4.3.1**)

217 It may be noted that conventional insurers who have obtained authorization to conduct window takaful operations report the window takaful operations as a separate segment in their financial statements. Window takaful operations' data is included in the data for conventional insurers.
It may be noted that Window Takaful Operators (WTOs) have started to make an impact in the General Takaful segment: the WTOs' asset base has increased from PKR 4 billion as of December 31, 2016 to PKR 6.3 billion as of December 31, 2017.

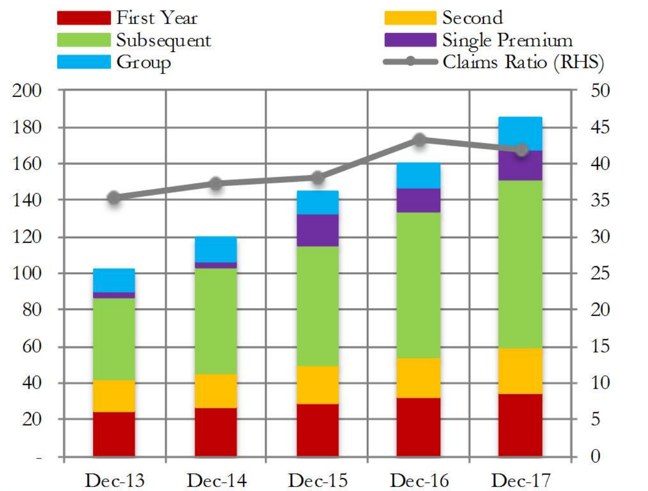
218 SECP Annual Report 2017 has reported insurance penetration of 0.84 percent in 2015 and 0.91 percent in 2016. The difference is due to relative coverage of insurance companies.

Figure 4.3.1

Life insurance premiums have shown a steady growth

Life insurance premiums (flows) and claims ratio

(PKR billion)



Source: Unaudited/Audited published financial statements of life insurance companies.

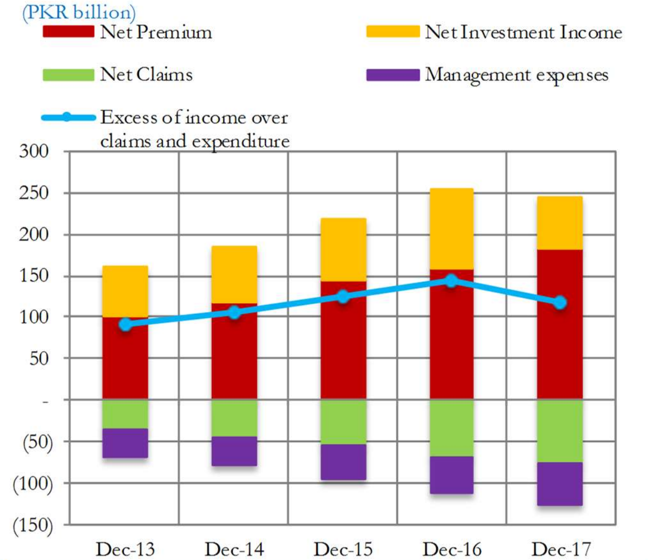
Despite the increase in premiums, the excess of income over claims and expenditures has decreased by 18.54 percent to PKR 117.2 billion for the year ended December 31, 2017 mainly due to a decrease in net investment income. (**Figure 4.3.2**)

Figure 4.3.2

Revenue has decreased due to lower net investment income

Life insurance revenue (flows)

(PKR billion)



Source: Unaudited/Audited published financial statements of life insurance companies.

With regards to financial soundness, the Capital to Assets ratio has been declining since 2013 and the slide continues in CY17. This is due to relatively higher rise in assets over the years. (**Table 4.3.2**)

The Claims ratio, after consistently rising till 2016, has declined in 2017 due to a relatively larger percentage increase in premiums compared to claims. Further, the Combined Ratio has also observed a slight decline and remained far below 100 percent (69.28 percent for the year ended December 31, 2017) which implies that the Life Insurance Sector is still making a comfortable Underwriting Profit.

Despite witnessing an increase in the combined ratio in CY17, the non-life insurance sector indicators are relatively quiet sound …

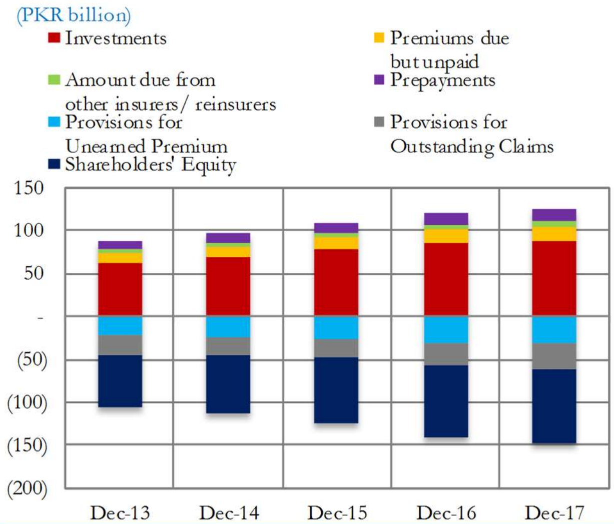
The assets of the non-life insurance sector increased by 4.75 percent to PKR 179.6 billion for the year ended December 31, 2017. Similarly, the sector's investments registered an increase of 4.64 percent to PKR 89 billion for the same period. Overall, the sector has a positive float (the money available for investing activities) which has generally been increasing over recent years which bodes well for the industry. (**Figure 4.3.3**)

Net Premiums have increased by 13.11 percent (YoY) to PKR 41.7 billion in CY17. The Motor segment still forms the largest segment of the portfolio (constituting around 43.9 percent of Net Premiums) provided by the non-life insurance sector despite a decrease in the overall share of Net Premiums as of December 31, 2017. The Health segment[219] has registered an increase of 27.46 percent to PKR 7.1 billion over the same period, increasing its overall share to 17.1 percent of Net Premiums. (**Figure 4.3.4**)

Figure 4.3.3

Assets of non-life insurance have shown a steady increase

Structure of non-life insurance

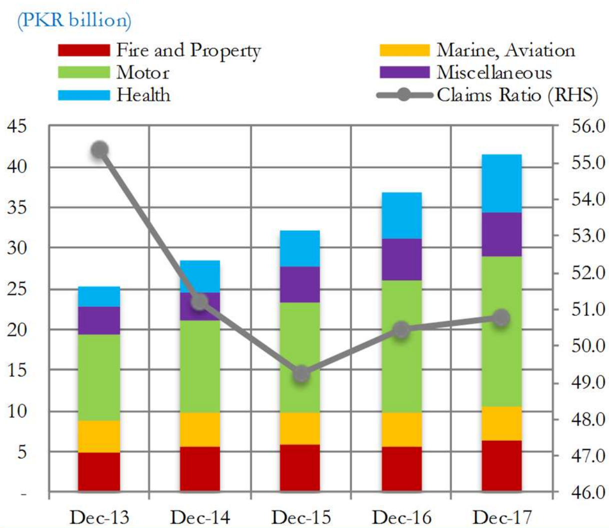


Source: Unaudited/Audited published financial statements of non-life insurance companies.

Figure 4.3.4

The Claims ratio has increased over the last two years

Non-life net premiums flows and claims ratio



Source: Unaudited/Audited published financial statements of non-life insurance companies.

However, Net Claims have shown a slightly larger increase; they have increased by 13.83 percent (YoY) to PKR 21.1 billion for the period ended December 31, 2017. The almost commensurate increase in Net Premiums and Net Claims have had a negligible effect on Underwriting Profits.

The sector has registered a decline in Profit before Tax of 26.61 percent to PKR 11.8 billion for the year ended December 31, 2017 mainly due to a steep decrease in Investment Income from PKR 11 billion in CY16 to PKR 5.7 billion in CY17 (a decline of 47.92 percent).

The non-life insurance sector, despite slight deterioration in indicators, is still quite sound. The decrease in Return on Investment (ROI) may be attributed to the long-term low interest rate environment and corrections in the capital market. The Capital to Assets ratio, despite fluctuations, has registered an increase over the last year. In addition, despite the increase in the Combined Ratio (from 82.08 percent to 85.3 percent for CY17), the sector still maintains a sizeable cushion for non-life insurers to register Underwriting Profits. (**Table 4.3.3**).

Table 4.3.3

Soundness of Non-Life Insurance

	Dec-13	Dec-14	Dec-15	Dec-16	Dec-17*
	Percent				
Capital to Assets	12.63	13.33	12.98	12.48	12.91
Claims Ratio	55.34	51.22	49.24	50.45	50.77
Combined Ratio	88.48	83.61	80.57	82.08	85.30
Premium Retention	50.72	50.40	51.79	55.07	56.03
Return on Investment	5.76	6.36	5.77	8.43	6.57
ROA	3.28	4.21	5.58	4.46	4.65

Source: Unaudited/Audited published financial statements of non-life insurance companies.

*Estimated Figures

219 The figures for health segment are underestimated as some insurers consolidate them under Miscellaneous Premiums.

The Takaful segment[220] has grown substantially …

The asset base of the Family Takaful segment increased by 16.47 percent to PKR 22.6 billion (YoY) as of December 31, 2017.

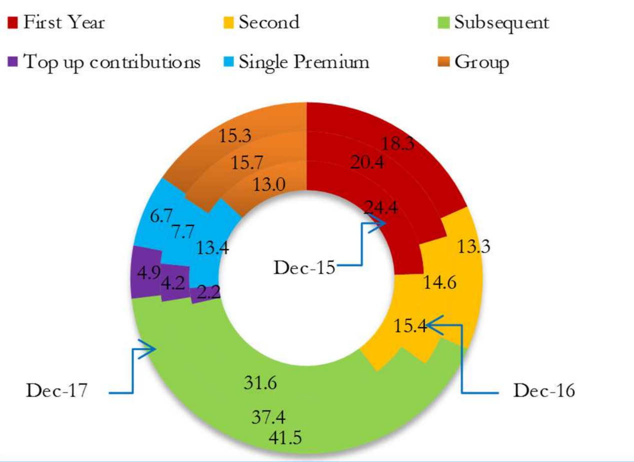
Gross Premium for the Family Takaful segment has increased by 10.42 percent to PKR 9.6 billion. The segment has successfully retained its customer base as Subsequent Year Renewals (under the Individual Family Takaful business segment) have seen a steady increase over the years; its share in Gross Premium has increased from 37.42 percent for the year ended December 31, 2016 to 41.5 percent for the year ended December 31, 2017. (**Figure 4.3.5**)

Figure 4.3.5

Subsequent year renewals have shown a significant increase

Family Takaful gross premiums (flows)

(percent)



Source: Unaudited/ audited published financial statements of family takaful companies.

The Family Takaful segment has also increased its profits for the year registering a 7.6 percent increase to PKR 181.7 million for the year ended December 31, 2017.

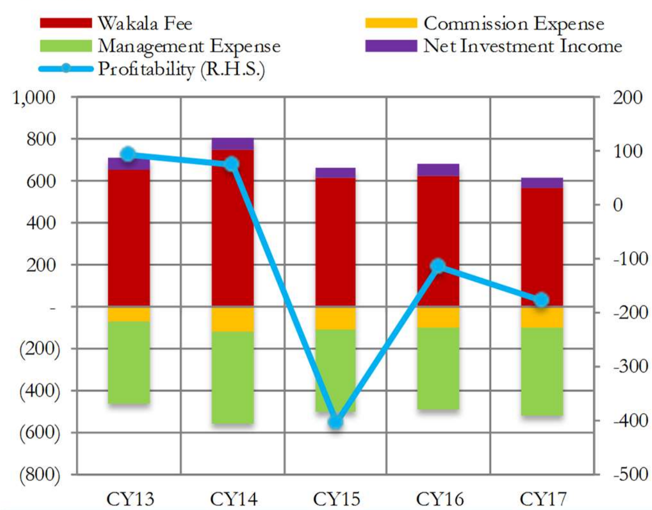
Notwithstanding an increase of 3.48 percent in the asset base of the General Takaful segment (to PKR 2.4 billion as of December 31, 2017), the General Takaful segment[221] has reported a Loss before Tax of PKR 176 million for the year ended December 31, 2017. This is due, in part, to a decrease in business underwritten by the takaful companies—reflected in the decreased Wakala fee—which may be attributed to increased competition from Window Takaful Operators (**Figure 4.3.6**).

Figure 4.3.6

The segment has been reporting losses for the last few years

General Takaful Profit and Loss (flow) items

(PKR million)



Source: Unaudited/Audited published financial statements of general takaful companies.

The segment has also witnessed a larger loss in Other Income of PKR 181.8 million for the year ended December 31, 2017 contributing to the increase in overall loss.

Most of the risks mentioned in previous publications still remain significant …

The insurance industry still faces concentration risk as a significant public sector player dominates the industry. While the concentration risk associated with the public life insurer can be gauged (it constitutes more than 60 percent of the entire insurance industry), nothing substantive can be stated about the recent financial health (including

220 Data for full-fledged takaful companies.

221 The data for 2016 and 2017 has been estimated.

the associated concentration risk) of the public non-life insurer as its financial information has not been publicly available for the last few years.

Besides the significant public insurers in the life and non-life sectors, there are a few systemically important private sector insurers in both of the sectors, which may contribute to systemic risk for the industry. To mitigate this risk, these systemically important insurers may be subject to enhanced supervision and regulation.

There is only one local reinsurer (which caters to the general insurance sector) in the industry, which may lead to increased **reinsurance risk**. Insurers mitigate this risk by utilizing the services of a diverse range of international reinsurers.

The increasing use of technology will lead to increased **cyber risks** for the industry, both as business clients of IT products and services, and as providers of financial protection against the risk of unexpected (contingent) loss. The industry may face data loss, data security, and technology failure. In order to mitigate these risks, some insurers are developing in-house IT systems to enable better decision making, meeting business challenges, enhancing controls, etc. Some other operational risks may emanate from human resources, regulatory challenges, etc.

The industry's reliance on investments (particularly in government instruments) makes it prone to **market risk** as adverse movement in interest rates or equity prices may affect their investment income.

Growth in the global insurance industry is likely to be sustained in 2018…

Global non-life premiums are expected to sustain growth at around 3 percent in 2018 and 2019[222]; it could be stronger depending on price increases.

Premium growth in emerging markets is expected to improve steadily from 6 percent in 2017 to around 7 percent in 2019. Assuming 2018 has average catastrophic losses, profits are expected to improve.

Global life premiums are expected to increase by 4 percent over the next two years based on robust performance of savings products in emerging markets. In emerging markets, life premiums are expected to grow at 12 percent in 2018. Given the global low interest environment, profitability may remain challenging in light of low investment returns.

Pakistan may witness sustained growth in the insurance industry in 2018…

Given the comfortable combined ratio and the net amount available for investing activities, coupled with low insurance penetration, the insurance industry is expected to maintain (if not, improve) its growth rate.

This growth impetus may gain momentum from the insurance needs surrounding the China-Pakistan Economic Corridor (CPEC) projects.

In addition, with the entrance of new Window Takaful Operators (WTOs) and operationalization of other recently established WTOs in the Takaful segment, it is expected that there will be an increase in premium (contribution) and asset growth. In addition, profitability, particularly for the Takaful sector, may increase in 2018 due to the influx of the recently established WTOs.

[222] Swiss Re's Global insurance review 2017 and outlook 2018 /19

4.4 Performance and Risk Analysis of Exchange Companies

Established under the Foreign Exchange Regulation Act, 1947, Exchange Companies (ECs) have been actively playing their role in facilitating the foreign exchange transactions. ECs have been growing steadily with expanding network, improving profits and sufficient capital. The sector poses limited systemic risk due to its small size, low leverage, minimum degree of inter-connectedness and relatively competitive structure; however, ECs do have reputational linkages with the banking sector. While SBP's guidelines comprehensively address the rising challenges of money laundering and financing of terrorism, ECs have the responsibility to manage such risks proactively. Going forward, Pakistani diaspora and expected growth in tourism present both opportunities and risks to the ECs.

Foreign Exchange Policy and its operations in Pakistan are formulated and regulated in accordance with the provisions of the Foreign Exchange Regulation Act, 1947 (Act). The objective of this Act is to regulate, in the economic and financial interest of Pakistan, certain payments, dealings in foreign exchange, securities, import/export of currency and bullion. Under section 3AA of the Act, SBP can authorize any company to deal in foreign currency notes, coins, postal notes, money orders, bank drafts, traveler's cheques and transfers[223].

As of financial year ended June 30, 2017[224], a total of 52 exchange companies (ECs) are functional which include 27 full-fledged ECs (ECAs) and 25 'B' category ECs (ECBs); however, no new ECB can be established now as it was one time opportunity provided to accommodate Authorized Money Changers with limited resources[225]. ECs are allowed to operate through branches, third party franchise agreements[226], payment booths, company owned currency exchange booths and temporary currency exchange booths.

The scope of business of ECAs include buying and selling of foreign currencies, inward home remittances, outward remittances, export of foreign currencies other than US dollars, branchless banking as agents of authorized financial institutions, collection of utility bills and installation of banks' ATMs at their branches. ECs are prohibited to engage in any other activity such as deposit taking, lending etc. Moreover, the scope of ECBs is restricted to buying and selling of foreign currencies and branchless banking as agents of authorized financial institutions.

ECs are playing a pivotal role in the management of foreign exchange in the country

The main purpose of establishing ECs is to facilitate the FX needs of individuals. Moreover, since their income is taxable, ECs help in increasing the tax revenue to some extent. The role of ECs has become even more significant in recent times due to increasing importance of combating money laundering and financing of terrorism. Since ECs are legally incorporated companies, they are well equipped to manage these challenges through due diligence of customers, documentation, corporate governance, systems and controls, computerization/automation, and human resources development.

---

223 ECs Manual 2017, Chapter 2, Section 1: http://www.sbp.org.pk/epd/ec/2017/EC-Manual.pdf

224 Financial year of ECs is from 1st July to 30th June: Chapter 3, Section 13(i) of ECs Manual, 2017.

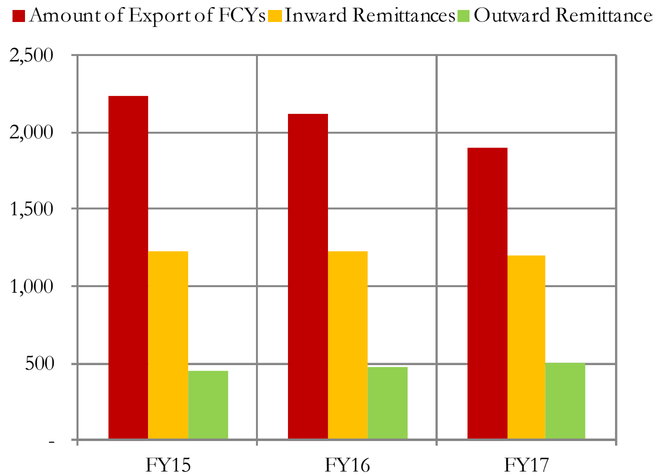
225 Chapter 8 of ECs Manual 2017.

226 Only existing Franchise arrangements between Franchiser (ECs) and their Franchises. ECs are not allowed to enter into new 3rd party franchise arrangements as per Chapter 4, Section 2(ii)a of ECs Manual 2017.

Figure 4.4.1

Export of FCYs has declined while remittances have been steady

Amount of Export of FCYs, Inward and Outward Remittances by ECs (US$ million)



Source: SBP

Export of FCYs by ECs has been declining over the last three years…

The demand for US Dollar in foreign exchange market is more than any other foreign currency, while supply of other foreign currencies is more than their demand. Therefore, ECAs are permitted by SBP to export the foreign currencies, other than US Dollars, which these companies purchase from customers but are unable to sell over the counter due to lower demand. ECAs are required to bring in equivalent US Dollars against the amount of foreign currencies exported by them, either through import of currency notes or credit in foreign currency accounts of ECAs maintained with the banks in Pakistan[227].

Over the last three years, the amount of export of FCYs by ECs has been consistently declining, which can be attributed to (a) increased demand for Saudi Riyal due to rise in number of Hajj/Umrah pilgrims, and probably (b) decline in supply of cash FCY as emigrant workers, particularly in Saudi Arabia, are avoiding visits to Pakistan due to job concerns. (**Figure 4.4.1**).

…while both inward and outward remittances have stayed steady amidst measures taken by SBP to limit the associated risks

Home remittance is a very important source of foreign exchange flows in the country. At present, most of the ECAs have agency arrangements mainly with three Money Transfer Operators (MTOs) i.e. Western Union, Ria Financial Services and Money Gram. Inward remittances through ECs during the last three years have hovered around US$ 1,200 million though there have been slight decline. On the other hand, outward remittances have somewhat risen over the same period; but, these are only 41.3 percent of the inward remittances during FY17.

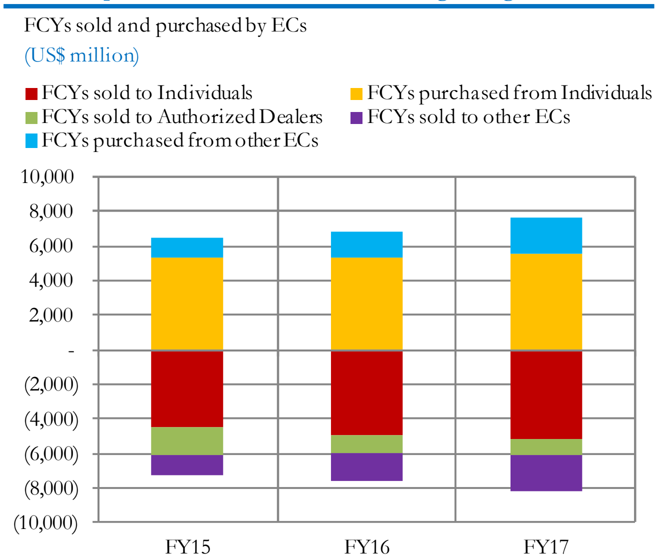
ECs Manual 2017 of SBP entails a number of measures to regulate the risks arising from remittance transactions. These measures include limit on outward remittances to 75 percent of the inward remittances mobilized during the preceding month[228], documentation, Know Your Customer (KYC), and Customer Due Diligence (CDD) requirements for all outward remittances regardless of the amount[229], requirement of Crossed Cheque/Demand Draft/Pay Order for all outward remittances of USD 35,000/- or above[230], and requirement of SBP's approval for all outward remittances of USD 50,000/- or above[231]. Moreover, all inward and outward transactions of ECAs shall be routed through foreign currency accounts of the ECAs maintained with banks in Pakistan[232].

Sale and purchase activities of ECs have been growing…

[227] ECs Manual 2017, Chapter 3, Section 9(iv)
[228] ECs Manual 2017, Chapter 3, Section 9(iii)d
[229] ECs Manual 2017, Chapter 6, Sections 2, 3 & 4.
[230] ECs Manual 2017, Chapter 3, Section 9(iii)h
[231] ECs Manual 2017, Chapter 3, Section 9(iii)i
[232] ECs Manual 2017, Chapter 3, Sections 9(ii)b & 9(iii)f

FCYs sold by ECs to individuals have been lower than the FCYs purchased from them in recent times. However, their amount has been growing as the ratio of FCYs sold to FCYs purchased moved up to 92.54 percent in FY17 from 84.65 percent in FY15. Moreover, FCYs sold by ECs to Authorized Dealers (Banks) have come down to US$ 972 million in FY17 from US$ 1,566 million in FY15 (**Figure 4.4.2**).

