FINANCIAL STABILITY REVIEW 2015

State Bank of Pakistan

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Financial Stability and State Bank of Pakistan

Financial stability is defined as a situation in which the function of efficient financial intermediation and payment services continues without disruptions despite internal and external shocks, and financial risks are monitored and managed so well that the possibility of systemic crisis is minimized. The SBP sees financial stability as an evolving process, as the financial sector adapts itself to the needs of the economy and financial globalization.

Efficient financial intermediation and access to financial services across all segments of the population is the ideal situation in which economic growth can thrive. The significance of the financial sector is even more crucial given its inter-linkages with the real sector. SBP being the leading regulator of the financial sector strives to play a facilitating role in the growth of the sector. The confidence of economic agents in the financial sector's ability to meet their financial needs in a convenient and secure manner is also important for maintaining and promoting financial stability. The SBP works closely with the Securities and Exchange Commission of Pakistan (SECP), Pakistan Banks' Association (PBA), the Federal Government, and other regulatory bodies in achieving this goal.

Ensuring financial stability also complements another important SBP's objective of securing monetary stability. It is hard to imagine monetary stability in absence of financial stability. Financial Stability Review (FSR) provides an assessment of financial stability issues and pitches input for policy initiatives. The report gives an independent perspective and commentary on the state of financial stability by providing an objective view on the developments in the financial sector, and giving an in-depth analysis of issues relevant to the financial institutions and markets. It also endeavors to promote informed public debate on various aspects of the financial system.

The FSR was used to be published as a biannual document. The last published FSR covered the period of 1st Half, 2013. The current installment of FSR, a yearly document, focuses on the year 2015. To bridge the gap between the two publications, however, an attempt has been made to discuss important developments in the financial sector over the years 2013 and 2014, as well. From now onwards, FSR will be published as an annual document.

State Bank of Pakistan welcomes feedback and comments on the FSR.

Data Convention and Coverage

The Financial Stability Review (FSR) uses two terminologies; CY for Calendar Year and FY for Financial Year (except otherwise mentioned) in case of Non-Bank Financial Institutions (NBFIs).

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

- Banks (conventional or Islamic), Development Finance Institutions (DFIs), Microfinance Banks, Financial Markets 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 NBFIs (excluding DFIs) is based on audited annual accounts for the relevant financial year which ends in June.
- The financial close for Insurers is December of the corresponding year.

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Overview

The financial system remains in a stable and sound state at the end of CY15. Assets base of the financial sector has expanded at a decent pace of 15.1 percent in CY15 (12.6 percent, on average, during CY13-CY15). As a result, the financial depth[1], measured by financial assets to GDP, has increased from 56.4 percent in CY13 to 59.4 percent in CY14 and 68.4 percent in CY15 (**Table 1**).

Table 1

Assets Composition of the Financial Sector

	CY12	CY13	CY14	CY15
Assets (PKR Billion)	13,120.1	14,146.6	16,261.2	18,718.0
Growth rate (Percent)	18.7	7.8	14.9	15.1
	Percent of Total Assets			
MFBs	0.3	0.4	0.4	0.5
NBFIs*	4.6	4.2	4.1	3.9
Insurance*	4.3	4.5	4.7	4.3
CDNS	16.4	16.5	16.4	15.6
Banks	74.4	74.5	74.4	75.6
	Assets as Percent of GDP			
MFBs	0.2	0.2	0.3	0.4
NBFIs	2.7	2.3	2.4	2.7
Insurance	2.5	2.5	2.8	3.0
CDNS	9.6	9.3	9.7	10.7
Banks	43.6	42.0	44.2	51.6
Overall assets	58.6	56.4	59.4	68.4

* All numbers of NBFIs and insurance for CY15 are as of end June.
Source: Unaudited/audited financial statements of banks, MFBs, NBFIs and insurance companies. SECP & SBP.

The consistent performance of the financial sector is quite encouraging, considering that the global developments have been challenging. The vulnerabilities in emerging markets owing to high debt to GDP ratio, capital outflows and fragility in equity markets, depreciation in currencies etc. have kept the global financial stability under stress. The slowdown in China and the resulting stock market correction had rippled effects throughout emerging and advanced economies in later half of 2015 particularly after August.

The weak economic recovery in European Union (**EU**) coupled with higher political risks due to Greek financial assistance have put the European banks, already suffering from low profitability, under renewed stress. Higher sovereign and private sector debt have been identified by the European Central Bank as one of the potential systemic risks for its financial sector.[2] As the EU, one of the biggest trading partners of Pakistan struggled with nominal growth prospects amid low interest rates and quantitative easing, Pakistan's exports to EU declined[3].

The continued slump in commodity prices added to the fiscal burden of commodity rich countries, mainly Gulf Cooperation Council (GCC) countries, and slackened the pace of remittances flow to emerging economies. Moreover, cross border investments have also reduced[4].

In contrast to weak economic fundamentals throughout Asia (China, Japan, Gulf countries etc.) and Europe, the US economy showed signs of moderate expansion. Recognizing the improvements

[1] For explanation of financial depth and its measurement, please see the background section of "Global Financial Development Report 2015/2016" of the World Bank. http://www.worldbank.org/en/publication/gfdr/background/financial-depth

[2] European Central Bank, "Financial Stability Review", November 2015.
[3] State Bank of Pakistan, "The State of Pakistan's Economy", Second Quarterly Report, 2015-2016.
[4] State Bank of Pakistan, "The State of Pakistan's Economy", Second Quarterly Report, 2015-2016.

in some key fundamentals of the economy (such as household spending, business fixed investments, labor market recovery etc.), the US Federal Reserve (**Fed**) raised the interest rates in December 2015[5]. However, the credit risk in US has risen – with surge in nonfinancial business debt – owing to highly accommodative credit and underwriting standards. The high corporate leverage coupled with macroeconomic challenges has dampened the debt repayment capacity of the borrowers[6]. Moreover, the long anticipated rate rise by the Fed suppressed further the risk appetite of the investors and stock markets throughout emerging economies suffered.

Domestically, the economy of Pakistan fared better in CY15. Inflation remained subdued; foreign exchange (**FX**) buffers continued to rise; exchange rate remained stable; current account deficit reduced despite fall in exports; large scale manufacturing grew and investor sentiments remained at the elevated levels.[7]

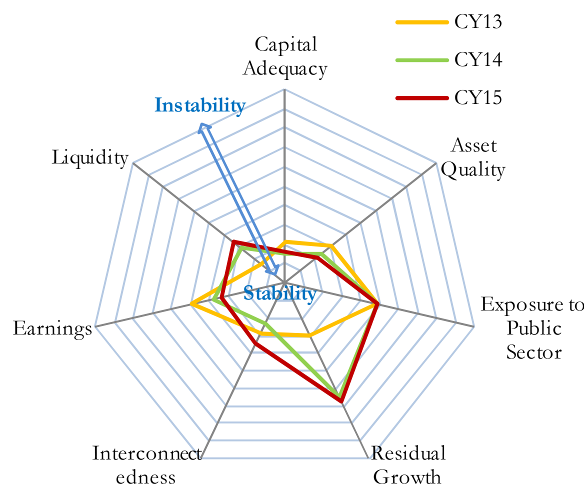
Enabling macroeconomic environment brought about by prudent management policy consistency, falling global commodity prices and relatively better energy situation allowed the economy and the financial sector to flourish.

Banking sector remains in a comfortable state, if viewed through various dimensions of growth and soundness as seen in the Banking Stability Map[8] (**Figure 1**). Particularly, performance of the banking sector improved on the back of record earnings and high capital adequacy ratio. Strong assets growth and revival of private sector credit, along with gradual improvement in the asset quality further strengthened the overall financial position.

Figure 1

Despite growth, banking sector remains stable

Banking Sector Stability Map



Source: Financial Stability Department (FSD), SBP

Over the last three years (CY13-CY15), asset base observed average growth of 13.2 percent year-on-year (YoY), with a healthy growth of 16.8 percent in CY15. During the same period, advances grew at a modest pace of 8.7 percent (YoY) lead by corporate, agriculture and consumer finance, while investments, mostly in government securities, increased by 20.1 percent.

The asset expansion has been financed by deposits (average YoY growth of 12.5 percent) and borrowings (average YoY growth of 28.2 percent). As such substantial portion of the excess growth (residual growth) in assets has been financed by the non-core liabilities (borrowings). Though most of it is short term and secured in nature, unsecured portion has also seen considerable growth,

[5] Federal Open Market Committee (FOMC) of US Federal Reserve, "Monetary Policy Statement", December 2015 http://www.federalreserve.gov/monetarypolicy/files/monetary20151216a1.pdf

[6] Office of Financial Research, "Financial Stability Report", 2015, United States Department of Treasury.

[7] State Bank of Pakistan, "The State of Pakistan's Economy", Second Quarterly Report, 2015-2016.

[8] 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 level in the past (since 1996). For details please see Technical Appendix. For methodology please see Dattels, P., McCaughrin, R., Miyajima, K., & Puig, J. (2010). "Can you map global financial stability?" *IMF Working Papers*, 1-42.

particularly during CY15, indicating higher level of interconnectedness among the banks.

Over the last few years, public sector exposure on the banks' balance sheets, primarily, in the form of investments in sovereign papers has increased significantly. The share of such investments to total assets has risen from 36.7 percent in CY13 to 44.7 percent in CY15. If the banks' advances to PSEs are also included, the share of public sector exposure in total asset increases 53 percent in CY15.

With rising investments in government securities, however, the *funding liquidity*[9] of the banking sector has remained quite comfortable during CY13 to CY15; average liquid assets represent 50 percent of the total assets and 66 percent of the deposits.

Although banking sector's exposure to government has strengthened the liquidity position, concentration of these assets do carry certain risks. The holding of sovereign papers (particularly of longer-term maturity) exposes banks to market risk due to interest rate movements. Higher demand of funds for fiscal needs also creates some pressure on short term liquidity, particularly in the period of private sector credit demand. Moreover, in case of any easing-off in fiscal reliance on banking funds, an orderly unwinding of the huge investment portfolio will be testing for banks. In the latter scenario, banks would face challenge in deploying excess funds into alternative avenues that could generate decent income stream within their risk appetite.

Asset quality of the banking sector has improved with the decline in gross non-performing loan ratio (GNPLR) and rise in provisions coverage. GNPLR has moderated from 13.3 percent in CY13 to 11.4 percent in CY15; while, at the same time, provision coverage ratio has increased from 77.1 percent to 84.9 percent.

While infection ratios have improved and flow of fresh NPLs has subsided, reducing high stock of NPLs[10] remains the key challenge for banks. To address the issue, SBP on its part is endeavoring to provide conducive environment through legal and regulatory measures for recovery of NPLs and improving flow of credit to private sector(**see Box A for details**). Banks, on the other hand, need to make concerted recovery efforts to reduce quantum of NPLs.

Earnings performance of the banking sector, have consistently improved over the last three years, largely on the back of growing share of income from investment in government securities. From PKR 165 billion in CY13, the profit (before tax) has increased to PKR 329 billion in CY15. Key profitability ratios such as return on assets (ROA) and return on equity (ROE) have also improved from 1.6 percent and 17.9 percent in CY13 to 2.5 percent and 28.5 percent in CY15, respectively.

Capital position of the banking sector continues to strengthen as Capital Adequacy Ratio (CAR)stayed well above the local and international benchmarks. The CAR has improved from 14.9 percent in CY13 to 17.3 percent in CY15. Tier 1 CAR is also comfortably placed at 14.4 percent in CY15 as compared to 12.6 percent in CY13.

High level of CAR has improved the overall resilience of the sector under various hypothetical stress scenarios considered in Chapter 3. However, if private sector credit demand further picks up in the wake of favorable monetary conditions and

[9] Funding liquidity means the ease with which market participants can obtain funds; while market liquidity implies ease with which assets (e.g. bonds) could be traded in the market. For details please see Brunnermeier, Markus K., and Lasse Heje Pedersen. "Market liquidity and funding liquidity." Review of Financial studies 22.6 (2009): 2201-2238.

[10] NPLs have been hovering around PKR 600 billion since CY12

developments on other fronts such as China Pakistan Economic Corridor (CPEC), it will attract higher capital charge and may shrink the capital buffers presently available with the banks. In the meantime, banks also have to strengthen their capital to meet the gradual increase in the minimum capital requirements. Banks, therefore, need to closely evaluate the situation and plan for capital generation for matching the expected increase in credit requirements and enhancing their resilience.

Within the banking sector, Islamic Banking Institutions (IBIs) have continued to increase their share in overall assets (9.6 percent in CY13 to and 11.4 percent in CY15) which is in line with SBP's Strategic Plan for the Islamic Banking Industry 2014-2018. With healthy growth in financing portfolio, financing to deposit ratio has reached to 46.9 percent against the conventional banks' average of 46.3 percent. Earnings of IBIs have moderated during CY15; ROA (before tax) of 1.2 percent in CY15 compared to 1.5 percent in CY14.

Given the better performance of the economy and the banking sector, the markets (Money, FX and Equity) have also performed smoothly during CY15; though some volatility was witnessed in equity and FX markets in second half of the year (post Yuan devaluation and expected rise in interest rates in the US) when majority of the emerging economies observed capital flight and came under stress.

Structural changes in SBP's interest rate corridor and effective implementation of monetary easing stabilized the money market. Improved Balance of Payment (BoP) position, accumulation of reserves and consecutive successful IMF reviews has helped calm the FX market. Despite spillover of global financial stress to domestic markets, local equity markets remained relatively stable due to positive developments on domestic front and better performance of few corporate sectors (fertilizer, auto, cement etc.). Smooth functioning of markets indicates reduced risks to the stability of the financial system.

Apart from banks, Non-Bank Financial Institutions (NBFIs) with varying business models and focused clientele have performed reasonably in FY15. Mutual Funds have fared well followed by leasing and Modarabas. The profitability of Development Finance Institutions (DFIs) has dwindled a bit in FY15; while Investment Finance Companies (IFCs) have suffered losses. The business of IFCs is facing stagnancy and some are even non-compliant under NBFC regulations issued by SECP. Moreover, the funding risk remains prominent for some of the NBFIs. Also, the diversification of clientele suggested in the business models of NBFIs has yet to be achieved. NBFIs are serving similar market segments as the banks, in which they do not possess competitive advantage.

Insurance sector performance remained steady with considerable improvement in profitability of all its segments. Continuing growth in gross premiums have not only increased the asset base of life insurers but also the improved the insurance penetration rate (from 0.5 percent in CY13 to 0.8 percent in CY15). The non-life sector is growing steadily; while Shariah based insurance (Takaful) is also gaining traction. The concentration risk remains the main concern for life insurance due to high market share of a single public owned insurer. Further, penetration rate is low by international standards and efforts are needed for improving the outreach of the insurance service.

The current stable position of the financial sector, especially the banking sector, could not have been possible without the enabling regulatory environment. SBP, over the past few years, has taken several measures to strengthen and guide the banking sector towards better performance with

stability. The measures adopted pertain to a wide spectrum of bank's operations such as Capital Adequacy, Payment Systems, Anti-Money Laundering (AML) and Countering the Financing for Terrorism (CFT), Large Exposures and Concentration Risks, Banking supervision (On-site & off-site monitoring), Priority Financing (Export Refinance, Long Term Financing) and serving the underserved/unbanked areas (Financial Inclusion Agenda). SBP "Vision 2020" has also set the direction for further strengthening the financial stability and improving efficiency, fairness and effectiveness of the banking sector (See **Box A** for further details).

Notwithstanding the overall position of the financial sector and risks highlighted earlier, following areas may pose challenges to stability of the financial sector.

First of all, there has been a noticeable decline in the prime risk taking activity (i.e. lending) by the banking sector. Advances to Deposit Ratio (ADR) of the banking system has consistently been falling since long and as of end CY15 stands at 46.4 percent; down from 75.9 percent as of end CY08 and 48.6 percent as of end CY13. This could partly be due to weak demand from the private sector (textile and sugar sectors are under pressure due to idiosyncratic and structural issues) and partly due to bank's inclination towards easier options. Government's fiscal needs have compelled it to tap liquidity from the banking sector. This has given an opportunity to the banks to bet on the inevitable and earn risk free returns. The banks' balance sheets are now sensitive to market risk, re-investment risk, banks' own treasury operations and the changes in government's liquidity and debt management policies.

Second, deposit growth, though higher than last year, has been insufficient to meet the funding needs of both private and public sectors. Consequently, banks' repo borrowing from SBP rose sharply during CY15. With the expected rise in private credit and given the trend in government borrowings, it will be quite challenging for banks to match the credit demand from core liabilities. Only opportunity for banks is to intensify deposit mobilization efforts not only to match the expected increase in credit but also to reduce reliance on non-core sources of funds.

Third, credit risk is higher for Public Sector Commercial Banks (PSCBs) and medium-sized banks (mostly privately owned). PSCBs carry the highest GNPLR and it has been increasing since CY13. GNPLR of medium sized banks is quite high with low provisions coverage ratio. This advocates that some of these banks are unable to either identify (adverse selection) or attract quality borrowers; legacy debts persist on their balance sheets and there are inherent weaknesses in their credit risk management system. Therefore, these banks need to strengthen credit standards, accelerate recovery efforts and improve credit risk management practices..

Fourth, the degree of complexity and sophistication of technology based payment systems, though beneficial, could expose the payment system to external risks (such as cyber attacks, equipment failure etc.).As the financial market infrastructure is spread across various participants who are not operating under one regulatory umbrella, risk originated in payment system (settlement risk, liquidity risk, operational risk etc.) spreads out in no time and with large magnitude. Therefore, the overarching and collaborated efforts for oversight have become a must in current era to ensure undisrupted and secured functioning of financial market infrastructure of the country. SBP is working in the same direction based on international best practices with material progress.

Finally, global environment is a key risk factor for the economy, in general, and the banking sector, in particular. The continuous slowdown in China and emerging economies, the ongoing negotiations on Greek assistance program and referendum in UK to decide its future in the EU are the sources of uncertainty in CY16 and beyond due to our trade and financial links with Asia, EU and UK. These global challenges may impact the exports, particularly already under pressure textile sector; the largest borrower of financial sector. The trade activity, if squeezed, will also impact the non interest income (fee, commission etc) of the banking sector. Further, global uncertainty may possibly trigger volatility in the equity market as well.

Moreover, falling commodity prices, though beneficial for import dependent economies like Pakistan, could also dent the revenue of export oriented sectors. Given the dependence of the country's exports on a few major sectors (e.g. textiles) and commodities (e.g. rice), falling international prices may hurt the repayment capacity of borrowers of these sectors, which may posemild risk to the asset quality of the banking sector.Any sustained stagnancy in low oil prices may further add to the fiscal burden of GCC countries, which may depress the outflow of workers to these countries and worker remittances, already decelerating, may further slowdown that may impact the flow of funds to the banks.

Box A: Regulatory Developments[11] – Perspective of growth and stability of financial sector

One of the prime responsibilities of SBP is to ensure that the financial system, particularly the banking system, is sound and remains on its potential growth trajectory without jeopardizing the financial stability. SBP – within its regulatory domain – continuously endeavors to bring in improvement in the regulatory structure which could address the unique spectrum of domestic risk profile and align it with best international practices. Consequently, the financial landscape of the Pakistan is equipped with well structured, effective, and robust regulatory framework.

The capital is the main line of defence against risks to the financial stability. In August 2013, SBP issued Basel III instructions for implementation in Pakistan in the light of Basel III reform package introduced by the Basel Committee on Banking Supervision (BCBS)[12]. Besides, SBP introduced disclosure templates released by BCBS for capital adequacy purposes to enhance consistency and comparability of banks' capital related disclosures[13]. Lately, SBP has issued instruction for implementation of Basel-III Liquidity standards,

SBP has been initiating measures to prevent the use of banking channels for the purposes of money laundering/ terrorist financing. In this regard, SBP developed comprehensive Anti Money Laundering (AML) regulations which were strengthened from time to time[14] and aligned with the Financial Action Task Force (FATF) recommendations/ international norms. Moreover, SBP had major contribution in drafting and finalization of the AML law/Act and its subsequent amendments to meet international standards and to bring consistency and clarity in the enforcement provisions.

In order to align the existing regulatory framework with the fast changing business environment and the best international practices, Prudential Regulations (PRs) for the Corporate and Commercial banking were revised in June 2014[15]. Key objective of the amended regulations is to help the banks and DFIs to address their unique risk factors and dynamic environment in a better way by allowing them more discretion in business decisions.

Further, in its revised PRs, SBP more comprehensively addressed concentration risk and related party exposure issues. SBP defined the large exposure and aligned such exposures with overall gross advances and investment of banks. Such regulatory steps will be of great help to implement system-wide Macro Prudential Regulations in Pakistan.

Regulations without effective and timely supervision/monitoring and necessary enforcement action may dilute the effectiveness of even a strong regulatory structure. Knowing this fact, both of SBP's supervisory legs (off-site and on-site) play a pivotal role and ensure that banks perform under the compliance of regulatory ambit, identify key risk areas threatening the stability of institutions/system, and identify the potential areas to promote growth and efficiency.

The concept of thematic inspection was introduced recently, with a view to identify issues that are common across the industry and work on proactive policy responses to address potential risk and vulnerabilities to the financial system. In this regard, industry-wide thematic inspections were conducted which not only facilitated assessment of compliance with the regulatory requirements but also identified areas requiring improvements in various regulatory policies.

Further on the supervisory front, SBP successfully and effectively employed the resolution regime for one of ex-problem bank. Effective resolution strategy, efficient communication with the general public, media and

[11] There is a wide range of regulatory initiatives SBP has been persuading on related to areas e.g. financial inclusion, customer protection, legal and regulatory structure, financial infrastructure, foreign exchange and monetary policy, banking services etc. However, emphasis here is put on those regulatory measures which have helped bringing in stability and promotes growth in the banking sector.

[12] Banking Policy and Regulations Department (BPRD) Circular No.6 of 2013

[13] BPRD Circular No.11 of 2014

[14] BPRD Circular Letters No.13 of 2015, No. 6 &7 of 2014, No.22 of 2013, and BPRD Circular No.2 of 2012

[15] BPRD Circular No.6 of 2014

bank's depositors and prompt resolution of issues prevented emergence of any panic or contagion like situation in the overall banking sector. SBP's enforcement actions against the problem bank established its regulatory writ and financially weak banks got the message and paced up their efforts to address the regulatory issues.

With privatization of the public sector banks and entry of private players in the market, majority of the banking sector in Pakistan is now private sector owned. Accordingly a need was felt for instituting explicit deposit protection scheme, which is considered integral safety-net tool to ensure the soundness of the banking system and protect small depositors of a bank in case of failure. SBP, therefore, in consultation with various stakeholders developed draft of Deposit Protection Corporation (DPC) Act in the light of Core Principles for Effective Deposit Insurance Systems as propounded by International Association of Deposit Insurers (IADI). The bill is presently in the parliament and is expected to be enacted shortly..

To bring credit demand to its potential growth path and increase credit to GDP ratio, concerted efforts of all stakeholders are required. SBP – in its capacity - has taken various measures to enhance private sector credit. Some of the key measures are given below:

a) SBP, in the prevailing state of the financial markets, can only impact demand indirectly through giving price incentive. To spur demand, SBP has significantly cut its policy rate in the recent past. The monetary easing triggered by SBP actions has transmitted to the retail interest rates as WALR has declined from 11.3 percent in Dec-12 to 7.7 percent in Dec-15[16]. Also, the results of consumer finance survey conducted in June 2015 showed that the cost of auto financing has reduced by 300bps over the last one year;

b) SBP has introduced priority financing schemes to enhance private sector credit which include Export refinance scheme, Islamic export refinance scheme and Long term financing facilities;

c) SBP in consultation with banks has proposed amendments in the Financial Institutions (Recovery of Finances) Ordinance 2001 (FIRO), including alternative provisions for dealing with foreclosure matters in a more transparent manner. Once promulgated, these amendments will not only facilitate recovery of NPLs but also expansion of mortgage and infrastructure financing;

d) SBP has prepared and submitted Financial Institutions (Secured Transactions) Bill, 2015 for initiating approval process from the Parliament. The implementation of the project will enable lenders to create charge on the movable assets of the borrowers that will consequently facilitate flow of financing to private sector, particularly, the SME sector;

e) SBP is actively pursuing financial inclusion agenda through its different work streams including Islamic finance, SME finance, Microfinance etc. In order to enhance the outreach of financial access across the country, SBP is pursuing Financial Inclusion Program (FIP). Furthermore, SBP in collaboration with SECP is trying to build a vibrant capital market so that large corporates may fulfill their funding requirements from issuance of papers in the secondary markets. This would enable banks to cater the needs to SMEs, housing and agriculture sector.

f) SBP is working for promotion of green banking & finance in the country, which broadly includes concepts like renewable energy/ energy efficiency financing, resource efficiency & sustainable development. To this end, SBP has held consultations with various stakeholders to design and implement policies and initiatives on green banking in the country and encourage local banks to extend credit to this sector. Further, SBP issued the scheme for Financing Power Plants using Renewable Energy(RE) to help in provision of concessional lending to banks/DFIs for onward lending to the RE projects and promote climate friendly investments. The

[16] http://www.sbp.org.pk/ecodata

scheme has been recently revised to make it more attractive for borrowers and participating banks.

Protecting depositors' interest is one of the key priorities of SBP. To ensure that depositors get their due share, SBP enhanced minimum saving rate to 6 percent (p.a.) in May 2012[17] followed by advising banks to calculate MSR on monthly average balance[18] in March 2013. In order to rationalize the cost of deposit with changing monetary policy stance, in September 2013[19], SBP linked MSR with monetary policy through aligning it with SBP repo rate. In June 2014, SBP lifted up MSR condition on fixed deposits[20].

SBP over the last few years has revitalized its consumer protection mandate to "Conduct Supervision" to ensure that the consumers are treated in a fair, transparent and efficient manner, and banks grow sustainably in a responsible manner. To promote fair banking practices, SBP has issued various set of instructions and guidelines including Fair Treatment of Consumers(FTC) framework, Consumer Grievance Handling Mechanism, Product Disclosure Requirement, guiding principles for Fairness of Service Charges, Standards of Banking Conduct, Banking facilities for visually impaired persons, Fair sales practices for third party products etc. These regulatory initiatives will also help customers make informed decisions through better understanding of services provided by the banks. Further, SBP is working on Conduct Assessment Framework which will allow the banks to assess their business conduct and identify areas requiring improvement.

SBP has made concerted efforts to ensure safety, integrity, efficiency and reliability in the designated payment system. Such endeavors remained well complemented with huge banks' investment in IT and core banking solutions. Following the international best practices, SBP has taken numerous initiatives to enhance efficiency, security, and standardization including (a) international bank account number (IBAN)[21], (b) standardization of financial articles such as cheques, pay-orders, demand draft etc[22] (c) issuance of several rules/guidelines to facilitate or direct financial participant to improve the quality and safety of transactions etc.

SBP regulatory efforts are forward looking and deeply synchronized with the economic interconnectedness. In August 2015, SBP issued its "SBP Vision 2020[23]" after developing it through a participative and consultative process. The plan embodies strong emphasis on organizational efficiency and effectiveness. The SBP Vision 2020 revolved its six strategic goals i.e.

1) Enhance the effectiveness of monetary policy
2) Strengthen the financial system stability regime
3) Improve the efficiency, effectiveness, and fairness of the banking system
4) Increase financial inclusion
5) Develop modern and robust payments systems
6) Strengthen SBP's organizational efficiency and effectiveness

Under the strategic goal – 2, a special focus has been put on to ensure financial stability. For that purpose, a separate department i.e. "Financial Stability Department (FSD)" has been formed. Apart from consolidating financial stability issues in FSD, SBP has also initiated working in several new areas aiming to address financial stability concerns. Some of the important areas on which FSD is working on include: (a) Designing of financial system stability framework, (b) crises management framework, (c) review and update of consolidated supervision framework, and (d) framework for identification and supervision of D-SIBs [24] in Pakistan.

It is expected that SBP initiatives will strengthen the stability of the financial system enabling it to better withstand any contingent situations. It will further bolster the process of financial intermediation in short to medium term.

[17] BPRD Circular No.1 of 2012
[18] BPRD Circular No.1 of 2013
[19] BPRD Circular No.7 of 2013
[20] BPRD Circular No.5 of 2014
[21] Payment System Department (PSD) Circular No.2 of 2012
[22] PSD Circular No.1 of 2014
[23] http://www.sbp.org.pk/spd/StrategicPlan-2020-Eng.pdf
[24] D-SIBs stand for Domestic Systemically Important Banks

Section A: Banking Sector

1 Process of Financial Intermediation

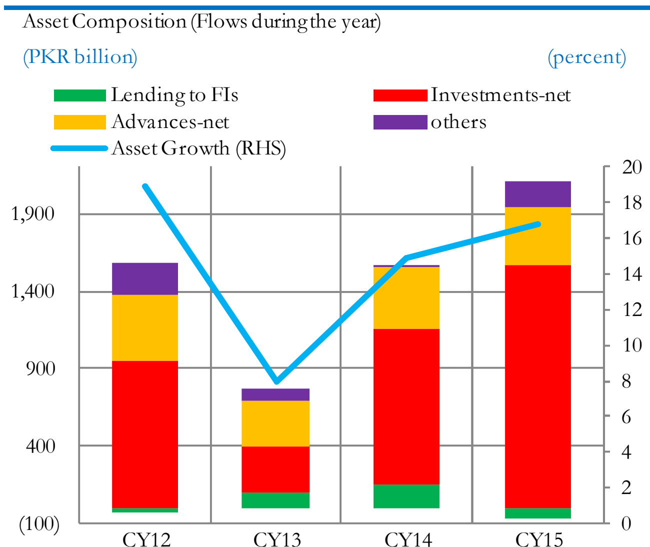
The momentum in credit demand from the private sector continues during CY15; though, the surge has not been as sharp as the decline in weighted average lending rates (WALR). Government papers – being credit risk free instruments – have attracted banking funds resulting in further rise in investment to deposit ratio. The growth in deposits has not been enough to support the asset side resulting in significant rise in repo borrowings from SBP. The positive economic outlook, expected developments under the CPEC, and some global recovery are expected to accelerate the pace of credit demand from private sector in the short to medium term.

The credit demand of the private sector – which started to take-off in CY13 after some stagnancy – has continued its growth during CY15. Private sector advances have a major contribution in 8.1 percent growth in overall gross advances; thanks to positive economic developments and some easing of structural bottlenecks[25]. Nonetheless, Government has remained the major user of banking funds due to its fiscal needs[26] and shifting of its borrowings from the central bank to commercial banks[27], which increased banks investments in government papers by 31.7 percent **(Figure 1.1)**. Consequently, the overall asset base has observed 16.8 percent growth during CY15 (14.9 percent in CY14).

On the funding side, deposits have remained the mainstay with 12.6 percent growth[28] followed by considerable support from financial borrowings (mainly through SBP Repo facility) **(Figure 1.2).** The equity of the banking sector has observed moderate rise on the back of high profitability, injection of fresh capital in few capital deficient banks, and revaluation surplus on securities placed in available for sale (AFS) category.

Figure 1.1

Asset growth primarily contributed by investments



Source: FSD, SBP

ADR is consistently declining…

Advances to Deposit ratio (ADR) – which reflects proportion of deposits flowing to serve financing needs - is considered an important measure to assess the degree of financial intermediation[29].

ADR of the banking system has consistently been falling since long and as of end December 2015 stood at 46.4 percent; down from 75.9 percent as of end December 2008 and 48.6 percent as of end December 2013 **(Figure 1.3).** The prime reason behind this fall has been the slow

[25] Such as improvements in law and order, lower energy shortages, reduced cost of doing business etc.

[26] In comparison to previous years FY11-FY13 (7.2 percent on average), the fiscal deficit has come down during FY15 (5.3 percent of GDP) and FY14 (5.5 percent).

[27] Under IMF's Extended Fund Facility (EFF) program, as one of the Quantitative Performance Criterion (QPC), government borrowing from SBP has to be within certain limits. For details http://www.finance.gov.pk/mefp/eff.pdf

[28] This growth was higher than CY14 (11 percent) but lower than average growth during CY08-15 (13.2 percent).

[29] A very high ADR may indicate liquidity mismatch (both structural and cyclical); while excessively low ADR may hint at compromised process of financial intermediation.

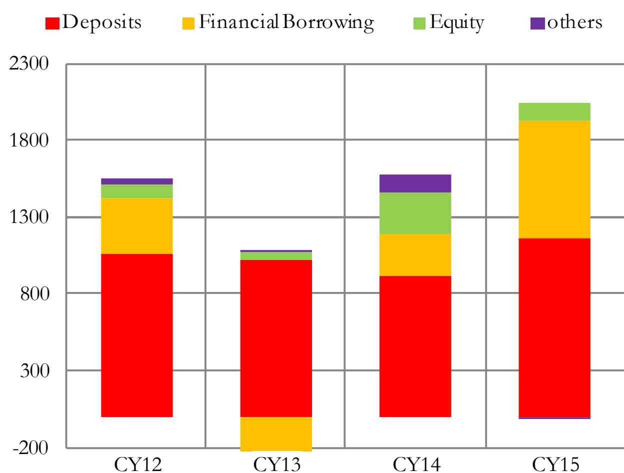
growth in advances portfolio, relative to deposits[30], due to host of factors including structural bottlenecks (such as power shortages, security concerns etc.) and subpar export performance due to global economic slowdown. Growing credit risk in some key sectors such as textiles and lengthy judicial process for the recovery of NPLs has also made banks risk averse in lending to the private sector. On the contrary, deposit base has been steadily growing; thus further dropping the ADR.