Figure 4.4.2
Sale and purchase activities of ECs have been growing



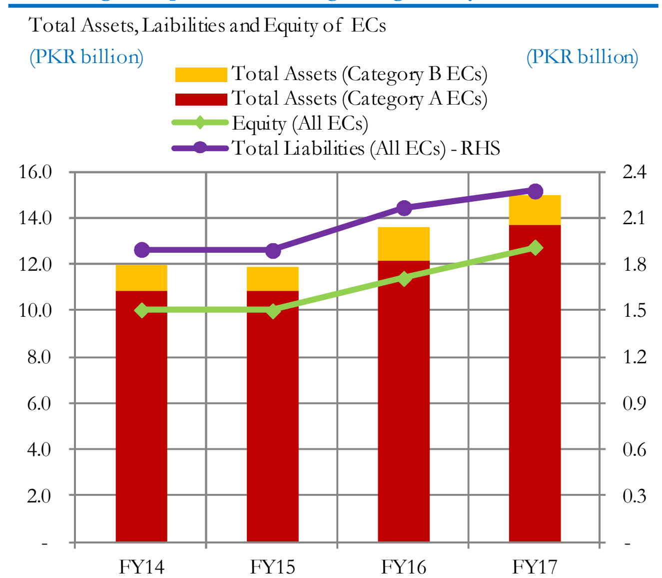
Source: SBP

Overall, FCYs sold by ECs has remained higher than FCYs purchased by them over the last three years. During FY17, 73.55 percent of total FCYs purchased by ECs have been from Individuals, while the remaining have been purchased from other ECs. Similarly, 62.77 percent of total FCYs sold have been to Individuals, 25.40 percent have been to other ECs, while the remaining 11.83 percent have been sold to Authorized Dealers during FY17.

…while SBP's regulations are in place to manage the related risks

In order to minimize risks in sale and purchase activities of ECs, SBP has in place certain regulations. Some of these include documentation requirement for all foreign currency transactions regardless of the amount[233], requirement of Crossed Cheque/Demand Draft/Pay Order for all sale transactions of USD 35,000/- or above[234], and requirement of SBP's approval for all transactions of sale of foreign currencies to the individual customer of USD 50,000/- or above[235].

Figure 4.4.3
Exchange Companies have been growing steadily



Source: SBP

ECs have been growing steadily…

Due to the transactional nature of activities of ECs, asset size may not be a good indicator of the extent of business development of ECs. Nevertheless, consistent growth in assets, observed during the last four years, does indicate stable performance of the ECs (**Figure 4.4.3**). Due to limited operations, only a small portion of assets of the ECs belongs to

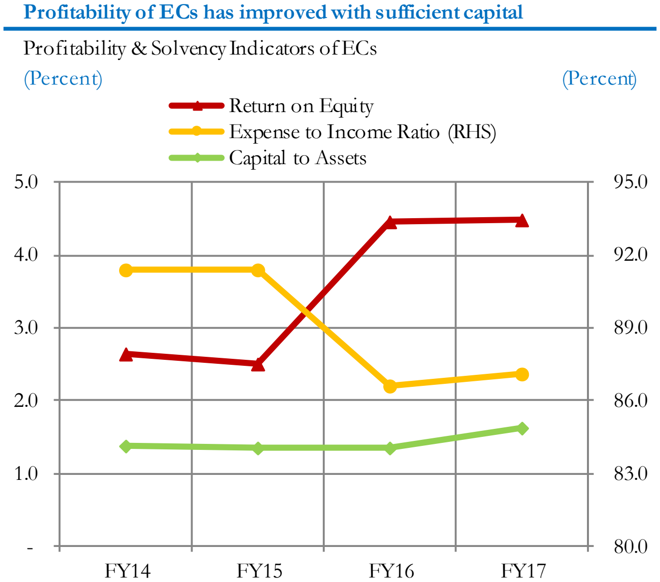
233 ECs Manual 2017, Chapter 6, Section 2
234 ECs Manual 2017, Chapter 3, Section 9(i)g
235 ECs Manual 2017, Chapter 3, Section 9(i)h

ECBs (8.8 percent). Majority of the asset base of ECs is funded by the equity; however, liabilities of ECs have grown significantly in the last couple of years, which mainly represents the advance amount received by the ECs from the Global Money Transfer Operators as per their contractual arrangements.

…with improving profits…

Profitability of ECs has improved in recent years as total income has grown by 21.48 percent on average since FY15. Consequently, ROE has also risen from 2.50 percent in FY15 to 4.45 percent in FY17. However, 'expenses to income ratio' of ECs have been on the higher side despite some drop in the last couple of years (**Figure 4.4.4**).

Figure 4.4.4
Profitability of ECs has improved with sufficient capital



Source: SBP

In order to safeguard the interest of customers and to keep the spreads competitive, ECs are required that the spread between buying/selling rates of US Dollar, Pound Sterling, Euro, Saudi Riyal and UAE Dirham shall not exceed one percent of their buying rate[236]. Moreover, for all other foreign currencies, ECs shall ensure maintaining a competitive spread.

…and sufficient capital

Minimum authorized and paid-up capital of ECAs and ECBs are set at PKR 200 million[237] and PKR 25 million[238], respectively. The number of ECs non-compliant with the minimum capital requirement has considerably come down in recent years.

SBP is actively coordinating with these non-compliant ECs in order to bring their capital up to the requirement. Nevertheless, overall solvency position of the ECs has been more than adequate since CY14 as indicated by improving capital to assets ratio, which stands at 84.85 percent at the end of FY17. Moreover, ECs are required to limit their exposure at the close of business each day at a level not higher than 50 percent of their capital base; where exposure is the higher of the overbought or oversold positions at the close of day[239]. With regard to liquidity management, ECAs are required to maintain 25 percent of their capital (10 percent for ECBs) as Statutory Liquidity Reserve (SLR) with SBP in the form of unencumbered approved government securities[240].

ECs pose limited systemic risk

Systemic importance of ECs is much lower than other financial institutions due to their small size, low leverage, limited inter-connectedness and relatively competitive structure. Share of ECs in total assets of the financial sector stands at 0.06 percent as of end FY17. Moreover, inter-linkages between ECs and commercial banks are limited to the amount of FCY sold to them by ECs which is rather low (11.83 percent of the total FCY sold in

[236] ECs Manual 2017, Chapter 3, Section 11
[237] ECs Manual 2017, Chapter 3, Section 2
[238] ECs Manual 2017, Chapter 8, Section 3
[239] ECs Manual 2017, Chapter 3, Section 10.
[240] ECs Manual 2017, Chapter 3, Section 3 & Chapter 8, Section 4.

FY17) and FX accounts maintained with them for remittances (**Figure 4.4.4**). Further, share of the largest EC in total assets of the ECs sector stands at 9.81 percent as of end FY17.

From the group-level perspective, it is important to mention that a few ECs are direct subsidiaries of banks. This poses reputational risk to the bank in case the respective EC gets in any kind of trouble. Hence, both banks and ECs need to manage the risks faced by ECs on a group-wide basis.

SBP's ECs Manual addresses the rising challenges of money laundering and financing of terrorism

Money laundering and financing of terrorism are some of the major challenges faced by the ECs. Since the inception of ECs, SBP has been issuing various instructions followed up with individual interactions during its monitoring and enforcement activities. The ECs Manual enlists a comprehensive set of guidelines on Anti Money Laundering (AML) and Combating Financing of Terrorism (CFT) for ECs to follow. Some of the important areas covered by these guidelines include customer due diligence and verification, documentation of transactions, record keeping, reporting of suspicious transactions, training of the company's human resource, and compliance of legal and regulatory framework. Further, through its on-site inspections and off-site surveillance, SBP has been ensuring that these guidelines are being followed by ECs in true spirit.

ECs need further work in the areas of operational risk

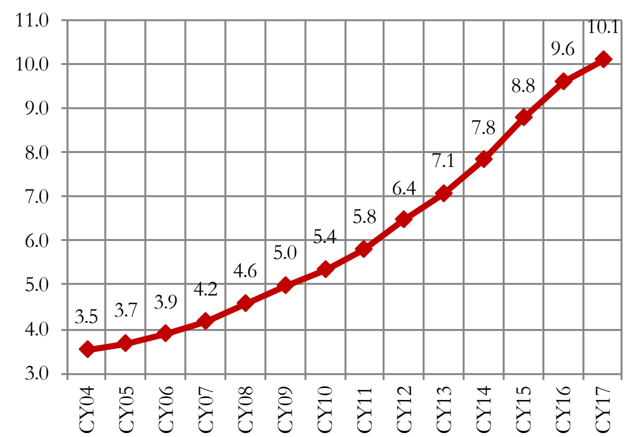
Due to its small size and transactional nature of activities, footprint of any EC is relatively small both in terms of physical and human resource. With limited resources, it is not surprising that core business applications used by ECs are not as sophisticated as other market players (banks, for instance). Nevertheless, with continuous advancement in information technology, more and more simple and cheap software solutions are arriving in the market every day. Hence, in the near future, ECs are expected to utilize these advancements to their benefit, which will improve certain areas of operational risk including frauds and accuracy of records.

Figure 4.4.5

Pakistani diaspora is increasing every year

Number of Overseas Pakistani Workers*

(Number in million)



* Registered for overseas employment through Bureau Of Emigration & Overseas Employment

Source: http://www.beoe.gov.pk/files/statistics/2017/country.pdf

Pakistani diaspora presents both opportunities and risks…

Inward remittances are directly linked to the Pakistani diaspora dispersed across different regions of the World. Indications are that the growth of this diaspora may have slowed down in the last couple of years. The number of overseas Pakistani workers registered for overseas employment through Bureau of Emigration & Overseas Employment stands at 10.1 million as of end CY17 (**Figure 4.4.5**). However, this number is not a true representative of the diaspora since the number of returned emigrant workers is not available. Moreover, there is slight decline in home remittances in recent years as well.

Nevertheless, ECs need to devise better plans to cater to the needs of existing diaspora so that the use of informal channels can be curtailed.

…so does the prospective growth in tourism

With the improvement in law and order situation in the country in recent times, annual tourist arrivals to Pakistan have more than tripled since CY13 to 1.75 million in CY16, while resident travelers returning to the country have increased by 30 percent to 38.3 million[241]. Moreover, Pakistan has been ranked the world's top travel destination for 2018 by the British Backpacker Society[242]. Hence, tourism is expected to pick up in the future, leading to increase in sale and purchase activities of ECs. This will also mean that ECs will end up having more foreign currencies with them thus resulting in rise in export of those currencies. ECs need to further invest in their core business applications in order to effectively utilize these opportunities in the future. Moreover, they also need to strengthen their 'know your customer' (KYC) processes by further improving their transaction monitoring mechanism to avoid dealing with proscribed persons/entities.

ECAs should look to further their role in mobilization of home remittances

ECAs are well placed to mobilize remittances as unlike banks, their branches remain open till late evening and their services are available on Saturdays. ECAs may focus on offering better services and undertake aggressive marketing campaign to increase their client base. This has great significance not only from the perspective of the ECAs, due to an important revenue stream, but it will also help to support supply side resulting in stabilized exchange rate.

241 Pakistan Tourism Development Corporation via Bloomberg: https://www.bloomberg.com/news/articles/2017-09-27/as-terror-attacks-recede-tourism-in-pakistan-starts-to-thrive

242 http://gulfnews.com/news/asia/pakistan/pakistan-tops-list-of-world-s-best-travel-destination-for-2018-1.2148655

Section C: Non-Financial Sector

5 Performance and Risk Analysis of Corporate Sector

The corporate sector, as per estimates, has observed a broad-based steady growth in balance sheet and sales along with decent profitability in CY17. The listed firms, especially largest ones, are self-sufficient in liquidity with low debt burden and strong repayment capacity. However, the smallest of the listed firms are vulnerable in terms of borrowing capacity, cost of funds and repayment ability. Textile sector, being one of the largest borrowers of the banking sector, has relatively higher leverage and lower repayment capacity, but the financials depict improvement leading to lower probability of defaults. Most of the firms remain unrated; though, regulatory initiatives and other factors have brought some desirable shift in behavior during CY17.

Corporate sector remains the largest borrower of banking sector…

Assessment of risks to corporate sector has gained importance post GFC due to its strong linkages with the macro-economy as well as the financial sector. The assessment facilitates in making policy prescriptions necessary for ensuring financial stability from macroprudential perspective.

Easier monetary conditions over the last decade has allowed the corporates, particularly in the emerging market economies, to enhance their leverage. Pakistan is no exception as corporate debt as a percentage of GDP has risen to 15.55 percent in 2017 from 14.57 percent in 2012.

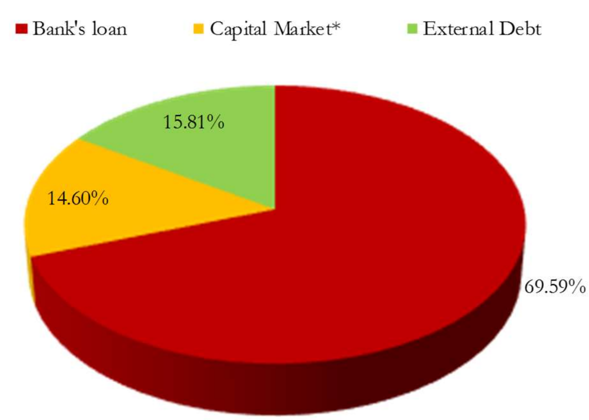
In Pakistan, corporate debt structure comprises of (i) banks' loans, (ii) borrowing through capital market, and (iii) external private debt. However, the quantum of financing availed through each avenue differs by a wide margin **(Figure 5.1)**.

Banking sector has been the key source of financing to the corporates. Out of a total of PKR 6.6 trillion lending as of December 2017, around PKR 4.6 trillion has been lent to the corporate sector by banks[243] **(Figure 5.2) (Also see Chapter 3.1).** With bank lending constituting 70 percent share in the overall corporate debt, there is a strong interconnectedness between the two sectors. As such, shock in any one of the two sectors could adversely affect the operating performance and solvency of the other.

The corporate financing through capital market stands at PKR 753.1 billion, of which, Sukuk funding (PKR 619.5 billion) plays the dominant role **(Figure 5.3).** A major share of Sukuk is issued by energy sector.

Figure 5.1
Bank's loan has major share in corporate's debt structure

Corporate's debt structure as on 31 December, 2017
(Percent)



Soruce: SBP and SECP

Finally, corporates have availed financing of USD 7.4 billion (PKR 815.7 billion) from abroad as of end December 2017, which is 41.51 percent (USD

243 Private corporates have availed PKR 3.6 trillion of total corporate loans.

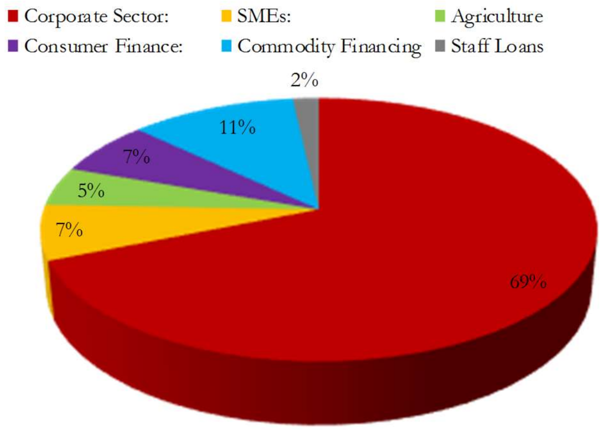
2.2 billion) higher than the outstanding amount as of end December 2016.[244]

Figure 5.2

Corporate sector has major share in banking sector advances

Segement-wise outstanding Banks advances as on 31 December, 2017

(Percent)



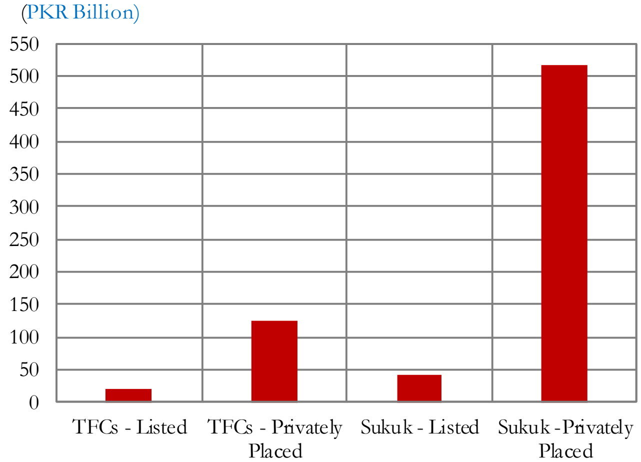
Source: FSD, SBP

Figure 5.3

Pakistan's corporate debt market is limited and has mainly confined in privately placed Sukuk

Corporate debt market of Pakistan as of December 31, 2016 (Outstanding)

(PKR Billion)



Source: Securities and Exchange Commission of Pakistan (SECP)

Estimates suggest that corporate sector has performed well during CY17…

As per the pro forma financial statements, corporate sector appears to have performed well with expansion in assets and decent profitability during CY17 **(Table 5.1)**. The total assets of the listed corporates are expected to have moved up by 11.26 percent during CY17[245]. The major thrust has come from current assets owing to sharp rise in trade debt and account receivables. Moreover, the corporates appear to have managed their cash flows by purchasing more on credit. This is quite reflective through surge in trade credit and other account payables.

As per estimates, sectors' operating fixed assets have observed sharp increase; well synchronized with the recent trend of rising demand for term finance by corporate borrowers to enhance productive capacity. Besides, the sector has further diversified the balance sheet through long-term investments (including in subsidiaries and associates).

The estimates also reveal that the sector has earned decent after-tax profits with ROA and ROE of 6.63 percent and 16.39 percent, respectively during CY17. The better performance appears to stem from sales growth supported by increase in domestic and external demand and lower interest rates. Other Financial soundness indicators (FSIs) also reveal a comfortable financial health of the sector, particularly, better debt repayment capacity with improved "interest coverage" ratio, although "debt to equity" ratio appears to have risen marginally. The improving financials of corporates suggest higher repayment capacity and lower probability of defaults (**See Box 5.2**).

[244] Private sector corporates' external borrowing mainly consists of non-guaranteed long-term loans. They have registered a significant increase during CY17 due to CPEC related projects, mainly in the energy sector. http://www.sbp.org.pk/ecodata/pakdebt.pdf

[245] The analysis is based on financial statements of 378 companies listed on Pakistan Stock Exchange (PSX). The sample period is 2005-2017. For 2017, where required, the data has been projected based on last five-year averages and exponential smoothing.

Table 5.1

Financial Statements of PSX Listed Companies and Ratio Analysis

	2013	2014	2015	2016	2017*
	PKR billion				
Balance Sheet					
Non-Current Assets	**3,112**	**3,280**	**3,524**	**3,767**	**4,138**
Net operating fixed assets	2,190	2,276	2,414	2,561	2,720
Long term investments including subsidiaries & associates	509	540	585	597	749
Current Assets	**2,300**	**2,670**	**2,758**	**2,884**	**3,262**
Inventories	596	575	525	555	584
Trade Debt / accounts recievables	765	1,044	1,083	1,082	1,382
Current Liabilities	**2,239**	**2,594**	**2,619**	**2,663**	**3,178**
Trade Credit & other accounts payables	-	1,463	1,510	1,560	1,611
Short term Borrowings	653	678	650	649	661
Non-Current Liabilities	**1,119**	**1,122**	**1,206**	**1,266**	**1,407**
of which Long term secured loans	548	466	480	528	553
Debentures/TFCs	22	20	68	61	57
Shareholders' Equity	**2,053**	**2,234**	**2,457**	**2,722**	**2,960**
***Proforma adjutment*					(144)
Total Assets	**5,412**	**5,950**	**6,282**	**6,651**	**7,400**
Income statement					
Sales	**6,183**	**6,610**	**6,045**	**5,469**	**5,594**
Gross profit	945	909	908	886	935
EBIT		698	688	642	714
Financial expenses	185	170	163	125	118
of which Interest expenses	141	146	140	106	101
Profit before taxation	520	528	525	517	595
Profit after tax		**370**	**384**	**379**	**466**
Cash Flows from operations	745	343	499	575	779
Financial Ratios					
Net Profit margin/Net profit to sales	8.41	5.60	6.35	6.93	8.32
Return on Assets (Percent)	9.70	6.51	6.27	5.86	6.63
Return on equity (Percent)	27.09	17.26	16.35	14.63	16.39
Current ratio	1.03	1.03	1.05	1.08	1.03
Inventory Turnover Ratio	10.37	11.50	11.52	9.86	9.58
Debt equity ratio	1.64	1.66	1.56	1.44	1.55
Interest coverage ratio	4.69	4.79	4.90	6.04	7.05

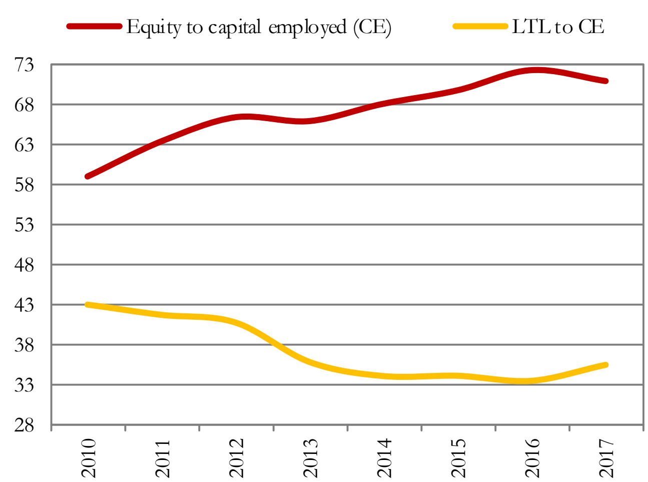
Source: State Bank of Pakistan
*CY17 represents proforma balance sheet projected based on Exponential Smoothing and income statement projected based on 5-years' average growth.
**proforma adjustment refers to the amount required for balancing the accounting equation (i.e. A=L+E)

Corporates continue to rely on own sources …

The gap between long-term liability (LTL) to capital employed (CE)[246] and equity to CE, which has been widening over the years, has slightly narrowed down in CY17 (**Figure 5.4**). This implies that the trend of reliance of corporates on their own rather than borrowed funding has reversed as per estimates. The corporates are already borrowing for capacity enhancement, their balance sheet footing is increasing and the domestic aggregate demand is strengthening. All these factors point to the need for higher funds in the future and the corporates are expected to tap the capital markets and the banking sector for the purpose (see **Box 5.1** for technical underpinning of this argument).

Figure 5.4
Corporate sector has been increasingly reliant on equity financing

Equity and debt financing of corporate sector during 2010-2017
(Percent)



Source: SBP

Performance of KSE-100 index companies corroborates with the estimated improved showing of the corporate sector …

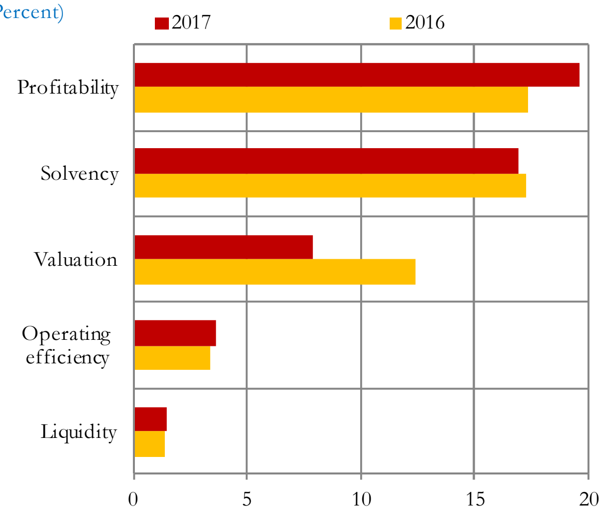
The KSE-100 firms have dominant presence in the overall equity market with major share in market capitalization. The financial health of these firms has

[246] Capital employed is calculated as total assets less current liabilities.

remained stable during CY17 as indicated by various FSIs **(Figure 5.5)**.

Figure 5.5
The financial soundness of the sector has further strengthened

Key Financial Soundness Indicators (FSIs) of corporate sector
(Percent)



Source: Bloomberg

The profitability has improved with ROE rising to 19.65 percent in CY17 from 17.37 percent in CY16. With decline in debt to asset ratio to 16.93 percent in CY17 (17.23 percent in CY16), the sector has revealed slight improvement on solvency front. The liquidity is also strong as current ratio stands at 1.44, indicating firms' ability to meet short-term obligations. The asset utilization capacity (i.e. operating efficiency) has improved as well with higher asset turnover ratio.

Nevertheless, valuations decline due to price effect …

Valuation of KSE-100 companies has declined as the recent downturn in local bourse has translated into dip in the prices of listed companies. Thus, a sharp downfall has been witnessed in P/E ratio to 7.90 in CY17 from 12.43 in CY16.[247] However, there are expectations that the equity market could recover as macroeconomic conditions improve and corporate sector's performance could revert the P/E ratio back to its long-term trend in near to medium term **(See also Chapter 2)**.

Table 5.2
Extended DuPont Analysis- Top 100 Non- Financial Companies of KSE-100*

	2015	2016	2017
	PKR Billion		
Net Income (NI)	269	260	338
Profit Before Tax (PBT)	375	357	455
Profit Before Tax and Interest (PBIT)**	440	406	501
Revenue/Sales	3,436	2,921	3,531
Assets	3,295	3,549	4,101
Equity	1,566	1,719	1,922
Average Assets (Av. A)	3,190	3,422	3,825
Average Equity (Av. E)	1,501	1,642	1,820
Extended DuPont Components			
	Percent		
Tax Burden (a=NI/PBT)	0.72	0.73	0.74
Interest Burden (b=PBT/PBIT)	0.85	0.88	0.91
Operating Profit Margin (c=PBIT/Sales)	0.13	0.14	0.14
Asset Turn Over (d=Sales/Av. A)	1.08	0.85	0.92
Financial Leverage (e=Av. A/Av. E)	2.13	2.08	2.10
ROE (after tax) [axbxcxdxe]*100	17.94	15.83	18.57

*Asset-wise Top-100 companies of 2017 have been taken based on available financials on PSX website as of January, 2018.
***Financial Charges have been taken as proxy for interest expense*
Source: Pakistan Stock Exchange

Growing profitability stems from improved asset turnover …

The extended DuPont analysis suggests that the improvement in asset turnover has been the key factor behind surge in ROE **(Table 5.2)**. Corporates have efficiently used their assets to generate more sales. Moreover, besides slightly higher financial leverage, reduced burden from taxes and interest expenses have also pushed ROE up. The tax burden has been lower in CY17 as the GoP reduced the tax rate for corporate sector to 31 percent[248] The consistent low interest rates in

[247] The valuation is pure market indicators and, generally, is subject to high volatility

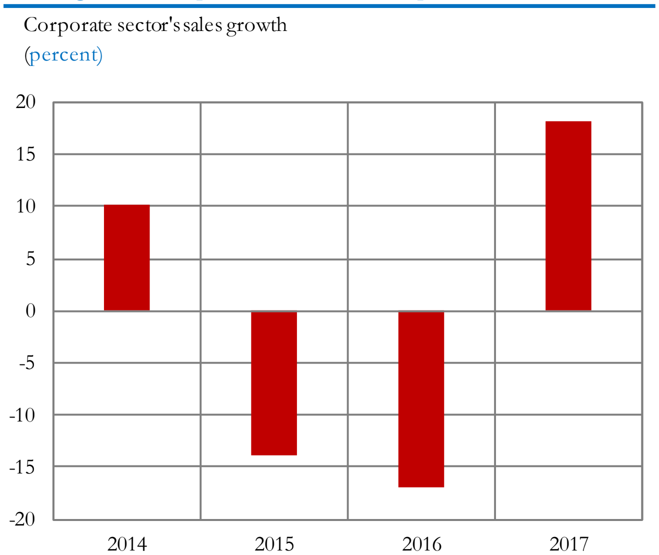
[248] Budget speech 2016-17, Ministry of Finance (MoF)

response to easy monetary policy is also translating into lower interest expenses for corporates.

... as corporate sales growth has reversed its course

Improved performance of the top 100 listed corporates has resulted from the robust growth in sales during CY17 **(Figure 5.6)**.[249] Several factors have provided boost to sales including conducive business conditions, improvement in energy flows, low borrowing costs, higher domestic demand and better security conditions. In addition, the rise in exports since July 2017, because of firming up of global growth - hence higher external demand, has also contributed towards the sales growth.

Figure 5.6
Sales growth of corporate sector has turned positive in FY17



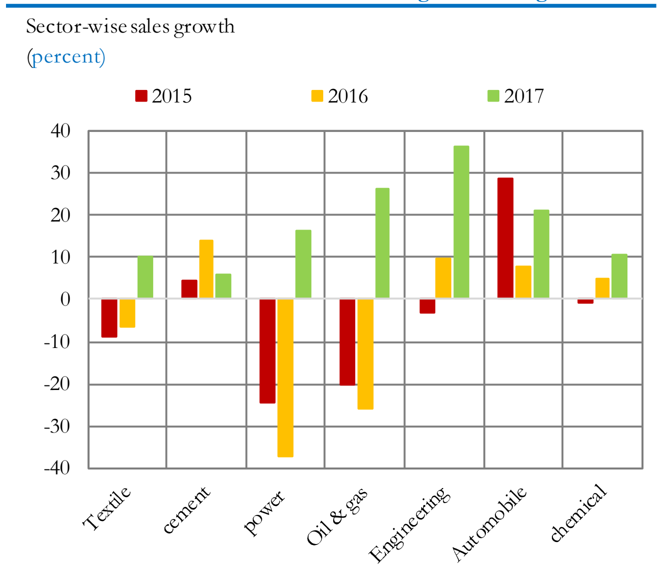
Source: Pakistan Stock Exchange (PSX)

The sales growth has been broad based…

The sales growth has been broad-based across various sectors including Oil and Gas, Textile, Automobile, Refinery and Engineering etc. **(Figure 5.7)**. The Oil & Gas and Refinery sectors are the beneficiaries of bounce back in international oil prices. Better energy supply, grant of GSP Plus status and government's incentive package has turned the negative sales of textiles in last couple of years into positive during CY17.[250]

Moreover, automobile sector has observed steady rise in sales during last few years with highest growth recorded in CY17. The high demand of automobile products, well facilitated by consumer financing, along with favorable economic conditions especially low interest rates, has pushed the sales growth up.[251]

Figure 5.7
The sector has observed broad based sales growth during 2017



Source: PSX

Leverage is contained in major sectors and debt repayment capacity improves…

http://www.finance.gov.pk/budget/budget_speech_english_2016_17.pdf

249 The sales growth is based on PSX companies with available data during CY13-17. At the time of analysis, financials for 200 companies was available.

250 Under the Prime Minister's Package of Incentives for Exporters, the government: (i) allowed duty draw back up to 7.0 percent on the export of textile products(e.g; garments, home textiles, processed fabric, etc.) ; exempted customs duty on the import of raw material for textile and; exempted sales tax on the import of textile machinery.

251 Please also see Quarterly Performance Review of Banking Sector (October – December, 2017)

Except for power, leverage appears to be contained in major sectors such as textiles and chemicals (**Figure 5.8 a, b & c)**. This is because, as explained earlier, corporates are generally utilizing their own funds for expansion; for example, textiles' average rise in equity is 7.35 percent during 2015-2017; cement is 16.38 percent and automobile is 21.98 percent.

The energy sector has benefited from government's efforts like retirement of circular debt in 2013, prioritizing energy projects under CPEC and effective control of transmission and distribution losses.[252]

The interest coverage ratio (ICR)—a proxy for debt repayment capacity—of most of the important sectors is at the comfortable level. Also, ICR is improving for majority of the sectors; perhaps a manifestation of easy monetary policy. However, in absolute terms, the ratio of textile sector (the major borrower of the banking sector) is relatively low. Around 37 percent of the listed textile firms have ICR close to the vulnerability threshold level in 2017.[253] It may be relevant to mention that the credit risk for textiles is relatively higher but is gradually declining **(See Chapter 3.1)**. In addition, the improving financials of the sector suggest better repayment capacity and lower probability of defaults **(See Box 5.2)**.

Economies of scale has benefited larger firms…

Literature generally suggests an inverse relationship between firm size and its leverage; bigger the size lower the leverage.[254] Similar relationship appears to exist in the corporate sector of Pakistan (see **Box 5.1**). The two largest quartiles (4&3) of corporates have observed the highest asset growth **(Table 5.3)** with low leverage (**Figure 5.9a**). Bigger firms, appear to be following the pecking order theory by utilizing their internal resources first. Smaller firms are more leveraged.

Table 5.3
Assets growth by corporate Size

Size-wise Category	2015	2016	2017
	Percent		
Quartile 4 (Large)	5.45	6.15	14.43
Quartile 3 (Medium)	6.58	11.69	16.29
Quartile 2 (Small)	1.59	5.98	9.31
Quartile 1 (Very Small)	0.93	-3.48	2.55

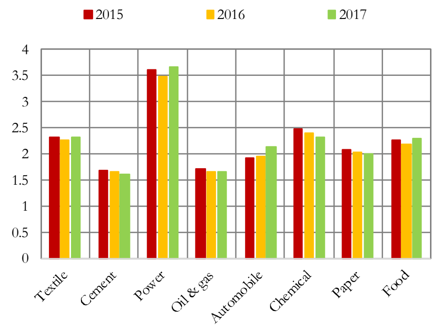
Source: PSX

Moreover, the larger firms have better debt repayment capacity (ICR), which has further improved during CY17 **(Figure 5.9b)**. This is in contrast to the smaller firms that have exhibited low and decreasing ICR. Larger firms also have lower costs per unit of borrowing than smaller firms do.[255]

The operating efficiency, measured as sales to average assets, of quartile 4 (large firms) has remained intact during CY17 while it has declined for the other quartiles **(Figure 5.9c)**.

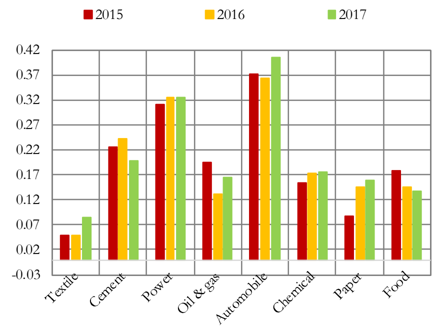
252 Chapter 14, Pakistan's Economic Survey 2016-17.
253 As Bank of Korea indicates financially distressed firms are those having ICR below 1 for three consecutive years. (FSR-June 2016,Box I-4)
254 Onofrei, M., Tudose, M. B., Durdureanu, C., & Anton, S. G. (2015). Determinant factors of firm leverage: An empirical analysis at Iasi county level. Procedia Economics and Finance, 20, 460-466.
255 Average per unit cost of borrowing in 2017 for largest firms in quartile 4 is 7.75 percent as compared to 8.28 percent for smallest firms in quartile 1.

Figure 5.8a
Power and textile sectors observe highest leverage
Leverage: Average assets to average equity
(percent)



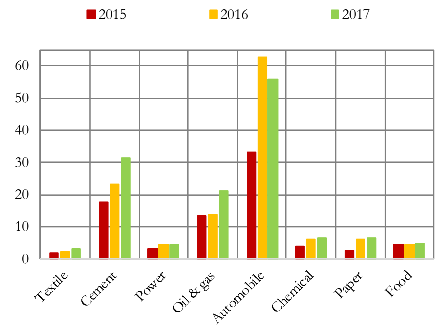
Source PSX

Figure 5.8b
ROE has seen a rise in most of sectors
ROE: Profit (after tax) to average Equity
(percent)



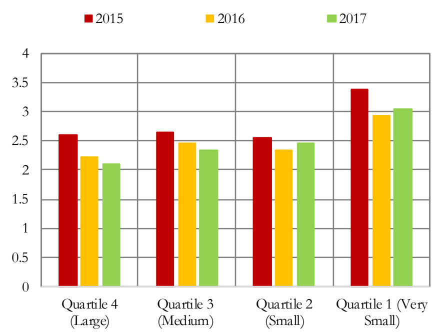
Source PSX

Figure 5.8c
Most of sectors has observed improved debt servicing capacity
Interest Coverage Ratio (ICR): EBIT to interest expenses
(No of times)



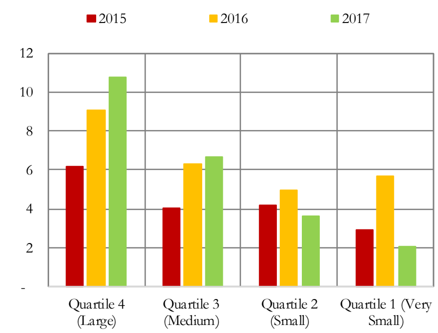
Source PSX

Figure 5.9a
Largest quartile has lowest leverage
leverage: average assets to average equity
(percent)



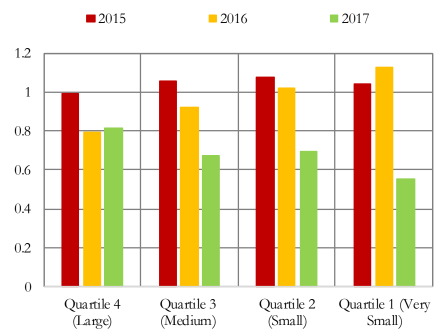
Source PSX

Figure 5.9b
Largest quartile of corporate has highest debt repayment capacity
Interest Coverage Ratio(ICR): EBIT to interest expenses
(No.of times)



Source PSX

Figure 5.9c
The operating efficiency has remained intact for largest quartile
Operating efficiency: sales to average assets
(percent)



Source PSX

Corporates remain unrated; requiring higher capital charge under Basel III …

Credit risk rating is an important signal, which demonstrates the relative debt repayment capacity of corporates. Such rankings allow the banks to take on higher quality credit exposures. In Pakistan, the rating culture is not prevalent, as most of the banks' corporate clients remain unrated **(Figure 5.10)**. At the end of CY17, 71.21 percent (*PKR 2.6 trillion*) of corporate exposure remained unrated as compared to 77.83 percent (*PKR 2.5 trillion*) in CY16. Consequently, banks' exposure attracts higher risk weights and more capital charge under Basel requirements.

However, some change in the behavior is visible during CY17, as some of the additional exposure has been categorized under lower (higher rated) bands. Some regulatory measures introduced by the SBP to promote the rating culture (such as higher risk weights assigned to large sized unrated exposure, adoption of more robust and prudent risk management practices, and enhanced capacity of External Credit Assessment Institutions (ECAIs)) might have brought about this desirable improvement.

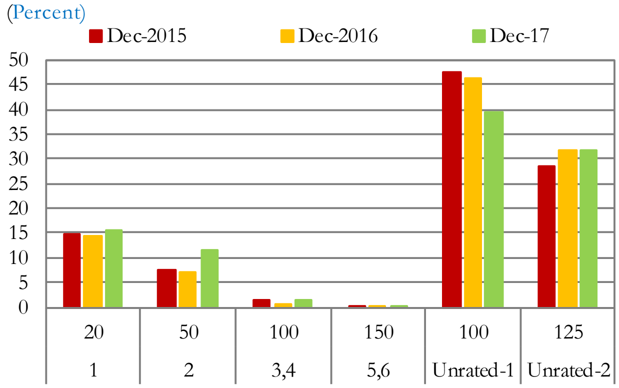
Overall, the outlook of corporate sector is positive for 2018. It is expected that corporate profitability will benefit from favorable tax policies, rising domestic and global demand, and improved energy supply etc. Also the capacity enhancement presently underway will lead to higher production with reduced cost through economies of scale. As such, improving financial performance and strengthening global and domestic demand may induce corporate to rely more on the banking sector and capital markets.

Figure 5.10

Rating culture has started to improve backed by regulatory initiatives

Share of outstanding Banks's lending to corporate sector against SBP's supervisory mapped rating grades*

(Percent)



**Banks are required to map the rating assigned by agency with SBP supervisory rating grades ranging form 1 to 6. For example AAA to AA fall in grade 1 with 20 percent risk weight.*

Source: SBP

However, few factors that may challenge the steady performance of the sector in the year ahead include resurgence in global oil prices, rising momentum of inflationary pressures, uncertainties related to upcoming elections, and rising financing cost due to tightening of monetary policy in 1st half of 2018.

Box: 5.1: Credit riskiness of corporate non-financial listed firms – An econometric analysis

The credit allocation is an important driver of the economic growth and the firms utilizing the credit are the engines of real growth. The credit, however, tends to be pro-cyclical and its availability to riskier firms increases during expansions.[256] The easy monetary conditions, therefore, tend to breed financial excesses, which unwind during contractions, leading to defaults.[257] This will have consequences for the real growth as well as financial stability.

The corporate non-financial firms (NFFs) of Pakistan happen to be the largest borrowers of the banking sector. Of the PKR 4,982.1 billion loans extended by the banks to the domestic private sector as of December 2017, the corporate private sector has availed PKR 3,589.9 billion.

While banks institute all measures to ensure that the selected borrowers are financially sound and solvent, and have capability to service their obligations, the idiosyncratic and systemic uncertainties always leave a possibility of default, however small it may be. As of end-CY17, the loan delinquency rate in the domestic corporate lending stands at 10.11 percent. Given the high exposure of banks to the non-financial sector, it would be interesting to explore how the dynamics of financial and macroeconomic factors affect the possibility of corporate delinquencies, based on the information of already delinquent corporates. Specifically, we use five accounting ratios of a sample of 276 listed firms as well as macroeconomic variables over 2013-2017 period and assume that

$$P(D_{i,t} = 1) = \Phi(\alpha + \sum_{i} X_{i,t-1} + \sum_{k} Y_{k,t-1}),$$

where X_i refers to the firm-specific financial information and Y embodies the systemic factors common to all firms, both lagged one period, while $\Phi(.)$ is the probability transform function, the logit model in our case.[258] The X_i includes the working capital, retained earnings, earnings before tax, equity and sales, all normalized by total assets, while the Y_k includes industrial sector growth and interest rate. The D_i equals unity if the firm, *i*, has defaulted on its credit obligations in year *t*, or zero otherwise. We proxy the default by using firm specific data from SBP's Credit Registry, where a firm is taken to have defaulted if its credit obligations remain overdue by 365 days and above (OD 365).

Important as the overall NFF sector is, the textile industry is the mainstay of Pakistan's economy. The industry's contribution in the export earnings of the country is around 55.81 percent in CY17. It also constitutes a substantial share of the corporate lending of the banking industry – around 27.24 percent. Although, better energy supply, grant of GSP Plus status and government's incentive package has turned the negative growth of textiles exports during last couple of years into positive during CY17,[259] the major concentration of NPLs continues to be in the textile sector – 49.11 percent of the total corporate NPLs. Given that textile sector is a key borrower, it has been subjected to the same analysis as the NFFs.

Empirical Results

(a) All Non-financial Firms

The financial performance of the NFFs in terms of above-mentioned five ratios over five-year periods shown in **Figure 1**.[260] The working capital ratio, though positive on average, remains highly tilted towards lower

[256] Borio C. and Lowe P. (2002). Asset prices, financial and monetary stability: exploring the nexus. BIS Woriking Paper No. 114
[257] IMF (2018) Global Financial Stability Report, *April.*
[258] This is in essence an Altman-type model augmented with macro-variables. [Altman E. (1968). Financial Ratios, Discrimnant Analysisand the Prediction of Corporate Bankruptcy. *The Journal of Finance*, 23(4), 589-609.] A similar analysis has also been carried out in Chapter 2 of IMF (2018).

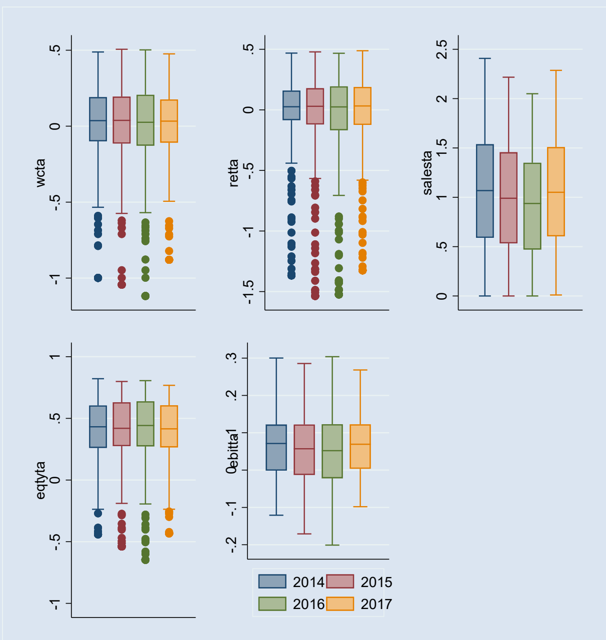
[259] (a) See State of Pakistan's Economy: Third Quarterly, FY17 for discussion on the Prime Minister's Package of Incentives for Exporters; (b) The year-on-year growth of textile exports during CY13-CY17 has been recorded at 8.50 percent, -2.26 percent, -4.25 percent, -5.01 percent and 8.77 percent, respectively.
[260] **wcta**=Working Capital to Total Assets; **retta**=Retained Earnings to Total Assets; **salesta**=Sales to Total Assets;**eqtyta**=Equity to Total Assets[260] and **ebitta**=Earnings Before Interest and Taxes to Total Assets . For CY17, the average accounting information of last five years has been used.

quartile with substantial outliers, implying reliance of firms on sources other than their own in the short run. This corroborates the fact that working capital finance dominates the lending by the banks (**see Chapter 3.1**).

Figure 1

Financials of non-financial corporates improves

Financial Indicators – Non-Financial Firms



Source: SBP Staff Calculations

The retained earnings also turn out to be highly concentrated below the median, with substantial number of outlying firms, implying low incidence of retention. The corporates' sales, on the other hand, remains robustly positive with some firms having sales more than double their asset size. The dispersion of this indicator is the highest amongst all the variables. With strengthening domestic demand conditions, the sales are expected to rise in the future.

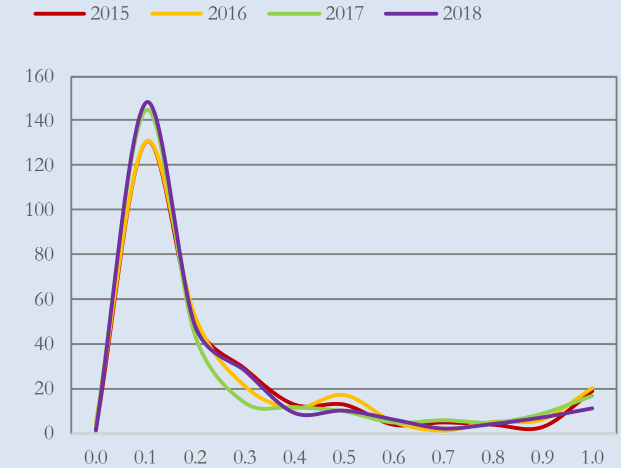
The equity of the firms on average remains strongly positive as well, though some outliers on the negative side can also be observed. Finally, the corporate sector remains largely profitable and is expected to witness a rise in earnings.

Figure 2

More firms are expected to travel to non-default zone

Probability of Default - Corporate Non-financial Firms

(Number of Firms)



Source: SBP Staff estimates

Table 1

Actual and projected number of defaults

	2014	2015	2016	2017	2018
All NFFs					
No. of Firms, *of which*	272	271	272	270	273
OD 365*	54	58	60	61	NA
P(D>=0.5)**	43	47	53	51	39
Textile Sector					
No. of Firms, *of which*	109	108	109	109	109
OD 365*	33	37	40	41	NA
P(D>=0.5)**	29	35	40	38	36

Source: Finanial Statements of Firms and Credit Information Bureau, SBP

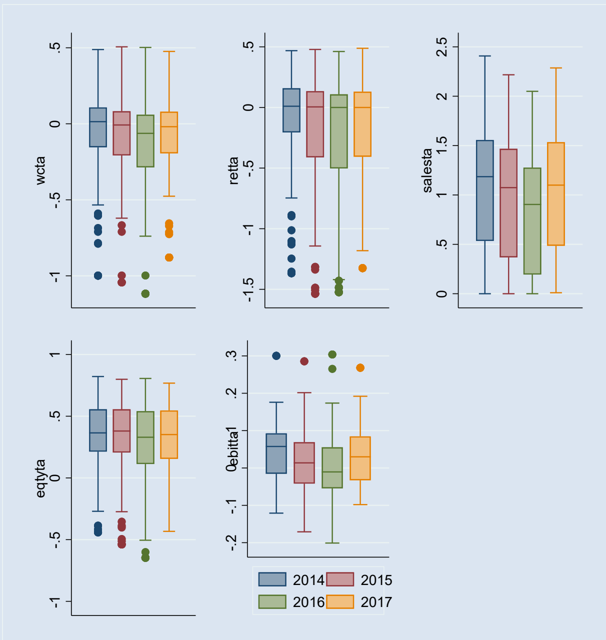
* Firms with credit obligations overdue by 365 days and above as per CIB data;

** Model based projections.

The model-based distribution of probabilities of default (PDs) are depicted in **Figure 2**. The mass of PDs are concentrated in the range of 0.01 percent to 0.40 percent, i.e. in the *safe zone*. The curve beyond 0.50 percent, the *default zone*, remains thinner and is projected to thin out further in 2018. Indeed, as shown in Table 1, the number of firms expected to default in 2018 is 40 against 61 that actually defaulted in 2017 (see **Table 1**), largely on the back of improving sales and profitability.