Figure 1.2

Deposits remain the mainstay, borrowings contributed too

Liabilities Composition (Flows during the year)

(PKR billion)



Source: FSD, SBP

During this time, fiscal needs, concomitant with limited availability of external funding for government, has made public sector the key user of banking funds. Public sector exposure has been expanding not only in terms of banks' investments in sovereign papers but also through lending to PSEs.

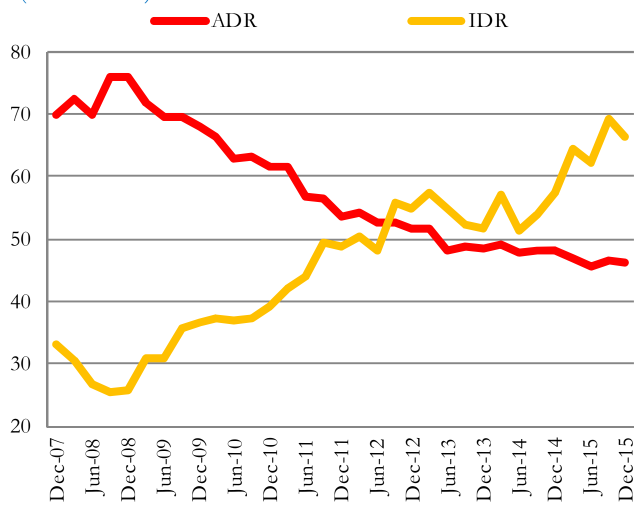
Although banking sector's exposure to government, being domestic in nature, carries no credit risk, yet it has some inherent issues. The holding of sovereign papers (particularly of longer-term maturity) exposes banks to market risk. Aggressive funding to public sector may also create some bouts of liquidity shortages. Moreover, in case of any easing-off in fiscal reliance on banking funds, an orderly unwinding of the huge investment portfolio might be another challenge. It will be testing for the banks to deploy the released funds in alternative avenues which could generate decent income stream within their risk appetite.

Figure 1.3

ADR falling since 2008

Shift in Asset Mix

(Percent Share)



Source: FSD, SBP

Private sector credit demand reveals some signs of recovery…

Flow of advances to private sector started to gain momentum after CY13 owing to improving macroeconomic environment, better energy supply and security conditions, and positive sentiments of both domestic and foreign investors[31].

The growth in gross advances during CY15 (8.1 percent), though lower than previous year's growth of 9.4 percent, is still higher than average growth during CY10-13 (6.2 percent). Importantly, CY15 observed decent growth despite outstanding advances of textile sector – the largest borrower of banking sector advances- declining due to subdued external demand from China and Euro zone, ongoing structural issues in textiles and low commodity prices **(Please see Box 2.1 in Chapter 2)**.

[30] Average annual growth of advances was 7.7 percent during 2008-15 (7 years) as against 13.2 percent average annual growth in deposits during the same period.

[31] On external front: (i) Moody's upgraded Pakistan's foreign currency bond rating while Standard & Poors upgraded the outlook from stable to positive, (ii) Business confidence index surveys of CY15 conducted by Overseas Investors Chamber of Commerce and Industry (OICCI) revealed significant improvement in business confidence. On domestic front: (iii) Consumer confidence survey of SBP shows consistent rise in consumer confidence index during CY15.

Further, on the positive side, the credit disbursement is quite broad based flowing to several sectors including agribusiness[32], production and transmission of energy, chemicals and pharmaceuticals and financial sectors (**Table 1.1**). It may be worth highlighting that Strategic Trade Policy Framework (2015-18) has been announced by Ministry of Commerce, Government of Pakistan which aims at addressing the important areas such as competitiveness, quality standards, market access of local products etc. This policy initiative, if implemented successfully, is expected to raise exports – including textile sectors' - and, consequently, could help generate credit demand.

Table 1.1

Sector-wise Gross Advances Flows (Public and Private)

	CY13	CY14	CY15
	PKR billion		
Agribusiness	(14.0)	53.5	80.0
Production/transmission of energy	0.3	128.2	60.2
Chemical/Pharmaceuticals	0.2	40.1	33.2
Financial	39.3	4.2	22.9
Individuals	49.9	49.7	21.8
Electronic/electrical appliances	1.9	7.0	15.3
Cement	(3.7)	(9.0)	12.0
Sugar	14.7	18.1	6.3
Shoes and leather garments	2.9	(3.6)	2.3
Insurance	0.0	0.3	(0.3)
Automobile/transportation	4.5	11.5	(19.0)
Textile	79.5	13.6	(30.5)
Others	133.8	110.8	196.0
Total	**309.2**	**424.5**	**400.2**

Source: FSD, SBP

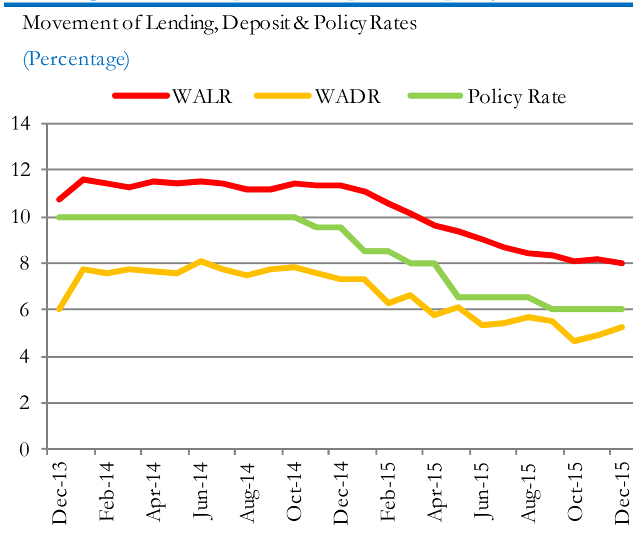
Though the recent credit growth is a positive sign, the surge has yet to find the crest considering the recent sharp dip in policy rate and weighted average interest rates **(Figure 1.4)**[33]. Besides the time lag involved in transmission mechanism, the partial resistance may be due to less than anticipated rise in domestic demand (lower real GDP growth), still higher real interest rates (due to lower inflation) and challenges on domestic and external fronts.

Figure 1.4

Lending rates fall in response to drop in SBP's policy rate

Movement of Lending, Deposit & Policy Rates

(Percentage)



Source: S&DWHD, SBP

Working capital advances stay unchanged; while fixed investment advances pick up…

Segment-wise information on domestic advances flows reveals around 75 percent contribution from private sector – mostly in corporate sector **(Table 1.2)**. Within working capital financing, repayment from public sector entities (PSEs) nullified 13 percent growth by private sector resulting into an overall marginal decline of 0.7 percent in working capital loans. The average working capital demand declined by 1.0 percent in the last two years in sharp contrast to 12 percent average annual growth during CY10-CY13. This decline may be attributed to demand effects i.e. declining exports and receding prices of goods used as input in manufacturing process owing to low commodity prices – particularly the oil prices[34].

[32] The partial increase in agribusiness advances during the period is due to change in reporting methodology for Islamic banks.
[33] Weighted average lending rate (WALR) on fresh lending came down by 329 bps in CY15 to reach 8.0 percent in Dec- 2015 (http://www.sbp.org.pk/ecodata/sir.pdf)

[34] Whole Sale Price (WPI) index showed deflation during entire CY15 on YoY basis and average inflation of 1.1 percent during CY14 to CY15 against average inflation of 13.2 percent during CY10-CY13 (4 years).

Table 1.2

Segment-wise Domestic Advances Flow during CY15

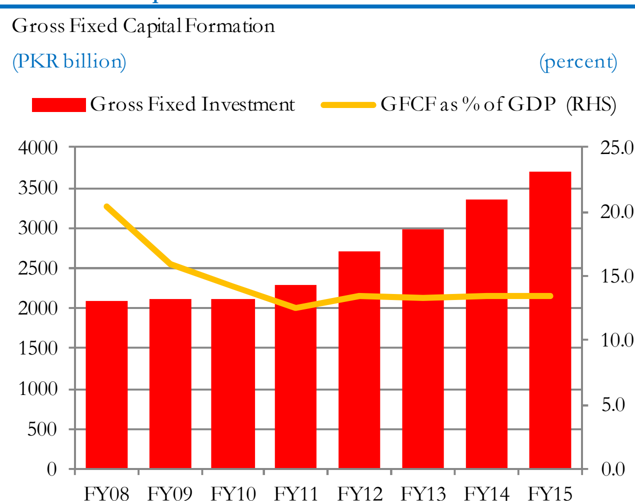
	Public Sector	Private Sector
	(PKR billion)	
Corporate Sector	**23.6**	**205.2**
Fixed Investment	108.8	177.8
Working Capital	(116.6)	113.9
Trade Finance	31.4	(86.5)
SMEs		**17.2**
Fixed Investment		33.5
Working Capital		(6.8)
Trade Finance		(9.5)
Agriculture		**26.5**
Consumer Finance:		**43.0**
Credit Cards		1.9
Auto Loans		24.2
Consumer Durable		(0.0)
Mortgage Loan		3.4
Other personal Loans		13.6
Commodity Financing	**68.1**	**(22.5)**
Staff Loans		9.9
Housing Finance		7.8
Others than housing finance		2.1
Others		**(1.7)**
Total	**91.7**	**277.6**

Source: FSD, SBP

Encouragingly, private sector advances growth has climbed up in fixed investment segment (long term) since last couple of years[35]. The prime users of this long-term financing (over one year) were transport, storage and communication, chemical and chemical products, non-metallic mineral products, construction, textile, and energy sectors[36]. The current state of economic affairs [low interest rates[37], stable exchange rate and low commodity prices (including metal and machinery)] has provided ample opportunity to firms to enhance their productive capacity; which, surely, hints at expected future industrial growth. Noticeably, this surge has helped in stabilizing the Gross Fixed Capital Formation (GFCF) to GDP ratio **(Figure 1.5).**

Figure 1.5

Gross Fixed Capital stabilizes in relation to GDP



Source: Statistical Bulletin March 2016, S&DWHD, State Bank of Pakistan

Note: FY here means Fiscal Year

Consumer financing gains momentum in a low interest rate environment …

The consumer financing (CF) – after following high growth path during 2003-07[38]- observed sharp slowdown along with rise in infection ratio during 2008-12[39] (**Figure 1.6**). This fall in CF was in line with the overall economic slowdown as well as marginal growth in credit to private sector. However, consumer financing has again started to gain momentum in last couple of years (CY15 observed growth of 15.3 percent, while CY14 saw 9.2 percent growth).

[35] CY15 and CY14 observed growth in fixed investment of 19.6 percent and 15.2 percent, respectively, compared to just 3.5 percent average growth during CY10-CY13 (4 years).

[36] Source: http://www.sbp.org.pk/ecodata/By-type-of-finance.pdf

[37] The capacity building usually requires mega projects of longer term with huge cost involved. Such projects generally require banks' financing (usually consortium financing) with floating rates. The low interest rates may provide a significant cost saving to firms for next few years.

[38] Liquidity inflows, low interest rates, banks' desire to diversify their lending portfolio, and overwhelming demand from common public helped increase CF at that time.

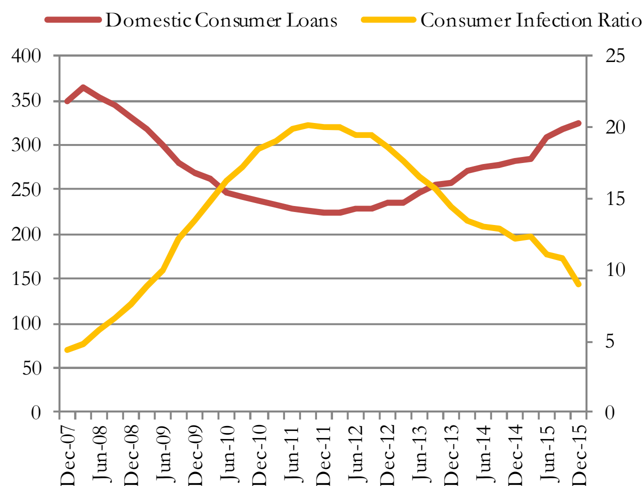
[39] The CF after attaining the peak of PKR 371 billion in December, 2007 dipped by 40 percent to reach PKR 224 billion as of December 31, 2011.

Figure 1.6

CF grows when NPLs decline

Annual Flow of CF and NPL Ratio

(PKR billion) (percent)



Source: FSD, SBP

The granular CF data reveals contribution from auto financing followed by personal loans and, to some extent, mortgage financing. Auto financing demand sharply rose in the last three years (34 percent growth in CY15 and 3-years average of 28 percent during CY13-15). Besides government sponsored auto schemes, the declining interest rates explain the rise in this segment since most banks have linked auto financing to KIBOR on floating basis. In parallel, the high growth in auto manufacturing served the supply-side contribution[40].

The recently announced auto policy is expected to increase market competition through bringing in new manufacturers. Lower prices and better choices, as a result, might further increase automobile demand and hence rise in auto financing in coming years.

Amongst other segments, growth in personal loans – mostly offered on fixed rate - is contributed by one major player of the industry[41]. The slight increase in mortgage financing during the reviewed year is due to the recent surge in construction activity.

SME financing grows modestly …

SME financing kept falling during CY08-CY12 and marginally picked up thereafter. The advances to SME sector have showed modest growth of 6.0 percent during the reviewed year. In order to encourage banks to enhance their exposure to the SME sector, SBP in CY15 reemphasized the banks/DFIs to: a) achieve their SME financing targets and b) to accomplish some supplementary measures by December-2016[42]. It is expected that this policy initiative – complemented by positive economic developments - will play a catalytic role in enhancing growth of SME financing and its share in overall advances.

The recent surge in consumer financing along with increased recovery in SME financing are positive developments which are also synchronized with SBP's efforts towards financial inclusion. However, banks still have credit concentration in corporate entities, which, limits banks ability to diversify and venture into consumer and SMEs financing.

Pilling stock of wheat financing need to be resolved…

The financing for the procurement of wheat of PKR 71 billion has raised the overall commodity financing during CY15; while outstanding stock observed pay-offs both in sugar (PKR 2 billion) and urea (PKR 21 billion) (**Figure 1.7).** The increase in wheat financing is mainly attributed to rise in wheat support price from PKR 1200/40kg to PKR 1300/40kg in November 2014[43].

The public sector outstanding stock of wheat financing – which is self-liquidating in nature - has remained high since 2009. On account of unpaid subsidy, government might have to adjust the rising stock through issuance of debt instruments as it did in the past[44]. Re-accumulation of these stocks requires devising a mechanism to timely retire outstanding commodity financing within the given cycle.

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[40] CY15 witnessed around 44 percent growth in car production in Pakistan (Source: http://www.pama.org.pk/statistical-information/sales-production/monthly-sales-production)

[41] The outstanding personal loan financing is quite concentrated as around 93 percent of financing is being provided by only 3 banks.

[42] Islamic SME Financing targets of 15 percent have also been set for each bank.

[43] In the second half of CY15, wheat financing reduced significantly due to off-loading of wheat by Trade Corporation of Pakistan (TCP).

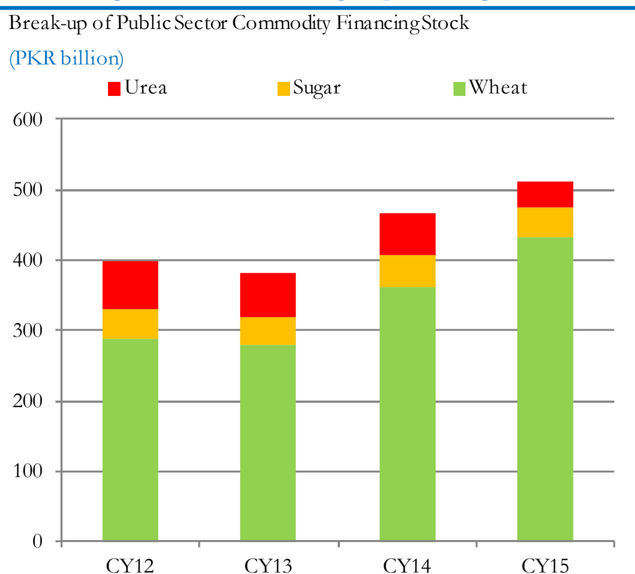
[44] In November 2011, government adjusted unpaid subsidy on commodity finance through issuance of PIBs and MTBs (http://www.sbp.org.pk/fsr/2011/pdf/2ndhalf/Chap-01.pdf)

Figure 1.7

Outstanding stock of wheat financing keeps on rising

Break-up of Public Sector Commodity Financing Stock

(PKR billion)



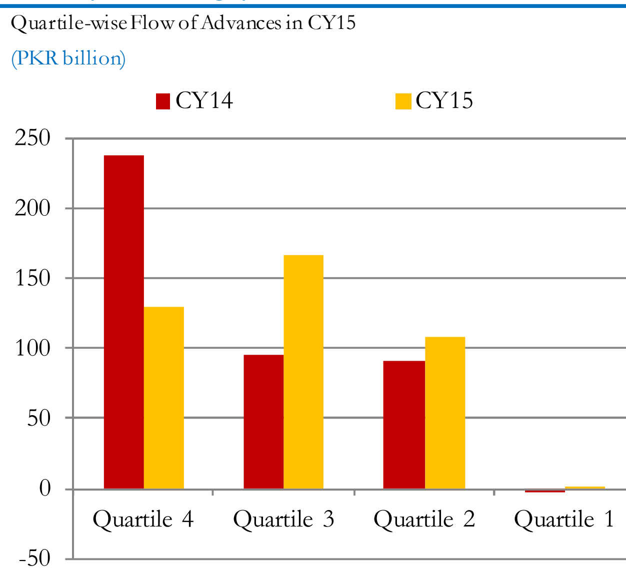
Source: FSD, SBP

Figure 1.8

Relatively more lending by Medium and Small banks

Quartile-wise Flow of Advances in CY15

(PKR billion)



Source: FSD, SBP

Overall advances flow quite diversified…

When analyzed from the perspective of banks' size[45], the lending in CY15 has not been confined to a few large banks, but, rather, it is broad based. Banks in quartile 3 (medium sized banks) have had a bigger contribution than banks in quartile 4 (large banks) in the advances flow during the year. Similarly, banks in quartile 2 (small banks) also contributed significantly in flow of advances **(Figure 1.8)**.

The recent surge in credit demand is expected to accelerate further in medium term due to ongoing economic reforms (fiscal consolidation, monetary easing, build up of FX reserves etc), likely resolution of energy shortfall, developments relating to CPEC) and strengthening of business confidence.

[45] For this analysis, all banks in each calendar year have been divided into quartiles based on their share in total assets. Banks above the 75th percentile, in terms of total assets, have been classified as large (quartile 4). Banks between the 75th percentile and 50th percentile have been categorized as medium (quartile 3) and so on. The methodology *does not* account for bank mergers at this point.

Investment remained high despite decline in yield…

Banks have continued to invest in (credit) risk free government securities (PKR 1.5 trillion) during CY15 despite decline in yield on government papers of all tenors **(Table 1.3)**. This has lifted up the share of net-investment in overall assets to 49 percent as of end December 2015 (44 percent as of end December 2014). Holding sovereign debt papers has a number of merits – even at lower rate of return – viz.; risk free interest income, zero risk weight for calculation of Credit Risk Weighted Assets (CRWAs) for Capital Adequacy purposes and strong fund based liquidity. However, inclusion of longer term PIBs has exposed banks to interest rate risk[46] **(see chapter 2 and 7).**

Stable growth remained the salient feature of deposits…

One of the positive aspects in banking has been the consistent growth in deposits. With growth of 12.6 percent, deposit base has reached to PKR 10.4 trillion as of end December 2015 **(Figure 1.9)**. Around 72 percent of the overall deposits of the banking sector are placed in the core category of CASA (Current Account- Saving Account); exhibiting stability of deposits. The

[46] Maturity is directly proportional to instrument's sensitivity to interest rate changes which is also termed as high duration or interest rate risk.

decomposition of data reveals growth in all segments of deposits during CY15; non-remunerative current deposits (17.7 percent), saving deposits (11.4 percent) and fixed deposits (6.9 percent).

Table 1.3
Flow of Banks' Investment in Govt. Securities

Flows During	CY13	CY14	CY15
	PKR billion		
MTBs	171.7	(970.6)	809.6
PIBs	108.8	1,977.2	616.1
Others	20.9	0.6	152.7
Total investment in Govt. Securities	**280.5**	**1,006.5**	**1,425.6**
Total Investments	**301.4**	**1,007.1**	**1,578.3**
Investment in Govt. Securities to Total Investment (Percent)	93%	100%	90%
Outstanding Stock as of end:	**CY13**	**CY14**	**CY15**
	PKR billion		
MTBs	2,704.1	1,733.5	2,543.0
PIBs	736.1	2,713.2	3,329.3
Others	306.7	354.8	452.9
Total investment in Govt. Securities	**3,746.9**	**4,801.5**	**6,325.2**
Total Investments	**4,347.1**	**5,354.2**	**6,932.4**

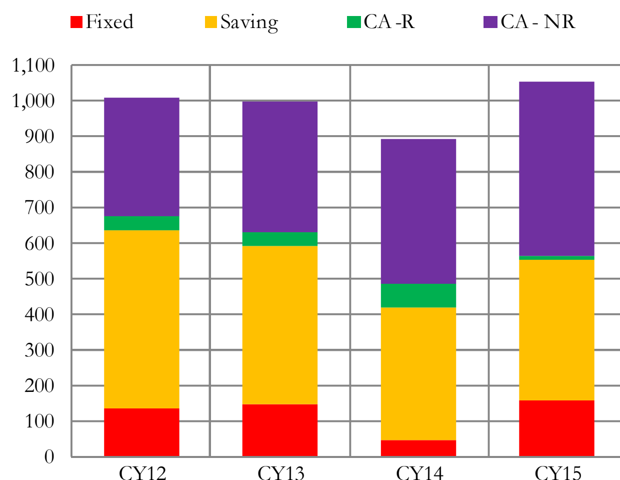
Source: FSD, SBP

The stability in deposit growth may be attributed to customer's trust in banking, limited availability of alternate sources and lack of awareness about available ones, convenience which is further strengthened by better use of IT services, banks' efforts to convey and convince depositors through aggressive media campaigns, and recent pick up in advances growth[47].

Worker remittances and deposits appear to grow together…

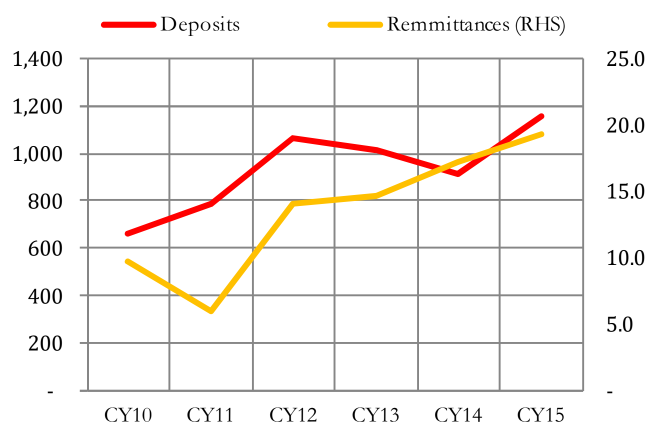
The consistent growth in worker remittances over the years[48], becoming part of the liquidity of domestic financial system, is, perhaps, another factor partially supporting the deposit growth. The yearly flow data exhibiting an upward co-movement in deposits and worker remittances hints at some contribution of remittances in deposit growth **(Figure 1.10).** In addition, the entry of large banks into branchless banking has augmented the deposit growth (particularly in terms of number of accounts). It has provided an opportunity to these large banks to explore the untapped avenues of the financial system.

Figure 1.9
Decent growth in all segments of deposits
Annual Flow of Deposits
(PKR billion)



Source: FSD, SBP

Figure 1.10
Deposit flows and worker remittances appear synchronized
Workers Remittances & Deposits- Cumulative Flows
(PKR billion) (USD Billion)



Source: SBP

47 The analysis reveals that deposits of the banking sector are aligned with cyclical movements in advances. Please see Box-A in the Quarterly Performance review of the Banking Sector, July-September 2015.
http://www.sbp.org.pk/publications/q_reviews/2015/q_review_Jul-Sep_15.pdf
48 Pakistan is the 8th largest recipient of worker remittance (http://www.worldbank.org/en/topic/migrationremittancesdiasporaissues/brief/migration-remittances-data)

SBP made changes in minimum saving rate to safeguard depositors…

SBP has been endeavoring to protect the depositors' interest through its various policy initiatives. To ensure adequate returns to depositors on their funds placed with banks, SBP has been raising and strengthening minimum saving rate (MSR) regime since 2008.

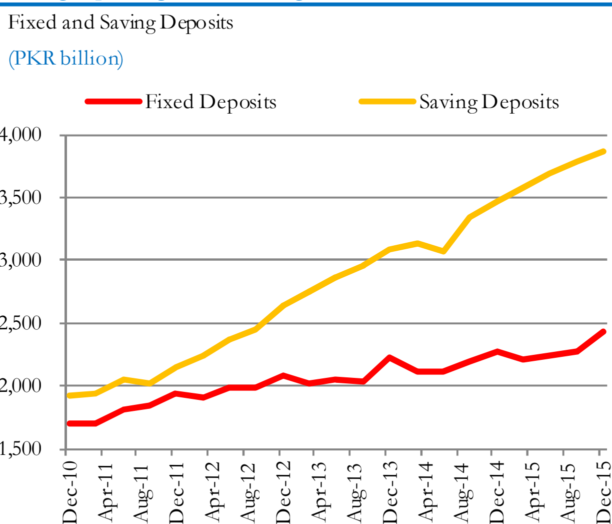
Historically, SBP introduced MSR, for the first time, as 5 percent per annum (p.a.) on all saving and term deposit in May 2008. It then raised MSR to 6 percent (p.a.) in May 2012, advised banks to calculate MSR on monthly average in March 2014, and linked MSR with lower bound of interest rate corridor in September 2014 such that MSR remains 50 bps below the floor of the corridor[49].

Figure 1.11

Saving deposits grew with changes in MSR

Fixed and Saving Deposits

(PKR billion)



Source: Statistical Bulletin March 2016. S&DWHD, SBP

After the introduction of MSR, the share of saving deposit in overall deposits has increased from 32.7 percent as of 31st December, 2008 to 37.2 percent as of 31st December, 2015 **(Figure 1.11).**

On the other hand, growth in fixed deposit – after observing deceleration in CY14 – bounced back in CY15, likely, due to banks' effort to balance their funding mix. It may be noted that around 55 percent of fixed deposits are held in the bucket of shorter term maturity (one year or less) and offering rates slightly above the MSR[50].

Foreign Currency (FCY) deposit growth subsides…

Currency-wise break-up shows 8.0 percent increase in FCY deposits – lower than the average growth of around 19.4 percent during CY10-CY13 but more than 5.6 percent growth in CY14. This could be due to stability in local currency during the first three quarters of the reviewed year. FCY deposits observed rise, mostly, in the last quarter – post Yuan devaluation - owing to anticipation of decline in the value of domestic currency **(see chapter 7)**. The FCY deposits, though, remained within the limits prescribed by SBP[51].

Retail deposits grow as disposable income rise…

The deposit-holder wise distribution shows healthy contribution both from institutional depositors (governments, NBFIs) and personal/retail depositors[52]. On the other hand, deposits of private sector businesses have decelerated. The growth in retail deposits might be driven by higher overall income[53] partially supported by consistent low oil prices which has increased the disposable income of various agents in the economy.

Borrowings rise as growth in deposits fall short of the credit demand of private and public sectors …

The growth in overall deposits has, however, not been enough to meet the aggregate financing need of both the private and public sectors. Consequently, financial borrowings supported the funding side of the banking sector during the reviewed year **(Table 1.4).**

[49] SBP also excluded term deposits from MSR policy in June 2014.

[50] Source: Statistical Bulletin, April 2016, SBP

[51] As per regulation O-5 of Prudential Regulations, deposits mobilized under FE 25 scheme, after netting-off the deposits utilized to finance trade related activities such as financing against Import and Export documents, should not at any point exceed twenty percent of the local currency deposits of the bank.

[52] In CY15, personal deposits contributed 57 percent in overall deposit flow (share in outstanding deposit 50 percent) while institutional deposits added 31 percent (share in outstanding deposits 14 percent)

[53] Per capita income in Pakistan reached USD 1,513 in Jun-15; up by 9.5 percent from USD 1,384 in Jun-14.

Table 1.4

Breakup of Financial Borrowing in CY15

	CY13	CY14	CY15
	PKR million		
Secured	(406.1)	229.2	678.4
i) Borrowings from Subsidiary Co etc. & Directors	-	-	-
ii) Borrowings From SBP:	(491.5)	182.1	681.3
Export Refinance	6.3	7.8	19.4
Others (Repo borrowing from SBP)	(497.8)	174.3	661.9
iii) Repo borrowings (other than SBP)	87.3	41.9	(1.5)
iv) Others	(1.9)	5.3	(1.4)
Unsecured	**94.3**	**48.4**	**86.3**
i) Call borrowings	58.8	26.9	6.5
ii) Overdrawn nostro accounts	6.0	(2.1)	(1.8)
iii) Others	29.4	23.6	81.6
Total Borrowings	**(311.8)**	**277.6**	**764.7**

Source: FSD, SBP

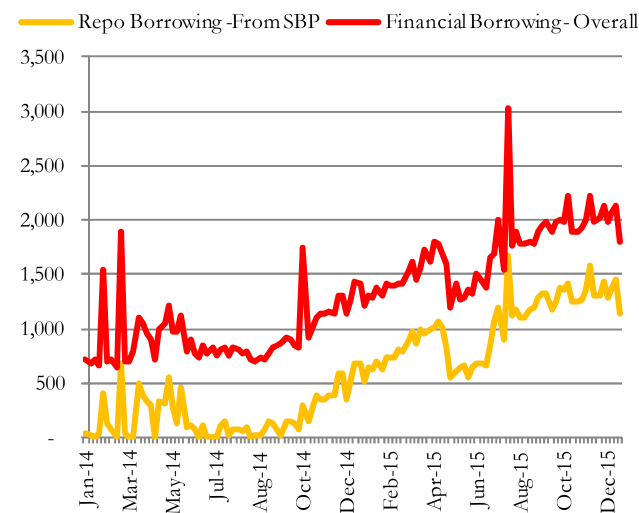
The weekly data[54] of outstanding stocks shows that banks' repo borrowing from SBP dominated the overall borrowings **(Figure 1.12)**. Particularly, such borrowings sharply picked up after SBP introduced SBP target rate for overnight money market repo rate (ONR)[55]. In order to keep ONR closer to SBP target rate, SBP injected adequate liquidity into the market which addressed the dual concerns. On the one hand, it contained volatility in overnight rates while, on the other hand, it addressed the liquidity concern of the market enabling it to function smoothly (**see chapter 7**).

Equity observed gradual rise…

Equity base – one of the most important measures of banks' resilience against shocks – reveals a moderate increase of 9.6 percent during CY15. The overall high profitability – and retained earnings - and SBP's minimum capital adequacy policy that prompted few capital deficient banks to put in additional equity are the major reasons behind the rise in equity. Further, revaluation surplus – primarily on account of mark to market adjustment on PIBs placed in AFS category - also supported the equity of the banking sector.

Figure 1.12

Repo borrowing from SBP dominated overall financial borrowiings



Source: FSD, SBP

Conclusion…

Overall, the flow of deposits and advances advocate that small and medium-sized banks have played, relatively, a better role in financial intermediation during CY15. Large banks have focused more on investments. They need to diversify their asset pool, other than investment in government securities, so that any unwinding of fiscal need in future may not adversely impact their financial health, as well as, the financial stability of the entire system. The positive economic outlook and expectation of gradual recovery on global front provide evidences to expect credit off-take further accelerating in future.

[54] Since financial borrowings are transitory in nature, the data of shorter frequency such as weekly or daily shows a better picture.
[55] In May 2015, SBP introduced a 'Target Rate' for overnight money market repo rate, as a new 'Policy Rate' to unambiguously signal SBP's stance of monetary policy (http://www.sbp.org.pk/dmmd/2015/C9.htm)

2 Risk Analysis of the Banking Sector

The risk profile of the banking sector mainly comprising of Credit, Liquidity and Market risks has remained subdued during the period under review. Credit risk, as measured by the Non-Performing Loans Ratio (NPLR) or infection ratio, has subsided. NPLR has declined by 91 bps in CY15 to record 11.4 percent; though stock of NPLs has registered a marginal rise. Textile sector's infection ratio has increased making it more vulnerable to credit risk. Whereas, decelerating trend of cash recoveries against NPLs may lead to build up in stock of NPLs. Despite some growth in non-core liabilities, funding liquidity of the banking sector, by virtue of large holdings of government securities, remains healthy. Market risk profile of the banking system is well contained, though banks may face revaluation risk in a rising interest rate scenario.