Figure 3
Financials of textile sector are improving

Financial Indicators – Textile Sector



Source: SBP Staff Calculations

(b) Textile Sector

The financials of the textile sector depict some improvement. The sales and profitability indicators present a better picture, although the sector remains net borrower in the short term (see WCTA ratio in **Figure 3**). With more firms moving into positive territory in terms of earnings, the solvency has strengthening as well.

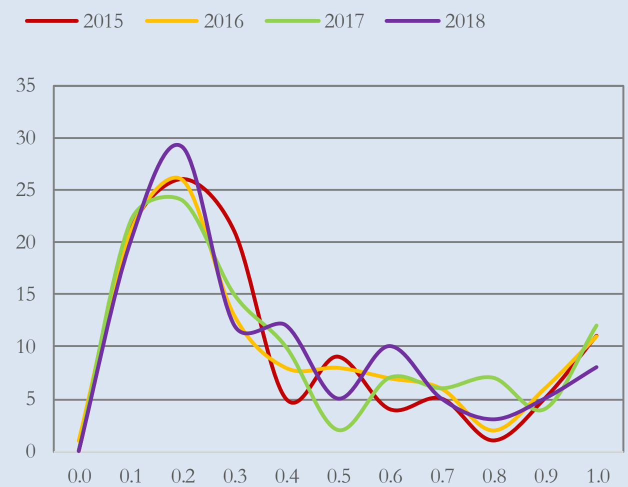
The distribution of default probabilities presents some interesting facts (see **Figure 4**). The mass under *safe zone* has shrunk during 2016-17 period compared with 2015. Moreover, the distribution seems to have worsened during 2017.

In 2018, a significant movement within the *default zone* is expected: area under 0.5-0.7 percent interval is estimated to increase while the area under 0.7-0.9 percent is anticipated to decrease. This is indicative of the fact that some firms are moving away from the state of extreme default to just-default condition. Some firms are even expected to migrate to safe zone as the mass under 0.4-0.5 percent interval is expected to increase in 2018. In number terms, 36 firms are projected to be delinquent in 2018 as against actual 41 in 2017.

From a policy perspective, there is a need for banks to strengthen their credit origination and monitoring standards while a continuous regulatory macro-prudential oversight is warranted as well.

Figure 4
Tail of the distribution smooths but still carries significant mass

Probability of Default- Textile Sector
(Number of Firms)



Source: SBP Staff estimates

Box: 5.2: The Determinants of Corporate Leverage: An empirical analysis of non-financial firms listed on PSX

A balanced capital structure with an optimal composition of equity and debt is key to a sustainable funding strategy as well as cost minimization. A very low leverage may reduce the ROE (as seen in DuPont analysis earlier) while a highly excessive leverage enhances the credit risk and, consequently, the cost of debt.

Table 1

Definition of variables

Variables		Definition	Expected Sign
Dependent variable			
Total Debt Ratio	Y	Total debt to total assets	
Independent variables			
Profitability	X1	Operating profit to total assets	PO(-ve) TO(+ve)
Growth	X2	Percentage change of total assets	PO(+ve) TO(-ve)
Size	X3	Natural log of total assets	PO(-ve) TO(+ve)
Liquidity	X4	Current assets to current liabilities	PO(-ve) TO(+ve)
REER	X5	Index of Real Effective Exchange Rate	?
Agregate Demand	X6	Per capita income	+ve

Note: PO = Pecking Order Theory; TO = Trade-off Theory

Source: SBP Staff Estimates

The research in the capital structure field is dominated by two principal themes: '*Trade-off theory*' and '*pecking-order theory*'.[261] This note investigates the applicability of capital structure theories and tries to explore the firm-specific and macroeconomic factors that might affect it. The investigation is performed using panel data technique for a sample of 331 firms listed on the PSX for a yearly sample spanning 2006-2016. Various factors hypothesized to affect the leverage are appended in **Table 1.**

The following model is estimated using fixed effects technique.[262]

$$y_{it} = \alpha_0 + \sum_{i=1} X_{it} + u_i + \epsilon_{it},$$

where α_0 is the intercept, $X_{it}'s$ are idiosyncratic and systemic factors defined in **Table 1,** u_i are the individual fixed effects while ϵ_{it} are the firm-specific residuals.

Table 2

The key determinants of leverage of corporate sector Fixed Effect Model (FEM) estimation

Dependent variables	Total Debt Ratio
Independent variables	
Constant	2.586
	(0.000)
Profitability	-0.436
	(0.000)
Growth	0.027
	(0.129)
Size	-0.106
	(0.000)
Liquidity	-0.118
	(0.000)
Aggregate Demand	0.188
	(0.000)
REER	-0.330
	(0.000)
R2	0.331
No.of observations	3612
Residual unit root (Fisher)	*0.000*

Note: (i) *p*-values are reported in parenthesis below the slope estimates (ii) *Fisher*-type unit root test for unbalanced data (Madala & Wu, 1999).

Source: SBP Staff Estimates

The results, given in **Table 2**, reveal that, on average, profitability, size and liquidity of firms have statistically significant and negative impact on the leverage. This is consistent with the *pecking order theory*. It suggests that highly profitable businesses prefer to finance their projects through own resources rather than relying on

[261] Pecking order theory argue that companies prefer to finance their investment first by internal resources and then by borrowed capital, and finally by using the equity provided by shareholders (Myers and Majluf, 1984). Kraus and Litzenberg (1973) laid the foundations of trade-off theory pointing out as the more profitable the company is, the higher the need for the debt tax shield.

[262] The Hausman (1978) test favors modeling fixed effects over the random effects.

external funding. Further, the large sized firms, generally blue chip big corporates, tend to have sound financial health and are likely to rely less on external borrowings. Furthermore, the availability of liquidity obviates the need of reliance on outside sources.

The leverage is found to have statistically significant and positive relationship with aggregate demand (proxied via per capita income) and worsening currency parity conditions.[263] Growing economic activity raises the demand for borrowing, most probably, due to funding requirement in expansionary phase of the business cycle (including the need for operating fixed assets). A positive impact of a depreciation on borrowings makes sense either in case the firm is an importer of inputs or an exporter. In case of former, higher input costs may likely increase the need for finances. In case of the later, however, a weak local currency enhances the external demand for local goods, requiring higher production and a need for higher financing.

The results largely confirm our analysis in the previous sections, where it was observed that larger, liquid and profitable firms tend to have lower debts on their balance sheets.

---

[263] Since we use REER, an increasing trend implies appreciation. Therefore, a negative relationship with REER actually implies a positive association with depreciation.

Myers, S. C., & Majluf, N. S. (1984). Corporate financing and investment decisions when firms have information that investors do not have. Journal of financial economics, 13(2), 187-221.
Kraus, A., & Litzenberger, R. H. (1973). A state-preference model of optimal financial leverage. The journal of finance, 28(4), 911-922.
Hausman, J. A. (1978). Specification tests in econometrics. Econometrica: Journal of the econometric society, 1251-1271.

6 Soundness and Efficiency of Financial Market Infrastructures

Pakistan Real-time Interbank Settlement Mechanism (PRISM) has continued its upward trend in both volume and value in the wholesale transactions. At the same time, concentration risk in PRISM remains contained due to increased competition among banks. In the retail payment segment, besides paper-based transactions, the volume and value of e-banking transactions have surged depicting changing consumer preferences. SBP, cognizant of emerging cyber security risks, is putting in place adequate safeguards to protect the integrity of payment systems. Noteworthy improvement in operational risk associated with the functionality of Automated Teller Machines (ATMs) i.e. ATM downtime, has been observed. SBP is also taking steps towards enhanced oversight of the Systemically Important Payment Systems (SIPS), such as 1-Link and NIFT to mitigate systemic risk. The FMIs related to corporate securities trade and settlements remain resilient and continue to improve their risk management regime in order to ensure stable and efficient functioning of capital markets. Owing to increasing interconnectedness among the FMIs, the contagion risk, within the system, is also growing.

Financial market infrastructures (FMIs) are pivotal components of the financial system that facilitate the process of financial intermediation and maintain the trust of participants. They constitute critically important institutions, instruments and channels, which aid in the smooth flow of funds and securities. Therefore, soundness and efficiency of FMIs is crucial for the stability of the financial system.

FMIs broadly cover the Payment Systems, Central Securities Depositories (CSD), Securities Settlement Systems (SSS), Central Counter Parties (CCPs) and Trade Repositories.[264] Pakistan's major FMIs include large value payment system (LVPS) i.e. Pakistan Real-Time Interbank Settlement Mechanism (PRISM); two interoperable inter-bank switches (1Link & M-Net[265]); one clearing house of paper based instruments (NIFT); one corporate securities settlement company (NCCPL); and one corporate securities depository company (CDC).

6.1 Payment Systems

Payment System Landscape and performance

SBP, by virtue of powers entrusted to it, plays the role of a regulator, operator and facilitator of country's payment and settlement systems. SBP in its "Vision 2020" has set, "Development of Modern and Robust Payment System" as one of its key strategic objectives. To achieve this goal, SBP is developing a National Payment System blueprint; modernizing the clearing and settlement infrastructure; enhancing security; and implementing a robust regulatory and supervisory framework for FMIs to improve their efficiency and ensure soundness.

Based on the quantum of values transacted, the country's payment system is divided into *Large Value Payment Systems (LVPS)* and *Retail Value Payment Systems (RVPS)*. The LVPS comprises of PRISM, which is used for both wholesale transactions of funds and securities between participants of PRISM and third party fund transfers, while RVPS is

[264] FMI is defined as a multilateral system among participating institutions, including the operator of the system, used for the purposes of clearing, settling, or recording payments, securities, derivatives, or other financial transactions. Committee on Payment and Settlement Systems of BIS, (2012). "Principles for Financial Market Infrastructures"

[265] M-Net has recently initiated its winding up proceedings.

composed of various paper-based and electronic channels used for retail transactions.

Table 6.1
Profile of Payment System Mechanisms

Mechanism	CY13	CY14	CY15	CY16	CY17
(Volume in thousands and Value in PKR trillion)					
PRISM					
Volume	528.7	681.4	852.9	985.4	1,384.9
Value	146.9	156.6	224.5	238.1	336.9
Retail Payments					
Volume	719,916.3	800,426.8	857,383.3	962,610.7	1,161,655.1
Value	138.8	158.2	165.5	170.8	192.6
Paper based					
Volume	359,966.6	365,371.2	349,882.1	392,499.5	463,602.6
Value	107.1	123.2	129.2	134.1	152.0
E-Banking					
Volume	359,949.7	435,055.6	507,501.3	570,111.2	698,052.5
Value	31.7	35.0	36.4	36.8	40.6

Source: PSD, SBP

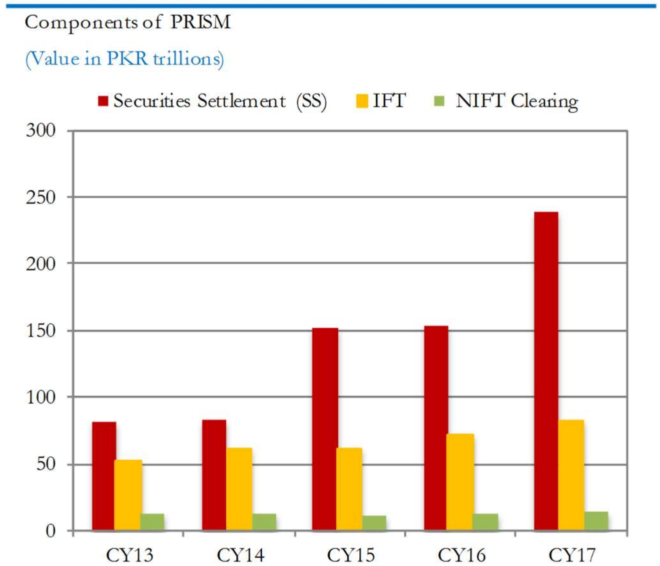
PRISM has been consistently growing in terms of both volumes and values. The retail segment is characterized by increasing volume of e-banking transactions, which points towards growing preference of electronic channels among banking customers.

PRISM has efficiently managed higher volume …

During CY17, PRISM transactions have grown in both volume and value. In aggregate, it has settled 63.62 percent of total value of all payments, almost 10 times of GDP (**Table 6.1**). The daily average volume of settled transactions has grown to about 5400 (2016: 3800), while daily average value has increased to PKR 1,315 billion (2016: PKR 930 billion).

In contrast to moderate growth during CY16, the value and volume of PRISM transactions have grown by 41.46 percent and 40.54 percent, respectively, in CY17. The growth in value has primarily resulted from the growth in value of securities transactions (**Figure 6.1**), possibly due to increase in the quantum of open market operations (OMO) activity as well as banks' repo borrowings from SBP (**see Chapter 2**).

Figure 6.1
Value of PRISM transactions has increased



Source: PSD, SBP

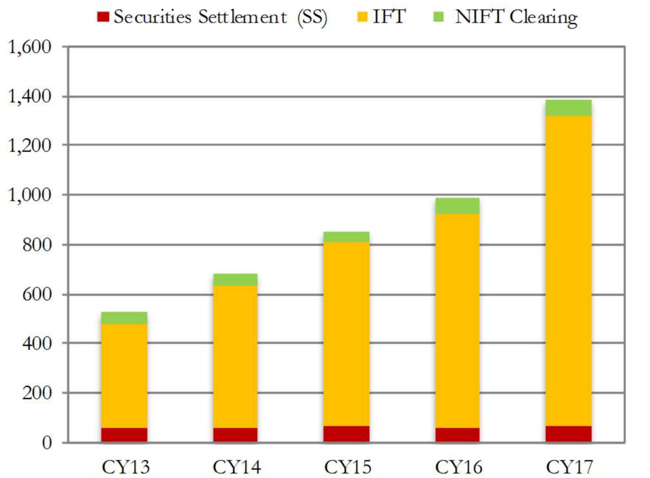
Encouragingly, there is a noteworthy increase in the use of PRISM for Inter-bank Funds Transfers (IFT)[266]. The volume of IFT, which forms the major portion of PRISM transactions, has shown increase of 45.85 percent, while value has increased by 16.49 percent during CY17 (**Figure 6.2**). A major portion of volume of IFT transactions is comprised of third party fund transfers[267].This is the result of continued efforts by SBP to raise awareness among customers for utilization of PRISM for efficient fund transfers. Moreover, under Pakistan Remittance Initiative (PRI), banks have been allowed to use PRISM free of charge for same-day settlement of domestic transfers of home remittances to their

266 IFT transactions comprise of bank-to-bank transfers and third party customer transfers.

267 Third party fund transfers mean fund transfers processed via PRISM by direct participants on instructions of their customers/accountholders.

beneficiaries[268], which have increased the volume of IFT transactions.

Figure 6.2
Volume of PRISM transactions is growing
Components of PRISM
(Volume in thousands)

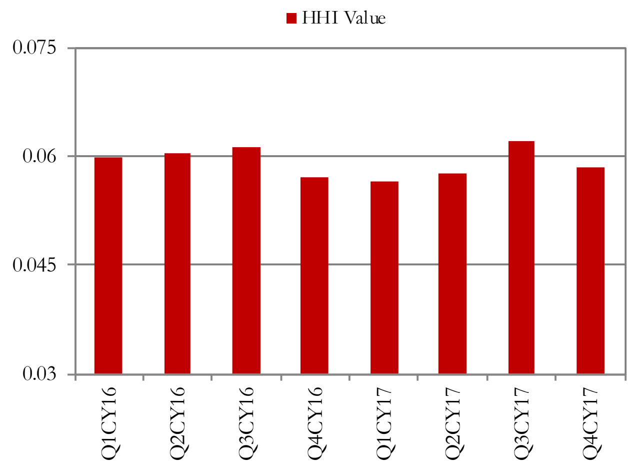


Source: PSD, SBP

Concentration of payments settled via PRISM is low …

The analysis of payments settled among commercial banks through PRISM depicts that the concentration of payments remains low. The Herfindahl-Hirschman Index (HHI) for payments concentration among commercial banks averages around 0.06[269] for CY17 (**Figure 6.3**), remaining close to its value in CY16. Thirty-one commercial banks are direct participants of PRISM[270], out of which, seven banks, on average, account for 52.30 percent of the payments during CY17. These banks account for around 60.29 percent of the total banking sector's assets. The concentration of payments within these top seven banks also remains low. This is a reflection of limited monopolistic tendencies in the banking sector.[271] It implies that the degree of substitutability in terms of payments settled through PRISM remains high, thus containing systemic risks in the event of a potential failure of any participant of PRISM.

Figure 6.3
Concentration Risk in PRISM remains low
Quarterly Concentration in Payments made through PRISM
(Index Value)



Source: PSD

Disruption risk in PRISM remains low…

Owing to sufficient business recovery and resumption measures instituted by SBP to ensure continuity of operations, risks of disruption in PRISM remain limited. In order to ensure continuous availability of the system, SBP maintains business continuity and disaster recovery sites to be utilized in case of any interruptions in primary facility.

The scope of PRISM has been enhancing…

In addition to CDC, SBP has allowed National Clearing Company of Pakistan (NCCPL) to become

268 PSD Circular Letter No. 04 of 2015; http://www.sbp.org.pk/psd/2015/CL4.htm
269 HHI value of less than 0.1 suggests low concentration.
270 There are a total of 41 direct participants of PRISM. For the purpose of this analysis, only banks (excluding MFBs and DFIs) are considered.
271 Source: Khan and Hanif (2017): SBP Working Paper series no.92, "Measuring Competition in the Banking Sector of Pakistan: An Application of Boone Indicator" http://www.sbp.org.pk/publications/wpapers/2017/wp90.pdf

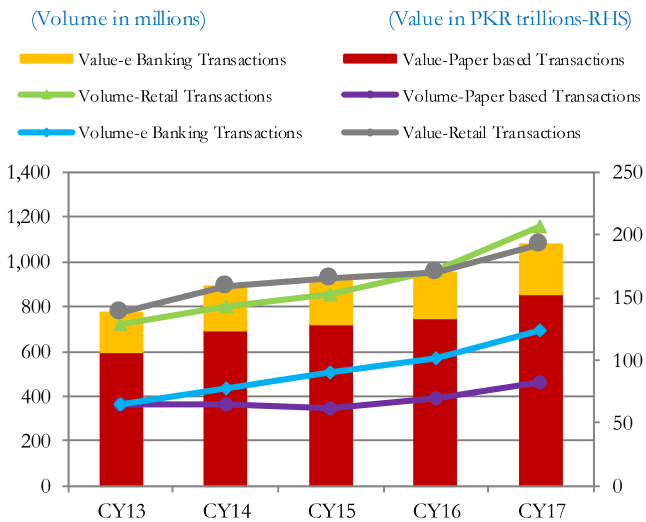
a special participant of PRISM to facilitate the efficient settlement of the capital market transactions.[272] As opposed to previous practice when the funds leg of the transactions was settled through various settlement banks, the trades will now be settled via PRISM, which will improve the efficiency of the process.

Moreover, the settlement risk associated with these transactions will be mitigated, as the settlement of National Clearing and Settlement System (NCSS) transactions will take place through the accounts maintained by banks with SBP. The availability of intra-day liquidity facility (ILF) for PRISM participants would also minimize the liquidity risk.

Figure 6.4

Retail payment segment shows robust growth

Retail payment trend



Source: PSD, SBP

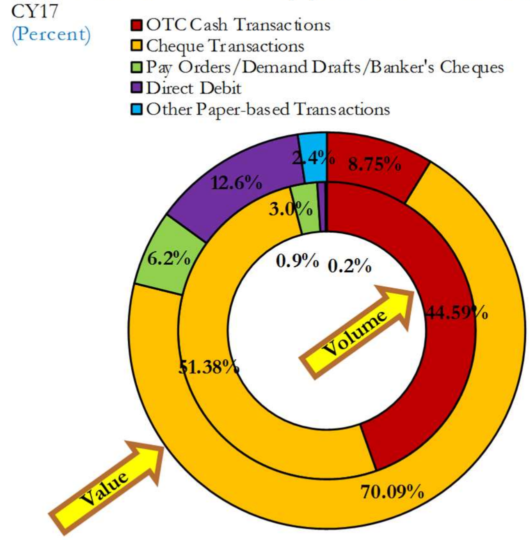
The retail payment system shows robust growth…

The country's retail payment systems include paper-based and electronic modes of transactions. The overall volume of transactions have surged by 20.68 percent during CY17, while the value of these transactions have gone up by 12.75 percent (**Figure 6.4**).

Figure 6.5

Cheques dominated paper based transactions

Volume and Value wise share of paper-based retail transactions during CY17



Source: PSD, SBP

Cheques dominate paper-based transactions…

Within retail payments, paper-based transactions have surged by 18.12 percent in volume and 13.40 percent in value, during CY17. Cheques remain the most preferred instruments as they accounted for 51.38 percent of the total volume and 70.09 percent of the total value of paper-based transactions (**Figure 6.5**). The lion's share, in volume, of these transactions pertains to cash withdrawals (51.11 percent). However, in terms of value, they have accounted for 11.65 percent of the total amount transacted (**Table 6.2**). A possible reason for withdrawal of smaller amounts through cheques may be that the customers are avoiding the cost associated with withholding tax on cash withdrawals.

272 PSD Circular No. 1 of 2018; http://www.sbp.org.pk/psd/2018/C1.htm

Table 6.2

Chequing Transactions in CY17

Type	Number	Amount	Volume share	Value Share
	Million	PKR billion	Percent	
Cash Withdrawals	164.7	15,503.1	51.11	11.65
Transfers	103.8	86,481.8	32.23	64.97
Clearing	53.7	31,117.8	16.66	23.38

Source: PSD, SBP

Non-cheque based Cash transactions remain low in value…

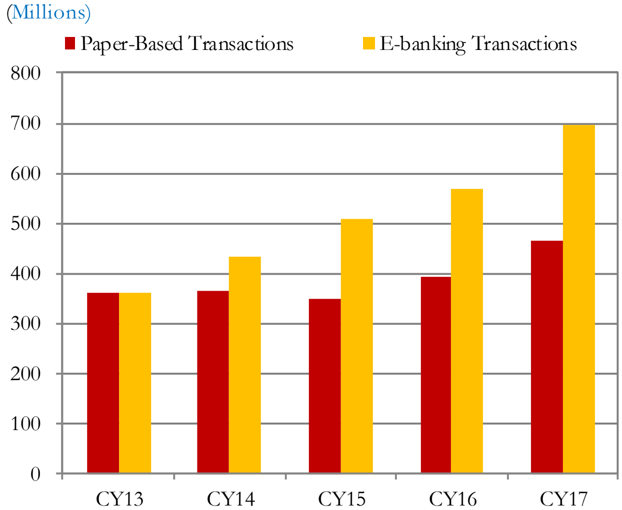
Non-cheque based cash transactions (such as Cash deposits, Utility Bill Payments etc.) in CY17 represent 44.59 percent of the total volume of paper based transactions; however, in terms of value they only represent 8.75 percent. This suggests that e-banking transactions are gradually gaining importance among the formal payment channels.

Figure 6.6

E-Banking transactions gaining traction

Volume of Paper-Based and E-Banking Transactions

(Millions)



Source: PSD,SBP

E-banking transactions are gaining traction…

Electronic modes of funds transfer are gaining traction as depicted by increasing volume of e-banking transactions (**Figure 6.6)**. The e-banking transactions have witnessed a growth of 22.44 percent in terms of volume and 10.35 percent in value. The growing volume suggests increasing preference of consumers towards electronic channels.

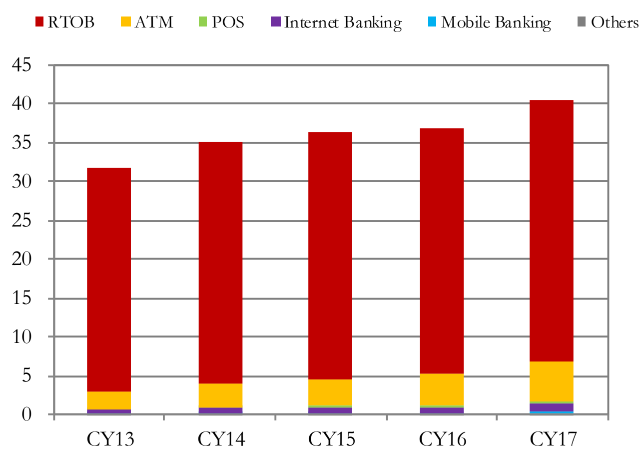
Among e-banking transactions in CY17, Real Time Online Banking (RTOB) transactions have accounted for 83.45 percent in value terms followed by ATM transactions (12.48 percent) (**Figure 6.7**).

Figure 6.7

E-Banking transactions' value increased in CY17

Value of E-Banking Transactions

(PKR Trillions)



Source: PSD, SBP

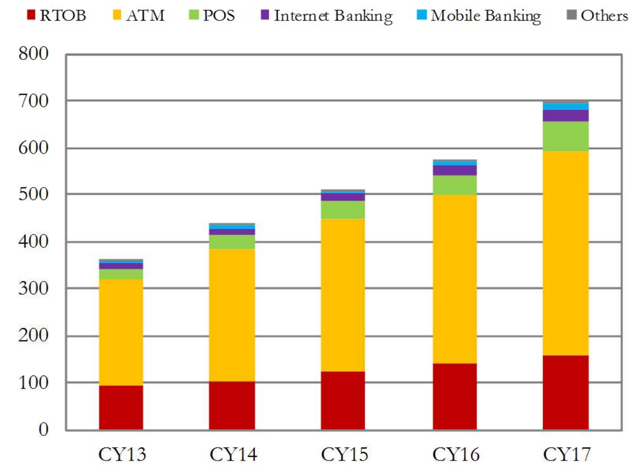
With respect to volume, ATMs lead with 62.67 percent share, followed by RTOB transactions having 22.35 percent share. The growing convenience and trust provided by internet and mobile channels are leading to a gradual decrease in share of RTOB transactions (**Figure 6.8**).

Figure 6.8

Volume of E-Banking transactions consistently increase

Volume of E-Banking Transactions

(In Millions)



Source: PSD, SBP

In order to cater to the shifting preference of banking customers towards electronic modes, the commercial and microfinance banks are also investing to expand their e-banking infrastructure and services as evident from the growth in Online Branches, Automated Teller Machines (ATMs) and Point-of-Sale (POS) machines during the past two years. Similarly, plastic cards have also witnessed expansion as depicted by growth in credit cards, debit cards and ATM only cards (**Table 6.3**).

PayPak making inroads…

In pursuance of SBP's Vision 2020 and National Financial Inclusion Strategy (NFIS), SBP launched the country's first domestic payment scheme i.e. PayPak in April 2016 which is operated by 1-Link. Its purpose is to provide the banking customers with low-cost, efficient and secure payment solution. Due to joint efforts by SBP and banking industry, around 500,000 cards have been issued by 16 banks, which points towards increasing adoption of PayPak by banks and customers.

Table 6.3

E-Banking Infrastructure Position at the end of Calendar

Description	CY13	CY14	CY15	CY16	CY17
	Number				
Online Branches	10,596	11,149	12,442	13,926	14,610
ATMs	7,684	9,018	10,736	12,352	13,409
POS	33,734	34,945	50,072	52,062	52,506
	Number in Thousands ('000)				
Total Payment Cards	22,380	25,994	32,744	36,202	39,361
of which:					
Credit Cards	1,336	1,332	1,394	1,209	1,374
Debit Cards*	20,048	23,727	26,489	17,470	19,848
ATM Only Cards	996	935	4,861	6,806	8,385
Social Welfare Cards	-	-	-	10,358	9,501
Pre-paid Cards	-	-	-	359	253

Source: PSD, SBP

* Prior to CY16, Debit cards also included social welfare and pre-paid cards.

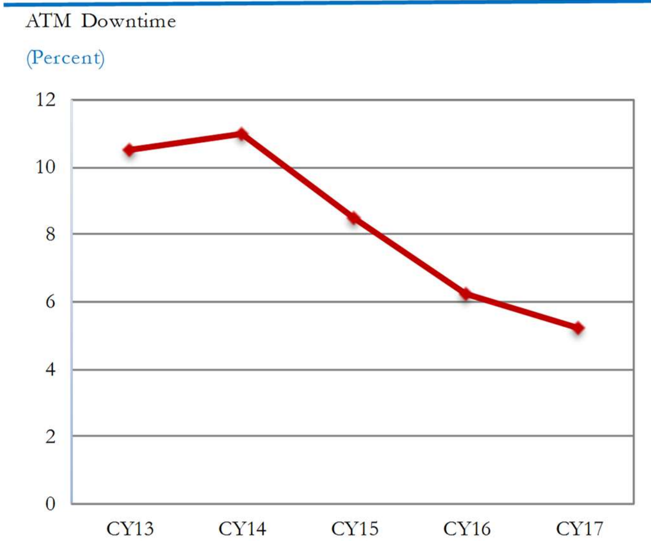
Managing cyber security risk becomes paramount with increasing adoption of e-banking channels…

CY17 has witnessed a surge in the number of registered users of internet banking and mobile banking by 22.83 percent and 91.09 percent, respectively. Similarly, the use of electronic payment gateways for card-not-present (CNP) transactions[273] on e-commerce platforms has been rising. Overall, the increasing use of electronic channels raises the probability of cyber-attacks and electronic frauds, which can potentially threaten the integrity of the banking system and undermine the confidence of the public. The rising number of payment card skimming incidents in the country also point towards the growing challenge of cyber-security.

273 Card-not-present transactions are those transactions, which are made when a consumer is not face-to face with the retailer or service provider – for example shopping online, by mail, or by phone.

SBP, cognizant of these challenges, continues to develop and implement a robust regulatory and supervisory regime to ensure the safety of the payment systems (**See Box 6.1)**.

Figure 6.9
ATM Efficiency has continuously improved



Source: PSD, SBP

Improvement in ATM efficiency signals lower operational risk…

Owing to the fact that ATM transactions occupy the most share in e-banking transactions, their efficient functioning and upkeep becomes critically important. As a medium of transactions which is designed to be available to customers round the clock, ATM downtime, due to bank's own system failure, poor connectivity, power outages and inadequate cash replenishment, especially during prolonged holidays, may lead to customer dissatisfaction and can create reputational risk.

Due to concerted efforts of the banking industry and improved surveillance by SBP, availability of ATMs has improved. Its uptime is on the increase over the past few years, which further improved to about 95 percent during 2017 (**Figure 6.9**).

Settlement and liquidity risks in retail segment remain low…

Pakistan's retail payment system works on Deferred Net Settlement (DNS) basis i.e. on T+1 basis.[274] This entails overnight credit risk as the transactions are settled on the next working day between the banks. To manage this risk, transfer limits have been imposed on per day basis both for retail and for corporate customers. Moreover, as these transactions are settled via PRISM, the availability of intra-day liquidity facility (ILF) mitigates the liquidity risk.

Branchless Banking serving as a catalyst for financial inclusion…

Branchless banking serves as a catalyst for financial inclusion and offers unprecedented opportunities to expand the outreach of financial services to the financially excluded populace. Currently, there are thirteen banks offering branchless banking services, which include four microfinance banks.

In CY17, the number of branchless banking accounts and deposits have surged by 86.63 percent and 80.41 percent, respectively. Similarly, the volume and value of branchless banking transactions have gone up by 647.6 million and PKR 2,804.0 billion, respectively (**Table 6.4**). This shows the growing confidence of customers in branchless banking as a convenient mode of payment.

Furthermore, to facilitate home remittances in a swift and cost effective manner, SBP has introduced a new category of Home Remittances Account (HRA) under the ambit of branchless banking regulations. HRA is as a platform that will facilitate the country's low-income workforce to remit money

274 When IBFT transactions take place, payer and payee accounts are debited and credited, respectively, in real time (i.e. at time T), while the back-end settlement between their banks takes place on the next working day (i.e. at time T+1).

back home to their families through formal channels without any hassle.

Table 6.4

Key Highlights of Branchless Banking

Description	CY16	CY17	Growth (percent)
No. of Agents	359,806.0	405,671.0	12.75
No. of Accounts (thousands)	19,964.9	37,260.2	86.63
Deposits as on period end (PKR million)	11,717.0	21,139.0	80.41
No. of Transactions during the period (millions)	478.5	647.6	35.35
Average No. of Transactions per Day (thousands)	1,329.1	1,877.9	41.29
Value of Transactions during period (PKR billion)	2,169.5	2,804.0	29.24
Average Size of Transactions (PKR)	4,539.2	4,317.3	(4.89)

Source: AC&MFD, SBP

In light of the increasing volume and value of transactions and outreach of branchless banking network, SBP has put in place a robust risk-based customer due diligence approach to ensure that the integrity of the branchless banking channels. Based on the category of account, the CDD requirements include verification of customer particulars from NADRA, biometric verification, transaction limits and maximum balance limits[275].

SBP is encouraging PSOs/PSPs to improve the efficiency of payment systems…

PSOs and PSPs are mostly non-banking technology-based firms, which are changing the landscape of payment systems across the globe. They provide various services such as clearing, routing, processing, switching and facilitating payments via electronic platforms. In doing so, besides competition to banks, they offer greater efficiency and customer convenience.

Pakistan's retail payment system is also witnessing an emergence of PSOs/PSPs such as payment aggregators, electronic wallets and e-commerce gateways. To encourage their growth whilst managing the risks associated with them, SBP has issued *Rules for Payment system Operators and Payment Service Providers.*[276] These rules provide a robust and enabling regulatory framework, which requires the PSOs/PSPs to obtain an in-principal approval from SBP, consequent to which they are allowed pilot operations. These measures aim at ensuring availability of necessary risk mitigants and controls before final approval is given.

Managing Systemically Important Payment Systems (SIPS)…

Since payment systems fall at the heart of the process of financial intermediation, any disruption of processes or flaw in their design may lead to systemic implications, which may threaten the stability of the financial system.

In Pakistan's case, National Institutional Facilitation Technologies (NIFT), which is the sole clearinghouse for paper-based transactions, and 1-Link[277] are of systemic importance. Similarly, with the emergence of various PSOs and PSPs, supervisory oversight is necessary for effective risk management of these entities.

Keeping this in view, SBP has issued a Payment System Designation Framework under section 4 of the Payment Systems and Electronic Fund Transfer Act, 2007.[278] The framework allows SBP to

[275] BPRD Circular No. 9 of 2016; http://www.sbp.org.pk/bprd/2016/C9.htm
[276] PSD Circular No. 3 of 2014; http://www.sbp.org.pk/psd/2014/C3.htm
[277] 1-Link operates the country's largest ATM switch and PayPak payment scheme, and conducts clearing of IBFT transactions.
[278] PSD Circular No. 2 of 2017; http://www.sbp.org.pk/psd/2017/C2.htm

designate any payment system as SIPS, which would enable it to perform close supervision of these entities. Currently, SBP is working with market stakeholders to finalize the designation.

6.2 FMIs other than Payment Systems

During CY17, key FMIs operating in the corporate securities market such as Pakistan Stock Exchange (PSX), NCCPL and CDC have taken various initiatives to improve the operational efficiencies and strengthen risk management regimes.

PSX working to align its risk management regime with international best practices…

After the integration of three stock exchanges in January 2016, as per the Stock Exchanges Demutualization and Integration Act 2012, Pakistan's capital market is now comprised of one integrated stock exchange called Pakistan Stock Exchange Limited (PSX). Following this integration, 40 percent of the shares have been passed on to its members, 40 percent of shares offered to strategic investors and 20 percent to general public. As a part of this divestment plan, bidding for sale of 40 percent equity stake to a strategic investor was held in December 2016. Resultantly, the equity stake was offered to a Chinese consortium of three Chinese exchanges and two local financial institutions. The rest of 20 percent equity was offered to general public via an IPO in June, 2017.

With the completion of the divestment process, the ownership and management of PSX has been separated in line with international best practices. Moreover, a single stock exchange with strong risk management and investor protection mechanisms will be more efficient in attracting investors from within and outside the country and achieve operational efficiency.

With the escalation of volatility witnessed during CY17, PSX is planning to further strengthen its risk management regime. Currently, scrip-level circuit-breakers are in place which avert panic selling or excessive buying that restricts or halts trading in a scrip if its price fluctuates by 5 percent or PKR 1/-, whichever is higher, compared to the closing price at the previous trading day.

However, PSX is now considering the widening of the circuit breakers in a phased manner. As per international best practices, the bourse is mulling over the implementation of index-based halts of 45 minutes for 5 percent fluctuation in KSE-30 index. The index-based halt would help in curtailing the generation of clearing house risk, allowing NCCPL to efficiently administer margins and collect marked-to-market (MTM) losses from clearing members. Moreover, it would provide the investors with a cooling-off period in order to assess the market.[279]

Assumption of Central Counter Party's role by NCCPL to mitigate credit and liquidity risks…

NCCPL is a key FMI of the country, dealing with settlement of trades in the corporate securities market. With the assumption of role of Central Counter Party (CCP)[280] in May 2016, NCCPL has become a systemically important FMI, responsible for mitigating systemic risk arising from the settlement of capital market transactions. Accordingly, it has taken various measures to strengthen its risk management regime as per international best practices prescribed by

279 PSX Notices; https://www.psx.com.pk/newsimage/107217-1.pdf

280 'CCPs' have multiple roles in its central clearing function. They set standards for clearing members, ensure netting of trades and the orderly close out of positions in a member's default scenario, maintain margin, maintain a default fund for loss mutulization (i.e. risk sharing), make margin calls, and carry out trade settlement'. Global Association of Risk Professionals (GARP) Scheweser Notes, 2016, FRM: Financial Markets and Products, Kaplan Inc. USA

International Organization of Securities Commission (IOSCO).

As explained earlier, the efficiency of capital market transactions will increase with NCCPL's inclusion as a special participant of PRISM. Instead of settlement of NCSS transactions through multiple settlement banks, NCCPL will now prepare multilateral net settlement batches (MNSBs) twice a day on the SWIFT message format and submit the same to SBP for settlement through PRISM281.

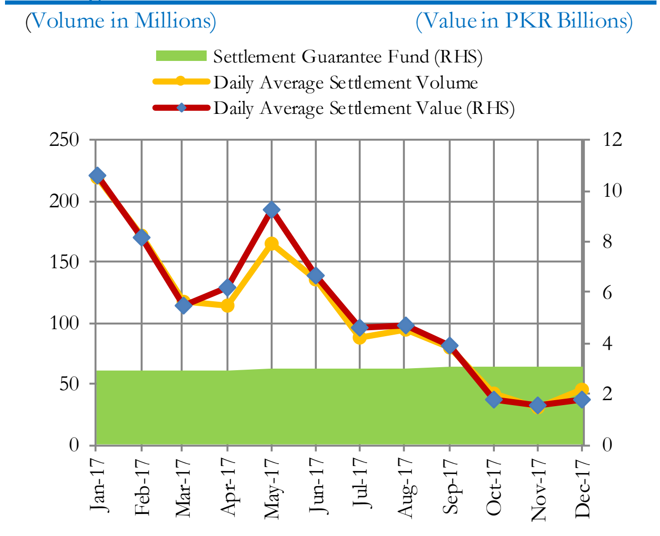
In order to manage the default risk, NCCPL has established a Settlement Guarantee Fund (SGF) as per NCCPL regulations, which was initially valued at PKR 2.75 billion.[282] During February 2017, PKR 9.9 million was utilized from the fund owing to failure of a clearing member and was replenished within the same month. The gradual enhancement of SGF continues and stands at PKR 3.08 billion at end of December, 2017[283].

While NCCPL continues to manage the settlement efficiently, the average daily settlement value has decreased significantly from PKR 8.1 billion in the first quarter of CY17 to PKR 1.7 billion during the last quarter because of bearish trend in the market and subdued trading activity. However, the daily average settlement value for the whole year stands at PKR 5.4 billion, which is greater than the size of the SGF (**Figure 6.10**). Although in case of failure of a clearing member, the first line of defense is the margins provided by the clearing member, a systemic event in the stock market may require SGF.

Going forward, when the volume of trade surges back to its usual level, the average daily settlement values may increase, rendering the SGF deficient in case of a systemic event. Hence, SGF needs to be enhanced further to mitigate the settlement risk.

Figure 6.10

Comparison of Settlement Guarantee Fund with Daily Average of Settlement Value



Source: NCCPL

NCCPL strengthening its risk management regime…

After the promulgation of Securities Act, 2015, and the assumption of the role of CCP, NCCPL has introduced various changes in its risk management regime. Some of these changes include a 10 percent increase in value-at-risk (VaR) margins and haircuts for ready and deliverable futures market and revision in features of the Securities Lending and Borrowing (SLB) scheme, Margin Financing Scheme (MFS) and Margin Trading Scheme (MTS)[284].

To mitigate operational risk, NCCPL has launched a Two-Factor Authentication feature and Completely Automated Public Turing test to tell Computers and Humans Apart (CAPTCHA) to improve security of the web-based portals, used by investors to track their trading activity in NCSS.

281 PSD Circular No. 1 of 2018; http://www.sbp.org.pk/psd/2018/C1.htm

282 NCCPL's Annual Report, 2016

283 NCCPL's Annual Report, 2017

284 NCCPL's Newsletter, *January-March, 2017*

The NCCPL has also secured the ISO22301 certification, related to business continuity management, awarded by SGS Pakistan.[285] This depicts the preparedness and resilience of NCCPL in the face of any disaster, thus ensuring that any disaster does not disrupt the smooth functioning of the capital market.

Central Depository Company (CDC) continues to hold the trust of the general public…

CDC is another key FMI that serves as the sole corporate central securities depository (CSD) of the country. It manages and operates the Central Depository System (CDS), which is an electronic book-entry system used to record and maintain securities and register their transfers, in order to manage custodial risk. Hence, CDC is an important facilitator of the corporate securities market, enabling smooth trading of securities in the capital market.

CDC continues to hold the trust of the public as evident from the increasing number of investor accounts, which stood at 52,180 as of end CY17. The CDS handled a total of 128 billion shares with a market capitalization of PKR 5.129 trillion[286] at the end of CY17.

The most crucial risk associated with any CSD is the asset safety risk, which involves the loss or misappropriation of securities due to omission, misuse and breakdown of controls. Therefore, in order to facilitate and protect the investors, CDC has launched MAccess—CDC Access Mobile Application—that offers the investors the convenience of managing their accounts through their mobile phones, thus garnering their trust.

Furthermore, CDC has also launched the Centralized e-IPO system (CES), enabling the investors to subscribe shares electronically through internet/mobile banking, ATMs etc.[287]

As per the provisions of the Companies Act 2017, which require all listed companies to process their dividends electronically, CDC has launched the eDividend Repository—an internet-based web portal—which allows investors a single-point access to track the returns on their investments and unclaimed dividends.[288] Further, in compliance with the provision of the Act, and to mitigate the operational risk associated with payment of dividends, CDC has made it mandatory for all capital market investors to provide their International Bank Account Number (IBAN) as part of the registration details for opening and maintaining sub-account in CDS.[289] The increasing adoption of technologies by CDC not only provides convenience to the investors but also mitigates the asset safety risk by ensuring more transparency to the investors.

Moreover, to cater to the risk of operational disruption in the face of any untoward incident, CDC has ensured that adequate contingency plans are in place. In March 2017, it became Pakistan's first ISO 22301 certified company for its Business Continuity Management Program.[290]

Increasing use of technology and interconnectedness among FMIs needs a close watch

Interconnectedness among the country's various FMIs is increasing gradually. Today, CDC, NIFT and NCCPL are participants of PRISM. While the rising interconnectedness is leading towards efficiency gains, it also raises the likelihood and

[285] NCCPL's Newsletters, *January-December, 2017*
[286] CDC's Newsletter, *October-December 2017*
[287] CDC's Newsletter, *April-June 2017*
[288] CDC's Newsletter, *October-December 2017*
[289] CDC's Newsletter, *July-September 2017*
[290] CDC's Newsletter, *January-March 2017*

impact of contagion risk in case of a system-wide distressed scenario.

Going forward, management of this risk requires further strengthening of the entity-level risk management regimes in FMIs along with increasing collaboration between the regulators (SBP & SECP). In this regard, SBP and SECP have signed a letter of understanding (LOU) in May 2017 to establish a Council of Regulators (CoR) to enhance their collaboration in order to ensure the stability of the country's financial system. This forum will prove to be effective in terms of managing risks associated with increasing interconnectedness among the country's financial institutions as well as FMIs.

Box 6.1: Emerging challenge of Cyber Attacks-Implications for financial sector

Today, cyber-attacks are characterized by an increase in sophistication, potential for disruption and global prevalence. The World Economic Forum Global Risk Perception Survey 2018 cited the risk of cyber-attacks as one of the top 10 risks in terms of both impact and likelihood. The overall cost of cyber-attacks is predicted to be USD 8 trillion over the next five years. Noteworthy examples of cyber-attacks during CY17 are the WannaCry ransom ware attack during May 2017, which affected more than 300,000 computers across 150 countries[291] and the Petya ransom ware attack, which targeted various large organizations across the globe. The threat of cyber-attacks is a disruptive cross-border phenomenon, which merits urgent global efforts.

The global financial system is not aloof of cyber security risk. The cyber-heist on Bangladesh Bank in 2016, which resulted in a loss of USD 81 million, is one of the notable examples from the recent past. As more and more financial institutions continue to leverage information technology to offer efficient and innovative services and products, technology becomes an integral part of their business models and operations. Consequently, it entails greater investment in cyber-security architecture and a robust regulatory and supervisory regime to ensure smooth functioning of payment and settlement systems to hold the trust of the general populace.

The emergence of cyber-security risks, which now pose a challenge of systemic proportions, is driven by a host of factors. These include the widespread use of technology, both by financial institutions and consumers, growing interconnectedness among financial institutions through the use of technology-based platforms, increasing reliance on data and the evolving nature and sophistication of cyber-attacks. Moreover, as financial institutions continue to adopt the evolving technologies, their dependence on technology firms for emerging services like cloud computing firms, FinTech platforms, etc. increases. Since these firms, generally, fall outside the perimeter of the financial regulators, the oversight of cyber-risks becomes a challenge.

The key risks associated with cyber-attacks, which compromise the integrity of the financial system, include:

- Breaches of data security/privacy resulting in financial losses,
- Vulnerability of IT systems to malicious viruses such as ransom wares,
- Disruption in IT systems of financial institutions leading to a halt in operations,
- Vulnerability of IT based financial solutions such as ATMs, internet banking and mobile banking to frauds such as skimming, phishing, pharming etc.,
- Reputational loss for financial institutions which may have systemic implications, and
- Vulnerability of national and cross-border payment and settlement systems which may pose contagion risk,

International bodies are making concentrated efforts towards addressing the issue affecting the cyber-resilience in the global financial system. The Committee for Payments and Markets Infrastructure (CPMI) and International Organization for Securities Commissions (IOSCO) have issued Principles for Financial Markets Infrastructures (PFMIs) which comprehensively deal with the risk management of financial market infrastructures[292]. Building on that, CPMI-IOSCO issued guidelines on cyber-resilience for financial market infrastructures which aims at improving cyber-governance, preparedness in case of a cyber-attack, threat intelligence and awareness among end-users. Similarly, the G7 published the "fundamental elements of cyber security for the financial sector", which outlines various elements to serve as building blocks upon which an entity can design and implement its cyber-security strategy[293].