Credit Risk

NPLR is declining amid nominal increase in stock of non-performing loans (NPLs)…

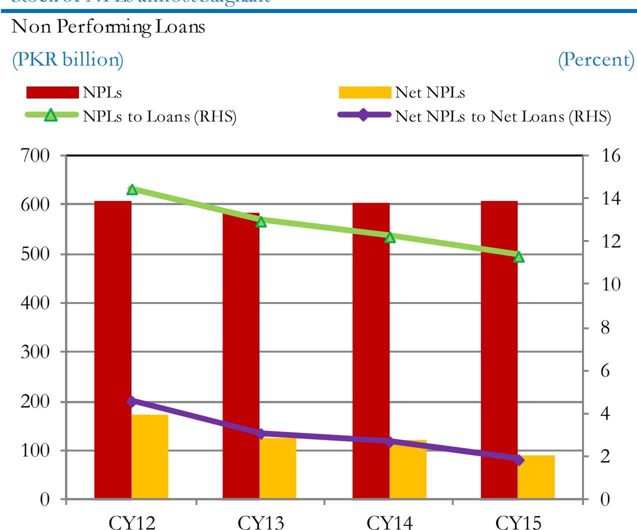
Asset quality of the banking system has observed gradual improvement over the last few years, a trend which continued during CY15. The NPLR at 11.4 percent, as of end CY15, has come down from a high of 14.5 percent in CY12. NPLR has steadily declined; 12.3 percent in CY14 and 13.0 percent in CY13 (**Figure 2.1**). Besides some improvements in domestic macroeconomic conditions such as falling interest rates which has led to gradual rise in credit off-take, this decline can also be attributed to banks' recovery efforts and conducive regulatory environment.

The stock of NPLs has been hovering around PKR 600 billion since CY12 **(Figure 2.1).** During CY15, NPLs inched up slightly by PKR 0.74 billion (or 0.12 percent YoY) to reach PKR 605.44 billion as compared to PKR 604.70 billion in CY14. The inflow of new NPLs in 2015 has almost been offset by cash recoveries (61.8 percent of fresh NPLs), write offs (13.7 percent) and restructuring and upgrade of existing NPLs (23.5 percent). The marginal rise in NPLs is mainly concentrated in textiles and textile related activities (trade and commodity finance).

With static NPLs, the improvement in infection ratio can also be attributed to growth in private sector advances. On YoY basis, gross advances have grown by 7.4 percent in CY13, 9.4 percent in CY14 and 8.1 percent in CY15, respectively.

Figure 2.1

Stock of NPLs almost Stagnant



Source: FSD, SBP

The containment of NPLs and improving NPLR are healthy signs for the banking sector's credit risk. Nevertheless, expected slower cash recoveries in the future and stagnant stock of NPLs may pose a risk to the declining trend of infection ratio leading to higher credit risk.

Among different categories of banks, Public Sector Commercial Banks (PSCBs) and Medium-sized banks appear to be vulnerable to credit risk…

In contrast to the overall trend, PSCBs' infection ratio has been increasing since CY13 and in CY15 it has increased by 50bps to reach 18.3 percent **(Table 2.1)**. During CY15, stock of NPLs of PSCBs has grown by 4.2

percent (YoY) which again highlights the inherent weaknesses in the credit risk management system of these banks. NPL stock of most of the PSCBs has surged during CY15.

On the other hand, infection ratio of local private banks (LPBs) has declined from 11.4 percent in CY13 to 9.3 percent in CY15. LPBs appear to be managing their credit risk better than PSCBs.

In case of Foreign Banks (FBs), infection ratio rose by 20bps in CY15 mainly due to proportionally higher decline in advances (35 percent, YoY) as compared to decline in NPLs (33 percent, YoY). FBs, however, have the lowest NPLR among all banking categories.

Table 2.1
Asset Quality by Bank Category

Bank Category	CY13		CY14		CY15	
	Infection Ratio	Provision Coverage Ratio	Infection Ratio	Provision Coverage Ratio	Infection Ratio	Provision Coverage Ratio
	percent					
PSCBs	17.0	71.2	17.8	71.2	18.3	79.1
LPBs	11.4	82.5	10.4	85.2	9.3	89.8
FBs	10.1	101.1	7.6	102.0	7.8	100.4
CBs	**12.6**	**79.4**	**11.9**	**80.9**	**11.1**	**86.3**
SBs	25.5	62.3	23.3	61.1	18.9	59.3
All banks	**13.0**	**78.4**	**12.3**	**79.8**	**11.4**	**84.9**

Source: FSD, SBP

In terms of size, there is gradual improvement in infection ratios for large and small banks, irrespective of their shareholdings, since CY13 (**Table 2.2**). However, gross NPLR of medium-sized[56] banks have increased as they are struggling to reduce their infection ratios and bring them down to industry average. It appears that some of these banks are unable to attract quality borrowers and legacy debts persist. Further, another cause of concern is that this category of banks has a lower provision coverage ratio.

Banks falling in the lowest quartile (very small-size) also have high NPLR (21.2 percent) but they possess sufficient coverage (92.5 percent). Thus, these banks due to their limited systemic impact (2 percent share in advances and 3 percent shares in NPLs) and adequate coverage to NPLS do not represent the weakest link.

Table 2.2
Asset Quality by Bank Size

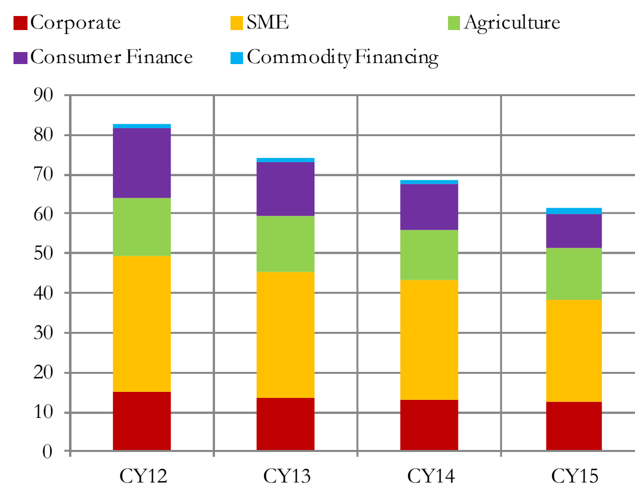
Bank Category	CY13		CY14		CY15	
	Infection Ratio	Provision Coverage Ratio	Infection Ratio	Provision Coverage Ratio	Infection Ratio	Provision Coverage Ratio
	percent					
Quartile 4 (Large)	12.2	81.6	11.8	80.4	9.8	92.0
Quartile 3 (Medium)	14.8	70.0	13.9	78.0	16.4	74.9
Quartile 2 (Small)	13.1	65.8	9.9	73.5	9.5	72.2
Quartile 1 (Very Small)	21.1	92.9	19.6	92.4	21.2	92.5
All banks	**13.0**	**78.4**	**12.3**	**79.8**	**11.4**	**84.9**

Source: FSD, SBP

Corporates becoming less riskier; while SMEs, despite improvements, carry higher credit risk…

In terms of segments, NPLR has improved across most categories (Corporate, SMEs, Consumers) since CY12 (**Figure 2.2**). From 15.0 percent in CY12, NPLR of corporates has come down to 12.30 percent in CY15. The level is still high but the declining trend is encouraging. If the corporate infection ratio continues to improve, it would not only motivate banks to take on more risks but also help corporates get loans at reasonable rates.

Figure 2.2
SME sector has the highest infection ratio



Source: FSD, SBP

[56] At the end of CY15, medium-sized banks have 22% share in advances and 32% share in NPLs stock.

SMEs, with highest infection ratio (26 percent) in CY15, still remain the most risky sector for the banks to lend. Historically, SMEs have higher NPLs due to operating vulnerabilities like lack of financial resources, limited technical upgrading and lack of training[57]. However, with recent improvements in macro environment, especially the cost of borrowings, SMEs are expected to fare better and downward trend in their infection ratio is expected to continue.

Rising NPLs intensify textile, sugar, and energy sectors' concentration risk…

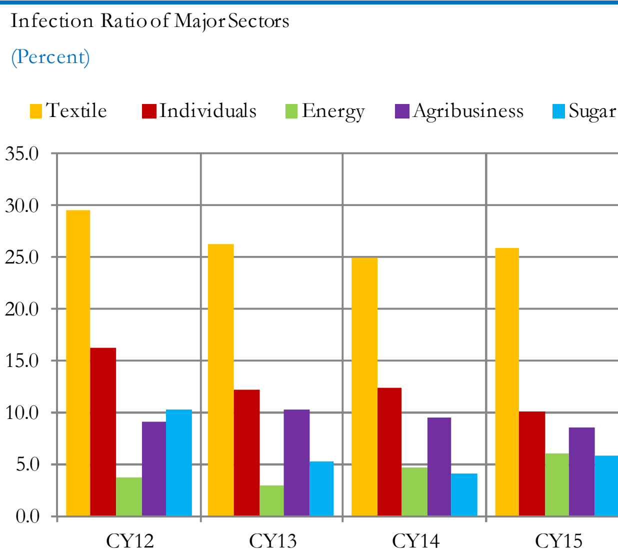
In terms of concentration, textile sector still represents one of the largest sectors as its share in total advances, though declining[58], is still sizeable (14.3 percent in CY15). In contrast, the infection ratio has been almost stagnant during the last three years and have hovered around 26 percent in CY15 (**Figure 2.3**). Persistent risk in the textile sector has made it more vulnerable for the lenders. Advances to the textile sector in CY15 have declined by 3.8 percent (YoY). Subdued commodity prices in international markets, slowdown in global demand, and energy shortfall has also led to the decline in demand for credit by the sector. Being the largest sector in terms of exposure, high infection ratio of textile sector has systemic implications (**See Box 2.1**).

Sugar sector, though not huge in terms of exposure (2.72 percent in CY15) but important for other reasons, has also exhibited slight rise in infection ratio in the wake of surplus sugar production and lower international sugar prices. However, keeping in view its small share, the sugar sector represents limited systemic risk to the banking sector (**See Box 2.2**).

Apart from these two sectors, energy sector advances grew by 9.7 percent whereas its infection ratio worsened by 1.3 percent over the last year. Due to the rising exposure of banks on energy sector and persistence of circular debt issue[59], banks need to put in place proper risk monitoring and mitigating mechanisms to ensure non-build up of bad debts in the energy sector.

Figure 2.3

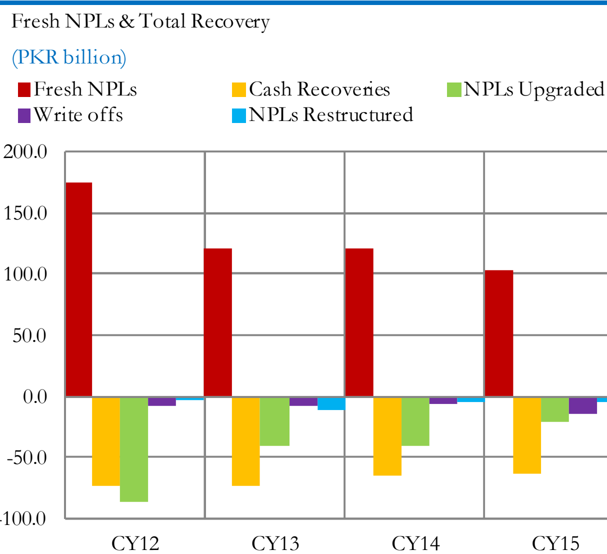
Textile sector has the largest share and highest infection ratio



Source: FSD, SBP

Figure 2.4

Flow of fresh NPLs considerably declined



Source: FSD, SBP

Receding fresh NPLs and improved provision coverage ratio has increased the resilience of the banking sector…

The flow of fresh NPLs is decelerating since CY12 on the back of cash recoveries and better recovery efforts

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57 SMEDA," State of SMEs in Pakistan" (www.smeda.org)

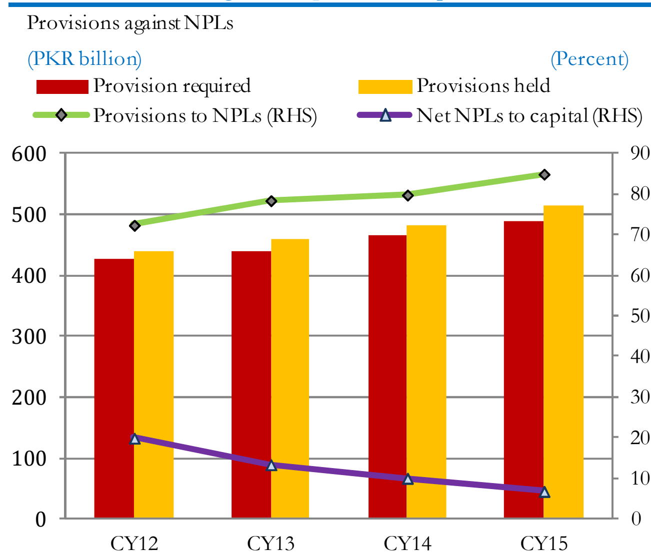
58 The share of textile sector advances in total advances was 16.7 percent in CY12, 17.3 percent in CY13 and 16.1 percent in CY14.

59 Anecdotal evidence suggests that circular debt issue remains a concern.

on the part of banks (**Figure 2.4**). In CY15, additions to NPLs amounted to Rs 103 billion which is 41 percent less than the peak of Rs 175 billion in CY12. Moreover, the provision coverage ratio has improved to 85 percent in CY15 from 80 percent in CY14 and 78 percent in CY13 (**Figure 2.5**).

Figure 2.5

Provisions held are higher than provisions required



Source: FSD, SBP

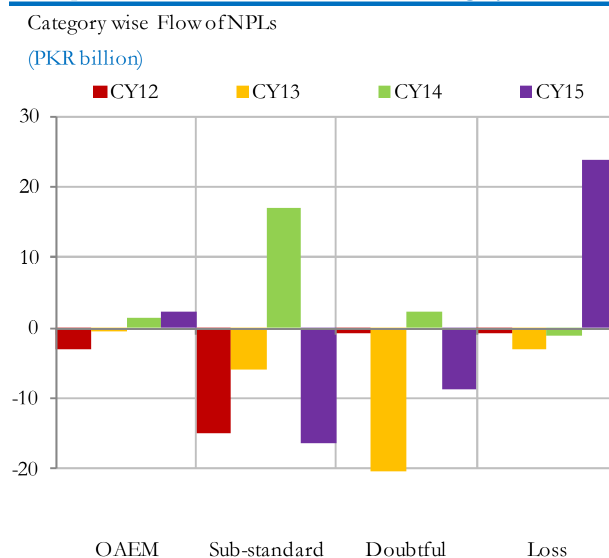
The rise in provisions held by the banking sector against bad debts is due both to the rise in specific provisions which increased by 5.2 percent (YoY) and increase in general provisions which grew by 41 percent (YoY) in CY15[60]. The gradual diminution in the benefit of Forced Sale Value (FSV), allowed earlier by SBP[61], has induced increase in the stock of specific provisions. Further, the migration from substandard and doubtful categories to loss category also led to an increase in overall provisioning requirements.

Rise in bad debts in loss category may increase the cost of lending…

A cause of concern is that the composition of NPLs is tilted towards the loss category which constitutes the bulk (86 percent) of the total bad loans (**Figure 2.6**). In CY15, an additional amount of PKR 24 billion was added to the loss category. However, considering that loss category of advances are, generally, fully provided for (PKR 519 billion), the credit risk tapers down, to some extent. Nevertheless, banks need to ensure that instead of allowing the bad debts to pile up, they need to improve their credit risk evaluation and monitoring processes. Rise in bad debts would increase the cost of lending which would eventually be passed on to the customers.

Figure 2.6

Composition of NPLs is tilted towards loss category



Source: FSD, SBP

Cash Recovery against NPLs started decelerating after 2013…

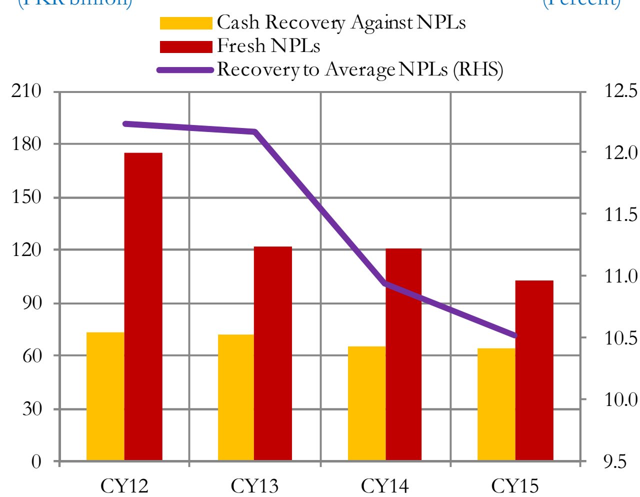
Overall cash recoveries are on a declining path and in CY15 they have declined by 2 percent to reach PKR 63.7 billion (**Figure 2.7**). Recovery to Average NPLs ratio has also decelerated from 12.2 percent in CY13 to 10.5 percent in CY15. Lengthy legal recovery process and lack of efforts on part of some banks to recover bad debts appear to be the major reasons for the slowdown in recoveries. Moreover, persistent higher stock of NPLs in loss category implies slim chances of any further recoveries.

[60] Total provision exceeds the required provisions as banks create general provision under various Prudential Regulations, particularly for the Consumer Finance (CF) portfolio to protect banks from the risks associated with the economic cyclical nature of this business. In terms of regulation R-4 of the Prudential Regulation for CF, banks are required to maintain a general reserve at least equivalent to 1.5 percent of the consumer portfolio which is fully secured and 5 percent of the consumer portfolio which is unsecured.
[61] BSD Circular No 1 of 2011

During 2015, LPBs have remained the main contributors to recoveries with 65 percent share in total recoveries followed by specialized banks (SBs) & FBs with a share of 22 and 13 percent, respectively. PSCBs have again been the poorest performers with less than 1 percent share in total recoveries.

Figure 2.7

Cash recovery gradually receding



Source: FSD, SBP

Among different products of Consumer finance, Mortgage loans have the highest infection ratio…

Except consumer durables, all other consumer financing categories exhibited improvement in infection ratio. The stock of NPLs declined by 15 percent leading to a lower infection ratio of 8.7 percent in CY15 (**Table 2.3**).

Mortgage loans have the highest infection ratio (25 percent) in CY15. However, the share of residential mortgage is less than 1 percent in total bank loans. The highest infection ratio can be attributed to the structural issues faced by banks including weak foreclosure standards, lengthy judicial procedures, non-automation of documentation and non-standardization of procedures amongst various housing schemes.

Table 2.3

NPL Ratio of Consumer Financing

	CY14		CY15	
	Share	Infection	Share	Infection
	percent			
Credit cards	7.8	10.5	7.4	9.7
Auto loans	24.1	5.1	28.3	2.8
Consumer durable	0.1	20.3	0.1	21.0
Mortgage loans	17.8	27.0	16.2	24.8
Other personal loans	50.2	9.5	48.0	6.5
Total	**100.0**	**11.6**	**100.0**	**8.7**

Source: FSD, SBP

Pakistan has the highest NPLs and the highest coverage ratio in the region…

The regional comparison shows that Pakistan has the highest gross infection ratio (**Table 2.4**). This is largely due to legacy issues[62] as the flow of new NPLs have receded over the years. Due to the legal impediments to writing-off long overdue loans and lengthy litigation process, banks are reluctant to shed off bad loans from their books. A prudent write-offs policy and dedicated efforts to increase recoveries can improve the situation.

Table 2.4

Infection Ratio & Provision Coverage Ratio (percent)

S.No	Country	CY13	CY14	CY15*	CY13	CY14	CY15*
		Infection Ratio			Coverage Ratio		
		percent					
1	Pakistan	13.0	12.3	12.5	78.0	80.0	82.0
2	Bangaldesh	8.6	9.4	9.3**	44.0	42.0	37.0
3	India	4.0	4.4	4.8	47.0	49.0	49.0
4	Indonesia	1.7	2.1	2.6	51.0	51.0	51.0
5	Sri Lanka	5.6	4.2	4.2	40.0	42.0	38.0

* September 2015 except Bangladesh
** June 2015
Source: FSIs (http://data.imf.org)

Pakistan's banking industry, however, maintains adequate level of provisions against NPLs which is the highest in the region **(Table 2.4)**. This provides comfort against imminent idiosyncratic and systemic risks.

[62] An aging analysis of NPLs shows that more than 40% of the amount under loss category is older than 5 years with remote chances of recovery

Results of credit shocks remain satisfactory, though there are some concentration concerns…

Different hypothetical credit shocks aimed at testing the borrower-wise concentration do not yield encouraging results as around one-third of the banks become non-compliant with the local benchmark of CAR. On the other hand, credit shocks based on historical data do not pose much threat to the asset quality and solvency of the banking sector. Stress tests are discussed in detail in **Chapter 3**.

Improving macroeconomic conditions suggest lower credit risk in the future…

Going forward, the improvements in macroeconomic environment signal diluted risks for the buildup of bad debts. The economy is showing signs of recovery; credit to private sector is picking up amid lower interest rates; Large Scale Manufacturing (LSM) is growing; law and order situation is improving and energy shortages are becoming less acute. The decline in oil prices is providing much needed support to the foreign exchange reserves and helping to bring down the production costs. Thus, banks are anticipated to operate in a favorable macroeconomic environment which might alter their risk taking behavior.

Nevertheless, outstanding stock of old NPLs and slower cash recoveries are the areas of concern for credit risk.

Liquidity Risk

The liquidity profile of the banking sector is characterized by both market developments and the funding position.

Market liquidity: Calmness prevailed after introduction of SBP target rate …

To better manage market liquidity, SBP has introduced changes to its interest rate corridor in May 2015. SBP's main policy rate, which is a target rate[63], set 50 bps below the ceiling rate has been introduced and the width of the interest rate corridor has also been reduced to 200 bps[64]. These steps, along with the monetary easing, have resulted in a significant reduction in volatility in the money market liquidity towards the second half of CY15. Not surprisingly, however, OMOs increased both in volume and frequency in order to achieve the aforementioned stability.

The calmness in the money market reduced risks to the day to day liquidity management by the banks. (For details see **Chapter 7**).

Fund based liquidity remained strong…

Funding liquidity of the banking sector has also remained healthy during CY15. Though there was increase in non-core liabilities[65], deposits remained the backbone of the funding mix.

Given the increase in long-term investments in government securities, banks have made efforts to raise fixed deposits in order to match the maturities. Overall, funding liquidity indicators improved during the period under review.

Core liabilities remained the mainstay of banks' source of funding…

With a growth of 12.6 percent in CY15 (11 percent in CY14), deposits have been the major contributor towards managing funding requirements **(Figure 2.8)**. However, some deceleration in the growth of deposits[66] forced banks to turn to non-core liabilities to fund their asset (advances and investments) growth. This is clearly indicated by a 76.4 percent rise in borrowings during CY15 compared to 38.4 percent in CY14. Overall, the share of non-core liabilities has increased to 20.3 percent in CY15 from 16.6 percent in CY14. Despite this rise, any significant funding risk does not arise as majority of these non-core liabilities consists of secured borrowings.

[63] It is to be noted that this target rate is for money market ONR where SBP manages liquidity (primarily through OMOs) in the market to ensure that ONR remains close to the target rate. http://www.sbp.org.pk/dmmd/2015/C9.htm)

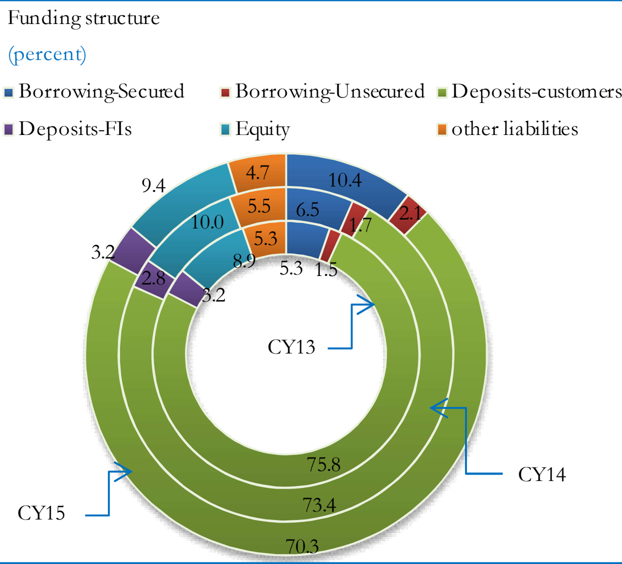
[64] Besides, SBP also withdrew the penal rate on frequent access (7 times in a quarter) to SBP Reverse Repo and Repo facilities.

[65] Customer deposits are core liabilities while all other liabilities are referred to as non-core liabilities.

[66] In the preceding two years of CY13 and CY12, YoY growth in deposits was 14% and 17%, respectively.

Figure 2.8

Deposits continued to be the main funding source



Source: FSD, SBP

…while funding cost of non-core liabilities remained higher

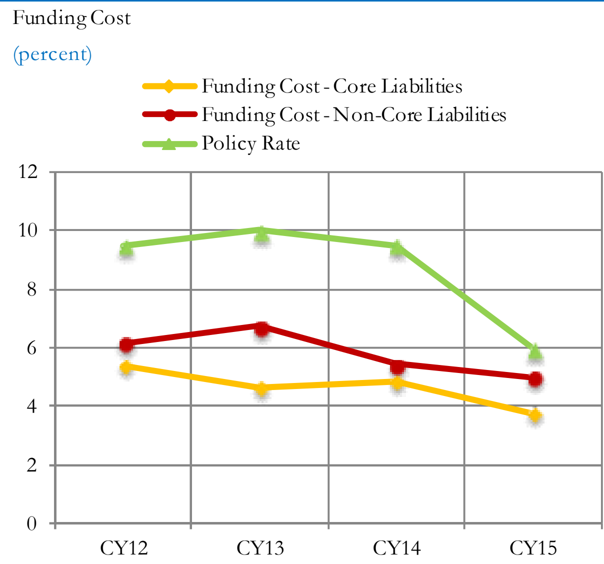
Customer deposits have always been the cheaper source of funds for the banks compared to non-core liabilities which are costlier (**Figure 2.9**). During CY15, the cost of core liabilities also declined with the continuous fall in interest rates. On the other hand, decline in cost of non-core liabilities was lower due to higher volume of borrowings compared to CY14.

Long term deposits registered consistent growth…

As banks are investing more in long-term securities, they are also making efforts to raise long-term deposits. During CY15 fixed deposits grew by 6.9 percent (YoY). The maturity profile of the deposits also indicates that deposits having maturity longer than three months have increased, while the ones having maturity lesser than three months have decreased **(Figure 2.10)**.

Figure 2.9

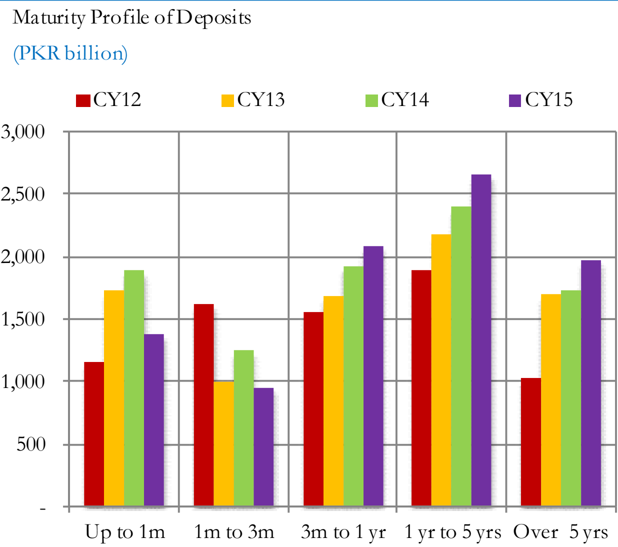
Funding cost of non-core liabilties remained higher



Source: FSD, SBP

Figure 2.10

Long term deposits registered consistent growth



Source: FSD, SBP

The profile of liquid assets has not changed…

The structure of the liquid assets of the banks has not changed as government securities continue to be the major component during CY15 **(Figure 2.11)**. Share of government securities in total liquid assets has increased

to 83.1 percent in CY15 from 80.7 percent in CY14 and 75.1 percent in CY13.

A structural shift towards investment in long-term securities was observed in CY14 owing to the anticipated fall of interest rates at that time. This motivation had led to an increase of 15.4 percentage points in the share of PIBs in total assets during CY14.

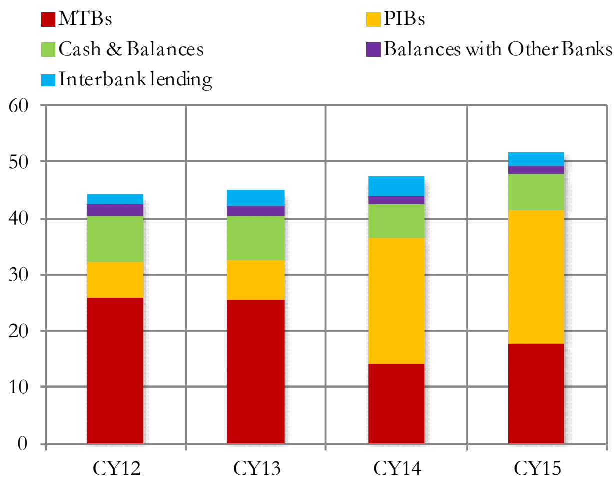
On the other hand in CY15, in addition to PIBs, banks have also invested considerably in MTBs owing to uncertainty about future interest rates. Overall, the share of both PIBs and MTBs in investments has increased during CY15.

Figure 2.11

Fund based liquidity further improved

Liquid Assets as a percentage of Total Assets

(percent)



Source: FSD, SBP

…where banks continue to place majority of their risk free government securities in Available for Sale category

Banks have persisted with their liquidity preference through placement of most of the securities into Available for Sale (AFS) category of investments, which allows banks to efficiently manage their liquidity requirements. Moreover, revaluation gains/losses on AFS securities do not impact the profit and loss statement. In terms of share, 95 percent of MTBs and 71 percent of PIBs are placed in AFS category as of end CY15 **(Figure 2.12).**

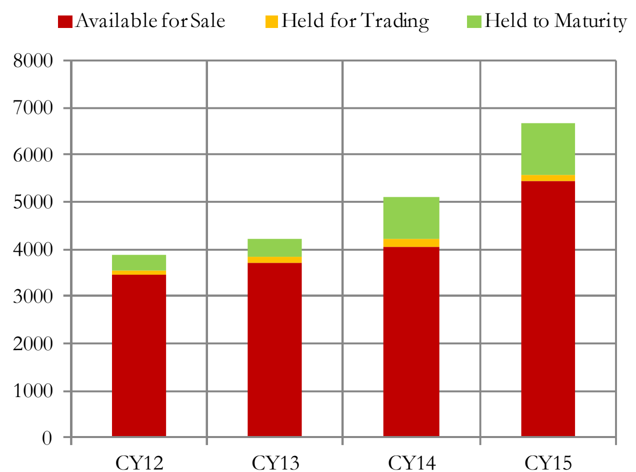
In addition to the AFS category, over the last two years, banks have also looked to lock in their income stream from investments by placing some of them in Held to Maturity (HTM)[67] category, majority of which are PIBs. Higher coupon rates and anticipation of decline in interest rates in the future were the reasons behind this diversification.

Figure 2.12

Banks continued to prefer Available for Sale Category

Government Securities by Category

(PKR billion)



Source: FSD, SBP

Small banks exhibited comparatively lower liquidity…

Comparing liquid assets of the banks with their overall assets reveals that not all banks are equally placed in terms of liquidity during CY15 (**Table 2.5**). Some of the growing banks (including three Islamic banks) belonged to the second quartile (small banks), which continue to have the lowest amount of liquid assets, due to credit growth and branch expansion.

Moreover, lack of high quality Shariah compliant debt instruments and unsophisticated secondary markets for such instruments have also hampered Islamic banks in this regard. On the other hand, large banks had the highest amount of liquid assets. Their ability to attract low cost deposits due to their wider market presence has helped them accumulate higher stock of liquid assets.

[67] Share of HTM in gross investments remained around 17 percent during last two years compared to 9 percent in CY13.