The results of the 1st wave of SBP Systemic Risk Survey depict that cyber security risk stands among the top 10

[291] The Global Risks Report, *2018 (World Economic Forum)*
[292] Principle 17 of PFMIs deals with operational risks related to functioning of financial market infrastructures.
[293] https://www.ecb.europa.eu/paym/pol/shared/pdf/G7_Fundamental_Elements_Oct_2016.pdf?69e99441d6f2f131719a9cada3ca56a5

risks facing Pakistan's financial system (**See SRS Results in Box:1 in Executive Summary**). However, the level of cyber security risk to Pakistan's financial sector remains within tolerable bounds. The industry has not seen any significant disruption in functioning of the payment and settlement systems, which has maintained the confidence of the participants.

State Bank of Pakistan (SBP), being the supervisor and regulator of the banking sector and payment systems, has long been cognizant of the growing threat of cyber security risk and is continuously working in close coordination with the banks to ensure cyber readiness.

In this regard, SBP has issued *the Framework for Risk Management in Outsourcing Arrangements by Financial Institutions* which addresses the risk emanating from reliance of banks on third party service providers[294].The SBP has detailed set of instruction on *Prevention against cyber-attacks, in terms of which* banks are required to continuously enhance their cyber security controls, processes and procedures in order to anticipate, withstand, detect, and respond to cyber attacks. For the purpose, banks need to formulate cyber security controls as an integral part of their IT risk management policy, accompanied by appropriate Standard Operating Procedures to safeguard against potential cyber threats[295].

To ensure that the payment cards in the country are secure, SBP has issued *Regulations for Payment Cards security* to facilitate the card service providers (CSPs) to develop a card security framework according to international best practices. The regulations require all cards to be issued in compliance with the Europay, Mastercard and Visa (EMV) standard from June 30, 2018 onwards, to protect the consumers from frauds such as skimming[296].

To protect the increasing consumer base using internet banking channels, SBP has issued *Regulations for the Security of Internet Banking* requiring banks to develop a comprehensive internet banking security framework[297]. The regulations emphasize on customer awareness by the banks about identity theft and fraud techniques as part of the preventive controls.

To cater to cyber security risk, Government of Pakistan has also taken various initiatives. The legal framework against cyber crimes was strengthened through promulgation of Prevention of Electronic Crimes Act, 2016. The legislation outlines a mechanism for investigation, prosecution and trial related to electronic crimes such as cyber-attacks. On the institutional front, a National Response Center for Cyber Crime (NR3C) is working under the Federal Investigation Agency with a mandate to deal with technology based crimes.

Cyber-security challenges for the financial sector need urgent attention of the global community. As the first line of defense, awareness among the human resources of financial institutions and end-consumers of financial services must be enhanced. Moreover, regulators must work closely with financial institutions to ensure that adequate safeguards are in place to defend against the cyber-attacks. Most importantly, owing to the cross-border nature of cyber-attacks, international collaboration between states, supervisory bodies, law enforcement agencies and financial institutions is pivotal to manage and mitigate the risks associated with these attacks.

[294] BPRD Circular No. 06 of 2017; http://www.sbp.org.pk/bprd/2017/C6.htm
[295] BPRD Circular No. 07 of 2016; http://www.sbp.org.pk/bprd/2016/C7.htm
[296] PSD Circular No. 05 of 2016; http://www.sbp.org.pk/psd/2016/C5.htm
[297] PSD Circular No. 03 of 2015; http://www.sbp.org.pk/psd/2015/C3.htm

7 Resilience of the Banking Sector Under Adverse Conditions

The stress scenario is not a forecast of macroeconomic and financial conditions. It is a hypothetical but coherent tail-risk setting designed specifically to assess the resilience of the banking sector to deterioration in macroeconomic conditions. This year's stress testing exercise assesses the extent to which the banking sector is able to withstand hypothetically designed domestic and global shocks in the medium term, besides considering the business as usual conditions in the baseline. The sector maintains its current level of solvency under the baseline scenario. Under the shocks, however, the solvency benchmark falls below the local standards after three years. In case of severe and protracted downturn induced by global macroeconomic conditions, the system even falls below the minimum global capital adequacy benchmark. In terms of size, the medium and large banks turn out to be vulnerable to both domestic and global adverse shocks while the small banks, on the back of their strong capital adequacy, largely withstand the stress.

7.1 Background and Developments

The stress-testing framework is being extensively used by various regulators and supervisors in order to assess the resilience of the banking sector to certain hypothetically designed adverse yet plausible event(s). The results of stress-tests, therefore, depict the *projected* behavior of macro-financial variables and health of the banking sector under the assumed scenarios.

SBP has been publishing the stress-testing results in FSRs since 2007-08. The stress-testing framework has been strengthened in recent years. This year's assessment, building on similar premises as in FSR 2016, extends it in a number of ways.

The current stress testing exercise includes *three* separate scenarios designed to assess the health of the banking sector over the medium term, i.e. five years from Q1CY18 to Q4CY22, unlike the previous stress testing exercise which spanned over three years horizon.

The *baseline scenario* captures the current dynamics of the macroeconomy and precludes any externalities. While, the other two scenarios, *domestic* and *global,* assume crystallization of idiosyncratic and systemic shocks, such as natural disasters and disruptions in global economy. Of the two stress scenarios, global has been designed to be severer.[298]

The methodology used to evaluate the resilience of banking sector in all the three scenarios is similar but differs in terms of paths being followed by the macroeconomic variables. Given the interaction between various sectors of the economy, variants of vector autoregressive (VAR) models have been employed.[299,300]

Moreover, in addition to the overall assessment, the cross-sectional heterogeneity has been captured by including segments of banking industry in terms of size (i.e., small, medium, large). The analysis also

[298] Usually three types of shocks are considered in stress testing based on the length of the shock events i.e. V-shaped, L-shaped and U-shaped. The shapes are envisaged in terms of recovery. V-shaped assumes quick recovery; L-shape assumes protracted downturn while U-shaped assumes recovery towards the end of projection horizon. Under this terminology, both domestic and global scenarios are assumed to be U-shaped. However, the recovery under the domestic shock takes place earlier while economy takes a little longer to recover under global shock.

[299] For details, please see *'Box 4.1 Technical Details'* of Chapter 4: Resilience of the Banking Sector, Financial Stability Review 2016, SBP.

[300] As per BIS study, one fifth of the authorities use VARs. [Bank for International Settlements (2017). Supervisory and Bank Stress Testing: A Range of Practices. December.]

complements the recent regulatory announcement regarding the framework for domestic systematically important banks (D-SIBs).[301]

7.2 Scenario Design Overview

The baseline scenario assumes business as usual environment, both globally and domestically, and is based on recent macroeconomic developments. Domestic scenario, on the other hand, follows the footprints of one of the worst episodes of droughts that hit Pakistan's economy in 1999-02. While global scenario, besides tracking the pattern of 2008 financial crisis, also considers the recently evolved global risks, making it extremely adverse.

The implications of changes in macroeconomic indicators, such as output, inflation, exchange rate, interest rate and exports on the health of the banking sector have been captured via non-performing loans, profitability and solvency. Specifically, the economic downturns and upturns can influence the income levels of borrowers, affecting their debt servicing capacity and amplifying the credit risk for banks. This in turn influences the profitability of banks, which has implications for their solvency.

Conversely, financial sector also has implications for (and can disrupt) the real economy as witnessed during GFC of 2008. The extension of credit by the banks is hampered during the downturns, slowing further the pace of economic growth. In fact, the recessions tend to be deeper and costlier when they coincide with the contraction phase of financial cycle.[302]

Stress test models, designed to test banking industry's resilience against adverse shocks, capture the inter-linkages among the various sectors of the macro economy. The authorities' feedback reactions, in response to the shocks, are assumed to be reflected in the adjustments of interest rate, inflation and exchange rate.

In terms of risks, the resilience of the banking sector has been assessed against credit, market (interest rate and exchange rate) and operational risks.

Baseline Scenario

Baseline scenario, *Scenario 0*, assumes absence of any idiosyncratic or systemic shocks over the simulation period. Nevertheless, short run risks, as highlighted in Chapter 1, may weigh on the domestic economy. The slowdown may occur due to ongoing political uncertainties, both domestic and global, pressures arising from external sector vulnerabilities as well as fiscal slippages, and reversal of oil prices. While Government has projected the GDP to grow by 6.2 percent in 2019, international observers, such as the IMF, are, however, expecting a slowdown in the economy in the upcoming years (**Figure 7.1**).[303]

In the medium term, CPEC projects are expected to support the manufacturing and structural development activities that may drive growth over the projection horizon.

These developments are assumed to strengthen the demand conditions in the medium term, leading to some inflationary pressure; political uncertainties and balance of payment vulnerabilities are assumed to tighten financial conditions in the short run. On top of these risks, recent uptrend in oil prices might further worsen the external account. Exports are likely to tread on an accelerated growth trajectory in the wake of strengthening demand conditions in the AEs, the recent support package by the government

301 BPRD Circular No. 04/2018.

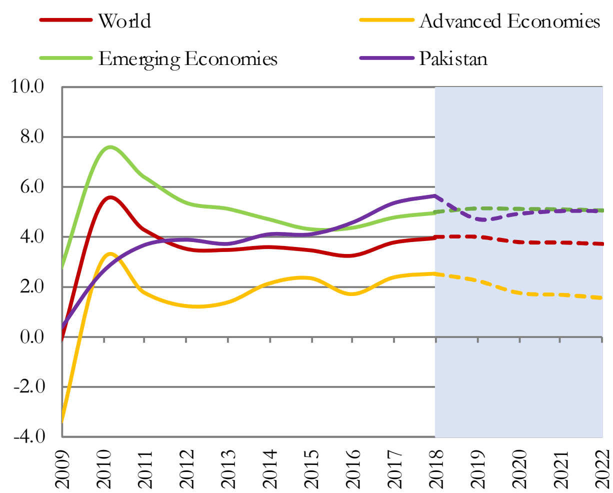
302 Drehmann M., Borio C., and Tsatsaronis K. (2012). Characterizing the Financial Cycle: Don't lose sight of the medium term! Bank for International Settlements, Working Paper No. 380.

303 IMF (2018), World Economic Outlook, *April*

as well as lagged impact of bouts of weakening parity conditions.

Figure 7.1
IMF Annual Real GDP Growth Forecast

Percent GDP growth Actual and Forecast (Dotted lines)
(Percent)



Source: IMF World Economic Outlook April 2018

Amid these economic developments, banking industry is expected to continue its current course of profitability and solvency, punctuated, however, by some adjustments due to tighter financial conditions in the short-run.

All the estimations made under this scenario are purely model based and turn out to be broadly in line with the IMF's WEO forecasts of April 2018.

Domestic Scenario

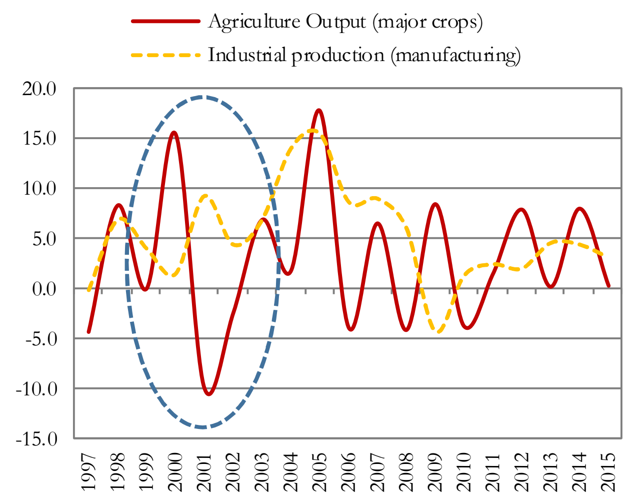
The domestic economy continues to be driven by, inter alia, the agriculture sector. Though slowly declining, the sector's output accounts for around one-fifth of the total GDP. Further, its interlinkages with industry and services sectors make it an important driver of the economic growth. Naturally, the sector remains prone to natural calamities such as earthquakes and periodic floods and droughts.

Such shocks, in the past, have led to periods of low growth, surging inflation and reduced investor confidence.

Climate change and the consequent global warming have been postulated to lead to extreme weather conditions causing droughts, floods, famine and cyclones. According to Long-Term Climate Risk Index (CRI) 2018, during last two decades, Pakistan experienced 141 climate related events and remains 7th most affected country in terms of human and output losses.[304] Concretely, the country suffered a 0.605 percent loss of its GDP due to extreme weather conditions.

Figure 7.2
Drought Period (1999-2002)

Growth Trend in Agriculture Output and Industrial Production
(Percent)



Source: S&DWH (SBP)

The domestic stress scenario, *Scenario 1*, therefore, considers the effects of climate change on the economy and its impact on the banking sector. The scenario is also motivated by the recent concerns about water conditions and availability. In this context, our benchmark period is 1999-2002 when the country experienced one of the longest and

[304] German Watch: https://germanwatch.org/en/download/20432.pdf

worst episodes of droughts.[305] As a result, Pakistan's economic growth slowed down to 1.97 percent in FY01 and exports fell by 2.25 percent. Agriculture output also witnessed negative growth with some lags (**Figure 7.2**).

Recently, the Indus River Systems Authority (IRSA), country's water resources management body, projected 40 percent shortage of water during the upcoming Kharif season, mainly due to a reduced amount of snow-melting, lower river flows, rainfall as compared to previous year.[306]

The expected water shortages could also weigh on the hydropower generation, which, during FY17, constituted around 30 percent of total electricity generation.[307] The stressed energy conditions may depress the industrial production causing a drop in domestic output.

To meet the shortfall, among other alternatives, thermal sources of power generation could be used. However, such a remedy may lead to higher import of oil and coal, thus amplifying the already high import bill. Besides pressures on the external account, the situation would result in higher prices, mainly via pass-through to consumer goods.

The *Scenario 1*, therefore, assumes a natural shock, similar to 1999-2002 drought, to hit Pakistan over the simulation period. Substantial fall in agriculture output, mainly due to crops failure, is assumed, while some recovery could take place on account of relief packages expected from the government.

In view of the post disaster relief initiatives of the government, it is assumed that the government's current expenditure would rise. At the same time, inflationary pressures could also rise in response to this supply shock.

With a drop in agriculture output, it is assumed that agri-exports, that constitutes around 20 percent of total exports in December 2017,[308] would fall. The imports of raw material and food could rise, which in turn would further aggravate country's current account balance.

Moreover, investor confidence is assumed to shake resulting in bearish sentiments in the stock market while the PKR-USD parity may experience some adjustment. In response to these vulnerabilities, interest rates may also adjust accordingly.

The growth paths assumed in this scenario for various macro-financial variables are projected through the same feedback models used in *Scenario 0*. As this scenario assumes output to, initially, decline but then recover towards the end of the simulation period, pressures on repayment capacity of borrowers are assumed. A moderate rise in non-performing loans is expected.

Global Scenario

The global economy currently faces multiple challenges on various fronts. These include lower but uncertain oil and commodity prices; political uncertainties in the Middle East and elsewhere; tapering or tightening of monetary policy by major central banks like Federal Reserve, Bank of England (BoE) and European Central Bank (ECB) and potential trade policy shift towards protectionism in the United States and probable retaliatory actions from major economic players.

The IMF's WEO, April 2018, estimates the world output at the level of 3.8 percent in 2017, lower from 5.4 percent in 2010 (*a slump of 160 basis points*). As per IMF's projections, the output of major economies like, US, EU, Japan, China and Russia,

[305] Pakistan Meteorological Department (2017). Drought Bulletin of Pakistan, October-December.
[306] IRSA meeting 22 March 2018.
[307] Pakistan Economic Survey 2016-17, Ministry of Finance
[308] State Bank of Pakistan

will fall short of or remain close to the level of post-crisis period till 2019.

The inward looking trade policies, initiated by United States, could lead to build up of inflationary pressures in the US via external account, possibly motivating quicker and tighter than anticipated normalization of monetary policy. Some retaliatory responses like tariffs imposition and rise in interest rates are also expected to come up from various jurisdictions such as UK, EU, and China.

The repercussions of these risks, which have already started building up across the globe, could be severe for Pakistan's economy in the medium term. The key vulnerabilities of global economy such as shifts in trade policies,[309] uncertainties surrounding oil prices and a slower growth in China could weigh on Pakistan's trade volume, investment portfolio, remittances, exchange rate and interest rate environment, and ultimately the real output.

All these global political and economic risks are assumed to crystallize in a hypothetically designed *Scenario 2*. Given the already slower real growth in the major economies, the events surrounding the scenario are assumed to lead to a severer downturn in the world economy than the one experienced in the wake of GFC 2008.

Amid this backdrop, it is assumed that world real GDP growth would fall but then recover over the simulation period. The real GDP growth of major economies of world is assumed to experience synchronized slowdown and fall at a higher rate than the one observed during 2008 financial crisis. This postulation is in line with the adverse scenarios considered by other Central Banks (*such as Bank of England*).[310]

In the low growth environment, global trade is assumed to stagnate initially and fall significantly in the latter period. Further, deteriorated market perceptions may diminish investors' risk appetite leading market participants to attempt de-risking their portfolios. Resultantly, capital flight is assumed from emerging markets and demand for less risky assets, often belonging to the developed countries, may rise. Emerging market currencies may depreciate against the benchmark currencies, e.g., the US dollar in such a situation.

Oil prices would also face downward pressures because of contracting global demand and trade. However, given that the supply conditions have changed due to availability of alternative energy sources (such as shale gas, wind, solar, Ethanol fuel etc.) the extent of adjustment in the oil prices has been assumed smaller than what was witnessed during GFC.

These developments justify the U-shaped downturn and assume that the decline of global growth would be deeper and would only reverse its course towards the end of projection period. This is unlike the actual event of 2008 where the start of recovery was observed in 2009.

Consequently, the scenario assumes that Pakistan's GDP would experience a more severe fall than was observed during GFC 2008 (**Figure 7.3**).[311] The external account is assumed to take pressure of falling global trade, causing a significant drop in exports. This effect is captured by deterioration of domestic parity conditions vis-à-vis the US dollar. Expensive imports along with ER adjustment is assumed to contribute to the buildup of price pressures.

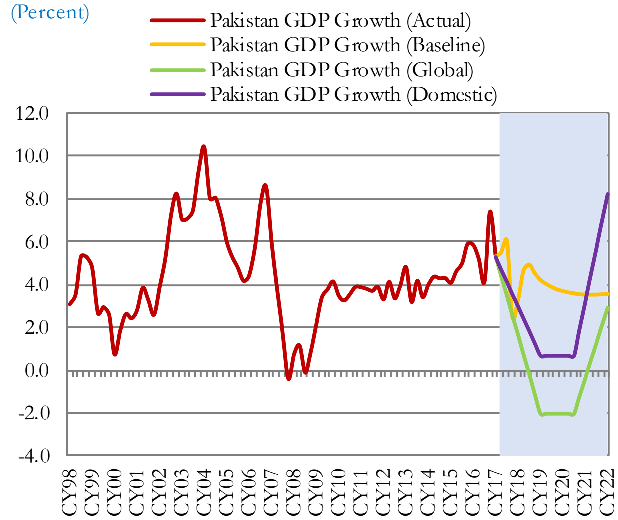
[309] For example, uncertainties surrounding NAFTA and renegotiation of economic arrangements between UK and rest of the EU.
[310] Stress testing the UK banking system: 2017 results

[311] The estimates of quartized GDP for Pakistan has been used. See Tahir A., Ahmed J. and Ahmed W. (2018). Determination of Business Cycles using Quarterized GDP of IGC Partner Countries. *Unpublished manuscript*. State Bank of Pakistan.

Figure 7.3
Annual Growth in Pakistan Real GDP

Percentage change in Output under Global and Domestic Scenarios

(Percent)



Source: Staff Calculations

In view of the assumed inflationary and exchange rate pressures, interest rates are likely to respond accordingly. Therefore, the assumed external sector pressures, a slowdown of aggregate demand and tighter monetary conditions, would translate into higher level of credit risk, leading to higher infection levels in the banking sector. At the same time, prompt slowdown of lending activity may also hurt the interest income of banks. This, coupled with higher provisioning expenses, could possibly impair banking industry's profitability and ultimately capital adequacy.

7.3 Stress Testing Results: System Level

(a) Impact on Credit Riskiness

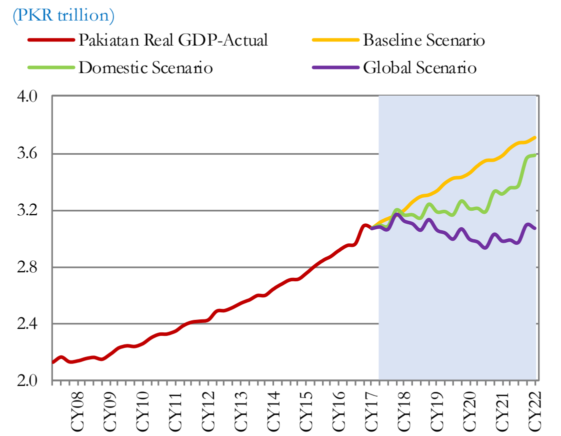
The results of stress test exercise indicates that GNPLR, under *Scenario 0*, oscillates broadly around the current level of 8.35 percent (as of Q42017) (**Figure 7.7**). Over the five-year projection horizon, GNPLR hits the lowest level of 7.40 percent in Q42018 and settles at the level of 8.10 percent in Q42022. This is mainly in line with our assessment of the domestic economy, where short run pressures are stronger while conditions are expected to improve in the medium term.

The GNPLR, under hypothetical scenarios, rises faster than in the baseline because of deteriorating macroeconomic conditions. Banking industry shows less resilience towards global shocks as delinquency rate touches 21.77 percent by the end of projection horizon. This is higher than the GNPLR levels attained over previous one and a half decade! The assumed crisis, erupted under global shocks, might pose stability concerns to the banking system of Pakistan.

Likewise, domestic led vulnerabilities also threaten banking sector stability but to a lesser extent. The assumed faster recovery under domestic scenario by the end of projection period could be the reason behind less severe GNPLR levels attained under Scenario 1 in comparison with Scenario 2.

Figure 7.4

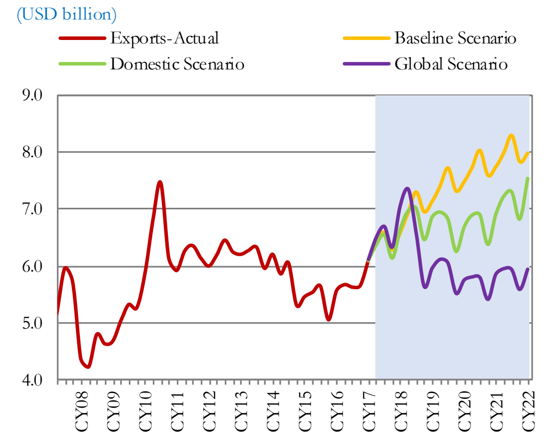
Projected Pakistan Real GDP under various scenarios



Source: Staff Calculations

Figure 7.5

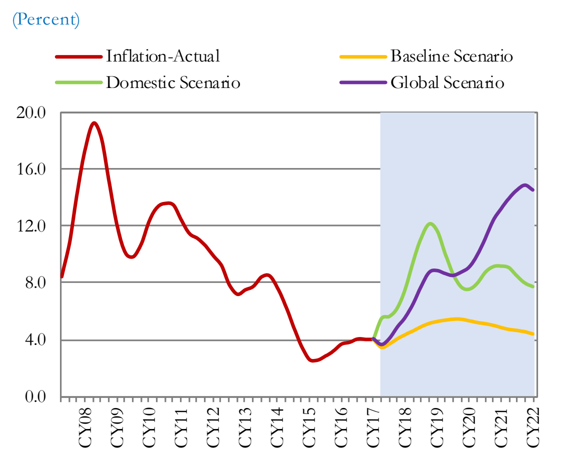
Projected Exports under various Scenarios



Source: SBP and Staff Calculations

Figure 7.6

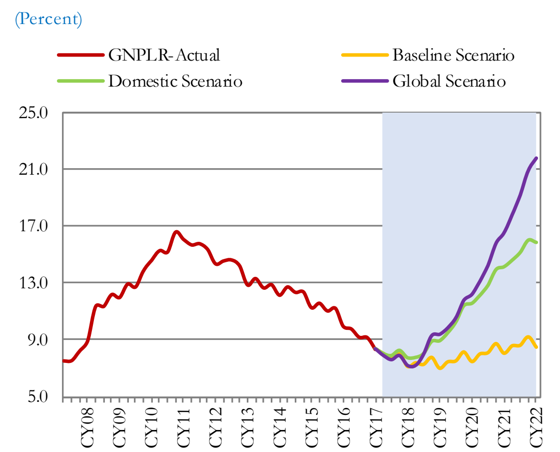
Projected Inflation under various Scenarios



Source: SBP and Staff Calculations

Figure 7.7

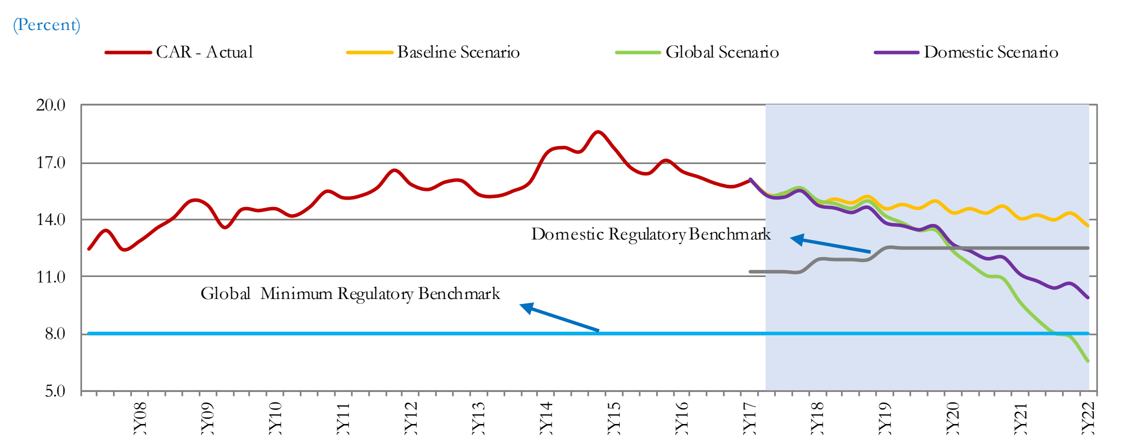
Projected System Level GNPLR under various Scenarios



Source: SBP and Staff Calculations

Figure 7.8

Projected System Level Capital Adequacy Ratio under various Scenarios



Source: SBP and Staff Calculations

(b) Impact on Solvency

The impact on solvency is measured via Capital Adequacy Ratio (CAR) of the banking system. As expounded in the scenario design, besides the credit risk, other risks viz., the market risk, realized via movements in interest and exchange rates, as well as the operational risk are likely to have impact on solvency. These three risks, therefore, have also been factored in while analyzing the impact of each scenario on eligible capital as well as risk weighted assets.

Under the business as usual environment, the CAR of the banking system deteriorates slightly, mainly on the back of existing macroeconomic risks discussed earlier as well as the expected upward growth trajectory of loans.

Under Scenario 1 (Domestic Shock), the banking industry manages to comply with the minimum international CAR requirement of 8.0 percent but fails to meet the domestic regulatory benchmark after two years (**Figure 7.8**).[312] The banking sector's CAR significantly declines in the event of a global shock, and even falls below the minimum international benchmark. It may be mentioned that the domestic CAR requirements are set at levels higher than the global standards.

7.3 Stress Testing Results – Segment Level

In line with the system level default analysis, segment level (small, medium and large sized banks) infection ratio has also been projected. This aspect of banking industry is included to assess how the cross-sectional heterogeneity affects the resilience of banks against various macroeconomic risks.

For GNPLR, system-level projections for non-performing loans and gross advances are distributed proportionately based on the contribution of each segment in the loan portfolio of entire banking system as of December 2017. Similarly, capital is also distributed proportionately to compute segment level CAR.

Large Banks

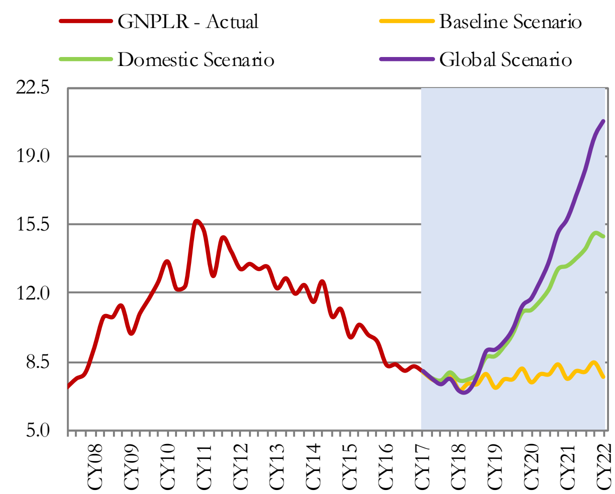
Large banks, by the end of simulation horizon, witness a rise of 0.51, 7.04 and 12.82 percentage points in GNPLR and fall of 2.11, 5.22 and 8.10 percentage points in CAR, under Scenario 0, Scenario 1 and Scenario 2, respectively. Scenario 2 turns out to be the most severe one and deteriorates profitability of large banks the most.

Figure 7.9

Global Shock increases the Credit Risk of Large Banks

Baseline and Projected under Global and Domestic Scenarios

(Percent)



Source: Staff Calculations

The local standard for CAR gets breached under both stress scenarios towards the end of CY2020. The minimum global benchmark, however, would only be violated in case of a protracted downturn and that too in the last quarter of the projection period. Large banks are, thus, projected to show

[312] The domestic CAR benchmarks are 11.275 percent (December 2017), 11.90 percent (December 2018) and 12.5 percent (December 2019 onwards).

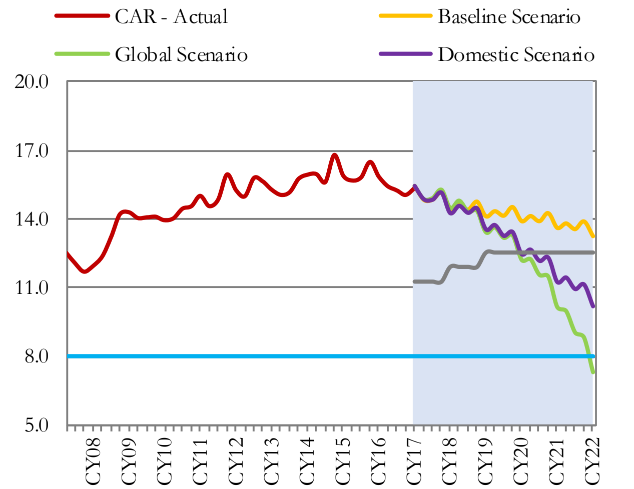
resilience against severe shock for up to two years (**Figure 7.10**).

Figure 7.10

Both the Stressed Scenarios breach Regulatory Benchmark

Large Banks CAR under various Scenarios

(Percent)



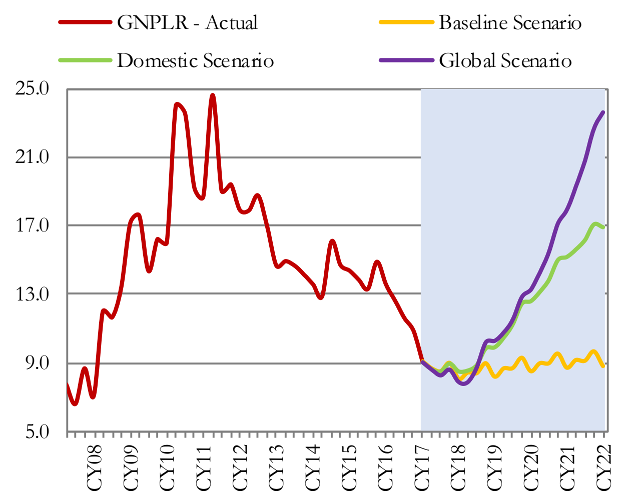
Source: Staff Calculations

Figure 7.11

Global Shock increases the Credit Risk of Medium Banks

Baseline and Projected under Global and Domestic Scenarios

(Percent)



Source: Staff Calculations

Medium Banks

By the end of projection period, GNPLR of medium-size banks rises by 0.58, 8.00 and 14.57 percentage points and CAR falls by 3.23, 7.14 and 10.89 percentage points during scenario 0, 1 and 2, respectively. Again, the impacts of global shocks outweighs the consequences of baseline conditions and domestic vulnerabilities in terms of severity (**Figure 7.11**).

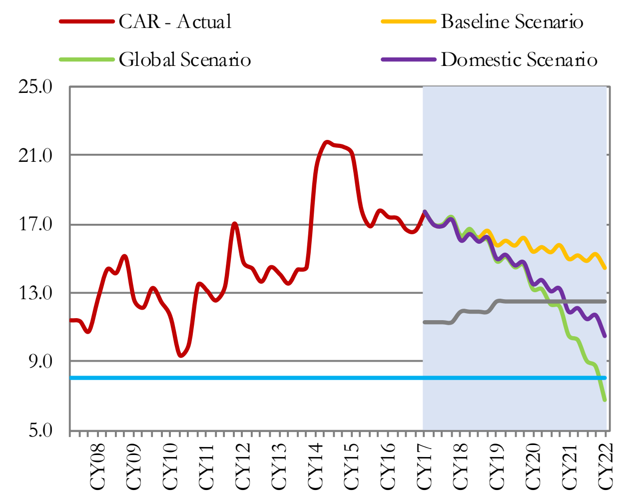
This category shows more resilience than large banks as it survives two quarters more before breaching local CAR requirement under Scenario 2 and four more quarters under scenario 1 (**Figure 7.12**). Comparatively lower exposure in terms of loans and a higher CAR, pre-shock, possibly help medium banks withstand the shocks.

Figure 7.12

Medium Banks are more vulnerable to credit Risks

Medium Banks CAR under various Scenarios

(Percent)



Source: Staff Calculations

Small Banks

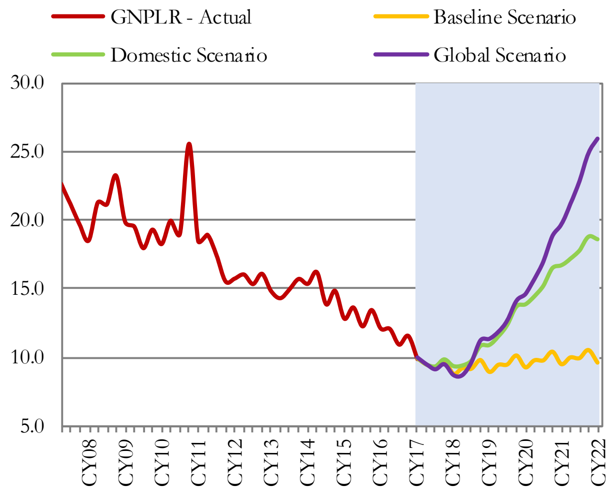
Small banks is the category of banks that happen to be the most resilient against domestic and global shocks. Although, it's CAR do fall like large and medium size banks but remains well above both the local and minimum global capital requirements (**Figure 7.14**).

Figure 7.13

Global Shock increases the Credit Risk of Small Banks

Baseline and Projected under Global and Domestic Scenarios

(Percent)



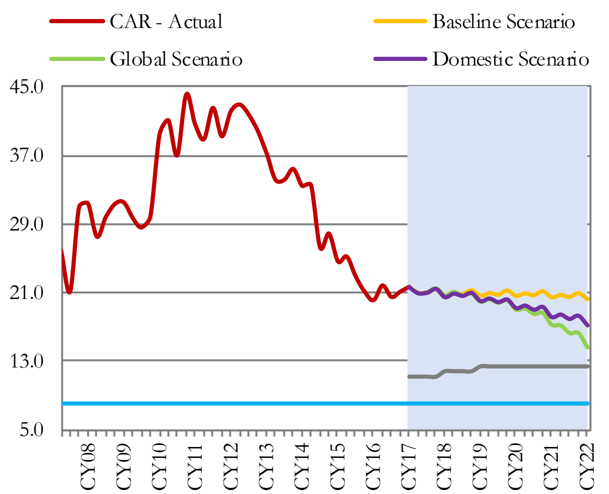
Source Staff Calculations

Figure 7.14

Small Banks are the most resilient to Credit Risks

Small Banks CAR under various Scenarios

(Percent)



Source: Staff Calculations

The delinquency rate of small banks rises by 0.63, 8.77 and 15.97 percentage points under scenario 0, 1 and 2, by the end of five-year horizon, which happens to be the highest among all three categories. However, due to a comfortable capital position of these banks, pre-shock, small banks turn out to be strong enough to absorb credit losses and still able to maintain capital above the minimum global and domestic regulatory requirements.

Appendix A: Financial Sector Vulnerability Index (FSVI) and Financial Sector Heat Map (FSHM)

The financial sector vulnerability index (FSVI) and financial sector heat map (FSHM) have been estimated on quarterly basis from the year 2005 to year 2017 following the methodology described by Aikman et. al. (2015)[313]. The index also provides range of forecasts for each quarter of year 2018 in the form of fan chart.

The FSVI represents the equal-weighted average risk arising from the four key areas i.e. the banking sector, the corporate sector, the financial markets, and the macro-economy. Each area is assessed based on various risk dimensions. For example, banking sector's risk dimensions include capital adequacy, earnings, liquidity etc. Within each risk dimension, in turn, various risk indicator(s) are used. For example, asset quality includes NPLs to loans ratio, Loss to NPLs etc. Generally, higher values of an indicator read higher risk. However, to make the direction of risk consistent, few indicators (such as CAR, ROA, GDP etc.) are pre-multiplied by negative unity.[314] See **Table 1** below for details.

The risk is depicted in terms of cumulative probability ranging from 0 to 1 such that closer to 0 means lower risk and closer to 1 is the higher risk. The risk magnitude of FSVI is, then, represented by various color scaling (blue with the lowest risk and red with the highest risk) to form Financial Sector Heat Map (FSHM).

In order to calculate the magnitude of risk, each indicator is standardized around its mean. Taking simple average of all the standardized indicators in all risk dimensions of a particular area yields the average standardized values of the area. For example, the values for banking is derived from averaging all standardized indicators of the banking sector in various risk dimensions i.e. capital adequacy, liquidity, earnings etc. The aggregate values are then derived by taking equal weighted average of values of all areas (i.e. banking, financial markets, etc.). The FSVI is then derived by rescaling the aggregate values, between 0 and 1, using the Empirical Cumulative Distribution Function (ECDF) of the entire time series data.

The FSVI is then mapped into color spectrum (blue to red) to obtain the FSHM. FSHMs of all sectors are also estimated separately.[315]

For completeness, a number of alternative measures for scaling the aggregate index between 0 and 1 have been explored, such as Normal Cumulative Distribution Function (NCDF) and Cumulative Probability by assigning equal probabilities to each value. All methodologies yield similar results for the FSVI and FSHM.

313 https://www.federalreserve.gov/econresdata/feds/2015/files/2015059pap.pdf

314 Otherwise, higher value of indicators would have shown lower risk.

315 For sector-wise heat maps, each sector standardized values is also rescaled with empirical cumulative distribution function

Table 1: FSVI and FSHM: Risk Areas, Risk Dimensions and Indicators

Sr. No.	Risk Area	Risk Dimension	Risk Indicator(s)	Impact on Financial Stability
1	Banking	Capital Adequacy (C) $C = \frac{1}{n}\sum_{i=1}^{n} c_i, n = 3$	c_1= *Capital Adequacy Ratio(CAR)* c_2=*TIER 1 (CAR)* c_3=*Capital to Asset Ratio*	Positive Positive Positive
		Asset Quality (AQ) $AQ = \frac{1}{n}\sum_{i}^{n} aq_i,$ $n = 4$	aq_1 = *NPLs to Total Loans* aq_2 = *Provisions to NPLs* aq_3 = *Net NPLs to Capital* aq_4 = *Loss to NPLs*	Negative Positive Negative Negative
		Earnings (E) $\mathrm{E} = \frac{1}{n}\sum_{i=1}^{n} e_i,$ $n = 5$	e_1= *Return on Assets Before Tax* e_2=*Return on Equity(Avg. Equity and Surplus) Before Tax* e_3 = *Net Interest Margin* e_4 = *Net Interest Income/Gross Income* e_5 = *Cost to Income Ratio*	Positive Positive Positive Positive Negative
		Liquidity (L) $L = \frac{1}{n}\sum_{i=1}^{n} l_i,$ $n = 3$	l_1= *Liquid Assets/Total Assets* l_2= *Liquid Assets/Total Deposits* l_3= *Earning Assets/Deposits*	Positive Positive Positive
		Borrowings	Borrowings (Excluding SBP Repo Borrowing)	Negative
2	Corporate	Corporate Debt	*Debt Burden (average of asset/equity, debt/equity and debt/asset ratios)*	Negative
3	Financial	Foreign Exchange	*Mid-Weight Interbank Exponential Moving Weighted Average (EMWA) Volatility*	Negative
		Money Market	*Overnight Repo Rate Exponential Moving Weighted Average (EMWA) Volatility*	Negative
		Capital Market	*KSE-100 Index Exponential Moving Weighted Average (EMWA) Volatility*	Negative
4	Macroeconomic	External Sector (Ex) $Ex = \frac{1}{n}\sum_{i=1}^{n} ex_i,$ $n = 3$	ex_1 = *Total Liquid Foreign Reserve Position (with SBP)* ex_2 = *Current Account Balance as Percentage of GDP* ex_3 = *Balance of Trade as Percentage of GDP*	Positive Positive Positive
		Real Sector (R) $R = \frac{1}{n}\sum_{i=1}^{n} r_i,$ $n = 2$	r_1 = *Real GDP Growth* r_2 = *Inflation*	Positive Negative
		Fiscal Sector	Fiscal Deficit as Percentage of GDP	Negative

.

Acronyms

A/E	Asset-Equity Ratio
AC&MFD	Agricultural Credit & Microfinance Department
ADD	Authorized Derivative Dealer
ADR	Advances to Deposits Ratio
AEs	Advanced Economies
AFS	Available-For-Sale
AMA	Asaan Mobile Account
AMCs	Asset Management Companies
AML	Anti Money Laundering
APG	Asia-Pacific Group on Money Laundering
ATM	Automated Teller Machines
AUMs	Assets Under Management
Av.	Average
BB	Branchless Banking
BC&CPD	Banking Conduct & Consumer Protection Department used in footnote
BCBS	Basel Committee on Banking Supervision
BIA	Basic Indicator Approach
BIS	Bank for International Settlements
BISP	Benazir Income Support Program
BoD	Board of Directors
BoE	Bank of England
BOP	Balance of Payment
BPRD	Banking Policy and Regulations Department
bps	Basis Points
BSSM	Banking Sector Stability Map
BTF	Balance Transfer Facility
CAELS	Capital Adequacy, Asset Quality, Earnings, Liquidity, Sensitivity
CAPTCHA	Completely Automated Public Turing test to tell Computers and Humans Apart
CAR	Capital Adequacy Ratio
CASA	Current Account Saving Account
CBCG	Correspondent Banking Coordination Group
CCP	Central Counter Party
CCS	Cross Currency Swaps
CDC	Central Depository Company
CDD	Customer Due Diligence
CDNS	Central Directorate of National Savings
CDS	Central Depository System
CE	Capital Employed
CES	Centralized e-IPO System
CF	Consumer Finance
CFT	Combating the Financing of Terrorism
CGHM	Consumer Grievances Handling Mechanism
CME	Chicago Mercantile Exchange
CNP	Card-not-Present
CNY	Chinese Yuan
CoDs	Certificate of Deposits
CoIs	Certificate of Investments
CoR	Council of Regulators
CPEC	China-Pakistan Economic Corridor
CPI	Consumer Price Index
CPMI	Committee for Payments and Market Infrastructure
CRI	Climate Risk Index
CRR	Cash Reserve Requirement
CRWAs	Credit Risk Weighted Assets
CS	Consolidated Supervision

CSD	Central Securities Depository
CSPs	Card Service Providers
CTAR	Capital to Total Assets Ratio
CY	Calendar Year
DB	Defined Benefit
DC	Defined Contribution
DFIs	Development Financial Institutions
DMMD	Domestic Markets & Monetary Management Department
DNS	Deferred Net Settlement
DPC	Deposit Protection Corporation
D-SIBs	Domestic Systemically Important Banks
DTRS	Derivative Transactions Reporting System
e-banking	Electronic Banking
EBIT	Earnings Before Interest and Taxes
ebitta	Earnings Before Interest and Taxes to Total Assets
EC	Exchange Company
ECA	Full-fledged Exchange Company
ECAIS	External Credit Assessment Institutions
ECB	B Category Exchange Company
ECDF	Empirical Cumulative Distribution Function
e-CIB	Electronic Credit Information Bureau
EFT	Electronic Fund Transfer
EM	Executive Management
EMDEs	Emerging Markets and Developing Economies
EMEs	Emerging Market Economies
EMV	Europay, Mastercard and Visa
EMWA	Exponential Moving Weighted Average
EOBI	Employees Old age Benefit Institute
EPD	Exchange Policy Department
EPU	Economic Policy Uncertainty Index
eqtyta	Equity to Total Assets
ER	Exchange Rate
EU	European Union
EWIs	Early Warning Indicators
FATF	Financial Action Task Force
FBR	Federal Board of Revenue
FCY	Foreign Currency
FDBR	Financial Derivative Business Regulations
FDI	Foreign Direct Investment
FEM	Fixed Effect Model
FERA	Foreign Exchange Regulations Act , 1947
FFSAP	Financing Facility for Storage of Agriculture Produce
FIs	Financial Institutions
FMI	Financial Market Infrastructure
FMU	Financial Monitoring Unit
FoF	Fund of Funds
FRA	Forward Rate Agreement
FSB	Financial Stability Board
FSD	Financial Stability Department
FSEC	Financial Stability Executive Committee
FSHM	Financial Sector Heat Map
FSI	Financial Soundness Indicators
FSR	Financial Stability Review
FSRB	FATF-Style Regional Body
FSVI	Financial Sector Vulnerability Index
FX	Foreign Exchange
FY	Financial Year
FY	Fiscal Year
GARP	Global Association of Risk Professionals
GBP	Great British Pound
GCC	Gulf Cooperation Council
GDP	Gross Domestic Product
GFC	Global Financial Crisis
GIFR	Global Islamic Finance Report
GNPLR	Gross Non-Performing Loans Ratio