Table 2.5

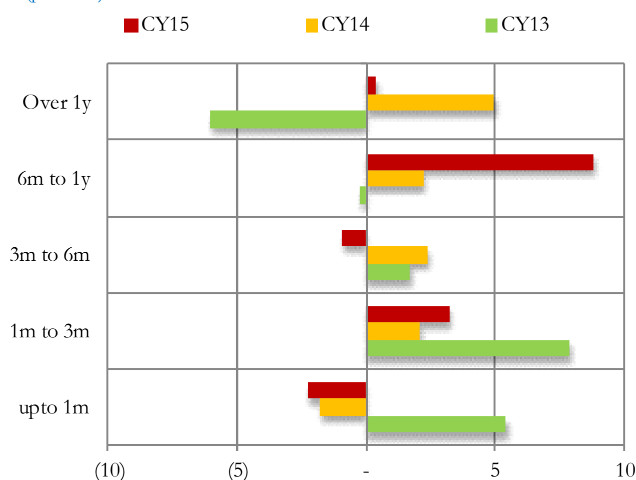
Liquidity by Bank Size (percent)

Bank Category	CY12	CY13	CY14	CY15
	Liquid Assets to Total Assets			
	percent			
Quartile 4 (Large)	47.2	48.4	51.5	55.4
Quartile 3 (Medium)	45.8	41.9	42.6	51.8
Quartile 2 (Small)	50.6	45.8	45.9	45.7
Quartile 1 (Very Small)	57.0	58.3	48.5	54.1
All banks	**47.4**	**47.3**	**49.2**	**53.8**

Source: FSD, SBP

Figure 2.13

Gap remained negative over 30-day horizon



Source: FSD, SBP

Gap remained negative over 30-day horizon…

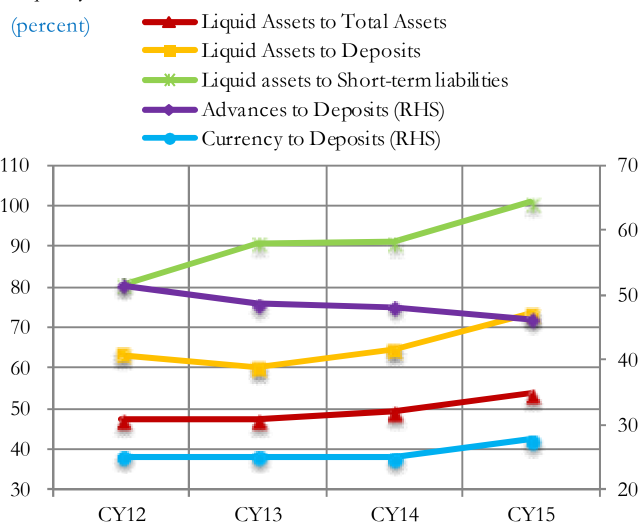
The banking sector presents a mixed picture when it comes to matching the maturity of assets and liabilities. During CY15, banks have fallen short over the 30-day horizon as the deposits maturing within this period have exceeded the assets. In comparison, the Gap for "up to 1m" is also negative in CY14, though it is somewhat lower than CY15. Similarly, the Gap for "3m to 6m" bucket has also turned negative during the period under review **(Figure 2.13)**.

Despite the aforementioned negative Gaps, it has to be kept in mind that maturity Gap analysis does not account for the tradability of the liquid assets. As mentioned before, banks have had a large amount of highly liquid government securities at their disposal, which has contributed to comfortable levels of liquidity throughout the year under review.

On the positive side, there is improvement in Gap for "1m to 3m" and "6m to 1y" maturities. The latter can be largely attributed to the higher stock of long term securities accumulated by the banks over the last two years.

Figure 2.14

Liquidity Indicators stayed healthy



Source: FSD, SBP

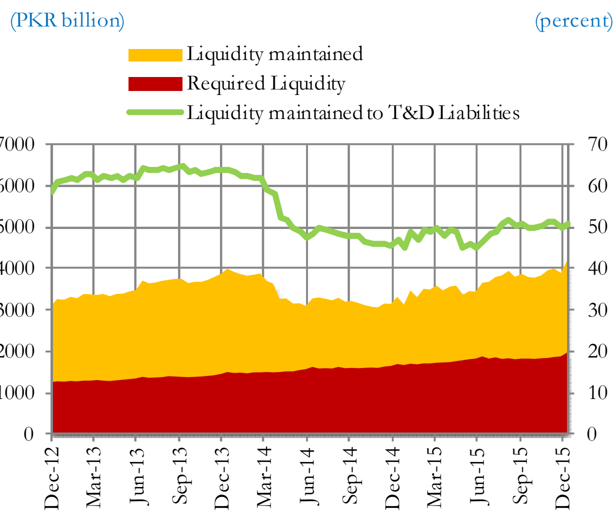
Liquidity indicators stayed healthy…

During CY15, more than half of the assets of the banks have fallen in the liquid assets category. As a result, all liquid assets indicators improved **(Figure 2.14)**. Moreover, liquid assets maintained by the banks with SBP as per Statutory Liquidity Requirement (SLR) continue to remain well above the required level of 24 percent (including 5 percent Cash Reserve Requirement) **(Figure 2.15)**. The ratio stood at 50.8 percent at the end of CY15 compared to 46.8 percent last year.

Figure 2.15

Banks maintained surplus liquidity

Required and Maintained Liquidity by Banks



Source: OSED, SBP

Rising currency in circulation a risk to deposit growth…

In an easy monetary policy regime, currency in circulation (CiC) may increase as the overall money supply increases. However, in an efficient intermediation process, the rise in CiC is not prominent. Over the last few years, the currency-in-circulation to deposits ratio (CDR) in Pakistan has exhibited minimal changes.[68] However, the ratio has increased by 4.0 percentage points to reach 32.5 percent as of end December 2015 from 28.5 percent as of end December, 2014.[69]

The rise in CDR points towards depositors' liquidity preference. In a low interest rate environment and higher money supply, savers' opportunity cost of holding cash declines and they either increase consumption or look for better return assets (such as Stocks, CDNS, Property market etc.) rather than keeping deposits in a bank.

However, normally, major part of these funds channel back to the banks' balance sheet in the form of deposits, but it does not seem to be the case during CY15. Some disincentive in the form of withholding tax on banking transactions could be one of the reasons. Rise in CiC does not bode well for the banking sector and banks need to devise ways to attract depositors, with ample liquidity, in order to have sufficient funds in the future.

Banks would stand resilient towards various liquidity shocks…

Banking sector would remain resilient in the face of different liquidity shocks. The results of stress tests on the banking sector reaffirm that system is satisfactorily placed to withstand liquidity shocks under different stress scenarios. For instance, severe liquidity shocks of significant deposit withdrawal for consecutive five days would have negligible effect on the short-term liquidity of the banks. Further, the liquidity coverage ratio (LCR) of the banking system[70], remained well above the acceptable benchmark of 1, as defined under Basel III. Stress tests are discussed in detail in **Chapter 3**.

Market Risk

Market risk refers to the possibility of losses in the on and off-balance sheet positions arising from adverse movements in market prices (interest rates, exchange rates, commodity prices etc.).[71] The market risk of the banking system has remained manageable during CY15.

Negative short-term rate sensitive Gaps, though within limits, may raise repricing risk in case of increase in interest rates…

During CY15, the Gap between the rate sensitive assets (RSA) and rate sensitive liabilities (RSL) remained negative for "up to 3m" maturity bucket (**Figure 2.16**). Moreover, the Gap for "3m to 6m" maturities also turned negative compared to positive value for CY14. These negative Gaps may expose banks to repricing risk if the interest rates increase in the future as banks may have to borrow at higher interest rates. On the other hand, banks can benefit in case of further decline in interest rates.

[68] CDR has been hovering around 28.6 percent, as of end December, during the last three years (2012-2015).

[69] CDR has further edged up to 35 percent as of April 8, 2016.

[70] The Liquidity Coverage Ratio will require banks to have sufficient high quality liquid assets to survive a significant stress scenario lasting 30 calendar days.

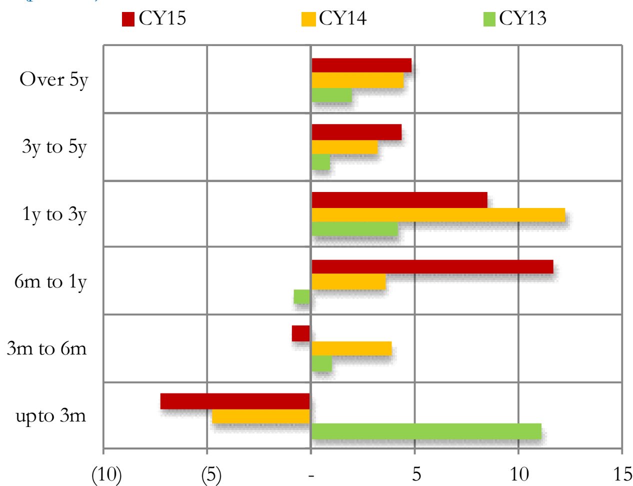
[71] For details see European Banking Authority https://www.eba.europa.eu/regulation-and-policy/market-risk

Figure 2.16

Gap (RSA-RSL) remained positive for long term maturities

Gap (RSA-RSL) as percentage of Assets

(percent)



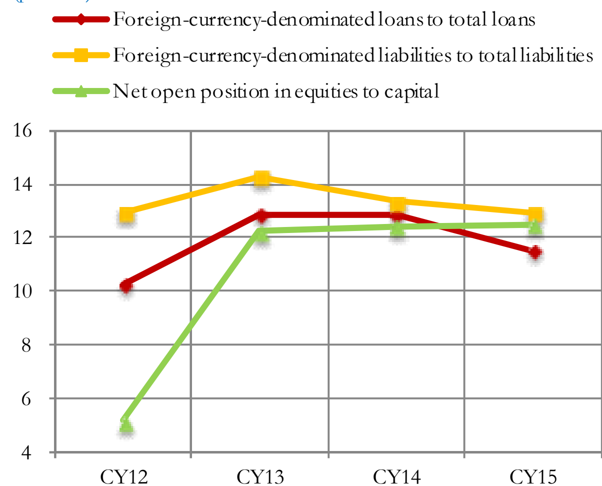
Source: FSD, SBP

Figure 2.17

Market exposure stayed within limits

Foreign currency and equity exposures

(percent)



Source: FSD, SBP

…while positive long-term rate sensitive Gaps may expose banks to revaluation risk in case of rise in interest rates.

Risk sensitive Gap for maturities greater than six months, which was already positive in CY14, has further increased during CY15. This is largely due to the anticipation of further decline in interest rates. Given such high positive Gaps, banks may get exposed to revaluation risk under an increasing interest rate scenario.

Banks' foreign exchange and equity exposures stayed within limits…

Both foreign exchange assets and liabilities have slightly decreased, while equity exposures have exhibited minimal increase. SBP's prudent policies pertaining to limits on foreign exchange and equity exposures[72] are largely behind the aforementioned trends in market exposures of the banking sector **(Figure 2.17)**.

[72] Prudential Regulations R-6 and O-5 for Corporate/Commercial banking http://www.sbp.org.pk/publications/prudential/index.htm

Box 2.1: Banking exposure on Textile Sector – a stability perspective

Textile sector has a special significance in the economy of Pakistan due to its backward and forward linkages. This important sector has deep rooted connection with the real sector in many ways i.e. (a) highest share in export volume, (b) more than 40 percent absorption of workforce employment, and (c) significant participation in manufacturing activity with 8.5 percent share in Gross Domestic Product (GDP)[73]. Further, Pakistan is the 4th largest producer of cotton[74] with 8.8 percent share in the global production[75]. The spinning industry is the key user of cotton and enables Pakistan to hold around 10.33 percent share in global consumption of cotton.

Textile sector is facing multiple challenges and showing dwindling performance in recent times with decelerating production. Growth in Large Scale Manufacturing (LSM) index of textile sector[76] has reduced to 0.53 percent during FY15 from 1.32 percent during FY14 and 1.6 percent during FY13 **(Table 1)**. Recently, during July15-Jan16 (7 months), YoY growth in LSM index has fallen to 0.95 percent compared to 1.05 percent in corresponding period last year.

The textiles' export performance has also been negative. The export of textile & textile articles has touched USD 13.5 billion in FY15 as compared to USD 13.7 billion in FY14 and USD 13.0 billion in FY13 **(Table 2)**. In the first eight months (Jul-Feb) of FY16, textile exports have declined by 8.8 percent and were recorded at USD 8.4 billion. The almost stagnant growth in textile export since last few years might have resulted in decline in Pakistan's share in global textile exports in contrast to rising share of peer countries (China, Bangladesh, India etc)[77].

Table 1

LSM Growth in Textile Sector

Percent	Weight in LSM	YoY Change		
		FY13	FY14	FY15
Textile	**20.91**	**1.6**	**1.3**	**0.5**
Yarn	12.96	2.1	1.6	0.5
Cloth	7.19	0.6	0.7	0.1
Jute Goods (Total)	0.33	9.3	-1.1	-7.2
Woollen & carpet yarn	0.33	-7.5	25.6	46.0
Woolen & worsted cloth	0.09	-3.3	-10.0	-11.0
Knitting wool	0.01	8.5	-21.2	0.7
Woolen blankets	0.00	-27.0	-7.3	47.2
Overall LSM Index		**4.1**	**4.1**	**3.3**

Source: Pakistan Bureau of Statistics
Note: FY means here Fiscal Year

Table 2

Export Performance of Textile Sector in Pakistan

USD billion

	FY14	FY15	Change
Export - Overall Textile	**13,720**	**13,476**	**-1.8%**
of which			
Cotton Cloth	2,770	2,455	-11.4%
knitwear	2,294	2,417	5.4%
Readymade garments	1,909	2,101	10.0%
Bedwear	2,138	2,096	-2.0%
Cotton yarn	1,997	1,842	-7.8%
Towels	767	781	1.8%
Other Textile Items	1,845	1,784	-3.3%
Total exports	**25,110**	**23,880**	**-4.9%**

Source: Pakistan Bureau of Statistics
Note: FY means here Fiscal Year

Not surprisingly, the financial information of listed textile companies at Karachi (now Pakistan) stock exchange shows a clear decline in profits and meager rise in sales growth in FY15 as compared to the previous year **(Table 3).**

[73] Source: All Pakistan Textile Mills Association (APTMA)
[74] http://www.statista.com/statistics/263055/cotton-production-worldwide-by-top-countries/
[75] Source: "COTISTICS – Annual Cotton Statistics Bulletin", Volume 44, August 2015
[76] Textile sector has around 21 percent weight in LSM index.
[77] Latif, R., Javid, A. Y. (2013), "Determinants for The Demand and Supply of Textile Exports of Pakistan", PIDE Working Paper, 2013:95

Table 3

Performance of Listed Companies - Textile Sector

PKR million	Top-20 listed Companies			Textile Industry*		
	2014	2015	growth	2014	2015	grwoth
Equity	160,653	185,037	15%	207,114	238,552	15%
Assets	409,041	449,360	10%	574,231	639,794	11%
Sales	350,963	359,471	2%	564,077	581,388	3%
Profit (before Tax)	13,236	11,172	-16%	20,646	12,684	-39%
Profit (after tax)	10,542	7,842	-26%	16,858	8,611	-49%

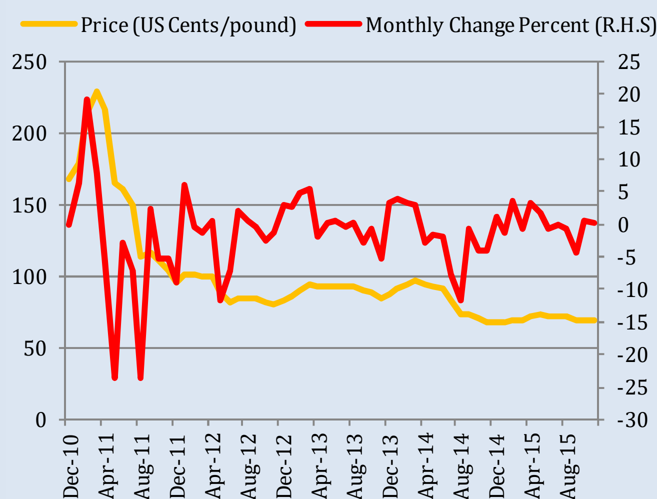
* Available inforomatoin for companies as of Jun-15 is compared with same companies as of Jun-14

Source: Pakistan Stock Exchange

Note: FY means here FY

Figure 1

International cotton prices declined to historical low



Source: IMF

The current state of textile industry in Pakistan could be attributed to multiple reasons, of which, few are listed below:

i. The prices of the textile products in the international markets have plummeted in recent past. The international cotton price index has fallen by 24 percent from 90.09 US Cents per pound in Sep-13 to 68.74 US Cents per pound in Sep-15. The decline is even more pronounced (62 percent) if referenced from Jan-11 (**Figure 1**). Sluggish global demand due to consistent recessionary phase in the Euro Zone and slowdown in China is one of the major reasons for the decline in international prices[78]. The steep fall in prices has adversely impacted the export revenues of the textile sector in Pakistan.

ii. The subdued economic condition in China – one of the key trading partners and buyer of Pakistan's textile goods- also dented the performance of textile exports. The overall export to china declined during Jul14-Jun15 by 15 percent to reach at USD 2.3 billion[79].

iii. Domestically, inadequate availability of energy and rising utility prices have compelled the firms to either make expensive alternate arrangements or shutdown the production, in the extreme case. The rising cost of production has resulted in underutilized and/or unutilized productive capacity making it difficult for the firms to survive. The loss making firms to operating firms in textiles have risen from 36 percent as of Jun-14 to 63 percent as of Jun-15.[80]

iv. The ease of doing business in Pakistan is not up to the mark if compared to the rest of the world **(Table 4)**.

[78] Source: World Bank, "Global Economic Prospects January 2016"

[79] Investigations have revealed that many of the large borrowers have reduced their production due to inability to book orders from China.

[80] Source: Pakistan Stock Exchange.

Table 4

Country-wise Ranking in Ease of Doing Business for Year 2016

	Overall Ranking	Starting Business	Dealing with Construction Permits	Getting Electricity	Registering Property	Getting Credit	Protecting Minority Investors	Paying Taxes	Trading Across Boarders	Enforcing Contracts	Resolving Insolvency
Malysia	**18**	14	15	13	38	28	4	31	49	44	45
Thailand	**49**	96	39	11	57	97	36	70	56	57	49
Turkey	**55**	94	98	36	52	79	20	61	62	36	124
China	**84**	136	176	92	43	79	134	132	96	7	55
Philpines	**103**	165	99	19	112	109	155	126	95	140	53
Sri Lanka	**107**	98	77	81	153	97	49	158	90	161	78
Iran	**118**	87	69	88	91	97	150	123	167	62	140
India	**130**	155	183	70	138	42	8	157	133	178	136
Pakistan	**138**	**122**	**61**	**157**	**137**	**133**	**25**	**171**	**169**	**151**	**94**
Bangladesh	**174**	117	118	189	185	133	88	86	172	188	155
Afghanistan	**177**	34	185	156	184	97	189	89	174	172	160

Source: World Bank

According to World Bank's survey[81] on "ease of doing business", Pakistan has been ranked at 138 (out of 185 countries) included in the survey. This ranking was assigned considering various components important for doing business e.g. access to energy and credit, registering property, trading across boarder, taxes etc. Importantly, as per the report, Pakistan is one of the lowest ranked countries in terms of getting electricity, paying taxes, and enforcing contract.

v. The deceleration in textile sector is reflected in the slowdown in LSM growth in yarn and cloth sectors[82]. The LSM growth in yarn and cloth decelerated to 0.5 percent and 0.1 percent during Jul14-Jun15.

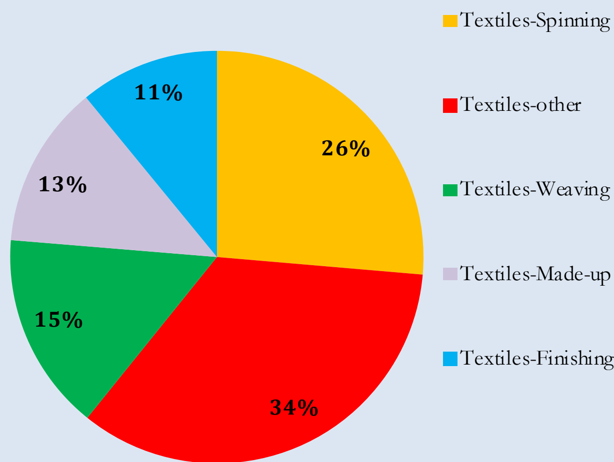
Why is textile sector important for banking sector?

Textile sector has been one of the core users of the banking services in Pakistan. As of end September, 2015 the overall gross lending of all banks to textile sector was PKR 676 billion or 13.4 percent of the overall gross advances[83], of which, around PKR 86 billion exposure was non-fund based (off-balance sheet). Under SBP's export financing scheme (EFS), SBP provides short term financing facilities to exporters through banks for exports of all manufactured goods especially value added products. As of end December 2015, textile sector has around 60 percent share in EFS.

Figure 2

Textile sector exposure is well diversified

Segment-wise Exposure as of End Sep, 2015 - Textile Sector



Source: FSD,SBP

Viewing financing to textile's subsectors, as of end September 2015, highest exposure in textile sector pertains to spinning industry (PKR 138 billion, 26 percent) followed by weaving (PKR 86 billion, 16

[81] http://www.doingbusiness.org/rankings
[82] Yarn and cloths carry 13 percent and 7 percent weight, respectively, in LSM index out of 21 percent for textiles.
[83] Due to cyclical movement, the gross lending keeps moving particularly during last two quarters of calendar year.

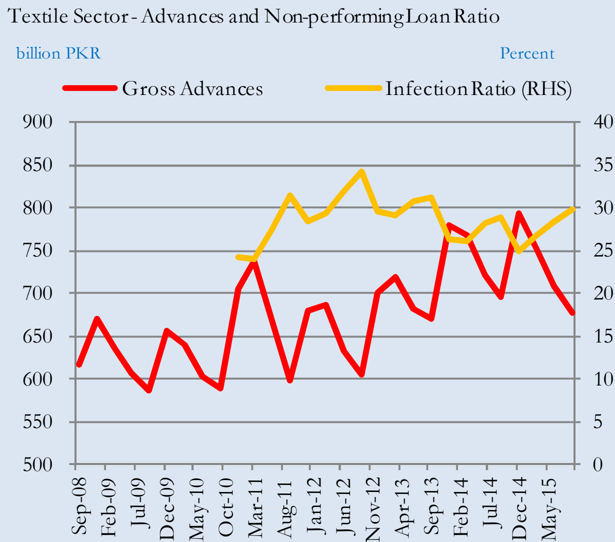
percent), textile made ups (PKR 66 billion, 13 percent), and finishing (PKR 57 billion, 11 percent) **(Figure 2)**[84].

As the performance of textile sector deteriorated and non-performing loans increased[85], its demand for credit subsided **(Figure 3)**. This has been more obvious in case of working capital financing[86]; growth remained negative 2.9 percent during Sep14-15 compared to average positive growth of 4.5 percent during Sep10-14 (4 years). However, since CY14, the general decline in interest rates incentivized borrowing firms to enhance their productive capacity (through borrowing for fixed investment) where textile sector is no exception.

Figure 3

Infection ratio declined yet remained high in textile sector

Textile Sector - Advances and Non-performing Loan Ratio



Source: FSD,SBP

The infection ratio of textiles is also at elevated level. As of Sep-15, gross NPLs of the textile sector stood at 29 percent; most of the bad debts were placed in the loss category with significant legacy (showing weak potential of recovery).

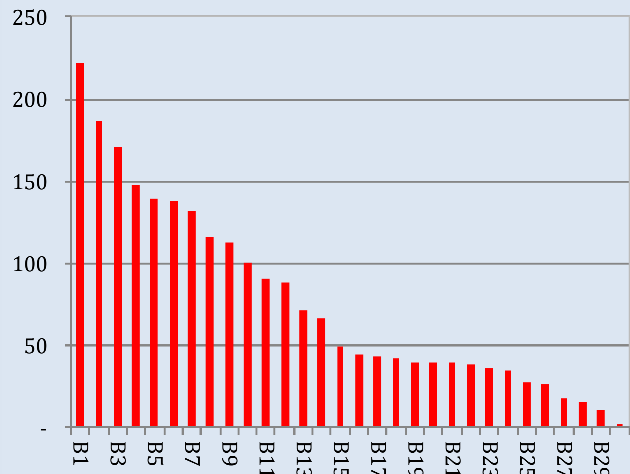
The interconnectedness of the textiles and banking sectors entails some risks to the financial stability. Bank's exposure in textiles is concentrated to a few large entities. The outstanding loan disbursement against top-20 companies stands at PKR 126 billion or around 20 percent of overall funded exposure.

In terms of banks, the exposure to textiles is quite dispersed as twenty nine out of 35 banks are directly serving the industry **(Figure 4).**

Figure 4

Several banks have high exposure in textile sector

Banks' Exposure in Textile - As percent of Equity (As of End Sep, 2015)



Source: FSD,SBP

However, in terms of equity, exposure of some banks is quite high. Nine (9) banks' exposure in textiles industry is more than 100 percent of their equity; while 13 banks' exposure is more than 50 percent of their equity. Considering entity wise high concentration, few defaults can quickly erode the equity of exposed banks and threaten the stability of the banking sector.

Interestingly, however, the five (5) largest banks of the banking sector, though, have high exposure in absolute terms; the concentration in terms of their equity is moderate hovering around 20-30 percent due to their relatively larger equity base.

Stress Assessment:

Given the current state of textiles, any further worsening in the future would have consequences for the stability of the banking system. In the hypothetical scenarios of additional 5 percent, 10 percent, and 20 percent defaults,

[84] Source: e-CIB database, State Bank of Pakistan

[85] Textile sector has the second highest infection ratio in CY15.

[86] Most of working capital financing pertains to textile sector.

the Capital Adequacy Ratio (CAR) of the banking sector reduces to 16.18 percent, 15.63 percent, and 14.55 percent respectively, still well above the minimum required level of 10.25 percent **(Table 5)**. However, solvency of banks with high concentration may come under pressure on default in textile exposure[87].

Table 5

Stress Test - Impact on Solvency with increase in NPLs in Textile Sector

PKR billion	Existing as of end Sep, 2015	If 5% advances become NPLs	If 10% advances become NPLs	If 20% advances become NPLs
Advances - Textile Sector	673	673	673	673
Overall Risk Weighted	6210	6210	6210	6210
Total Eligible Capital	1038	1005	971	904
CAR (in Percent)	**16.72**	**16.18**	**15.63**	**14.55**
Decline in CAR		-0.54	-1.09	-2.17
No of CAR non-compliant banks	2	2	3	6

Source: SBP

Future outlook:

In addition to sluggish global demand, the prime bottleneck hindering the textile sector's growth appears to be inadequate and high priced energy supply. The use of alternates (furnace oil, self-generation of power etc) may be feasible for few blue-chip corporates in short-term but may not be appropriate for majority of the firms. The materialization of government efforts to resolve energy issue through bringing more power into the system or tax incentives[88] in favor of textile sector are positive signs for the sector.

Further, the successful conclusion of dialogue between APTMA and government on textile package[89] may also have some positive impact on textile production and financing from banks. The World Bank's forecast on global oil price is on downside due to excess supply. The spillover effect in terms of reduced oil prices in Pakistan may continue to provide partial support to textile industry.

As per World Bank survey, consistently low cotton prices are expected to bottom out with signs of mild recovery in coming years of 2016 and 2017[90]. This will help Pakistan's textile exports to grow with expected pick up in textile financing given other domestic bottlenecks are removed.

Besides, the performance of textile sector will also depend upon other important factors including stability of exchange rate, international and local regulations, political stability and law and order conditions in the country. Importantly, the GSP plus status awarded to Pakistan by EU is subject to fulfillment of various conditions[91]. In case GSP plus status is withdrawn due to failing of one or few conditions, it may negatively impact the textile sector exports.

[87] It has been observed in 2011 that default of few large borrowing groups raised the infection ratio of the banking industry.
[88] Recently, FBR has continued to keep its zero rating policy (i.e. zero sales tax on use of gas and electricity) to textile, surgical, lather, carpets, and sports goods to spur exports.
[89] APTMA has been requesting the government to withdraw three percent duty on import of cotton, remove surcharge of Rs3.60/unit of electricity, and do away with Gas Infrastructure Development Cess. Besides, the association is asking to release sales tax refunds pending for years.

[90] Source: World Bank, "Commodity Market Outlook", October 2015.
[91] Including signing and implementation of 27 core International Conventions pertaining to; Human Rights, Labor Rights, Environment, Narcotics Control and Corruption besides vulnerability criteria (https://www.tdap.gov.pk/eu-atp-assets/EU_GSP_Plus_FAQ.pdf)

Box 2.2: Sugar Sector and Banking Sector Stability[92]

The second largest agro-industry of the country, Pakistan's sugar industry stands as the World's eighth largest producer and the fifth largest in terms of sugarcane production[93]. Sugarcane crops cover 1.17 million hectares of cultivated land and provides raw material to 89 sugar mills, playing a crucial role in creating economic activity in the country.

Table 1
Pakistan Sugar Industry Facts

Year	Refined Sugar Produced (Million Tones)	Carryover Stock (Million Tones)	Sugar Cane Support Price (Punjab-Sindh) (Rs per 40 Kg)	Average Retail Price of Sugar (Rs per Kg)	Area under Sugarcane Cultivation (Million Hectares)	Sugarcane Produced (Million Tones)
2009-10	3.14	0.87	100-102	63.41	0.94	49.37
2010-11	4.17	1.03	125-127	73.65	0.99	55.44
2011-12	4.65	1.11	150	57.16	1.04	58.04
2012-13	5.06	1.39	170-172	53.41	1.13	63.72
2013-14	5.62	0.84	170-172	54.8	1.17	67.43
2014-15	5.13	1.197	180-182	59	1.13	64

Source: Pakistan Sugar Mills Association (PSMA) Annual Reports/Reviews

Geographically, 45 sugar mills are located in Punjab, 7 in KPK and 37 in Sindh. Over the last five years, problems like high cost of production, narrow profit margins[94], serious productivity growth problems and province-wise support price differential have hurt the sector and limited the mills ability to meet their financial liabilities[95].

An analysis of the last six years revealed that sugar industry is facing issues of surplus stock and lower sugar prices. The persistent higher sugarcane support prices since 2009-10 have led to the increase in area under sugarcane cultivation and consequently higher availability of sugarcane. Farmers got better income but cost of production rose for the mills. Carryover stocks and bumper sugarcane crops created a glut in the domestic sugar market which subdued the prices in 2011-2012 and onwards making it difficult for the mills to cover the cost of production. From 2010-11 onwards, surplus sugar stock along with suppressed sugar prices can also be observed in the international markets[96].

The government has allowed export of sugar since 2011. However, due to non-competitiveness of domestic sugar prices as compared to international prices, higher quantities could not be exported. Government also permitted subsidy on sugar exports, but it was not enough to cover the price differential between domestic and international sugar prices and sugar mills failed to meet the export quotas. In order to support domestic sugar prices, Government has also imposed 20 percent regulatory duty on import of cheap raw and refined sugar in November 2014 which was subsequently increased to 40 percent in August 2015.

Table 2
Key Performance Indicators of Sugar Industry

Financial Ratios	FY10	FY11	FY12	FY13	FY14	FY15*
Current Ratio	0.7	0.9	0.8	0.8	0.8	0.8
Cost of goods sold to sales %	89.2	88.2	90.8	92.1	92.4	89.6
Debt Equity Ratio	2.3	2.8	2.7	2.3	2.5	2.2
Net profit margin before tax %	3.3	3.4	1.3	1.6	0.7	3.2
Return on Assets before tax	4.6	4.5	1.5	2.0	0.8	2.9
Return on Equity before tax	17.3	16.2	5.5	6.9	2.5	9.2

Source: Statistics & DWH Department, SBP 2015. Data represents financial results of 31 listed sugar mills.
* Data is based on audited financials of 15 listed sugar mills. The selection of sugar mills is based on the availability of financials for the year 2015.

The financial condition of sugar industry reveals rising cost of production with narrow profit margins (**Table 2**). Return on Assets (ROA) and Return on equity (ROE) has declined to historically low levels at 0.75 percent and 2.54 percent, respectively in 2013-14. However, financial results for 2015 suggest encouraging picture for sugar industry.

Banking Sector Exposure on Sugar Industry

The banking sector's total advances in Pakistan reached to their historic high of PKR 5.051 trillion as of 30-09-2015 with sugar sector financing[97] of around PKR

[92] The financial year of sugar mills end in September of every year. Therefore, end September data is used for analysis in this box.
[93] Pakistan Sugar Mills Association (PSMA) Annual Report 2014.
[94] For further details, see **Table 2**.
[95] Overview of sugar industry in Pakistan, June 2013, Lahore Chamber of Commerce and Industry.
[96] ISO Quarterly Market Outlook Aug 2014.

[97] Sugar sector financing comprises of two parts; commodity financing extended for trading of sugar and sugar financing extended to sugar mills for manufacturing.

184.475 billion (3.65 percent of total banking advances). The last five years statistics show that, on average, the share of sugar sector in total banks' advances accounts for a notable 4.0 percent, with commodity financing share of 1.0 percent and sugar financing share of 3.0 percent **(Table 3)**. Private sector stood as the major contributor of sugar sector financing with 2.95 percent share, followed by the public sector with an average share of 1.10 percent.

Table 3

Sugar Industry Exposure Bifurcation (PKR Billions)

Years	Commodity Financing	Sugar Financing	Total Sugar Industry Exposure
FY11	39.0	95.0	133.9
FY12	44.2	97.9	142.1
FY13	38.6	108.0	146.6
FY14	43.7	139.2	182.9
FY15	48.8	135.6	184.5

Source: FSD, SBP

Infection Ratio Analysis of Sugar Industry

During the last five years, the average infection ratio of sugar sector financing stood at 5.26 percent, in comparison to the overall banking sector's infection ratio of 14.15 percent. Further, the ratio gradually came down after touching the peak of 11.2 percent in Dec 2011 to as low as 2.63 percent in Mar 2015 (**Figure 1**). Afterwards, there is an uptick in bad debts in sugar sector and the infection ratio, as of 30th September 2015 stands at 5.08 percent.

Following the same trend of overall sugar financing, the infection ratio exhibits high average for private sector in comparison to public sector. Public sector infection ratio was essentially nil (due to the exposure being backed by government guarantees) as compared to private sector's NPL ratio of 7.49 percent on average over the last five years. Hence, the trend in infection ratio in sugar industry is entirely driven by the private sector.

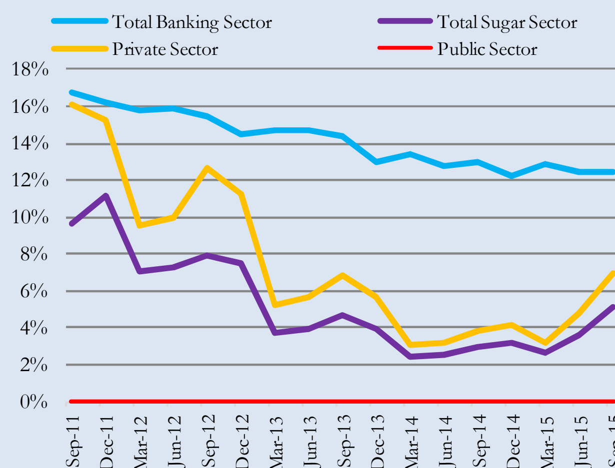
The main drivers behind the infection ratio of sugar financing could be the rising production costs due to higher sugarcane support prices; lower sale prices due to excess supply resulting from higher than expected sugarcane crops during the last five years along with carryover stocks of sugar; and lower than domestic sugar prices in the international market[98].

Figure 1

After Mar 2015, upward trend in infection ratio

Infection Ratio of Sugar Industry

(PKR billion)



Source: FSD, SBP

A granular analysis of sugar financing as reported in e-CIB (30-09-2015) highlights the following facts:

- Sugar exposure is significantly concentrated in top 5 banks which constitute around 54 percent of total sugar financing.
- Approximately 44 percent of the funded exposure is concentrated in top 10 borrowers.
- Among top 20 borrowers, only one borrower was reported as defaulter.

Future Outlook

The International Sugar Organization (ISO) in its report for August 2015 has reported world production for 2015 at 170.911 million tons against the consumption of 173.398 million thus creating a deficit of 2.487 million tons. As such it may have some impact on price of sugar in international market. Also the World Bank Commodity Markets outlook 2015 predicts that, nominal

[98] For further details, See table 1

annual sugar prices ($/kg) is expected to show an increasing trend in 2016 and onwards due to decrease in world sugar production. Moreover, domestic average retail sugar prices have registered a rise of Rs 4/kg in 2014-15 after announcement of sugar export quota by the government[99]. The expected rise in sugar prices may bring some respite to the industry.

Moreover, the improving financial results for 2015 also bode well for sugar industry. The government, in addition to the measures already taken, may also look at the incentives given by neighboring countries to support their sugar industry.

All in all, the outlook of sugar industry is positive and its impact on banking sector is likely to be less risky.

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[99] *Pakistan Sugar Mills Association, Statistics National*

3 Profitability, Soundness and Resilience

The momentum in banking sector's earnings continues as the sector has posted healthy profits in CY15 on the back of both markup and non-markup income. The solvency of the system improved further due to increase in capital base fuelled by retention of earnings. Both risk based and non-risk based solvency indicators have improved; Capital Adequacy Ratio (CAR) stood well above the minimum regulatory benchmark and Leaverage ratio is also higher than the level suggested under Basel-III. In the coming year, profitablity of the banking sector might come under pressue due to low yield on maturing government debt. Slower internal capital geneartion through profits and incerasing riskiness of the balance sheet might also effect solvency profile. Banking sector, at the moment, has enough cushion avilable to withstand a range of stress shocks.

Profitability

Banks' profitability represents first line of defense against unexpected losses. Retention of earnings is an important source to build capital buffers which improves shock absorption capacity of banks.

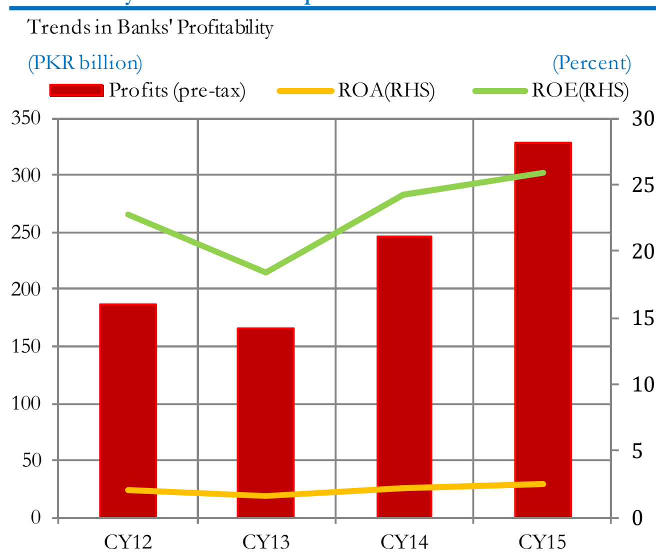
All the profitablity indicators show improvement…

Earnings, being an important barometer of the financial health of a banking sector, have improved significantly over the last three years in Pakistan. Profit before tax has doubled during this time from PKR 165 billion in CY13 to PKR 329 billion in CY15. Accordingly, all the profitability indicators saw improvement; ROA to 2.5 percent (up from 1.7 percent in CY13) and ROE to 25.8 percent (up from 18.4 percent in CY13) (**Figure 3.1**).

The recent income surge in CY15 came at the back of high net mark-up income contributed not only by 21 percent (YoY) growth in interest earned on government securities but also by 13 percent (YoY) saving on interest expense on deposits[100]. The 25 percent growth in non-interest income, primarily due to high gains on the sale of PIBs, further improved the profitability of the banking sector.

Figure 3.1

Profitability indicators have improved



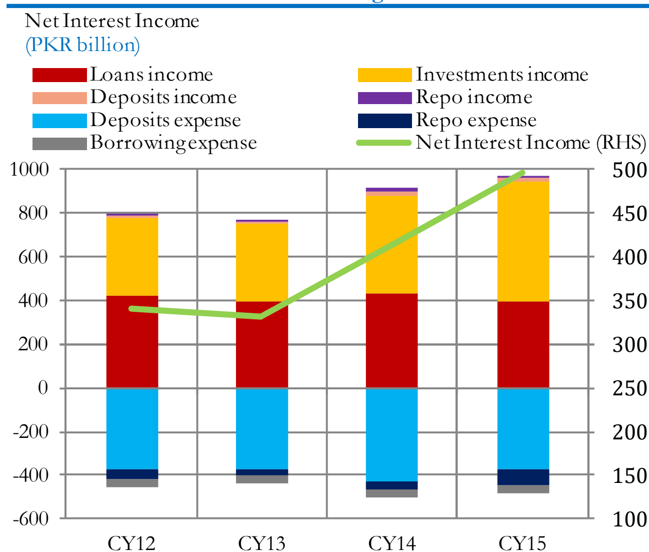
Source: FSD, SBP

Increasing markup on investments and declining cost of deposits increased Net Interest Income (NII)…

During the last three years, NII of the banking sector has witnessed a surge of 14 percent (YoY), on average, due to improvements in markup income on investments that registered average growth of 15.9 percent (**Figure 3.2**). Markup income on loans, at the same time, has declined by an average of 1.8 percent (YoY).

[100] Subsequent to decline in policy rate by 350 bps, WADR during this period dropped by 160 bps.

Figure 3.2
Net interest income continued its rising trend



Source: FSD, SBP

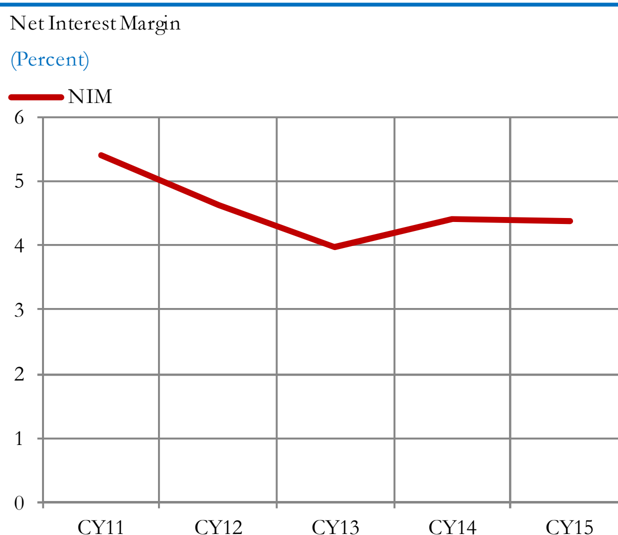
The divergence in interest income from two main sources of earning assets comes as a no surprise. A cumulative 400 bps decline in policy rate over the period CY14 to CY15 has impacted the returns on KIBOR linked earning assets. On the contrary, investments, largely in government securities, have continued to accumulate, resulting in growing interest income. Interest from investments have helped off-set the reduction in the markup/interest earnings from advances.

The cost leg of net markup income, predominantly comprising of deposit and borrowing costs, has increased by only 2.1 percent, on average, during the last three years. In fact, in CY15 markup expense declined by 3.8 percent mainly due to 13.2 percent savings on interest paid on deposits. As a whole, the markup cost on deposits grew by only 0.5 percent, on average, during CY14 to CY15. As for the borrowings, the cost (mainly on repos) surged by 34.7 percent, on average, during the same period. Rising cost of Repo borrowings observed a phenomenal growth of 137 percent in CY15, incurred mainly to address the liquidity stress faced by the market.

..but Net Interest Margin (NIM[101]) observerd nominal decline.

Despite the rise in NII, NIM remains anchored at 4.4 percent in CY15 **(Figure 3.3**). Declining interest rates along with increase in cost of Repo borrowings have decelerated the growth in the net interest income. Also, the portion of higher income generating asset (i.e. advances) in earning assets has been slower. Consequently, NIM has registered a negligible fall of 4 bps in CY15. Given the falling yields on maturing government securities, NIM could come under pressure in the coming months.

Figure 3.3
NIM remained stable



Source: FSD, SBP

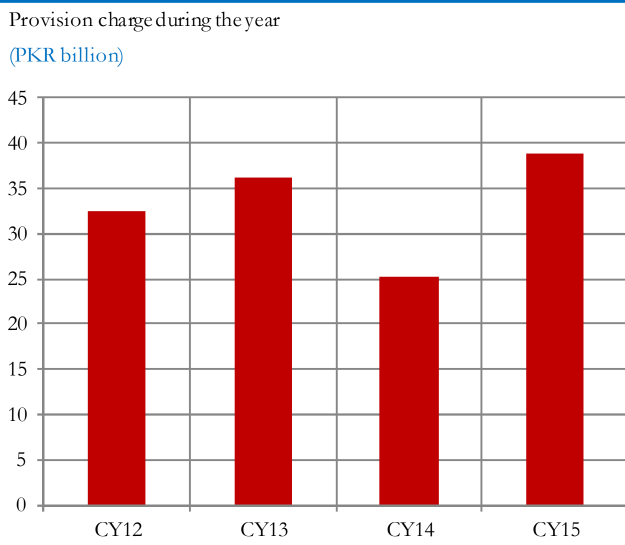
Provision charge surges due to shift in NPLs portfolio…

Despite decelerated growth in NPLs of the system in CY15, the provision expense increased by 53.5 percent (YoY) during CY15. This rise largely resulted from shifting of existing NPLs to 'loss" category where provision charge is 100 percent of

[101] NII over average earning assets equals NIM.

the outstanding amount and phasing out of FSV (Forced Sale Value) benefit[102] (**Figure 3.4).**

Figure 3.4
High provision expense due to shifting of NPL categories



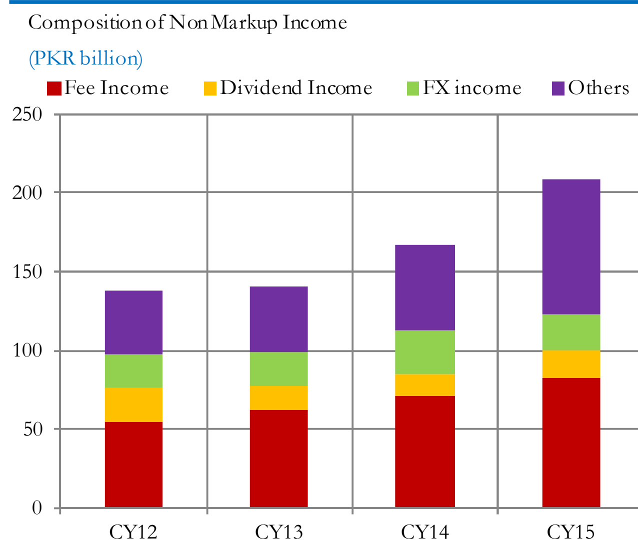
Source: FSD, SBP

Non-mark up income contributed significantly towards profitability…

Non markup income is generally driven by fee based business of banks and dynamic treasury management which pays off in the form of capital gains in stocks, FX and bond markets. Along with growth in the core income[103] in CY15, the non-mark up income of banks has grown at an accelerated pace of 24.7 percent on YoY basis. The growth is largely supported by improved fee based income from trade and insurance related services offered by banks and other income where substantial gains are booked on sale of PIBs (**Figure 3.5 and 3.6**).

In CY15, the fee income, which contributed 40 percent towards non-markup earnings, improved by 17.4 percent. The dividend income, though a smaller component of non-mark up income has grown by 20 percent indicating that banks have maintained their interest in healthy corporates.

Figure 3.5
Non mark-up income largely driven by fee income and other income



Source: FSD,SBP

Gain on sale of PIBs are an important source of other non-markup income…

Gain on sale of securities is a significant contributor towards non-markup income in CY15. Previously, capital gains on quoted shares used to be the major component of this type of income as the banks benefited from positive movement of capital markets (**Figure 3.6**).

However, in recent years, the accumulation of longer tenor government bonds with higher rates, in anticipation of declining interest rates and subsequent movement of interest rates as per expectations, have largely contributed towards this component. As the interest rates declined, banks realized huge capital gains in CY15 by selling longer tenor government bonds of higher yields.

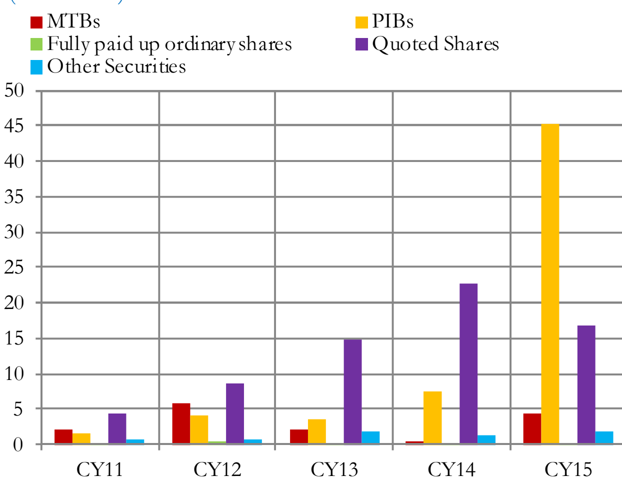
[102] BSD Circular No 1 of 2011
[103] Please see Box 3.1 on income composition.

Figure 3.6

PIBs largely contributed towards gain

Gain on Sale of Securities

(PKR billion)



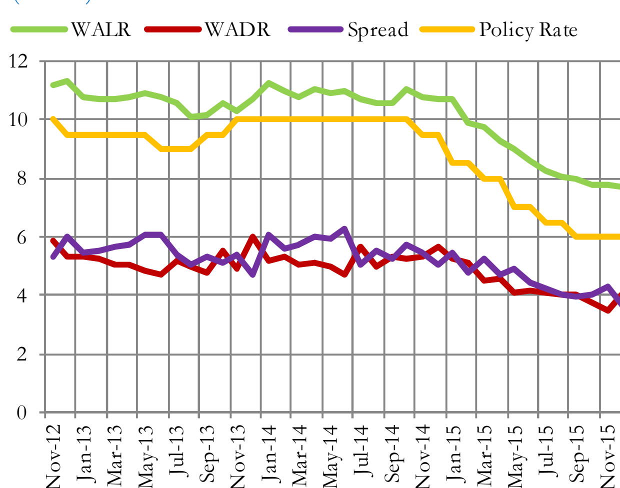
Source: FSD, SBP

Figure 3.7

Spread in tandem with policy rate

Movement of Deposit, Lending and Policy rates

(Percent)



Source: SBP

Banking spread has considerably reduced in the last three years…

Interest rate movement has also impacted retail rates, such as Weighted Average Lending Rate (WALR) on fresh loans and Weighted Average Deposit Rate (WADR) on fresh deposits. Both these retail rates are, to a large extent, synchronized with the SBP policy rate (**Figure 3.7**).

Against the policy rate decline of 4 percentage points over CY13 to CY15, WALR declined by 3 percentage points and WADR by 1.96 percentage points to stand at 7.74 percent and 4.04 percent, respectively, in CY15. Relatively lower decline in WADR is understandable as SBP, to protect the depositors' interest, has put in place MSR since 2008.

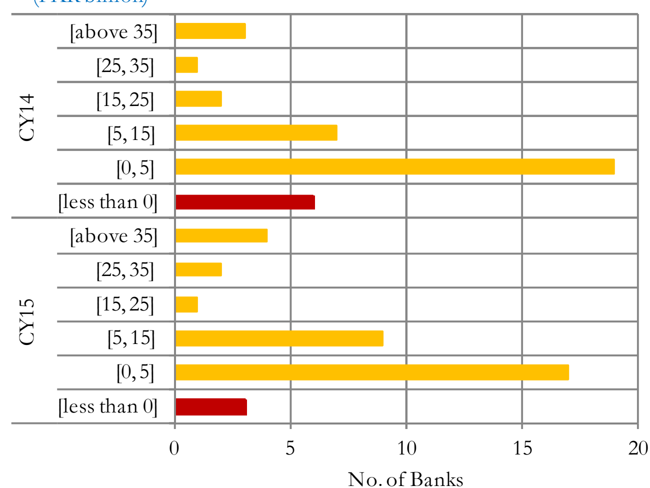
Consequently, the spread charged by banks has reduced by 100bps to 3.69 percent in CY15 from 4.72 percent in CY13. Despite this decline in spread, yield on rising volume of investment portfolio is supporting profitability of the banking system which should have otherwise declined.

Figure 3.8

Number of loss making banks has reduced

Pre-tax profitability of banking sector

(PKR billion)



Source: FSD, SBP

Concentration in earnings has also reduced…

Bank-wise statistics reveal a broad based contribution in banking profits as 32 banks posted profits, while the count of loss making banks has come down to 3 in CY15 from 6 in CY14 (**Figure 3.8**).

Concentration of earnings has further reduced as the share of large banks in total profits declined to 72 percent in CY15 from 78 percent in CY14. While share of medium banks increased from 18 percent in CY14 to 19 percent in CY15; whereas small banks' share in profitability doubled to 8 percent in CY15 from 4 percent in CY14. Very small banks have also been successful in sharing 1 percent of earnings in CY15 from their negligible share in CY14 **(Table 3.1)**.

Table 3.1

Concentration of Earnings by Bank Size

Bank Category	CY14	CY15	Change (percentage points)
	Share in earnings(before tax)		
Quartile 4 (Large)	78	72	-6
Quartile 3 (Medium)	18	19	1
Quartile 2 (Small)	4	8	4
Quartile 1 (Very Small)	0	1	1

Source: FSD, SBP

Solvency

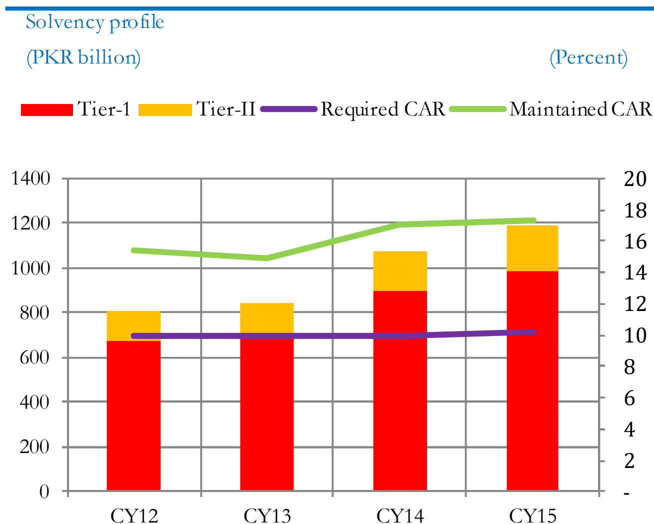
Both risk based and non-risk based indicators of solvency show improvement…

Despite the implementation of a comparatively strict Basel III Capital Accord, the overall capital adequacy of the banking sector remains well above the local benchmark of 10.25 percent. Over the years, guided by proactive and effective policies of SBP, banking sector has been successful in maintaining a healthy capital adequacy profile.

Capital Adequacy Ratio (CAR) exhibited a healthy jump of 249bps in the last three years to reach 17.3 percent in CY15, at the back of relatively higher growth in capital than Risk Weighted Assets (RWAs) (**Figure 3.9).** During the same period, RWAs also grew at an average rate of 9 percent; largely contributed by Market Risk Weighted Assets (MRWAs). The leverage ratio[104] after a slight decline stood at a comfortable level of 5.8 percent in CY15–well above the Basel-III standard requirement of 3 percent. Most of the banks are also compliant with the prescribed Minimum Capital Requirement (MCR) of SBP.

Figure 3.9

Solvency of the banks gets stronger



Source: BPRD, SBP

Improvement in CAR is seen across all the categories of banks

In terms of size, CAR has improved among all categories of banks (**Table 3.2**). Large banks, which are holding 70 percent of the industry's risky assets, have maintained their CAR above the local benchmark. On the other hand, CAR of medium sized banks has improved over the years due to capital build up in these banks, which will pay off in expanding their balances sheets in future. Small banks followed this trend as they build their capital base in CY15 and expanded their balance sheets in tandem.

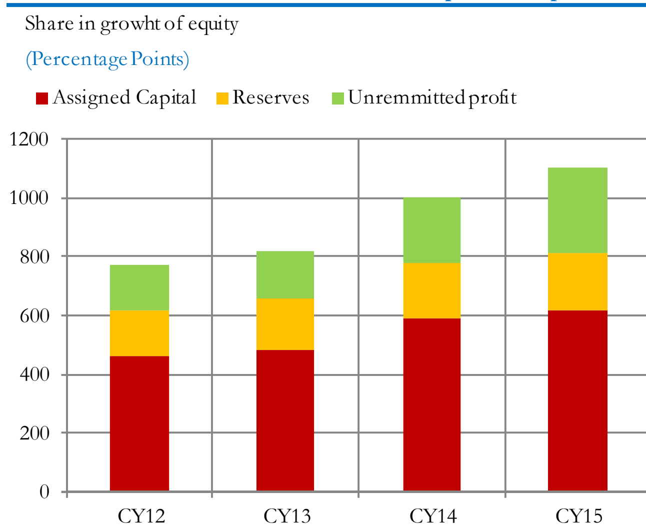
[104] Leverage ratio is defined as Tier-I capital as proportion of total assets (adjusted both sides for intangible assets). The inverse of leverage ratio is called leverage multiples.

Table 3.2
Capital Adequacy Ration(CAR) by Bank Size

Bank Category	CY13	CY14	CY15
	percent		
Large	15.2	15.8	15.9
Medium	12.1	13.8	14.8
Small	13.6	15.2	16.3
Very Small	17.5	15.0	18.2

Source: FSD, SBP

Figure 3.10
Profit retention remained the main source of capital buildup



Source: BPRD, SBP

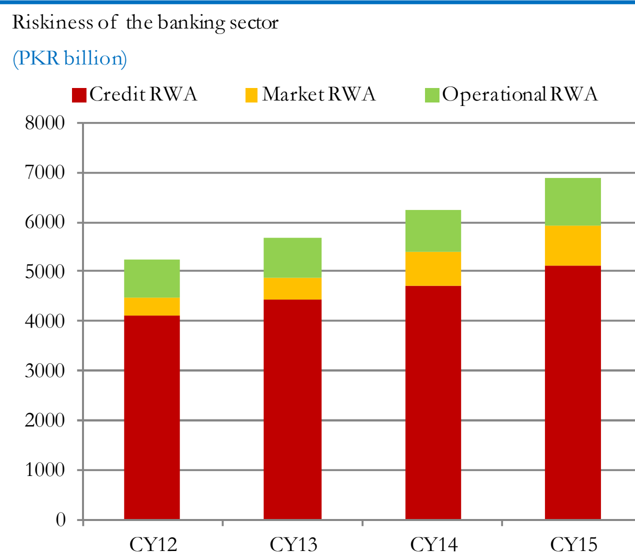
Improved profitability augmented Tier-I capital…

Pecking order theory[105] strongly holds in case of local financial sector as most banks widely utilized profits generated internally to increase capital positions **(Figure 3.10).** In CY15, the increase in Tier-1 capital has been supported by 28 percent growth in the retained earnings and some enhancement in the paid-up capital of the banks. Hence, Tier-I capital increased by 10.5 percent; bringing its share in the regulatory capital to 83 percent in CY15.

Credit Risk Weighted Assets(CRWAs) share decreased slightly…

In line with private sector's credit uptake, CRWAs witnessed a growth of 9 percent during CY15 (**Figure 3.11)**. This rise was largely for unrated borrowers carrying a risk weight of 125 percent and retail exposure including residential mortgage with risk weights of 75 and 35 percent, respectively. However, the contribution of CRWAs in total riskiness of the banking system has declined marginally (74.7 percent in CY15 compared to 75.2 percent in CY14) due to accelerated rise in MRWAs.

Figure 3.11
Credit risk remains dominant



Source: BPRD, SBP

…while MRWAs continue to grow at a faster pace

MRWAs have witnessed a sizeable growth of 16 percent (YoY) that has enhanced its share in total RWAs by 60 bps in CY15 to reach 11.7 percent. Among the MRWAs, Interest rate risk (IRR) provided most of the increase in capital charge due to significant increase in stock of investments in

[105] In corporate finance, pecking order theory postulates that companies prioritize their sources of financing, first preferring internal financing, and then debt, lastly raising equity as a "last resort".

long term PIBs. With 10.5 percent growth in equity investments by the banks, the associated capital charge also grew in tandem.

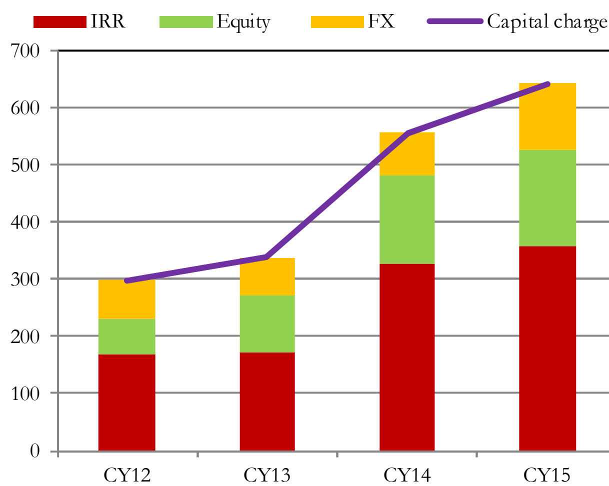
The foreign currency position related capital charge showed a significant growth of 57.5 percent probably due to revaluation of FX positions in CY15. FX related charge's share in total market related capital charge has increased to 18 percent in CY15 from 13 percent in CY14 (**Figure 3.12**).

Figure 3.12

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

Market Risk Components

(PKR billion)



Source: BPRD, SBP

Share of Operational Risk Weighted Assets (ORWAs) observed marginal decline…

The ORWAs have increased by 9 percent during CY15 mainly due to stable profitability of the banking system. Most of the banks in Pakistan use Basic Indicator Approach (BIA) to measure operational risk charge. Under the BIA, operational risk charge is 15 percent of the average of last three years' positive annual gross income. As the methodology of calculating ORWAs is dependent on gross income of the banks, so ORWAs naturally increases with increase in gross income. Despite growth in ORWAs in CY15, their share in total RWAs has marginally declined to 13.6 percent (a nominal dip of 13bps) due to accelerated rise in MRWAs.

The riskiness of the banking sector remains low…

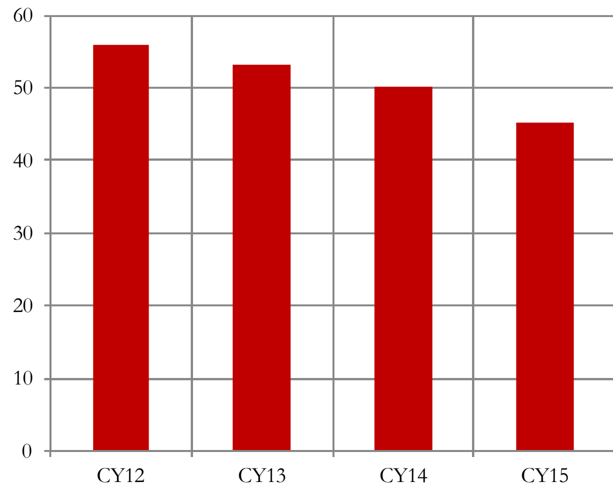
Despite growth in RWAs, the overall riskiness of the banking sector (CRWA assets to average earning assets) continues to subside (**Figure 3.13**). This is reasonable as major part of the 21 percent expansion in earning assets during CY15 carries low or zero risk weights. In line with the large share of public sector investments, share of zero risk weighted asset reached its highest level of 45 percent during CY15 from 39 percent in CY14.

Figure 3.13

Declining banking sector riskiness

CRWAs to Average Earning Assets

(Percent)



Source: BPRD, SBP

Share of assets in rest of the risk weighted categories (usually assigned to the advances extended to private sector) continued to decline, an outcome of slow growth in private sector credit (**Figure 3.14**). Since CRWAs observed relatively low growth of 9 percent, share of CRWAs as a percentage of average earning assets declined by 1.9 percentage points in CY15. This trend though favorable in short run,

may compromise risk management capacity of the banking sector in the future.

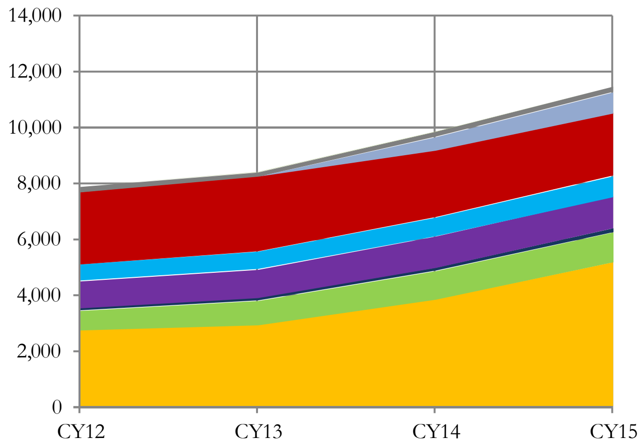
Figure 3.14

Expanding balance sheet fuelling little to CRWAs

Distribution of CRWAs as per weights assigned

(PKR billion)

0 | 20 | 35 | 50 | 75 | 100 | 125 | 150 | 1000



Source: BPRD, SBP

MCR policy guiding CAR…

A higher capital base above the regulatory requirements provides banks with sufficient cushion against unexpected idiosyncratic shocks and severe macroeconomic conditions. As part of its policy to strengthen common equity base of banks, the SBP over the period has enhanced the MCR requirements in gradual manner. The outcome of this approach is obvious in comfortable CAR of most banks (**Table 3.3**). Banks falling short of minimum CAR represent merely 1.4 percent of total asset of the industry and as such do not pose any serious concern to the solvency of the banking sector.

Table 3.3

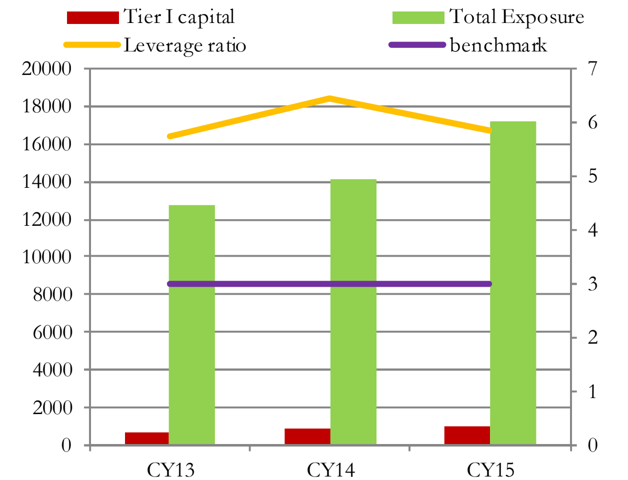
Distribution of Banks by CAR

	CY12	CY13	CY14	CY15
CAR<Required	5	5	3	3
Required<CAR<15percent	9	12	12	13
> 15 percent	24	21	22	19
Total	38	38	37	35

Source: BPRD, SBP

Figure 3.15

Banks have margin to increase leverage



Source: BPRD, SBP

Banking system's leverage remains well within the prescribed limit…

The leverage ratio, a non risk based indicator of solvency, despite slight decline remained at a comfortable level; thanks to growing Tier-I capital which kept on supporting the increased asset base. However, during CY15, leverage ratio declined by 61 bps due to higher expansion in the asset base relative to Tier-I capital. In CY15, the leverage ratio stood at 5.8 percent, much higher than the minimum 3 percent set by the Basel Committee on Banking Supervision[106] (**Figure 3.15**). However,

[106] The parallel run period of leverage ratio in Pakistan is from December 31, 2013 to December 31, 2017.

industry has still the gap of 285 bps between actual leverage and benchmark leverage which can be exploited to increase its asset base with existing level of equity.

Risk based measure of CAR is also reinforcing the room for further risk taking in banks' balance sheets. With current level of regulatory capital, benchmark CAR will remain within prescribed limit even if banks expand their risk weighted assets by 69 percent (**Table 3.4**).