GoP	Government of Pakistan
GP	General Partner
GPR	Geopolitical Risk Index
G-SIBs	Global Systemically Important Banks
H2	Second Half of Calendar Year
HFT	Held-For-Trading
HHI	Herfindahl-Hirschman Index
HP Filter	Hodrick-Prescott Filter
HRA	Home Remittance Account
I&I Inland Revenue	Intelligence and Investigation - Inland Revenue
IAs	Investment Advisors
IB	Islamic Bank
IBAN	International Bank Account Number
IBD	Islamic Banking Department
IBFT	Inter Bank Fund Transfer
IBIs	Islamic Banking Institutions
ICE	Inter Continental Exchange
ICO	Initial Coin Offering
ICR	Interest Coverage Ratio
IFCs	Investment Finance Companies
IFIs	Islamic financial institutions
IFSB	Islamic Financial Services Board
IFT	Interbank Fund Transfers
IGC	International Growth Centre
IH&SMEFD	Infrastructure, Housing & SME Finance Department
ILF	Intra-Day Liquidity Facility
ILTFF	Islamic Long Term Financing Facility
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
IPO	Initial Public Offering
IRR	Internal Rate of Return
IRR	Interest Rate Risk
IRS	Interest Rate Swap
IRSA	Indus River Systems Authority
IT	Information Technology
JTF	Joint Task Force
KIBOR	Karachi Inter-Bank Offered Rate
KMI	Karachi Meezan Index
KSE	Karachi Stock Exchange
KYC	Know Your Customer
LBO	Leveraged Buyout
LHS	Left Hand Side
LOU	Letter of Understanding
LP	Limited Partner
LSM	Large Scale Manufacturing
LTA	Look-Through Approach
LTFF	Long Term Financing Facility
LTL	Long-Term Liability
LVPS	Large Value Payment Systems
M&A	Merger and Acquisition
MCR	Minimum Capital Requirement
MENA	Middle East and North Africa
MER	Mutual Evaluation Report
MFBs	Microfinance Banks
MFS	Margin Financing Scheme
ML/TF	Money Laundering/Terrorist Financing
MMCs	Modaraba Management Companies
MMFs	Money Market Funds
MNSBs	Multilateral Net Settlement Batches
MoF	Ministry of Finance
MOU	Memorandum of Understanding
MPS	Micro-Prudential Supervision
MRWA	Market Risk Weighted Assets
MSCI	Morgan Stanley Capital International
MTBs	Market Treasury Bills
MTM	Mark to Market
MTO	Money Transfer Operator
MTS	Margin Trading Scheme
MUFAP	Mutual Funds Association of Pakistan
M-wallet	Mobile Wallet
NA	Not Applicable
NADRA	National Database and Registration Authority

NAFTA	North American Free Trade Agreement
NAV	Net Asset Value
NBFCs	Non-banking Finance Companies
NBFIs	Non-Bank Financial Institutions
NBMFCs	Non-bank Microfinance Companies
NCCPL	National Clearing Company of Pakistan Limited
NCDF	Normal Cumulative Distribution Function
NCSS	National Clearing and Settlement System
NFA	Net Foreign Assets
NFAS	Non-Financial Advisory Services
NFCI	National Financial Conditions Index
NFF	Non-Financial Firms
NFIS	National Financial Inclusion Strategy
NFLP	National Financial Literacy Program
NFSC	National Financial Stability Council
NGOs	Non-Governmental Organization
NI	Net Income
NIFT	National Institutional Facilitation Technologies (Pvt.) Limited
NII	Net Interest Income
NIM	Net Interest Margin
NMI	Non Market Maker Financial Institutions
NPF	Non-performing Financing
NPLR	Non-Performing Loan Ratio
NPLs	Non-Performing Loans
NR3C	National Response Center for Cyber Crime
NRA	National Risk Assessment
NSS	National Savings Schemes
O/N	Overnight Rate
OBOR	One Belt One Road
OD	Overdue
OMOs	Open Market Operations
OPEC	Organization of the Petroleum Exporting Countries
ORWAs	Operational Risks Weighted Assets
OTC	Over The Counter
P/E	Price-Earning Ratio
PAMA	Pakistan Automotive Manufacturers Association
PBA	Pakistan Banks Association
PBIT	Profit Before Interest and Taxes
PBT	Profit Before Tax
PD	Product Development
PDs	Probabilities of Default
PE	Private Equity
PE&VC	Private Equity and Venture Capital
PFMI	Principles for Financial Market Infrastructures
PIB	Pakistan Investment Bond
PIPE	Private Investment in Public Companies
PKR	Pakistani Rupee
PMEX	Pakistan Mercantile Exchange Limited
PMIC	Pakistan Microfinance Investment Company
PMRC	Pakistan Mortgage Refinance Company
PO	Pecking Order Theory
PORs	PRISM Operating Rules
POS	Point Of Sale
PPAP	Pakistan Poverty Alleviation Fund
PRI	Pakistan Remittance Initiative
PRISM	Pakistan Real-Time Interbank Settlement
PRs	Prudential Regulations
PSA	Private Sector Advances
PSD	Payment Systems Department
PSEFT	Payment Systems And Electronic Fund Transfer
PSEs	Public Sector Entities
PSO	Payment System Operator

PSP	Payment Service Provider
PSX	Pakistan Stock Exchange
QE	Quantitative Easing
REER	Real Effective Exchange Rate
REIT	Real Estate Investment Trust
retta	Retained Earnings to Total Assets
RHS	Right Hand Side
RMCs	REIT Management Companies
RO	Representative Offices
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment
RSPs	Rural Support Programs
RTF	Remittance Task Force
RTOB	Real Time Online Banking
RVPS	Retail Value Payment Systems
S&A	Subsidiaries and Associated Undertakings
S&DWH	Statistics & Data Warehouse Department
SAARC	The South Asian Association for Regional Cooperation
salesta	Sales to Total Assets
SB	Shari'ah Board
SBP	State Bank of Pakistan
SCD	Shari'ah Compliance Department
SCRA	Special Convertible Rupee Account
SEANZA	South East Asia, New Zealand, Australia Forum
SECP	Securities & Exchange Commission of Pakistan
SGF	Settlement Guarantee Fund
SIPs	Systemically Important Payment Systems
SLB	Securities Lending and Borrowing
SLR	Statutory Liquidity Requirement
SME	Small and Medium Enterprise
SRS	Systemic Risk Survey
SSS	Securities Settlement System
STRs	Suspicious Transactions Report
sVaR	Stressed Value at Risk
SWIFT	Society For Worldwide Interbank Financial Telecommunication
TA	Technical Assistance
T-Bill	Treasury Bills
TDR	Term Deposit Receipt
TFC	Term Finance Certificate
TO	Trade-Off Theory
TRWAs	Total Risk Weighted Assets
UAE	United Arab Emirates
UK	United Kingdom
US	Unites States
USD	US Dollar
VAR	Vector Auto-Regressive
VaR	Value at Risk
VC	Venture Capital
VPS	Voluntary Pension Scheme
wcta	Working Capital to Total Assets
WEO	World Economic Outlook
WHRF	Warehouse Receipt Financing
WTOs	Window Takaful Operators
WWF	Workers Welfare Fund
YoY	Year on Year
YTD	Year To Date

Annexures

Annexure I - Balance Sheet and Profit & Loss Statement of Banks

PKR million

BALANCE SHEET	Dec-13	Dec-14	Dec-15	Dec-16	Dec-17
ASSETS					
Cash & Balances With Treasury Banks	840,233	723,664	909,429	1,184,521	1,303,914
Balances With Other Banks	186,221	149,631	198,395	168,394	156,332
Lending To Financial Institutions	273,991	429,380	360,772	551,695	604,990
Investments - Net	4,305,484	5,309,630	6,880,765	7,509,164	8,729,019
Advances - Net	4,046,587	4,447,300	4,815,827	5,498,813	6,512,485
Operating Fixed Assets	259,405	277,030	310,102	336,376	395,246
Deferred Tax Assets	78,855	67,077	65,644	64,681	72,354
Other Assets	546,214	702,550	602,301	517,412	567,205
TOTAL ASSETS	**10,536,989**	**12,106,261**	**14,143,234**	**15,831,058**	**18,341,545**
LIABILITIES		-		-	-
Bills Payable	122,707	137,651	145,089	182,858	218,588
Borrowings From Financial Institution	723,828	1,001,447	1,766,145	1,942,458	3,125,432
Deposits And Other Accounts	8,318,058	9,229,773	10,389,260	11,797,867	13,011,778
Sub-ordinated Loans	40,070	44,329	51,366	59,330	64,703
Liabilities Against Assets Subject To Finance Lease	34	33	50	41	21
Deferred Tax Liabilities	18,288	37,149	47,622	61,109	44,684
Other Liabilities	375,374	448,432	420,935	434,598	495,549
TOTAL LIABILITIES	**9,598,360**	**10,898,816**	**12,820,468**	**14,478,261**	**16,960,755**
NET ASSETS	**938,629**	**1,207,445**	**1,322,767**	**1,352,797**	**1,380,790**
NET ASSETS REPRESENTED BY:				-	-
Share Capital	481,250	587,053	619,862	579,882	516,013
Reserves	175,593	189,242	192,039	205,314	271,448
Unappropriated Profit	164,440	227,151	290,908	344,615	410,371
Share Holders' Equity	**821,283**	**1,003,446**	**1,102,809**	**1,129,812**	**1,197,832**
Surplus/Deficit On Revaluation Of Assets	117,346	203,999	219,958	222,985	182,958
TOTAL	**938,629**	**1,207,445**	**1,322,767**	**1,352,797**	**1,380,790**
PROFIT AND LOSS STATEMENT	**Dec-13**	**Dec-14**	**Dec-15**	**Dec-16**	**Dec-17**
Mark-Up/ Return/Interest Earned	776,653	919,821	981,760	938,026	998,671
Mark-Up/ Return/Interest Expenses	444,431	504,990	485,575	453,232	499,819
Net Mark-Up / Interest Income	**332,222**	**414,830**	**496,185**	**484,793**	**498,851**
Provisions & Bad Debts Written Off Directly/(Reversals)	36,252	25,323	38,874	5,305	3,706
Net Mark-Up / Interest Income After Provision	**295,970**	**389,507**	**457,311**	**479,489**	**495,146**
Fees, Commission & Brokerage Income	62,337	70,421	82,640	90,266	102,898
Dividend Income	14,606	14,098	16,910	17,187	17,875
Income From Dealing In Foreign Currencies	21,431	28,396	22,824	14,015	14,308
Other Income	42,036	54,434	86,369	74,260	52,565
Total Non - Markup / Interest Income	**140,409**	**167,349**	**208,743**	**195,728**	**187,646**
	436,379	556,856	666,053	675,217	682,791
Administrative Expenses	267,990	304,588	330,006	356,183	387,878
Other Expenses	3,237	5,726	7,231	5,003	4,417
Total Non-Markup/Interest Expenses	**271,227**	**310,313**	**337,237**	**361,186**	**392,295**
Profit before Tax and Extra ordinary Items	165,153	246,543	328,817	314,031	290,496
Extra ordinary/unusual Items - Gain/(Loss)	2.01	3.79	0.51	0.27	23,717.35
PROFIT/ (LOSS) BEFORE TAXATION	**165,151**	**246,539**	**328,816**	**314,030**	**266,779**
Less: Taxation	54,176	83,171	129,811	124,117	108,987
PROFIT/ (LOSS) AFTER TAX	**110,975**	**163,368**	**199,006**	**189,914**	**157,792**

Annexure II - Financial Soundness Indicators of the Banking Sector

percent

Indicators	Dec-13	Dec-14	Dec-15	Dec-16	Dec-17
CAPITAL ADEQUACY					
Risk Weighted CAR^	14.9	17.1	17.3	16.2	15.8
Tier 1 Capital to RWA	12.6	14.3	14.4	13.0	12.9
Capital to Total Assets	8.9	10.0	8.4	7.8	7.1
ASSET QUALITY					
NPLs to Total Loans	13.0	12.3	11.4	10.1	8.4
Provision to NPLs	78.4	79.8	84.9	85.0	87.2
Net NPLs to Net Loans	3.1	2.7	1.9	1.6	1.2
Net NPLs to Capital^^	13.4	10.1	7.7	7.3	
EARNINGS					
Return on Assets (Before Tax)	1.7	2.2	2.5	2.1	1.6
Return on Assets (After Tax)	1.1	1.5	1.5	1.3	0.9
ROE (Avg. Equity& Surplus) (Before Tax)	18.4	24.3	25.8	23.9	19.5
ROE (Avg. Equity &Surplus) (After Tax)	12.4	16.1	15.6	14.4	11.5
NII/Gross Income	70.3	71.3	70.4	71.2	72.7
Cost / Income Ratio	57.4	53.3	47.8	53.1	57.1
LIQUIDITY					
Liquid Assets/Total Assets	47.3	49.2	53.8	53.7	54.0
Liquid Assets/Total Deposits	60.0	64.5	73.3	72.1	76.1
Advances/Deposits	48.6	48.2	46.4	46.6	50.1

^ Data for Dec-13 and onwards is based on Basel III, and data from CY08 to Sep-13 is based on Basel II with the exception of IDBL,PPCBL, and SME Bank, which is based on Basel I.

^^ Effective from June 30, 2015, Regulatory Capital, as defined under Basel requirements, has been used to calculate Net NPLs to Capital Ratio. Prior to Jun-15, Balance Sheet Capital was used for calculation of this ratio.

Annexure III - List of Banks

Dec-16	Dec-17
A. Public Sector Com. Banks (5)	**A. Public Sector Com. Banks (5)**
First Women Bank Ltd.	First Women Bank Ltd.
National Bank of Pakistan	National Bank of Pakistan
Sindh Bank Ltd.	Sindh Bank Ltd.
The Bank of Khyber	The Bank of Khyber
The Bank of Punjab	The Bank of Punjab
B. Local Private Banks (21)	**B. Local Private Banks (20)**
AlBaraka Bank (Pakistan) Ltd.	AlBaraka Bank (Pakistan) Ltd.
Allied Bank Ltd.	Allied Bank Ltd.
Askari Bank Ltd.	Askari Bank Ltd.
Bank AL Habib Ltd.	Bank AL Habib Ltd.
Bank Alfalah Ltd.	Bank Alfalah Ltd.
BankIslami Pakistan Ltd.	BankIslami Pakistan Ltd.
Dubai Islamic Bank Pakistan Ltd.	Dubai Islamic Bank Pakistan Ltd.
Faysal Bank Ltd.	Faysal Bank Ltd.
Habib Bank Ltd.	Habib Bank Ltd.
Habib Metropolitan Bank Ltd.	Habib Metropolitan Bank Ltd.
JS Bank Ltd.	JS Bank Ltd.
MCB Bank Ltd.	MCB Bank Ltd.
MCB Islamic Bank Ltd.	MCB Islamic Bank Ltd.
Meezan Bank Ltd.	Meezan Bank Ltd.
NIB Bank Ltd.*	SAMBA Bank Ltd.
SAMBA Bank Ltd.	Silk Bank Ltd
Silk Bank Ltd	Soneri Bank Ltd.
Soneri Bank Ltd.	Standard Chartered Bank (Pakistan) Ltd.
Standard Chartered Bank (Pakistan) Ltd.	Summit Bank Ltd
Summit Bank Ltd	United Bank Ltd.
United Bank Ltd.	
	C. Foreign Banks (4)
C. Foreign Banks (4)	Bank of Tokyo - Mitsubishi UFJ, Ltd.
Bank of Tokyo - Mitsubishi UFJ, Ltd.	Citibank N.A.
Citibank N.A.	Deutsche Bank AG
Deutsche Bank AG	Industrial and Commercial Bank of China Ltd.
Industrial and Commercial Bank of China Ltd.	Bank of China Limited^
D. Specialized Banks (4)	**D. Specialized Banks (4)**
Industrial Development Bank Ltd.	Industrial Development Bank Ltd.
Punjab Provincial Co-operative Bank Ltd.	Punjab Provincial Co-operative Bank Ltd.
SME Bank Ltd.	SME Bank Ltd.
Zarai Taraqiati Bank Ltd.	Zarai Taraqiati Bank Ltd.
All Commercial Banks (31)	**All Commercial Banks (30)**
Include A + B + C	Include A + B + C
All Banks (34)	**All Banks (34)**
Include A + B + C + D	Include A + B + C + D

** NIB Bank Ltd. was de-scheduled with effect from close of business on July 7, 2017, on account of its merger with and into MCB Bank Limited*

^SBP declared "Bank of China Limited" as a scheduled Bank with effect from September 18, 2017

Annexure IV - Composition of Islamic Banking Institutions

16-Dec		Dec-17	
	Islamic Banks		**Islamic Banks**
1	AlBaraka Bank (Pakistan) Ltd.	1	AlBaraka Bank (Pakistan) Ltd.
2	BankIslami Pakistan Ltd.	2	BankIslami Pakistan Ltd.
3	Dubai Islamic Bank Pakistan Ltd	3	Dubai Islamic Bank Pakistan Ltd
4	MCB Islamic Bank Ltd.	4	MCB Islamic Bank Ltd.
5	Meezan Bank Ltd	5	Meezan Bank Ltd
	Conventional Banks having Islamic Banking Branches		**Conventional Banks having Islamic Banking Branches**
1	Askari Bank Ltd.	1	Askari Bank Ltd.
2	Allied Bank Ltd.	2	Allied Bank Ltd.
3	Bank Al Habib Ltd	3	Bank Al Habib Ltd
4	Bank Alfalah Ltd	4	Bank Alfalah Ltd
5	Faysal Bank Ltd.	5	Faysal Bank Ltd.
6	Habib Bank Ltd	6	Habib Bank Ltd
7	Habib Metropolitan Bank	7	Habib Metropolitan Bank
8	National Bank of Pakistan	8	National Bank of Pakistan
9	Silk Bank Ltd	9	Silk Bank Ltd
10	Sindh Bank Ltd	10	Sindh Bank Ltd
11	Soneri Bank Ltd	11	Soneri Bank Ltd
12	Standard Chartered Bank	12	Standard Chartered Bank
13	Summit Bank Ltd.	13	Summit Bank Ltd.
14	The Bank of Khyber	14	The Bank of Khyber
15	The Bank of Punjab	15	The Bank of Punjab
16	United Bank Ltd.	16	United Bank Ltd.
	Grand Total 21 (5+16)		**Grand Total 21 (5+16)**

Annexure V - List of Non-Banking Financial Institutions

Asset Management Companies(AMCs)/ Investment Advisors(IAs)		**Non-Bank Microfinance Companies (NBMFCs)**	
1	ABL Asset Management Company Limited	1	Agahee
2	AKD Investment Management Limited	2	Al-Mehran Rural Development Organization
3	Al-Meezan Investment Management Limited	3	BRAC Pakistan
4	Alfalah GHP Investment Management Limited	4	CSC Empowerment & Inclusion Program
5	Alliance Investment Management Limited	5	Damen Support Programmme
6	Atlas Asset Management Limited	6	FFO (Farmers Friend Organization)
7	AWT Investment Management Limited	7	Gazi Barotha Taraqaiti Idara
8	BMA Asset Management Company Limited	8	JWS Pakistan
9	Dawood Capital Management Limited	9	Kashf Foundation
10	Faysal Asset Management Limited	10	Mojaz Foundation
11	First Capital Investments Limited	11	National Rural Support Programme
12	Habib Asset Management Limited.	12	Punjab Rural Support Programme
13	HBL Asset Management Limited	13	Rural Community Development Programme
14	JS Investments Limited	14	Saath Microfinance
15	Lakson Investments Limited	15	SAFCO Support Foundation
16	Magnus Investment Advisors Limited	16	Sarhad Rural Support Programme
17	MCB-Arif Habib Savings And Investments Limited	17	Shah Sachal Sami Foundation
18	National Fullerton Asset Management Limited	18	Sindh Rural Support Organization
19	National Investment Trust Limited	19	Soon Valley Development Programme
20	Pak Oman Asset Management Company Limited	20	Sayya Microfinance Company
21	UBL Fund Managers Limited	21	Thardeep Rural Development Programme
		22	Organization for Poverty Reduction and Community Training Program
Private Equity & Venture Capital Firms(PE&VC)			
1	PNO Capital Limited	**Modaraba Management Companies(MMCs)**	
2	Ijarah Capital Partners Limited	1	KASB Invest (Pvt.) Limited
3	Lakson Investments Limited	2	BRR Investments (Pvt.) Limited
		3	Habib Metropolitan Modaraba Management (Pvt.) Limited
REIT Management Companies(RMCs)		4	Orix Services Pakistan (Pvt.) Limited
1	Arif Habib Dolmen REIT Management Limited	5	Paramount Investments Limited
2	AKD REIT Management Company Limited	6	Punjab Modaraba Services (Pvt.) Limited
3	Orange REIT Management Company Limited	7	Fidelity Capital Management Company (Pvt.) Limited
4	ISE Towers REIT Management Limited	8	National Bank Modaraba Management Company Limited
		9	Treet Holdings Limited
Leasing Companies		10	Allied Engineering Management Company (Pvt.)
1	Orix Leasing Pakistan Limited	11	Sindh Modaraba Management Limited
2	Pak Gulf Leasing Company Limited	12	IBL Modaraba Management (Private) Limited
3	Sindh Leasing Limited	13	E.A Management (Pvt.) Limited
4	SME Leasing Limited	14	Al-Noor Modaraba Management (Pvt.) Limited
5	Grays Leasing Limited	15	Crescent Modaraba Management Company Limited
6	Security Leasing Company Limited	16	Premier Financial Services (Pvt.) Limited
7	Primus Leasing Limited	17	AR Management Services (Pvt) Limited
8	Saudi Pak Leasing Corporation Limited	18	UDL Modaraba Management (Pvt.) Limited
		19	BankIslami Modaraba Investments Limited
Investment Finance Companies(IFCs)		20	Popular Islamic Modaraba Management Company (Pvt.) Limited
1	Trust Investment Bank Limited	21	Awwal Modaraba Management Limited
2	First Dawood Investment Bank Limited	22	Al-Zamin Modaraba Management (Pvt.) Limited
3	Security Investment Bank Limited	23	Eman Management (Pvt.) Limited
4	Invest Capital Investment Bank Limited	24	ART Modaraba Management (Pvt.) Limited
5	LSE Financial Services Limited	25	Map Out Management Company (Pvt.) Limited
6	Pakistan Microfinance Investment Co. Ltd		
7	First Credit and Investment Bank Limited		
8	Escort Investment Bank Limited		

Annexure VI - List of Insurance Companies*

Non-Life Insurance Companies		27	SPI Insurance Company Limited
1	Adamjee Insurance Company Limited	28	The Asian Mutual Insurance Company (Guarantee) Limited
2	Alfalah Insurance Company Limited	29	The Cooperative Insurance Society of Pakistan Limited
3	Allianz EFU Health Insurance Limited	30	The Pakistan General Insurance Company Limited
4	Alpha Insurance Company Limited	31	The United Insurance Company of Pakistan Limited
5	Asia Insurance Company Limited	32	The Universal Insurance Company Limited
6	Askari General Insurance Company Limited	33	TPL Insurance Limited
7	Atlas Insurance Limited	34	Trafco Insurance Company Limited (Formerly The Credit Insurance Company Limited)
8	Century Insurance Company Limited	35	UBL Insurers Limited
9	Chubb Insurance Pakistan Limited	**General Takaful Companies**	
10	Continental Insurance Co. Ltd	1	Pak-Kuwait Takaful Company Limited
11	Crescent Star Insurance Limited	2	Pak Qatar General Takaful Limited
12	East West Insurance Company Limited	3	Takaful Pakistan Limited
13	EFU General Insurance Limited	**Life Insurance Companies**	
14	Excel Insurance Company Limited	1	Adamjee Life Assurance Company Limited
15	Habib Insurance Company Limited	2	East West Life Assurance Company Ltd.
16	IGI Holdings Limited (formerly IGI Insurance Limited)	3	EFU Life Assurance Limited
17	Jubilee General Insurance Company Limited	4	IGI Life Insurance Limited
18	National Insurance Company Limited	5	Jubilee Life Insurance Company Ltd.
19	New Hampshire Insurance Company - Pakistan Branch	6	State Life Insurance Corporation of Pakistan
20	PICIC Insurance Limited	7	TPL Life Insurance Limited (Asia Care Health & Life Insurance. Company Limited)
21	Premier Insurance Limited	**Family Takaful Companies**	
22	Reliance Insurance Company Limited	1	Dawood Family Takaful Limited
23	Security General Insurance Company Limited	2	Pak Qatar Family Takaful Limited
24	Shaheen Insurance Company Limited	**Reinsurance Companies**	
25	Silver Star Insurance Company Limited	1	Pakistan Reinsurance Company Limited
26	Sindh Insurance Limited		

** This list contains those insurance companies whose data has been used to conduct risk analysis for the insurance sector. In total, there are 35 non-life insurance companies (including National Insurance Company Limited) and 8 life insurance companies (including Postal Life Insurance) besides the aforementioned 3 General Takaful companies and 2 Family Takaful companies.*