With a comfortable level of both CAR and Leverage indicators and potential of growth in the economy, banking industry enjoys enough buffer to further increase its exposure to the private sector in the future.

Table 3.4

Capital Cushion CY15(PKR billion)

	Existing	Simulated	Cushion
Capital	1,190.4	1,190.4	-
RWAs	6,865.3	11,614.1	4,748.9
CAR	17.3%	10.3%	

Source: BPRD, SBP

Resilience

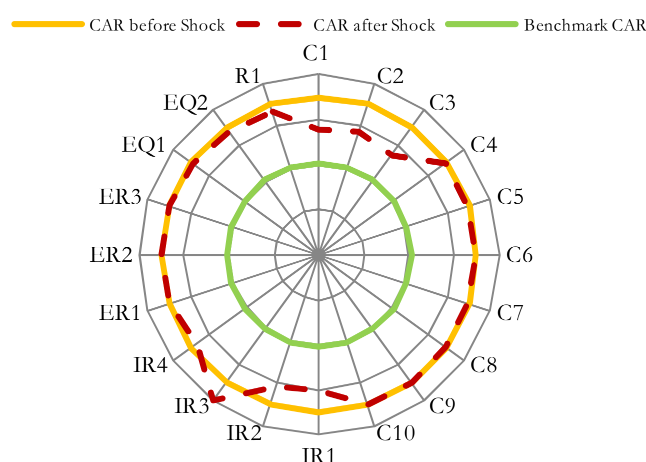
The banking system exhibited resilience under stress due to strong CAR of 17.3 percent as of CY15. Results of adverse scenarios for the credit, market, liquidity and contagion risk on the banking sector reaffirms that the system has sufficient cushion to withstand the stressed shocks[107]. Importantly, all banks with before-shock CAR of above 12.2 percent, including top 5 banks of the industry, would comfortably bear the solvency shocks.

[107] For details of the shocks, please see Table 1.13 of the Quarterly Compendium: Statistics of the Banking System, December 31, 2015 http://www.sbp.org.pk/ecodata/fsi.asp

Under sensitivity analysis, the after-shock CAR of the system would stay strong, though certain shocks to the credit risk portfolio would have significant impact on the solvency profile of the banking system. In case of the credit shocks; including, shock (C-1) assuming an increase in NPLs equivalent to 10 percent of performing loans, (C-2) default of top 3 private sector individual borrowers (fund based exposures only), and (C-3) a shock of default of top three borrowers (both fund and non-fund based) the highest decline in CAR of the banking system would be up to 380 bps (**Figure 3.16**). Keeping in view their systemic implication of high concentration of top corporate and group exposure, banks need close monitoring of such exposures.

Figure: 3.16

Banking system found resilient under multiple stress shocks



Source: FSD, SBP

Despite considerable rise in MRWAs, overall 12.0 percent share in total risk weighted assets continued to present a subdued market risk profile. However, market risk related sensitivity shock which, assume a parallel shift of yield curve by 300bps results in significant impact on banks CAR (industry CAR would experience a decline of 240bps). Similarly, analysis of liquidity stress tests, which envisaged

significant withdrawals of deposits and volatile funds, and dip in value of liquid securities, showed that the ample fund based liquidity in the system, would provide enough cushion to meet significant withdrawals of deposits and volatile funds. Also, industry's liquidity coverage ratio (LCR) - a measure of 30-days stressed liquidity position of banks under Basel III framework- would remain well above the required minimum level of 100 percent in a scenario assuming the value of government securities would marginally decline.

Macro Stress Testing

In addition to sensitivity analysis, SBP performs macro stress tests on aggregate data, using a top down approach, on quarterly basis. The objective is to assess the loss absorption capacity of the banking sector in terms of 'capital adequacy ratio' or CAR in the event of adverse macroeconomic shock(s). By employing a suit of models, the scope of macro stress testing exercise currently focuses on both the credit risk posed by the lending portfolio and market risk posed by investment portfolio of the banking industry.

Macro stress testing was first introduced in 2008 by SBP as a tool for macro-prudential surveillance[108]. While, the preliminary work essentially proposed processes and components of the framework, over time it has kept evolving and changing with the expansion of the banking sector. Various bank's publications had quantitatively evaluated and discussed the impact of macroeconomic developments on industry's performance in a macro-financial modeling setup.[109]

[108] Financial Stability Review 2007-08.

[109] For instance, Financial Stability Review 1st Half 2011, Quarterly performance review of the Banking System (September 2008, December 2008, March 2009).

To stress test the banking portfolio, for this FSR, we have designed a *baseline* (or business as usual) scenario and a separate *stressed* scenario. The reference period for this hypothetical analysis is from Q2CY16 to Q2CY18 i.e. 9 quarters.

For assessing credit risk, one of the models bank uses is the Credit Portfolio View (CPV) model based on Blaschke et al (2001)[110]. Under this approach, in case of Pakistan, it is assumed that the GNPLR is a function of growth in output (GLSM index), growth in exports (GEXP), developments in stock markets (PSE index) and monetary policy or discount rate (DR). The model estimated is as follows:

$$GNPLR_t = \alpha + \sum_{i=1}^{4} \beta_i GLSM_{t-i} + \sum_{i=1}^{4} \gamma_i GEXP_{t-i} + \sum_{i=1}^{4} \eta_i PSE_{t-i} + \sum_{i=1}^{4} \delta_i DR_{t-i} + \epsilon_t \ldots (1)$$

Variables in equation (1) are in logs and non stationary variables (the dependent variable, GNPLR, and explanatory variable, PSE) are made stationary by taking the first difference. In addition, the dependent variable GNPLR is logit transformed to avoid non-Gaussian errors[111] and Inverse Hyperbolic transformation is performed for GEXP and GLSM to handle non-positive values. The model is estimated using step-wise OLS regression on quarterly data from June, 2002 to December, 2015.[112]

The market risk is analyzed based on *dynamic* sensitivity approach. In the baseline and stress

[110] Blaschke, W., M. T. Jones, G. Majnoni, and S.M. Peria (2001), "Stress testing of Financial System: An Overview of Issues, Methodologies, and FSAP Experiences" IMF Working Papers WP-01/88.

[111] Vazquez, F., Tabak, B. M., & Souto, M. (2012). A macro stress test model of credit risk for the Brazilian banking sector. *Journal of Financial Stability*, *8*(2), 69-83.

[112] The results of the model and its diagnostics are given in "Technical Appendix".

scenarios, it is assumed that the risk sensitive investments, at the end of March, 2016 quarter, evolve till June, 2018 quarter based on the assumptions of the respective scenarios. The exposure at risk over this horizon is then adjusted to the corresponding changes in the interest rate. The combined effect of estimates of credit risk (GNPLR forecast) and market risk are then used for computing impact on banks' earnings and consequent calibration on sector's CAR.

Baseline Scenario

Baseline scenario assumes business as usual i.e. current macro-economic environment continuing its course from 2016 through first half of 2018[113]. During the past few quarters, Pakistan economy's major macroeconomic indicators have improved. Specifically, inflation remains subdued, large scale manufacturing has started picking up, external sector, despite difficulties, continues to perform well and private sector credit off take is gradually improving.

The gains can be explained in terms of low oil/commodity prices, improved energy availability, higher disbursements from bilateral and multilateral agencies, CPEC factor and better law and order situation.

In the baseline scenario, it is assumed that improvements on the macroeconomic front would continue to support positive trends in banks risk taking, market developments and earnings. More specifically, there would be an increase in credit disbursements, LSM would perform better, the stock exchange will register gains and the external sector will grow positively.

Stressed Scenario

Stress scenarios are, generally, hypothetical extreme events designed with the objective to assess resilience of the banking system in case of a severe and prolonged stressed period.[114]

The stress scenario has taken into consideration the forecasts of weak and uncertain global output growth[115]. According to World Economic Outlook (WEO) April, 2016, world economy is expected to expand by 3.2 percent if the challenges of slow and fragile recovery in advanced economies such as US and EU and a general slowdown in developing and emerging markets such as China and commodity exporting countries, are managed successfully.

Particularly, China's ongoing economic transition has global implications. Being one of the key trading partners of 100 countries which account for 80 percent of world GDP, a deceleration in China has resulted in subdued outlook for global trade and international commodity markets.

While designing stress scenario, it is assumed that the global economy would derail from the recovery path. The postulation is in line with projections of adverse scenarios considered by other central banks such as Bank of England[116]. They assume that around 2 percent contraction will take place in world GDP in the first year of stress and that it will remain below baseline during the remaining years.

Pakistan's economy is, to some extent, vulnerable to the developments in the international economies. With forecasts of possible slowdown or contraction in Pakistan's largest trading partner economies: US, EU, China and some Gulf countries, the downside risks to external sector is assumed to materialize.

---

[113] Baseline forecasts for LSM, PSE indices and growth in exports are made using the exponential smoothing methodology. While for the monetary policy variable, discount rate, discretion is applied.

[114] The data for March 2016 was not completely available at the time of analysis hence the data set used is till Dec, 2015.

[115] By April 2016 WEO world forecasts have been revised downward twice since October, 2015.

[116] Stress testing the UK banking system: Key elements of the 2016 stress test, Bank of England, March 2016.

The stress is assumed to transmit through trade and financial linkages that may spread to the rest of the economy.

Given that export industry is already passing through a difficult phase[117] and exports have been falling for the last four quarters, stress scenario assumes further drop in foreign demand and thus exports. For the stressed scenario, it is assumed that export growth would follow the same trend as observed in the past during the Global Financial Crisis (GFC) of 2007-08. Due to assumed increasing external vulnerability, downward pressure on exchange rate is also assumed.

Under the stressed scenario, global slowdown may shake investor's confidence. While the domestic investors might put investment decisions on hold till things improve, foreign investors are assumed to disinvest and leave for safe havens. In the short to medium term, significant withdrawals of foreign portfolio investment from the stock market are assumed which would partially erode stock market capitalization and may dent the sentiments of local investors. The equity market losses are assumed to result in stock market becoming bearish throughout the span of the adverse scenario.

Waning global demand and declining exports is assumed to slowdown production activity in the related industries in the LSM sector. The movements in LSM index during the stress scenario are derived from variation in LSM series. Under these considerations, it is assumed that the LSM will contract and would remain less than the baseline forecasts throughout the stressed period.

During the stressed period, it is assumed that inflationary pressures would come from hypothetical depreciation of domestic currency resulting in increase in the cost of imported goods and inflation expectations. Therefore, the threats to the country's growth prospects remain predominantly external in nature and global in dimension in the stressed scenario.

On the fiscal front, it is assumed that a decline in industries' profits will affect government's revenue collection. Government's taxation revenues from corporates, excise and custom is assumed to fall resulting in a higher budget deficit. To bridge the gap, stressed scenario assumes borrowings from both banking and non-banking channels. In this case, private sector credit disbursements are assumed to come under renewed pressure.

Decrease in revenues of LSM industries, listed on the stock market, is assumed to add additional pressures on the stock market.

In order to ease pressure on external account and ease inflationary pressures, it is assumed that there might be some monetary adjustments in the stressed scenario. In such a case, banks would be facing credit and market risks. The magnitude of the losses would depend on the profile of bank's risk sensitive assets and liabilities.

Given this hypothetical extreme scenario, it is expected that the repayment capacity of borrowers across the horizon will be affected which may lead to increase in non-performing loans. Box 3.1 explains some technical assumptions.

[117] Baseline export projections are also lower to account for stress on exports.

Box 3.1: Key Technical Assumptions:

- The growth in risk weighted assets (RWA) would correspond to the growth in advances in both the baseline and stressed scenarios on quarterly basis. For baseline, average growth in advances (since 2002Q2) has been applied (3.4%). For stressed scenario it is assumed that risk weighted assets would rise by 0.8% per quarter. The assumption is consistent with the growth observed during the historical stress period of GFC.
- In the baseline scenario as bank's earnings would rise, banks' capital base is projected to grow by 4.0% on quarterly basis (consistent with last nine quarters' growth rate). While during stressed period the growth in capital base is assumed to be lower compared to the baseline (2%).
- For impact on asset quality, provisions against stock of NPLs, in both scenarios, is assumed to be 90% which is based on the current level. We also assume 100% pass through to Capital from increase (decrease) in profits (losses) arising from credit and market risks.
- For estimation of market risk:
  - Only interest rate exposure is being considered for banks' risk sensitive investment portfolio.
  - The stress scenario assumes an upward parallel shift of the yield curve in every quarter. In the baseline and stressed scenarios, interest rates along the yield curve would change by the same magnitude as assumed for the discount rate.
  - The growth in risk sensitive investments during the stressed period would be by the same rate as observed during the stress period of GFC.

Stress Test Results

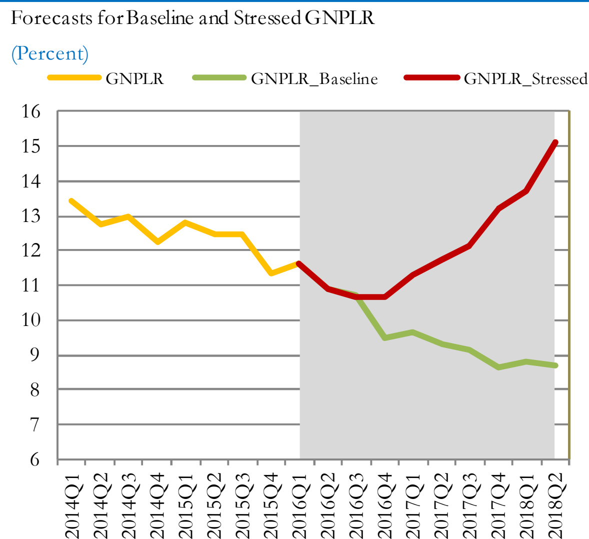
Under the baseline scenario, forecasts of the banking performance indicator, GNPLR, over the next nine quarters shows a declining trend. This implies, if supportive macro environment persists, infection ratio might gradually fall to 9.5 percent by end 2016. As the economic fundamentals further strengthen, the ratio would drop further by 800 bps to reach 8.7 percent by June 2018; a fall of 2.9 percentage points from the level of 11.7 percent in March, 2016 (**Figure 3.17**). Furthermore, market risk would remain subdued in a largely stable interest rate scenario.

Figure 3.17

Infection Ratio Rises under Stress Scenario

Forecasts for Baseline and Stressed GNPLR

(Percent)



Source: FSD, SBP

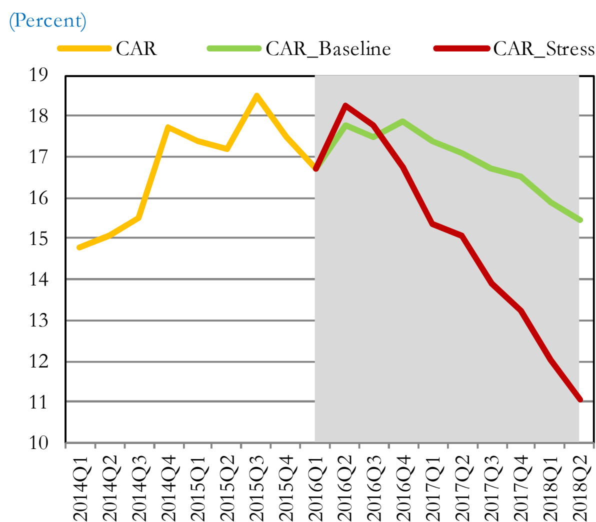
As the economy follows its growth path and credit to private sector rises, the RWA of the banking sector would also rise proportionately. In the baseline scenario, therefore, it is anticipated that the industry's CAR could fall to15.4 percent by June 2018; which is well above the required benchmark CAR of 11.275 percent at that time[118] (**Figure 3.18**). This lower level of CAR indicates better utilization of capital in case the private sector credit picks up.

[118] BPRD circular # 06 dated August 15, 2013 on 'Instructions for Basel III Implementation in Pakistan'.

Figure 3.18

CAR declines under Stress Scenario

Forecasts for Baseline and Stress CAR



Source: BPRD and FSD, SBP

On the contrary, stressed scenario would result in significant losses due to higher credit risk materialization together with repricing of banks' assets and liabilities. In the stressed scenario, the CPV model predicts GNPLR rising gradually. The ratio is projected to climb to 15.1 percent by June 2018 from the existing level of 11.6 percent as of March 2016 (**Figure 3.17**).

As the impact of global shocks become widespread, banking industry's CAR is anticipated to experience a steady decline. In the prolonged adverse scenario, banks' CAR would decline and is estimated to end up at 11.1 percent by June 2018 (**Figure 3.18**). While the drop is significant, the stressed CAR is still close to benchmark of 11.275 percent required by 2018.

In the stress scenario, reduction in CAR is due primarily to banks' suffering credit losses compounded by losses due to adverse movement in market interest rates. The seemingly large capital cushion currently available to absorb shocks might shrink in the face of extreme credit and market shocks.

Conclusion of Macro Stress Testing Exercise

Stress tests performed to gauge industry's resilience reinforces the view that if economy continues on the current growth path, higher capital charge on private sector credit would start utilizing the capital buffers industry is maintaining. Yet, positive trends would enable overall industry to sustain CAR noticeably above the minimum benchmark. However, banks may have to generate additional capital to provide cushion for expected growth in private credit.In case of economic distress, however, current capital cushion might be inadequate to absorb losses. In such a scenario, banks would need to prop up their capital base for complying with the minimum capital requirements.

Outlook

In an environment of low interest rates and falling yield on public debt, profitability of the banking system is expected to come under pressure in future. Though lower provisioning charge, low interest expense on deposits and off take of high yielding private credit might partially offset the downward pressure on income, yet growth in profitability is expected to decelerate in CY16[119]. Parallel to this, the growth in credit may take its toll in the form of high capital charge and may impact CAR of the industry. As such banks need to closely review the situation and plan for augmenting capital generation ahead of time for enhancing their resilience.

[119] Forecast generated on the basis of exponential smoothing methodology.

Box 3.2: A framework for the assessment of bank's earnings

The strength of earnings has a strong bearing on an institution's long term sustainability. It also provides information about distribution of risk among different activities. As per framework for the assessment of bank's earnings suggested by Cuoto (2002)[120], the income of an institution can be distributed between structural[121] and secondary sources. Net interest income, fee income and operating expenses; being core income and expense items, are the structural determinants of profitability while provisions and exposures affected by interest rate and FX movement are considered secondary determinants of profitability. The reliance of an institution on non-recurring income is a sign of earning weakness and signals that the bank is engaging in risky practices in an attempt to boost earnings.

As per this framework, the traditional profit and loss statement of a financial institution can be presented as follows:

Table 1

Proposed structure for the income statement(PKR billion)

		CY12	CY13	CY14	CY15
Structural	Interest earned on loans	428	396	437	404
	Interest earned on investments	353	361	450	545
	Interest earned-others	19	20	33	33
	Total interest income	801	777	920	982
	Total Interest expense	461	444	505	486
	Net interest income	340	332	415	496
	Fee income	54	62	70	83
	Operating expenses	253	268	305	330
	Total structural income	**141**	**127**	**181**	**249**
Secondary	Provision for loan losses	32	36	25	39
	Other secondary expenses	5	3	6	7
	Treasury results	84	78	97	126
	Other secondary income	0.8	0.0	0.0	0.0
	Total secondary income	**45.8**	**38.6**	**65.9**	**80.0**
	Profit/(loss) from banking activities	187	165	247	329
	Results of non-banking subsidiaries	0	0	0	0
	Profit/(loss) before taxes	187	165	247	329
	Income taxes	65	54	83	130
	Net profit/(loss)	**121**	**111**	**163**	**199**

Source: FSD, SBP

As per the above structure, the profitability of our banking system is quite stable as share of income from core business sources is higher (76 percent). Income arising from these sources is sufficient to cover operating expenses, provisions and taxes, and to provide an adequate return on capital. Though income from secondary sources has also increased over the years, yet reliance of industry on non-structural sources is not that high (24 percent).

[120] Couto, R. L. R. (2002). "Framework for the assessment of bank earnings". Bank for International Settlements, Financial Stability Institute.

[121] The structural determinants of profitability are those items of income and expense that satisfy three conditions: they arise from the operational activities of a bank, can properly be considered sustainable, in the case of income, or recurring, in the case of expenses, and are not particularly subject to misrepresentation.

4 Islamic Banking

The increase in assets base of Islamic banking outpaces the growth in the overall banking sector as share of Islamic banking reaches 11.4 percent during CY15 in line with the 5 year strategic plan for Islamic banking industry (2014-18). In contrast to conventional banking industry's trend, flow of funds for financing activities outpaced investments. A major portion of financing has been extended under Diminishing Musharakah and Murabaha. The asset quality indicators show slight improvement; though Non-Performing Financings have increased marginally. The earning performance moderated due to high operating cost of IBIs owing to expansionary phase of Islamic Banking industry. The capital adequacy indicators remain lower than the conventional banking industry as few Islamic banks are in the process of building up their capital base.

Islamic Banking continues to grow both globally and domestically…

The global Islamic financial services industry has reached an overall total value of USD 1.88 trillion as of 2015 despite facing a series of economic challenges such as prolonged low energy prices, downward revised economic growth outlook, geopolitical conflicts, exchange rate depreciations and an assets sell-off spree in emerging markets.[122] The share of Islamic banking assets (USD 1.5 trillion) constituted around 80 percent of Islamic financial services industry's assets.

In Pakistan, the growth trend of Islamic banking industry continued in CY15 as well **(Table 4.1)**.

Table 4.1

Performance of Islamic Banking

	IBIs				Conv. Banks
	CY12	CY13	CY14	CY15	CY15
	PKR billion				
Total Assets	837	1,014	1,259	1,610	12,533
Investments (net)	394	394	357	432	6,449
Financing (net)	231	315	409	645	4,171
Deposits	706	868	1,070	1,375	9,015
	percent (YoY)				
Total Assets	30.5	21.2	24.2	27.9	15.5
Investments (net)	43.8	(0.0)	(9.5)	21.1	30.2
Financing (net)	15.5	36.2	29.7	57.9	3.3
Deposits	35.6	22.8	23.3	28.5	10.5

Source: FSD, SBP

Besides favorable domestic macroeconomic environment coupled with regulatory focus on development, following other factors have also contributed to the growth in the Islamic banking sector:

- Increasing branch expansion of IBIs[123];
- Establishment of first Islamic Banking subsidiary;
- Merger of two former conventional banks into Islamic banks;
- Expansion in virtual banking services including branchless banking.

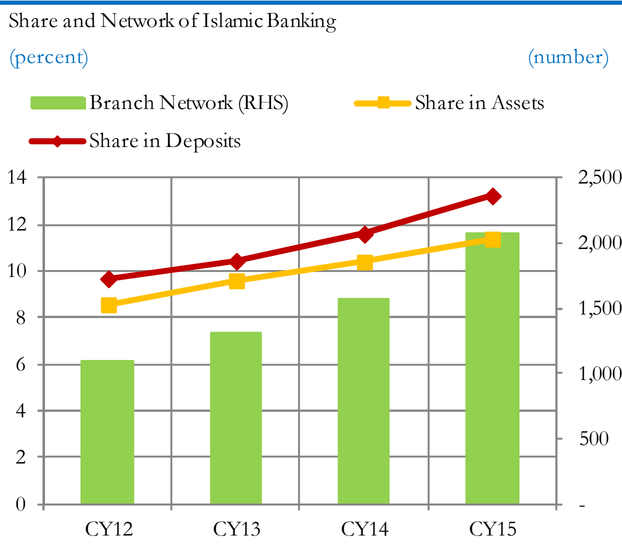
[122] IFSB, "Islamic Financial Services Industry Stability Report", 2016. According to the report, Banking Assets amounted to USD 1496.5 billion, Sukuk Outstanding were USD 290.6 billion, Islamic Funds' Assets were USD 71.3 billion and Takaful contributions stood at USD 23.2 billion. For more details, please see Table 1.1.1 and its explanatory note on page 7 in the IFSB's report.

[123] Islamic Banking in Pakistan is offered through full-fledged Islamic Banks (IBs), Islamic Banking subsidiary of a commercial Bank (practically a full-fledged Islamic Bank) and stand-alone Islamic Banking Branches (IBBs) of conventional Banks. Together, these are called Islamic Banking Institutions (IBIs). Presently, 22 IBIs including 6 IBs (having 1028 branches) and 16 conventional banks (having 1047 IBBs) are offering Shariah compliant products and services.

IBIs assets are recorded at PKR 1.6 trillion which is 11.4 percent of the asset base of the overall industry (9.6 percent in CY13). The assets growth rate of 27.9 percent (YoY) of IBIs during CY15 outpaced the 15.5 percent growth rate of conventional banking industry. Main contributors in the assets growth are financings and investments (largely in Sukuk). In terms of penetration, the branch network of IBIs has also expanded by 501 branches as the branch network increased to 2,075 branches in CY15 as compared to 1,574 branches in CY14 **(Figure 4.1)**.

Figure 4.1

Share and network of Islamic Banking continued to grow



Source: FSD, SBP and IBD, SBP

This growth of Islamic banking industry, especially the share in the banking industry, is in line with SBP's 5 year Strategic Plan for Islamic Banking industry (2014-2018), which, inter alia, envisions Islamic banking industry to achieve 15 percent share in the entire banking industry's assets by the year end 2018.

Financing growth of IBIs outpaces the industry…

IBIs' financing growth at 57.9 percent as compared to conventional banking industry's growth of 3.3 percent has remained the hallmark of CY15. Apart from regular rise in financing, the sharp increase can also be attributed to other factors, which include merger of two conventional banks into Islamic banks. In addition, SBP's instructions wherein banks having IBBs were advised to show Islamic Financing and Related Assets under the head of "Advances" in their financial statements,[124] also provided boost to financings.

Private sector the main beneficiary of IBIs financing…

Private sector, with predominant share of 88 percent, has remained the main beneficiary of funds; with major allocation to textiles, chemicals and pharmaceuticals, sugar and agribusiness. Out of remaining 12 percent financing to the public sector, agribusiness and 'production and transmission of energy' received the major chunk.

Diminishing Musharaka dominates the modes of financing…

During CY15, 31.7 percent share of Diminishing Musharaka in overall financings of IBIs is more than any other mode of financings; while financing under Murabaha has 24.5 percent share (**Table 4.2**). Combined share of Ijara, Salam and Istisna comprises almost 20.5 percent of the financing portfolio of IBIs; whereas Musharaka and Mudaraba constitute 14 percent of the total financings.

[124] BPRD Circular Letter No. 5 dated February 29, 2016. If this factor is netted out, the growth of financing turns out to be around 40 percent which is still a handsome growth.

Table 4.2

Islamic modes of financing

	CY12	CY13	CY14	CY15
	percent share in total financings			
Murabaha	39.7	40.6	30.1	24.5
Salam	3.0	4.0	4.5	5.3
Istisna	7.2	5.6	8.3	8.6
Musharaka	0.8	6.7	11.0	14.0
Ijara	9.2	7.7	7.7	6.6
Car Ijara	4.4	4.9	5.3	4.2
Plant and machinery Ijara	2.1	1.6	1.5	1.4
Equipment Ijara	2.4	0.5	0.3	0.1
Others Ijara	0.3	0.7	0.6	0.9
Diminishing musharaka	35.7	30.8	32.6	31.7
Other Islamic modes of finance	4.3	4.4	5.6	9.2
Mudarabah	0.2	0.2	0.1	0.0
Qard/Qard-e-Hasan	0.01	0.01	0.01	0.01
Total	100.0	100.0	100.0	100.0

Source: FSD, SBP

Musharaka Financing, though saw an increase of 97.9 percent (YoY), still comprises only 14 percent share in total financing. The reluctance of the IBIs to venture into the sharing based mode of financing not only signifies their risk-averse approach but also calls for adaptation of better risk management practices to tap the underserved/neglected sectors of the economy with better returns. Moreover, challenges like moral hazard, displaced commercial risk, weak contract enforcement mechanism and reluctance by prospective borrowers to undertake profit & loss sharing commitments with the bank needs to be addressed so as to ensure a significant share of participatory modes in the financings of IBIs. In this regard, the Strategic Plan for the Islamic Banking Industry (2014-18) envisages developing incentive mechanisms and enabling policy environment to stimulate Musharaka and Mudaraba based financing.

Corporate sector remains the main recipient of IBIs funds…

In line with the historical trend, client-wise financing of IBIs has remained concentrated in corporate sector which is the top beneficiary of IBIs' financing with PKR 503.3 billion (74.4 percent of financings). Out of the such financing, PKR 215.1 billion (or 42.7 percent) are utilized for long-term investment, PKR 228.7 billion (or 45.4 percent) of the funds are utilized for working capital needs and PKR 59.5 billion (or 11.8 percent) for trade financing. The financing to corporate sector has registered a growth of 53.9 percent (YoY) (**Table 4.3**).

Table 4.3

Segement wise financing

	CY12	CY13	CY14	CY15	Growth
	PKR billion				percent
Corporate Sector:	179.0	236.2	327.0	503.3	53.9
Working Capital	76.9	94.5	138.8	215.1	54.4
Fixed Investment	89.4	109.3	148.1	228.7	55.0
Trade Finance	12.6	32.4	40.1	59.5	48.4
SMEs:	10.1	16.8	15.1	20.8	37.6
Fixed Investment	2.5	5.2	5.4	6.0	9.5
Working Capital	1.2	2.9	1.3	1.6	57.7
Trade Finance	6.4	8.6	8.4	13.2	26.3
Agriculture	0.2	0.3	1.8	4.3	142.5
Consumer Finance:	32.0	38.2	50.5	67.7	33.9
Housing Finance	13.5	15.9	19.0	25.0	31.5
Commodity Financing	17.8	31.6	22.7	58.2	157.0
Staff Loans	4.1	5.2	6.8	8.8	28.9
Others	0.4	0.8	1.5	13.9	836.8
Total	243.7	329.1	425.4	677.0	59.1

Source: FSD, SBP

Other sectors such as Consumer, SME and Agriculture also registered noticeable growth…

Consumer finance with PKR 67.7 billion (10.0 percent of financing) has registered an increase of 33.9 percent. Housing Finance has registered 31.5 percent (YoY) growth. Out of total Housing finance of PKR 43.3 billion, the share of IBIs has amounted to PKR 25.0 billion (57.8 percent share) as compared to conventional banks' amount of PKR 18.3 billion (42.2 percent share) **(Table 4.4)**.

Table 4.4

Housing Finance

	CY12	CY13	CY14	CY15
	PKR billion			
IBIs	13.5	15.9	19.0	25.0
Conventional	26.4	23.0	20.9	18.3
Industry (IBIs+Conventional)	39.9	38.9	39.9	43.3
	Percent share of Industry (IBIs+Conventional)			
IBIs	33.9	40.9	47.7	57.8
Conventional	66.1	59.1	52.3	42.2

Source: FSD, SBP

Although, SME and Agriculture financing constitute less than 4 percent share in total financing, SME has grown by 37.6 percent and Agriculture by 142.5 percent in CY15. SMEs and agriculture are among the potential sectors of growth for Islamic banking according to the findings of KAP survey released by SBP in October 2014[125]. In line with SBP's Guidelines on Islamic Financing for agriculture, Islamic Microfinance Business and Handbook on Islamic SME Financing, IBIs are moving forward with innovative products to tap the benefits of underserved sectors of the economy such as agriculture, SMEs and microfinance.

Investments of IBIs grow steadily…

After witnessing negative growth during CY13 and CY14, CY15 bode well for investments of IBIs as the growth surged to 21.1 percent **(Table 4.5)**. This rise, however, is still below the overall growth in investments of the conventional banks i.e. 30.2 percent. Lack of adequate supply of Shariah compliant liquidity instruments mainly contributed to lower than average growth in investments for IBIs.

During CY15, the major investment avenue for IBIs has remained the Government of Pakistan (GOP) Ijara Sukuk which got a major boost after issuance of Rs 117.7 billion three-year Ijara Sukuk in December 2015. As a result, IBIs investment in Federal Government securities registered an increase of 27.9 percent (YoY), thereby constituting 71.2 percent of IBIs investment (net). On the contrary, the conventional bank's investment in Federal Government securities constituted 93.3 percent of their industry investment (net) portfolio.

This comparative position puts the IBIs at a relative disadvantage with respect to liquidity management, particularly short term liquidity. To overcome this issue, SBP is working to develop some Sukuk structures of shorter tenor in collaboration with SECP.

Table 4.5

Investments

	CY12	CY13	CY14	CY15	Growth
	PKR billion				percent (YoY)
Federal Government Securities	278.5	266.7	240.5	307.4	27.9
Fully paid up ordinary shares	3.5	4.3	5.4	12.0	125.1
Bonds/ PTCs/Sukuk certificates	33.9	34.0	45.1	56.7	25.8
Other investments	79.6	90.9	67.3	62.5	(7.2)
Total Investments	395.6	395.9	358.2	438.7	22.5
Provisions & deficit/ (surplus)	(1.2)	(1.5)	(1.5)	(6.7)	354.4
Investments (net)	394.4	394.4	356.7	431.9	21.1

Source: FSD, SBP

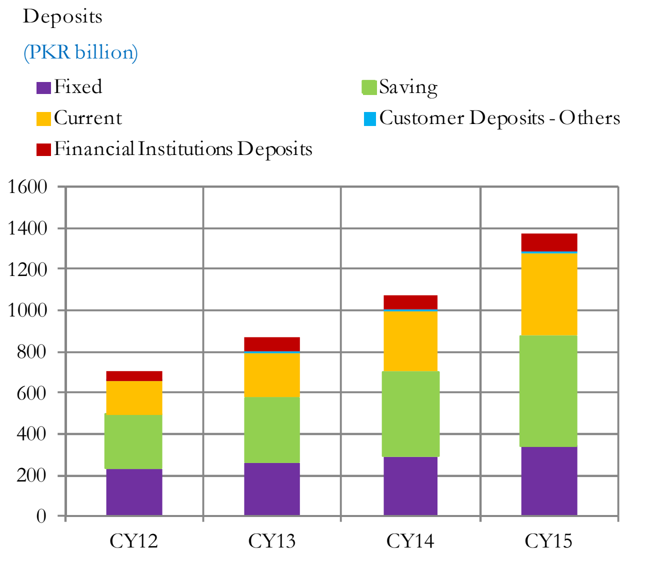
Deposits, the key funding source of IBIs, maintain growth momentum…

Deposits have remained the main funding source as IBIs successfully maintained their deposit growth momentum at 28.5 percent which outpaced the 10.5 percent growth rate of deposits of the conventional banks. Customers' deposits, at 93.4 percent of total deposits base, provided the pedestal for upholding the expansion in Islamic banking assets (**Figure 4.2**). Savings and Fixed deposits (generally, Mudaraba based) were recorded at 63.9 percent of

[125] Knowledge, Attitude and Practices (KAP) Survey http://www.sbp.org.pk/publications/Kap.htm

the deposits whereas Current accounts (generally, Qard based) remained at 29 percent of the total deposits. Average deposit increase per Islamic Bank (excluding IBBs) works out to PKR 51 billion in CY15 compared with PKR 29 billion per conventional bank, on average.

Figure 4.2
Deposits maintain growth momentum



Source: FSD, SBP

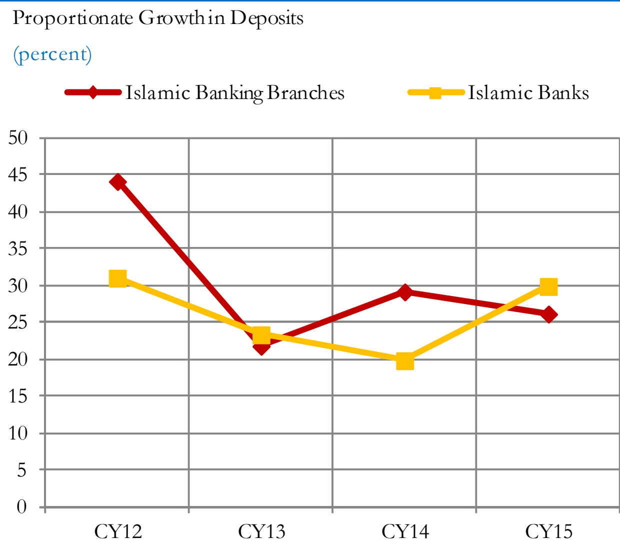
In terms of share in the deposits of IBIs, IBs outperformed the deposits growth of IBBs as IBs deposits grew by 29.9 percent as compared to IBBs deposits growth of 26.2 percent (**Figure 4.3**).

Fund based liquidity profile of IBIs remains comfortable…

The liquidity profile has remained satisfactory in CY15. Liquidity indicators like Liquid Assets to Deposits and Liquid Asset to Total Assets, at 41.2 percent and 35.1 percent, respectively, have showed signs of slight improvement over the previous year (**Figure 4.4**).

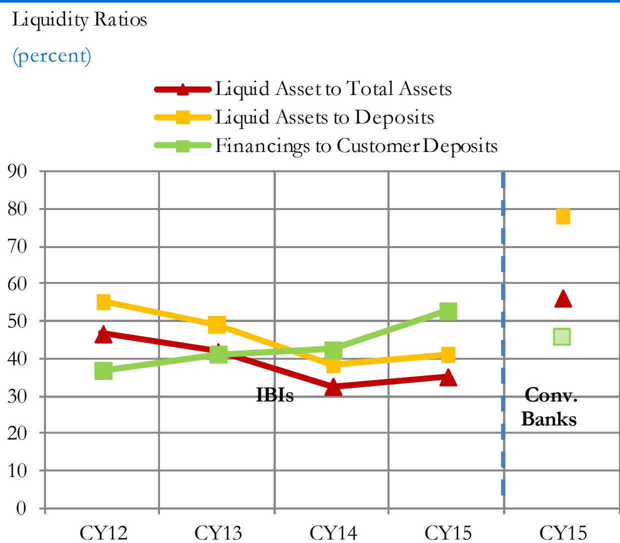
Financing to deposit ratio (**FDR**) at 46.9 percent, with an increase of 8.7 percent, has marginally surpassed the conventional banks' ADR of 46.3 percent in CY15.

Figure 4.3
IBs outpaced the deposits growth in IBBs



Source: FSD, SBP

Figure 4.4
Liquidity profile remained satisfactory



Source: FSD, SBP

Asset quality remains at comfortable level…

On the asset quality front, IBIs have performed fairly well. Though Non Performing Financings (NPFs) to Total Financings registered an increase from 4.7 percent in CY14 to 4.9 percent in CY15,

the provision coverage ratio has increased from 83.9 percent in CY14 to 95.6 percent in CY15. Resultantly, Net NPFs to Financing Ratio has declined from 0.8 percent in CY14 to 0.2 percent in CY15, whereas conventional banks' average is recorded at 2.2 percent. Similarly, Net NPAs to capital for IBIs has remained at 1.6 percent against the conventional banks' average of 7.8 percent (**Table 4.6**). All these indicators point to a comfortable level of asset quality of Islamic banks.

Table 4.6

Assets Quality

	CY12	CY13	CY14	CY15	Conv. Banks CY15
	percent				
NPFs to Total Financing	7.6	5.7	4.7	4.9	12.3
Provision to NPFs	66.5	74.4	83.9	95.6	84.3
Net NPFs to Net Financing	2.7	1.5	0.8	0.2	2.2
Net NPFs to Capital	9.8	6.9	3.9	1.4	7.4
Net NPAs to Capital	11.1	7.9	4.8	1.6	7.8

Source: FSD, SBP

Earnings under pressure due to expansion of outreach…

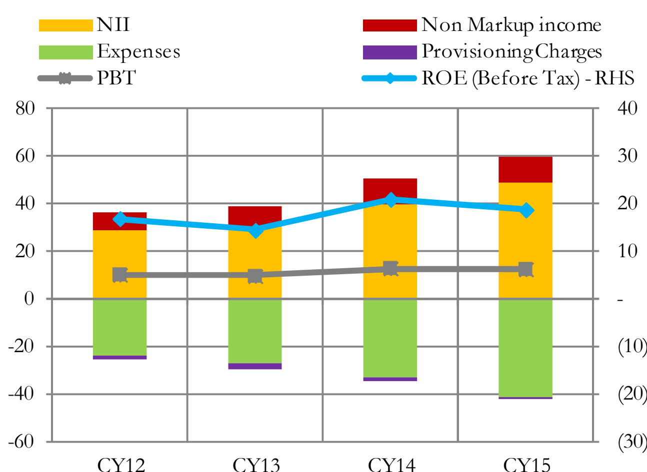
IBIs' earnings has, somewhat, moderated during CY15 as Return on Assets (ROA-before tax) has declined to 1.2 percent in CY15 as compared to 1.5 percent in CY14; which is also lower than the conventional banks' average of 2.7 percent. Net profit income to Gross income, with 80.9 percent share, has remained the major contributor towards the IBIs' earnings; while there is minimal support from Non Profit Income, with 19.1 percent share. Return on Equity (ROE-before tax) has also declined from 20.9 percent in CY14 to 18.7 percent in CY15; which is lower than the conventional industry average of 26.6 percent (**Figure 4.5**). Lower profitability for IBIs is understandable as they have access only to limited investment avenues (e.g. Ijara Sukuks) whereas conventional banks have access to ample interest based Government securities (PIBs and T-bills).

Figure 4.5

IBIs earnings moderated

IBIs' Earnings and Expenses

(PKR billion) (percent)



Source: FSD, SBP

Moderation in earnings indicators can be attributed to a host of factors such as decline in spread between financing and deposit rates (from 7.5 percent to 5.2 percent), decrease in income from dealing in FX and fall in profit on investments by 18.1 percent. Moreover, due to expansion in branch network, the administrative expenses have increased by 24.8 percent; operating expenses to Gross Income has surged (from 66.0 percent in CY14 to 70 percent in CY15) along with personnel expenses to operating expenses (from 38.6 in CY14 to 40.3 percent in CY15). The declining interest rate environment poses further challenge to the profitability of IBIs.

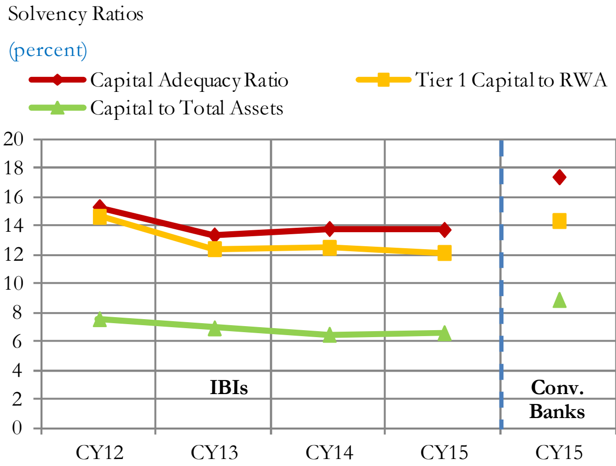
Capital adequacy is below industry average…

Overall, IBs have maintained CAR well above the required level of 10.25 percent. But, their CAR at 13.8 percent is well below the conventional banking industry's CAR of 17.4 percent. Few IBs are in the

process of building up their capital base, therefore, capital adequacy indicators like Capital to Assets and Total Capital to Total RWA of IBs are lower than those of coventional banking industry's averages (**Figure 4.6**).

Figure 4.6

IBIs CAR remained steady



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: FSD, SBP and BPRD, SBP

Way forward…

In view of the foregoing, it is obvious that the growth of Islamic banking has been quite impressive. The industry is still confronted with a number of challenges, though. Besides managing the risks faced by conventional banks, IBIs have to manage additional risks associated only with Islamic banking, such as Shariah non-compliance risk and displaced commercial risk. Similarly, Islamic banking is also facing limited availability of qualified and well trained human resource. Also, lack of understanding of prevalent Islamic banking theory and practice among the target audience is a stumbling block in sustainable development of the Islamic banking industry.

To address various issues and challenges faced by IBIs and to ensure fast paced development of the industry, concerted efforts are required from all the stakeholders. To this end, SBP has already launched comprehensive strategic plan for Islamic banking industry (2014-18) which sets out direction for the industry and also provides strategies with action plans. In this regard, the focused areas are: (i) enabling policy environment (ii) Shariah governance and compliance (iii) awareness and capacity building and (iv) market development.

Accordingly, various steps under the strategic plan have already been taken (summarized below) while others are expected to be completed by 2018:

- Implementation of Shariah Governance Framework for Islamic Banking Institutions (IBIs)
- Rationalization of Minimum Capital Requirements (MCR) for Islamic Banking Subsidiaries
- Awareness Creation and Capacity Building Programs for Islamic Banking Industry
- Establishment of Centers of Excellence in Islamic Finance Education (CEIFEs)
- Steering Committee for Promotion of Islamic Banking

In line with the enabling regulatory environment and governmental support, IBIs in their individual capacity and as an industry should also play an active role in further development of Islamic banking industry in Pakistan.

Section B: Non-Banking Financial Sector

5 Non-Bank Financial Institutions (NBFIs)

NBFIs have registered average asset growth of 7 percent over the period 2012-2015. Mutual funds having almost 60 percent share in assets is leading the sector followed by DFIs having a share of 26 percent. Despite registering strong bottom-line trends, leasing sector could not contain dampening of the overall sector's profitability led by DFIs. Leasing companies are able to overtake Modaraba companies in market share despite large number of players in the latter category; while investment finance companies are continually going down in terms of profitability and sustainability of the participating businesses. The NBFIs with their small market share in financial assets are less risky for the stability of the financial system.

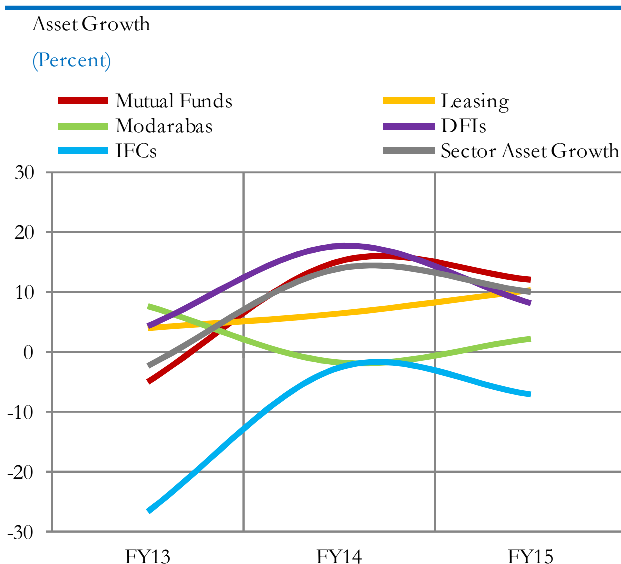
Besides banks, a range of other Non-bank financial intermediaries, comprising Non-Bank Financial Companies (NBFCs)[126] , Modaraba companies and Development Finance Institutions (DFIs) – collectively known as NBFIs (Non-bank Financial Institutions) – also operate in Pakistan[127].

The NBFI's sector constitutes a diverse set of financial intermediaries with varying business models. Yet, the presence of an ever imposing banking sector with deep resources that offers matching products continues to challenge the existence of NBFIs. The non-bank players with an asset base of 7 percent of that of the banking sector assets in (Financial Year) FY12 have seen their share fall to 6 percent in FY15.

Decline in operating performance despite modest growth in asset base….

The NBFIs have witnessed modest growth over the period 2012-15 (7 percent on average) on the back of reasonable growth observed in all the sub-sectors of NBFIs except Investment banks **(Figure 5.1)**. The industry closed the year[128] with an asset size of PKR 738 billion. Despite expansion in balance sheet of NBFIs, profitability of the sector has declined. The sector posted profit after tax of PKR 8 billion; 12 percent lower than the previous year. With the exception of leasing, profitability in rest of the sub sectors has declined where major drop is observed under DFIs segment (**Table 5.1 and 5.2**).

Figure 5.1
Growth trends in Non-Bank Financial Institutions



Source: MUFAP, Annual Audited Accounts of Leasing and Modaraba companies and FSD,SBP

[126] 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.
[127] Our coverage of NBFIs is limited to only operative NBFIs for which data is available.

[128] Financial Year (FY) for DFIs ends in December, while for other sectors their relevant FY ends in June.

Table 5.1

Asset Profile of NBFIs

	FY12	FY13	FY14	FY15
		(PKR billion)		
Mutual Funds(Net Asset Value)	377.8	356.8	407.9	429.8
Pension Funds(Net Asset Value)	2.7	4.8	8.2	13.6
REITS(Net Asset Value)	-	-	-	22.6
DFIs	143.2	149.4	176.1	190.5
Leasing companies	33.0	34.3	36.5	40.3
Modarabas	28.3	30.5	30.0	30.7
Investment Finance companies	15.8	11.6	11.3	10.5
Total Assets	**600.8**	**587.4**	**670.0**	**738.0**

Source: MUFAP, Annual Audited Accounts of Leasing, IFCs, Modaraba companies, REIT's and FSD,SBP

Table 5.2

Profitability Profile of NBFIs

	FY12	FY13	FY14	FY15
		(PKR million)		
DFIs	3,275.0	4,286.0	7,276.0	6,161.0
Leasing companies	(371.0)	498.0	563.0	640.0
Modarabas	1,225.0	1,969.0	1,410.0	1,353.0
Investment Finance companies	(1,688.0)	(783.0)	(135.0)	(162.0)
Total Profits	**2,441.0**	**5,970.0**	**9,114.0**	**7,992.0**

Source: Annual Audited Accounts of Leasing, IFCs , Modaraba companies, REIT's and FSD,SBP

Funding remained the key risk faced by NBFIs…

Funding risk remains the prominent risk faced by the sector. Also, the diversification of clientele suggested in the business models of NBFIs has yet to be achieved. NBFIs are serving similar market segments as the banks, in which they do not possess competitive advantage.

SECP revamps the regulatory framework for NBFCs in 2015…

SECP has introduced major amendments to the regulatory framework for NBFCs in November, 2015. The amendments seek to improve on the risk management practices of NBFCs, link Minimum Equity Requirements (MER) with the respective business activities of the NBFCs and enable SECP to regulate the non-bank micro finance institutions. For details please see **Box 5.1**.

Mutual funds competing for investor's interest amid falling interest rate…

Mutual Funds, leading the NBFI sector with an average growth of 6 percent in the last three years, have closed the year with Net Asset Value (NAV) of PKR 443 billion. Shariah-compliant funds and pension funds have gained increasing popularity as reflected by their share in funds market and addition of 25 new such funds in FY15. Pakistan's first Real Estate Investment Trust fund (REIT) has also been launched on June 12, 2015[129]. The share of Shariah-compliant funds has increased from 14 percent in FY12 to 29 percent in FY15; while pension funds expanded their position from 1 percent to 3 percent.

Constant Proportions Portfolio Insurance (CPPI) funds, with their unique product features of offering limited downside risk (via setting a floor for investments in money market and fixed income instruments) and simultaneous participation in the up-equity markets, have drawn attention of the investment community. This is evident from their market share which has doubled in one year from 3 percent last year to 6 percent this year and addition of 6 new funds in this category.

Nevertheless, lack of awareness about investment options among the general public coupled with expenses at the fund level, which places direct investments at an advantage, continue to constrain the emergence of mutual funds as a viable conduit for retail savings.

The sector seems promising though: a total of 26 new funds were launched in FY15. However, in the falling interest rate environment net redemptions of PKR 22 billion has been observed during FY15. Money market funds have become less attractive;

[129] Please see **Box 5.2** for details on REITs.

while equity funds are in competition with other high yielding assets (such as property market).

Despite some encouraging trends, the savings mobilized through mutual funds are still meager, in general, relative to the deposits of the banking sector (PKR 9.27 trillion in FY15) or placements under the National Savings Scheme (PKR 3.0 trillion in FY15).

Dipping DFI profitability has effected sector's bottom-line…

Asset quality of the DFI's has remained within the satisfactory limits owing to growing advances and reducing NPLs stock. Funding profile has remained tilted towards borrowings; while growth of deposits remains subdued. The DFIs profitability indicators have dwindled a bit due to abridged spreads and higher non-mark up expenses. The industry is well capitalized; though CAR has exhibited a downward trend.

DFIs profitability has dragged down NBFI's performance, as a whole, as it declined by 15 percent - largest fall among all the sub-sectors of NBFIs (**Table 5.2**). This has largely been due to increase in provision charge and other non-markup expenses incurred during FY15 by DFIs.

Leasing business: contrasting trends for leasing companies and modarabas…

Both leasing companies and modarabas are active in leasing business. However, leasing companies and modarabas have exhibited mixed business results in FY15 due to their exposures in different segments of the economy.

The leasing sector with its focus on transportation and logistical fleet has witnessed YoY asset growth of 10 percent in FY15. Profits have also increased by 14 percent- the maximum growth witnessed among the profit making entities of NBFIs.

For modarabas sector, Ijarah exposure to the plant, machinery and equipment led to build-up of impairment losses which has dented their profitability in FY15. The 24-company sector's asset base, while expanding over the years at an average rate of 3 percent, accounts for a meager 4 percent of the non-banking financial sector's assets. Despite large number of players, concentration of business is evident as seven companies represent 80 percent of the sector's assets, 70 percent of sector's equity and 86 percent of sector's income.

Modarabas, however, remained the investment choice for other modaraba management companies and Islamic banking branches of commercial banks looking for a Shariah compliant counter-party to their transactions. Bank controlled modarabas, with their ability to mobilize deposits have focused on generating income from the provision of Shariah-compliant financing facilities; while the others, depending on funds generated via IPOs and accumulated profits, have focused on trading, leasing and investment portfolios.

The diversity that the sector's business model affords is still promising as it attracted two new entrants in FY15 with a total paid-up capital of PKR 1.45 billion. Some of the weak modarabas are also in talks with textile and food companies for acquisitions and collaborative projects; should that occur it could change the face of the sector.

Investment banks continue to fade…

In the absence of funding sources from commercial banks and limited equity, investment banks have slowly been waning. The sector is unprofitable and has been operating on the sidelines owing to their inability to compete with the investment banking wings of commercial banks.

The much awaited road-map for the NBFIs introduced by SECP is expected to pull the

companies out of the difficult situation of losses (with their inability to generate income sufficient to cover operational expenses) and regulatory non-compliance (Minimum Equity Requirements (MER) and exposure limits due to weak equity profile). It has given the investment banks the choice of opting out of the deposit-taking category which attracts lesser MER. Capital Adequacy Ratio has also been introduced for the deposit-taking category of investment banks.

The regulations while offering depositor protection will further limit the funding avenues for the sector which, given its resource constraints, has already shifted its focus towards non-fund based activities for income generation. They are restructuring their operations and balance sheets while focusing on NPL recoveries.

Mutual Funds[130]

Mutual funds continue to remain an important alternate avenue for investments due to their comprehensive suite of products with multiple investments classes like equity, money market and income funds.

In FY15, the NAV of equity funds observed a growth of PKR 44 billion followed by CPPI with a growth of PKR 11 billion and pension funds with growth of PKR 5.4 billion. This growth in NAV, mostly due to revaluation, has helped mutual funds retain 62 percent share in the NBFI's sector (**Table 5.1**).

Equity funds despite being volatile and risky, have received net inflows of PKR 2.69 billion; yielding maximum returns of 21.73 percent relative to 16.01 percent return on the KSE 100 Index in FY15. The excess return is indicative of fund managers' better sector and script selection (**Figure 5.2**).

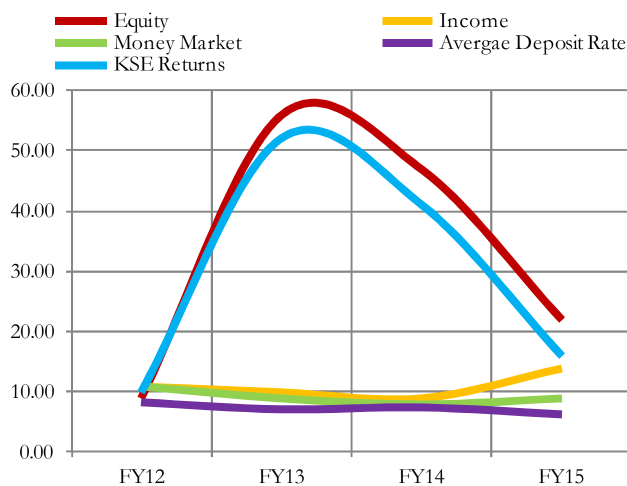
[130] Mutual Fund data has been obtained from MUFAP. The data is inclusive of pension fund statistics.

Figure 5.2

Conventional Equity-based funds offered superior yields

Yields on Mutual Funds vs KSE-100 Index and Average Deposit Rate

(Percent)



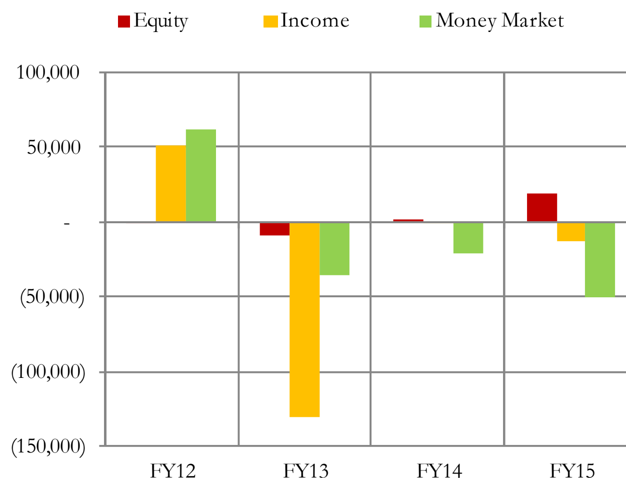
Source: MUFAP, FSD,SBP and S&DWHD,SBP

Figure 5.3

Net Redemptions from Money Market Funds

Top Fund-wise Net Sales

(PKR million)



Source: MUFAP

Interest rate trajectory has manifested itself in net redemptions in money market funds…

The mutual fund industry is no exception to the effects of easing of monetary policy. As the interest rates started to decline, money market instruments became less and less attractive for the investors.

Consequently, in FY15, net redemptions of PKR 59 billion have been witnessed in the conventional money market category **(Figure 5.3)**.

The outflow from money market funds has been large enough to more than offset the inflows observed in the rest of the funds categories. Consequently, the sector has observed overall net redemptions of PKR 22 billion in FY15.

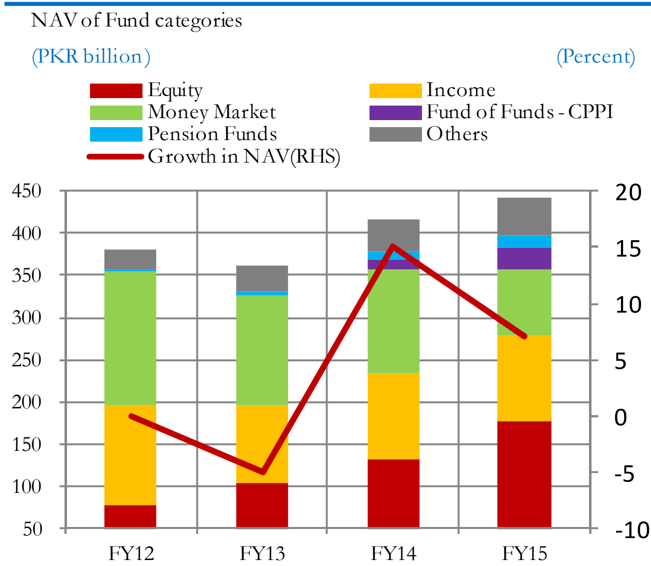
Asset price channel of monetary transmission seems operative…

The asset wise composition of the funds is also indicative of their returns. Downward trajectory of the interest rate has worked towards a reversal in the composition of the funds; placing equity funds with highest returns at the top, followed by fixed income and money market funds in FY15. This is in stark contrast to the state of affairs in FY12 when money market funds maintained highest NAV (**Figure 5.4**).

Figure 5.4

NAV growth decelerated while equity-based funds took the lead

NAV of Fund categories



Source: MUFAP

This compositional change is, however, as per expectations. Monetary easing usually has a positive impact on asset prices (equities, real estate, etc.) making them more attractive.[131] The corporates and retail investors (individuals) can then tap the revaluation gains of their balance sheets (or increase in wealth) to borrow more and invest in productive avenues. Higher investment activity could then lead to higher production. So, the first leg of the asset price transmission channel i.e. increase in equity prices, appears to be working in Pakistan as well.

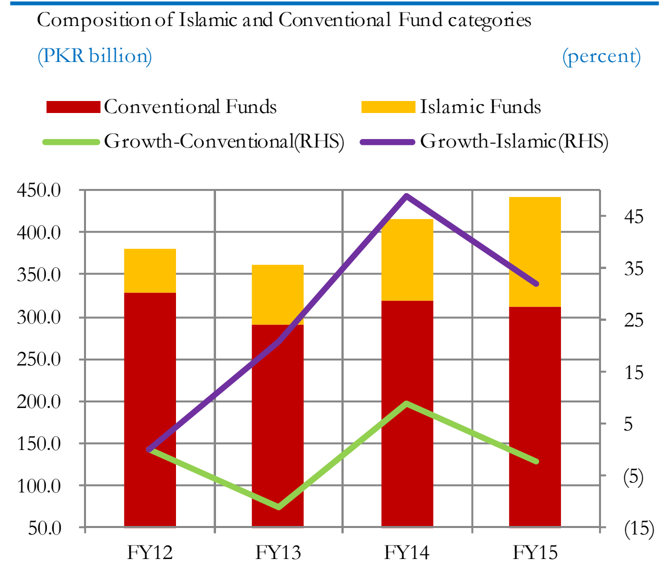
…while Shariah compliant modes gained allegiance

Behavioral factors usually have a strong bearing in investment discipline. If we divide the fund industry between conventional and Islamic categories, there is a clear inclination towards Islamic funds. The conventional funds position in net assets regressed by 15 percentage points bringing their share from 86 percent in FY12 to 71 percent in FY15. While the share in net assets value of faith based open end mutual funds jumped to 29 percent in FY15 from 14 percent in FY12 with an average YoY growth of 35 percent during this period.

Figure 5.5

Increasing popularity of shariah-compliant funds

Composition of Islamic and Conventional Fund categories



Source: MUFAP

131 For details please see "The Transmission Mechanism and the Role of Asset Prices", Frederic S. Mishkin, NBER Working Paper No. 8617, 2001.

Shariah-compliant equity funds remained the most popular category, witnessing net inflows of PKR 16 billion despite a return which was 71 bps lower than that offered by their conventional counterparts during FY15 (**Figure 5.5**).

Shifts in the investor anatomy prevailed……

Increasing popularity of the funds, especially among retail investors, is evident from the expanding investor base due to higher yield and tax advantage. The number of investment accounts has grown by 10 percent over the period FY12-15 with shifts in investor category. Institutional investment funds went down from 83 percent to 66 percent probably due to the waning of tax advantage for banks.[132] While share of individuals in total NAV increased to 34 percent from 17 percent in FY12.

Despite rising share of retail investors in funds market, their share is still low by international standards where retail participation is, generally, to the tune of 80 percent. Mutual funds are, therefore, a long way away from establishing themselves as a worthwhile alternate savings avenue in Pakistan as is the case internationally.

Sales and redemption pattern of mutual funds also provide an interesting insight. Net redemptions from money market funds were observed for all investment categories with a marked increase in equity funds by the Provident & Pension funds.

Banks, driven by the tax motives were also inclined towards the equity funds. Driven by higher returns but wary of the riskier equity funds, individuals took the mid-way of replacing their money market funds with the income funds.

[132] Previously under Finance Act of 2012, the income generated by banks from investment in mutual funds was taxed at 10%.

Table 5.3

Shifts in Investor Base of Conventional Equity Funds

	FY14	FY15
	PKR million	
Banking & FIs	(2,161.0)	3,416.0
Provident & Pension Funds	(196.0)	1,345.0
Individuals	(982.0)	484.0
Others	(1,571.0)	(2,555.0)
Total Net Sales	**(4,910.0)**	**2,690.0**

Source:MUFAP.

Table 5.4

Shifts in Investor Base of Conventional Income Funds

	FY14	FY15
	PKR million	
Banking & FIs	(109.0)	(7,341.0)
Provident & Pension Funds	211.0	900.0
Individuals	419.0	8,647.0
Others	(883.0)	2,297.0
Total Net Sales	**(362.0)**	**4,503.0**

Source:MUFAP.

Table 5.5

Shifts in Investor Base of Conventional Money Market Funds

	FY14	FY15
	PKR million	
Banking & FIs	(9,062.0)	(34,588.0)
Provident & Pension Funds	377.0	(1,758.0)
Individuals	(8,118.0)	(8,793.0)
Others	(2,076.0)	(13,483.0)
Total Net Sales	**(18,879.0)**	**(58,622.0)**

Source:MUFAP.

The sector has also graduated itself as a recipient of idle pension and other retirement funds largely due to tax incentive[133] and increased awareness among the investor and public regarding this attractive avenue for long-term savings, particularly for their

[133] Under section 63 of income tax ordinance 2015, pension fund investments are eligible for tax credit up to 20% of one's taxable income. Additional catch-up incentives are provided to participants over 40 years, with a maximum tax credit on 50% of taxable income.

old age. Investments in the offered pension schemes in FY15 are five times the level observed in FY12. The growing popularity of such funds resulted in 12 new fund offerings during the year (**Table 5.3, 5.4 and 5.5**).

Mutual funds facing stiff competition despite better returns…

Apart from direct competition from commercial banks and NSS instruments, returns offered by mutual funds is also effected by indirect cost of taxes and fees levied at the fund level. Banking sector further presents a challenging competitor not only in terms of funds mobilized but also with regards to outreach to the general public through their extended branch network.

NAV of mutual funds industry is only 4 percent of the funds parked in deposits with commercial banks offering an average return of 6.2 percent over the year when the money market mutual funds presently offer 8.8 percent on average. The investor base of around 236,000 investor accounts is meager as compared to the 38 million CASA accounts.

Expectations of a thriving stock market may prolong the current trend …

In light of the prevailing low interest rate scenario, investor interest is expected to move further towards high yielding equity funds. Some volatility may persist in the equity market in the near term but equities are expected to perform better relative to money market over the medium term. Investors with relevant risk profiles and investment horizons may profit from investing in the equity funds category. While yield on debt instruments are expected to remain subdued due to soft inflation outlook.

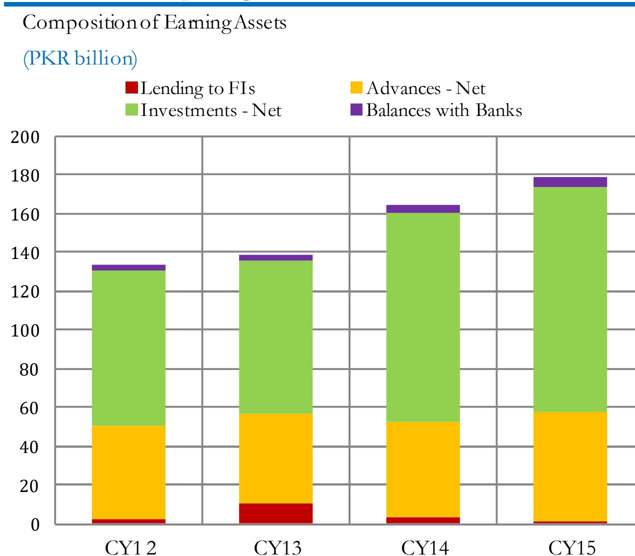
Development Financial Institutions (DFIs)

The DFIs continue to grow with a conservative pace in CY15[134] undermining the development role of the sector. The size of the industry remains limited to 8 DFIs with insignificant (3 percent) contribution to gross fixed capital formation.

The asset base of the DFIs has expanded by 8.7 percent in CY15; mainly driven by growth in advances and investment portfolio. Investments as compared to advances occupied significant share in total assets and remained the major source of earnings for the DFIs (**Figure 5.6)**.

Figure 5.6

Investments occupied significant share in Total Assets



Source: FSD,SBP

Advances grew handsomely but the share of SMEs squeezed further…

In CY15, advances (gross) increased by a notable 14.0 percent over the last year, significantly higher in comparison to growth of 8.1 percent in the banking sector. The main contributing factor in advances' growth during the year can be traced to a

[134] For DFIs the calendar year (CY) is the same as the Financial Year (FY).

remarkable 13.6 percent growth in corporate sector lending. Private sector lending increased as the macro economic conditions improved. An analysis of advances' flow displays the same pattern of growth in fixed loans as observed in the banking sector (**Figure 5.7**).

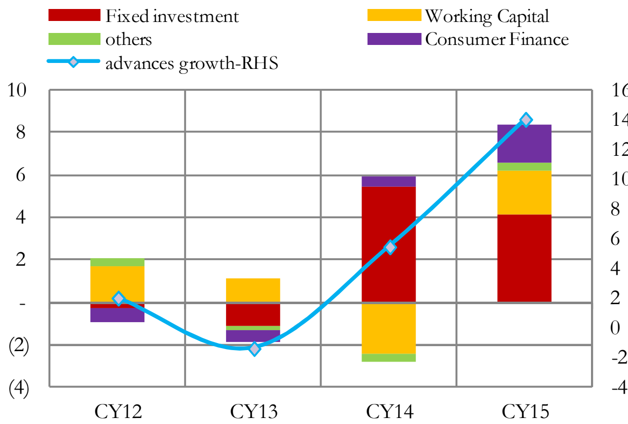
Under Consumer finance, flow of funds surged mainly in mortgage loans category. However, the growth was limited to only one DFI. SME sector shrank further with a net retirement of PKR 27 million. A prominent 75 percent decline was observed in the overall lending to Financial Institutions (FIs). Except one DFI, lending to FIs witnessed a downward trend.

Figure 5. 7

Major share of funds flew to Fixed Investments

Advances Composition (Flows)

(PKR billion) (percent)



Source: FSD,SBP

Share of investments in total assets remains large…

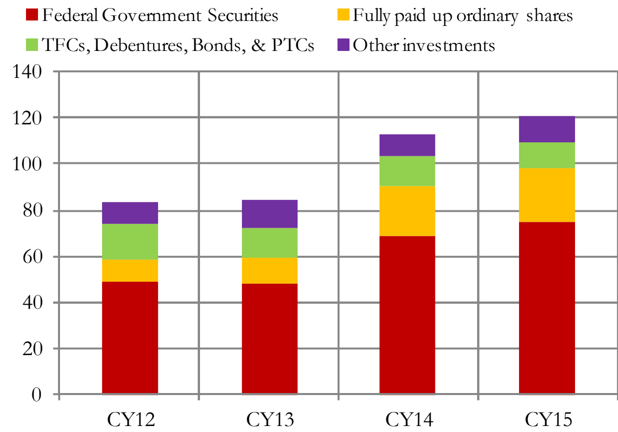
Investments, despite a decline in their share by 140 bps, occupy almost two-thirds share in total assets of the DFIs during 2015. A growth of 7 percent in investments is observed during the period owing to a notable increase of 9 percent in government securities (**Figure 5.8**). Investment in stock market also observed rising trend. Since CY13, equity investments have almost doubled in line with the capital market's remarkable performance.

Figure 5.8

Investment composition skewed towards Government Securities

Investment Portfolio of DFIs

(PKR billion)



Source: FSD,SBP

Investment composition skewed towards government securities…

Investment composition is skewed towards government securities followed by equity instruments. In order to manage their liquidity and gain benefit from interest rate movements, DFIs kept their investment strategy flexible by parking major chunk of their investments under AFS category (**Figure 5.9**). As of CY15, DFIs hold 50 percent of PIBs and 17 percent of T-bills under AFS category.

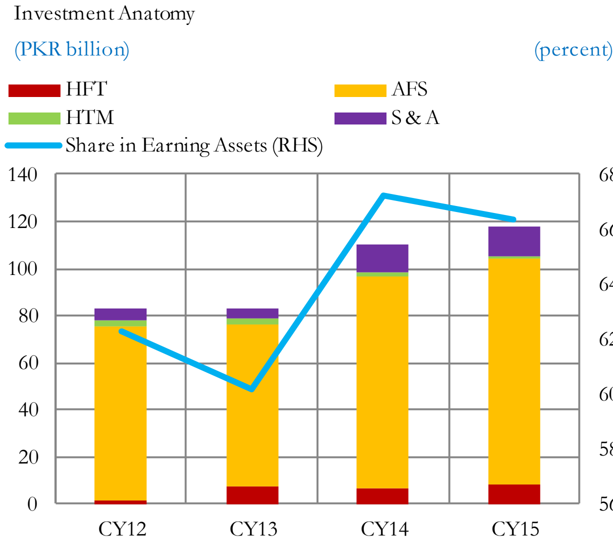
Growth in deposits receded…

On the funding side, borrowings and equity remained the main sources of funding for the DFIs. Borrowings grew by 16 percent YoY largely on account of increase in call borrowings and loans from SBP. This increase in borrowings is mainly attributable to low cost of borrowings compared to that of deposits. Equity, which on average funds 41

percent of the total balance sheet footing, grew on the back of healthy growth in retained earnings.

Figure 5.9

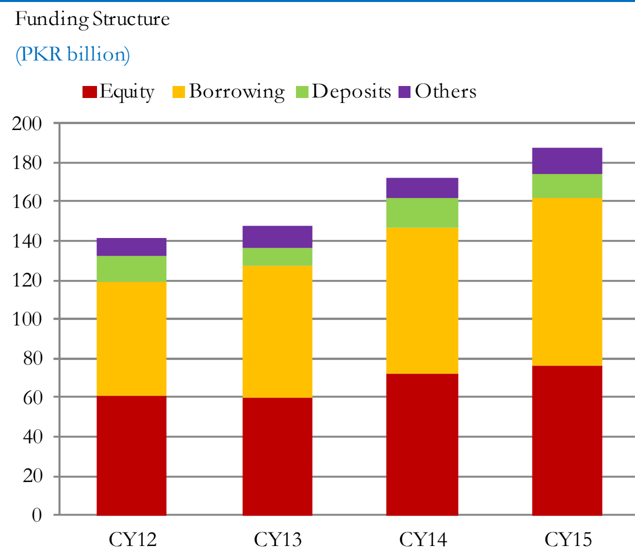
Major chunk of investments parked under AFS category



Source: FSD,SBP

Figure 5.10

Growth in deposits receded



Source: FSD,SBP

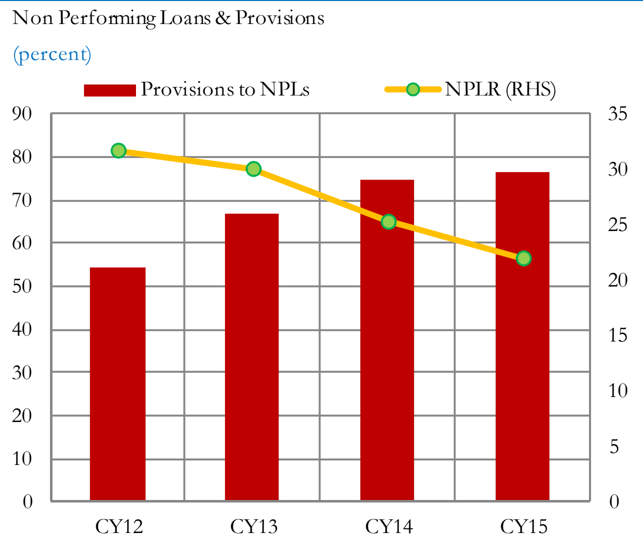
The share of deposits in total funding, on the other hand, has receded due to higher cost[135] (11 percent in CY15 compared to 9 percent in CY14) (**Figure 5.10**).

Assets quality of the DFIs shows improvements…

The infection ratio of DFIs has dipped due to marginal decline in NPLs stock and growth in advances, leading to improved asset quality (**Figure 5.11**). NPLs declined across the board except for two DFIs that showed an upward trend. More than 80 percent of the NPLs were parked under loss category having remote chances of recovery. Further, provision coverage ratio reached to a marginally higher level of 76.5 percent in CY15 in comparison to last year's level of 74.5 percent, demonstrating somewhat improved resilience of the sector.

Figure 5.11

NPLR showing a downward trend



Source: FSD,SBP

ROE and ROA of the sector dipped…

Operating performance of DFIs has been modest during CY15. The sector has posted pretax profit of PKR 8.8 billion, 1.1 percent higher over the last year. However, after tax profitability has

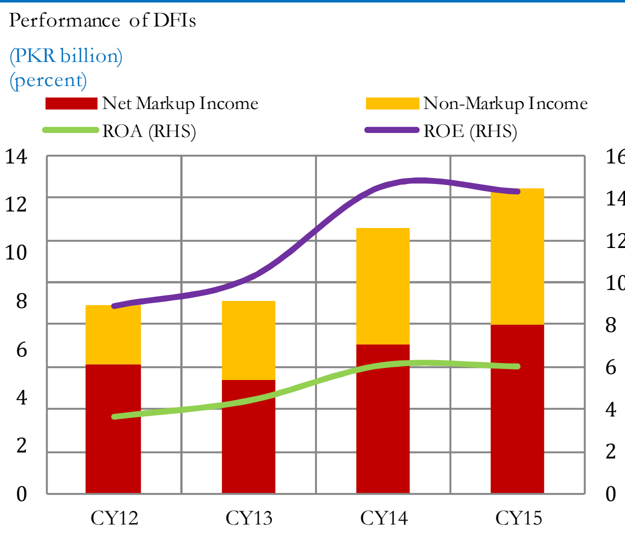
135 DFIs as per their mandate can only raise term deposits.

significantly declined relative to CY14 (a fall of 15 percent).

Though, the low interest rate environment has squeezed the return on advances, interest earned on large investment portfolio supported the overall net interest income which has also been complimented by a 16 percent growth in non-interest income. The major increase in non-interest income came from gains on sale of securities and dividend income.

Nevertheless, ROA and ROE has dipped mostly due to increase in provisions and administrative expenses, and expanding asset base of largely low yielding assets (**Figure 5.12**).

Figure 5.12
ROE & ROA dipped



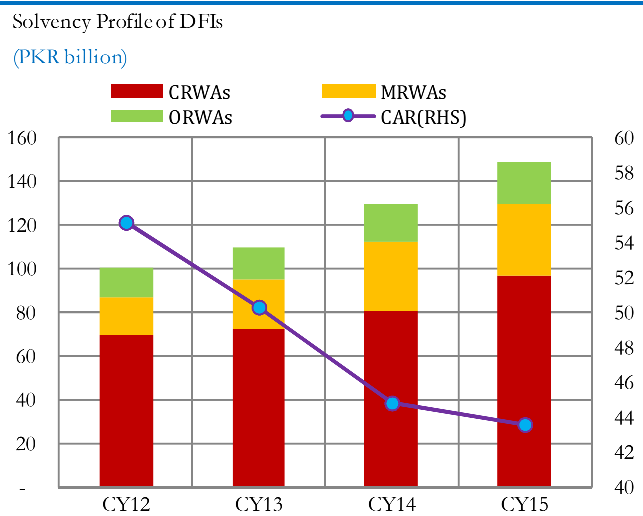
Source: FSD,SBP

Capital Adequacy Ratio (CAR) is declining…

Credit risk weighted assets have grown on the back of growth in advances. Operational risks weighted assets (ORWAs) also inched up due to higher gross income. Eligible total capital increased as well but proportionately less than the increase in RWAs; pulling the CAR downwards (**Figure 5.13**). However, the overall CAR of the industry at 43.6 percent is still at a level higher than the regulatory requirement evidencing strong solvency of the sector. All, but two, DFIs are compliant with minimum capital requirements.

Positive economic outlook, energy sector reforms, improved law & order situation, developments on CPEC and low interest rate environment may lead to increased growth opportunities for this sector as well.

Figure 5.13
CRWAs inched up



Source: FSD,SBP

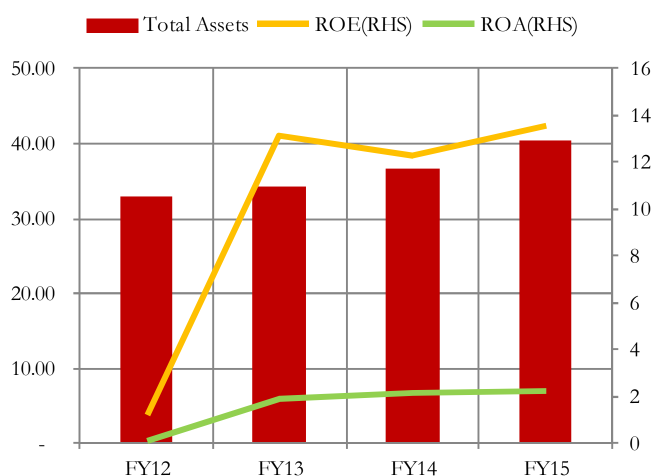
Leasing Sector

With a miniscule share in the financial sector, leasing sector poses limited concerns for the stability of the overall financial sector. However, their positive contribution in spurring economic activities via provision of alternative financing source is well desired for the development of the financial markets. Also, the focus of the leasing business in Pakistan is, generally, on SME segment and consumer finance, with most of the disbursements for machinery, equipment and vehicle leasing, which makes it even more attractive for equitable economic growth purposes.

Steady growth funded by deposits and borrowing…

The leasing sector has registered a steady growth for the last couple of years. The sector added another 10 percent to its assets base during FY15. Most of it was funded by a reasonable increase in deposits and borrowings from financial institutions. The fresh funds were largely disbursed for financing core business of leasing. Despite increase in loan loss provisioning charge, the operating performance showed significant improvement as ROE increased by 130 bps to 13.5 percent (**Figure 5.14**).

Figure 5.14
Steady asset growth funded by deposits and borrowings



Source: Annual Audited accounts of Leasing Companies

The ownership structure of leasing industry shows that 6 of these companies are part of the local or foreign banking groups and are largely contributing to the growth and performance of the sector during the last few years. The sector is quite concentrated as the largest firm (asset-wise) in the sector accounts for 69 percent of the sector's assets and 82 percent of sector's lease income. Market news suggest merger of two leasing companies which will create a larger firm whose market share will further increase concentration risk.[136]

Credit and liquidity are major risks faced by the leasing companies. In terms of severity, liquidity remains a major impediment in the growth of this sector. As large number of these firms are dependent on bank funds to finance their business, their growth remains largely affected by availability of funding lines from the banking sector.

Changes in the regulatory framework…

Leasing sector is governed by NBFCs and NE (Non-Bank Finance Companies and Notified Entities) regulations 2008 which were amended in November 2015 **(See Box 5.1)**. One of the major changes in these regulations is in capital requirement for deposit raising leasing firms.

As a result capital standards for new leasing companies which can raise deposits has been set at PKR 1 billion while existing leasing companies with deposit raising status can operate with a capital base of PKR 500 million. Further non-deposit taking leasing firms can operate with a nominal capital base of PKR 50 million.

Changes in the regulatory environment will help to solve the long standing solvency issues plaguing the sector. Further it will add to overall financial stability as only strong players remain in the market.

Modarabas

The Modaraba sector, despite 30 years of its operations, is far from actualizing the true potential of its business model which encompasses diversity in operations and maximum dividend payouts to its investors.

In 2008, SECP introduced 12[137] model financing agreements both to bring the companies at a level-

[136] For details of merger please visit www.psx.com.pk

playing field with the conventional sector and to provide new products for the Islamic financial market. Capitalizing on the model agreements, the companies can undertake diverse activities including leasing (Ijarah), financing, trading, manufacturing, property development, project financing and equity investments. Yet the sector's assets and income remains concentrated in leasing and only a few players have attempted to venture into trading, manufacturing and other Shariah-compliant financing.

Although the bank sponsored modarabas drawing on the credibility of their parent companies are able to mobilize funds in their investment schemes while also getting concessional credits at times, the rest of the companies are facing funding constraints and financing expenses.

Further, the Modaraba Management Companies (MMC) akin to an Asset Management company, were expected to float different types of Modarabas exploiting their respective strengths but almost all of the MMCs remained confined to the first offering. Currently there are 33 licensed MMCs but only 24 are in operation.

The growing Islamic finance industry offers immense potential for profitable operations, but the business strategies of the sector's players and lack of innovation in product offerings continues to dampen the modaraba companies' progress.

Moderate asset expansion amidst unchanged composition…

The 24-company sector's asset base, while expanding over the years at an average rate of 3 percent, has reached PKR 31 billion in FY15. It still accounts for a meager 4 percent of the non-banking financial sector's assets. The current asset growth was largely contributed by investments[138] which grew by 13 percent in FY15 on the back of vibrant equity market.

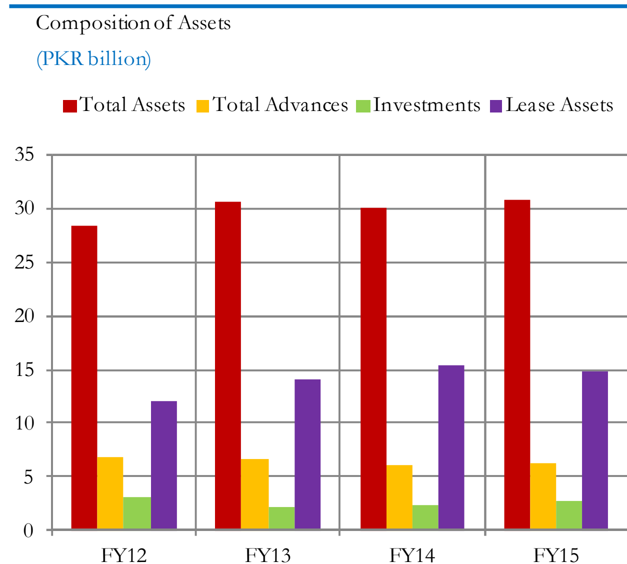
On the other hand, lease rental receivable -the core business of modarabas showed a nominal growth of 2 percent. Reliance on lease rental services is evident from the sector's asset profile whereby lease assets, while shrinking marginally, continued to make up a sizeable portion of total assets (48 percent in FY15 down from 51percent in FY14) (**Figure 5.15**).

Figure 5.15

Sector Assets remain concentrated in Lease Assets

Composition of Assets

(PKR billion)



Source: Audited financial statements of Modarabas

Modest inclination towards advances can be gleaned from the trend in financing under the various Shariah-compliant modes which grew by 2 percent in FY15. The growth, however, was concentrated in the bank sponsored modaraba companies which witnessed a 4 percent increase while the rest saw a decline of 5 percent.

Performance is concentrated in asset rich and bank controlled companies…

137 Ijara, Modaraba, Musharika, Diminishing Musharika, Musawamah, Istisna, Murabaha, Salam, Syndicate Modaraba, Syndicated Musharika, Islamic CFS Murabaha and Sukuk.

138 Investments include Listed /unlisted securities, Sukuk, certificate capital of other modarabas, subsidiaries/ associated companies and mutual funds.

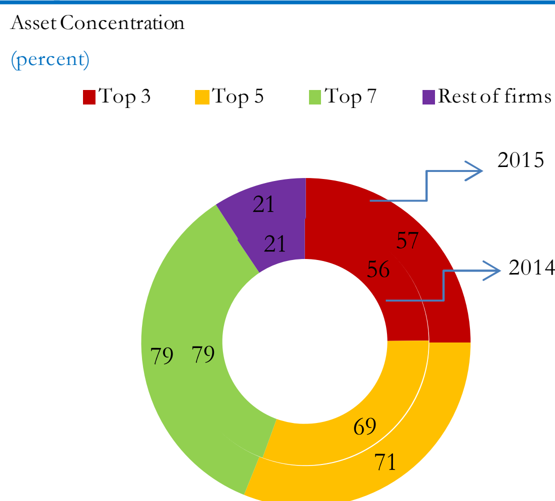
Much of the sector's performance and assets remained concentrated in the top seven modarabas. These seven companies (asset-wise) represented 79 percent of the sector's assets, 70 percent of sector's equity and 86 percent of sector's income from operations in FY15 (**Figure 5.16**).

Figure 5.16

Sector Assets remain concentrated in Top Seven Modaraba Companies

Asset Concentration

(percent)



Source: Audited financial statements of Modarabas

The modarabas under management control[139] of the banking sector seemed better positioned to take advantage of the business model offered by the sector as they made up 51 percent of total assets, 19 percent of equity and 34 percent of income from operations (**Table 5.6**).

Table 5.6

Modarabas under Management control of banks

	FY12	FY13	FY14	FY15
	percent			
Contribution in Sector Assets	58.0	55.0	53.0	51.0
Contribution in Sector Equity	18.0	16.0	17.0	19.0
Contribution in Core Income	28.0	48.0	32.0	34.0

Source: Audited financial statements of Modarabas.

Equity financed a major portion of the sector's assets…

Prudential regulations requiring transfer of 20-50 percent of after tax profits to a statutory reserve translated into an ever increasing contribution of equity in the sector's funding mix which surpassed 51 percent in FY15. In FY15, 33 percent of the sector's profits were transferred to statutory reserves. Financing, predominantly from the banking sector and other modaraba companies shrank to 12 percent while deposit mobilization, via non-interest bearing investment certificates, reached 21 percent (**Table 5.7**).

Table 5.7

Funding Mix of Existing Modarabas

	FY12	FY13	FY14	FY15
	percent			
Financing	17.0	14.9	16.4	12.2
Deposit Mobilization	23.2	25.6	20.8	21.3
Equity	44.0	42.9	47.9	51.7

Source: Audited financial statements of Modarabas.

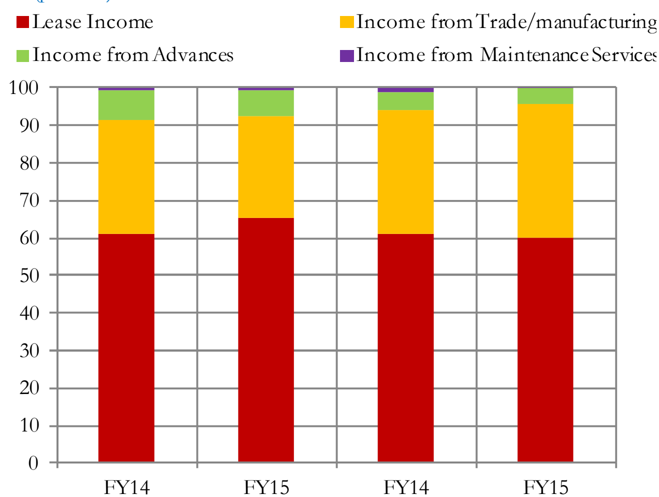
[139] Via direct ownership of the Modaraba Management Company or shareholding by the bank's associated companies.

Figure 5.17

Lease Income continues to dominate Sector Earnings

Composition of Income from Operations

(percent)



Source: Audited financial statements of Modarabas

Lease income dominated sector's earnings…

The sector's income remained concentrated in lease rentals which accounted for 59 percent (down from 61 percent in FY14) of total income generated from operations in FY15. While income from trading/sales grew on average at 7 percent over FY12-15, more than 70 percent of that income was attributable to a single manufacturing modaraba (**Figure 5.17**).

Profitability declined marginally…

Profitability of the sector fraught with operating and financing costs, declined over the year by 4 percent to reach PKR 1.4 billion with four companies landing in red. 61 percent of the income from operations was expensed in operating costs while another 10 percent went towards payment of finance costs (**Table 5.8**).

Depreciation on Lease Assets and Modaraba Management Company (MMC) fee further dragged down the profitability as most of the modarabas continued to pay the MMC fee at the maximum prescribed threshold of 10 percent of annual profits.

Tax exemption benefits continued to drive payouts to certificate holders. Cash dividends ranging from 0.9 percent to 90 percent of paid-up-capital were paid out by 20 of the companies in FY15 but many of the companies offered rates which were still not competitive.

Table 5.8

Performance Indicators of Modarabas

(PKR in billions and ratios in percentage)

	FY12	FY13	FY14	FY15
Profit After Tax	1.2	2.0	1.4	1.3
Total Income	10.2	11.8	10.6	10.7
Operating and Finance Cost	6.3	7.1	6.7	6.9
ROA (After Tax)	4.3	6.4	4.7	4.4
ROE (After Tax)	9.8	15.0	9.8	8.5

Source: Audited financial statements of Modarabas.

SECP in March-2016 carried out a comprehensive financial review of the modaraba companies to initiate action against the ones with unsatisfactory track record of dividend payouts, excessive bookings of non-earning assets and imprudent risk management framework. In the process, SECP has identified 13 underperforming modarabas and has vowed to chalk out business plans for their performance improvement.

SECP invited stakeholder comments on proposed regulations…

The proposed draft of Modaraba Regulations-2015, much in-line with the sector's current funding status, seeks to confine issuance of certificates of investment to the financial services modarabas. The change, if approved, would likely result in increased secondary offerings of securities by non-financial modarabas or alternatively padding-up of reserves via profitable operations in an attempt to maintain funding level. The proposed regulations further seek

to link deposit mobilization with minimum equity and proposed CAR methodology along with more stringent credit rating requirements envisaging stronger depositor protection.

The resilience that Islamic financial system components bring to the financial sector due to their real asset backed nature advocates for their stronger presence in our financial system. Lacking the ability to mobilize funds via investment schemes/deposits on the level of bank sponsored modarabas/Islamic banks which enjoy public confidence, the non-bank sponsored modaraba companies may venture into small-ticket businesses.

By offering short and medium term financing in areas like agriculture, livestock, tailor-made financing, small-scale businesses, the companies can better position themselves to cater to the unbanked segments of the economy promoting financial inclusion on the one hand and avoiding overwhelming competition on the other.

While the sector is devoid of posing a worthwhile threat to the stability of the country's financial system, the resource contribution by the banking sector, both as a financier and as an investor, points to a relatively vulnerable position of the sector itself in instances of operational threats to the banking sector.

Investment Finance Companies (IFCs)

Investment Finance companies licensed as such by the SECP can undertake a wide range of activities from the very basic fee-based investment advisory, FX trading and brokerage to the much intensive portfolio/ wealth management and corporate /consumer financing. The companies are meant to serve the investment and financing needs of a diverse clientele of financial institutions, general public, private sector corporations and high net worth individuals and can also venture into other NBFC categories such as commercial and retail leasing subject to additional minimum equity requirements as defined by the SECP.

The sector has seven[140] operative companies as of FY15 but the licenses for six of these companies are pending renewal by SECP which is in the process of devising a road-map for the NBFC sector along with a new set of regulations.

Repercussions of the liquidity crisis persisted while competitive environment threatened viability of operations...

The liquidity crunch after the stock market crisis of 2008 was especially intense for the investment finance companies because of their excessive reliance on the unsecured credit lines from banks and huge provision expense on their infected investments in stock market.

The repercussions of the crisis still persist as the sector is yet to post a profit. The companies continue to struggle with recoveries, accumulated losses and inability to raise financing. Lack of level-playing field and competition emanating from the presence of the much resourceful investment banking desks of commercial banks add to the adversity being faced by the sector as they continue to rely on their very competitors for their business funds.

...... wiping out sector assets......

The business of IFCs is stagnant. The companies have been operating on the side-lines focusing on settling outstanding liabilities via disposal of non-core/non-earning assets and maximization of recoveries from NPLs; thereby shrinking their balance sheets.

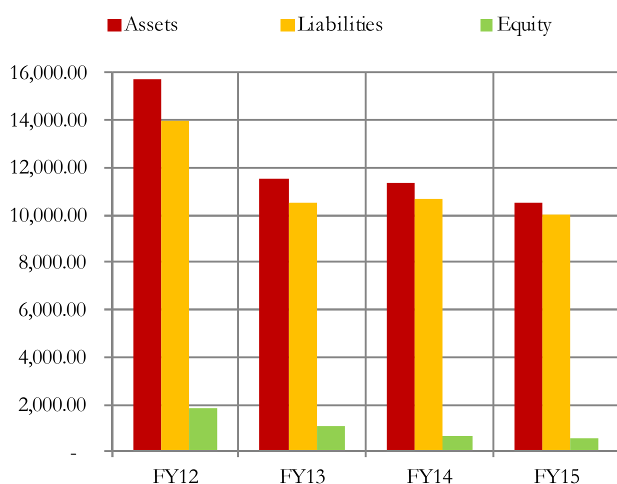
[140] LSE Financial Services, formerly the Lahore Stock Exchange, exchange has been licensed as an IFC.

Figure 5.18

Declining Balance Sheet Size of all but one company in the Sector

Balance Sheet Composition

(PKR million)



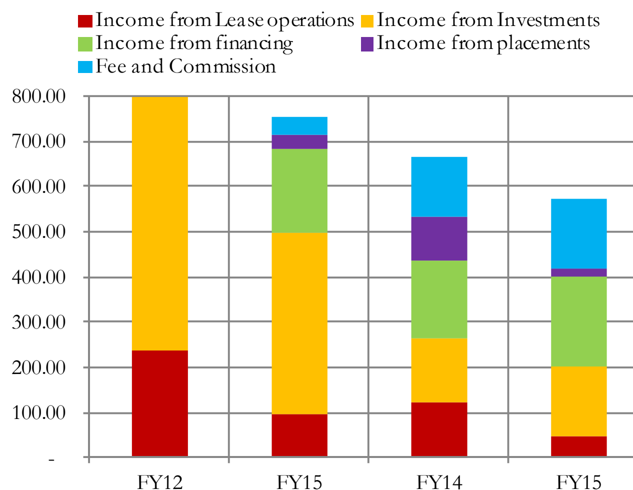
Source: Audited financial statements of Investment Finance Companies

Figure 5.19

Sector Earnings shift towards non-fund based sources

Composition of Income from Operations

(PKR million)



Source: Audited financial statements of Investment Finance Companies

The receding balance sheets of majority of players diluted the sector's asset base which reached PKR 10.5 billion in FY15 registering a 33 percent reduction over the four year period (FY12-15). Funding side (both liabilities and equity) followed suit, decreasing by 28 percent and 31 percent, respectively. All of the companies continue to report deferred tax assets which remained unutilized owing to their limited taxable income. Deferred tax assets accounted for 10 percent of the sector's asset base in FY-15 (**Figure 5.18**).

Mixed profitability results and tax losses overwhelm the sector's bottom line…

Most of the companies, due to non-availability of liquidity for fresh business, have been focusing on non-fund based activities to remain afloat. Non-fund based income (Fee and Commission) took the lead witnessing YoY growth of 17 percent in FY15 accommodating a 26 percent share in income (up from 4 percent in FY12). The contribution in total income from financing, investments and placements reduced from 78 percent to 62 percent over the period FY12-15 (**Figure 5.19**).

In FY15, five companies posted after-tax profits capitalizing on mark-up waivers on settlement of liabilities, reduction in financing costs brought on by a reduction in borrowings, net reversals in provisions (registered by 5 companies in FY15) and rationalization of administrative expenses (**Table 5.9**).

Table 5.9

Performance Indicators of Investment Finance Companies

	FY12	FY13	FY14	FY15
	(PKR billions)			
Income from Core Operations	1.46	0.76	0.67	0.57
Admin & Operating Cost	(0.67)	(0.56)	(0.48)	(0.46)
Finance Cost	(1.50)	(0.48)	(0.30)	(0.21)
Operating Profit	(0.71)	(0.28)	(0.99)	(0.72)
Equity	(1.69)	(0.78)	(0.13)	(0.16)

Source: Audited financial statements of Investment Finance Companies

Over the four year period (FY12 to FY15), funding (borrowings, COIs, CDs) went down by 31 percent which resulted in a reduction of 86 percent in the mark-up costs. During FY15, finance costs posted a 30 percent decline coming from a 12 percent

reduction in funds; net provisions of PKR 156 million in FY14 turned into net reversals against provisions of PKR 96 million in FY15; while administrative and operating expenses decreased by 32 percent over the year.

While both the operating and financing costs have reduced over the years, the progressively declining income from operations remains insufficient to cover these costs. In FY15, operating expenses wiped out 77 percent of Income generated from operations and another 35 percent was expensed in finance costs (28 percent for mark-up on COIs and CDs and 7 percent for borrowing).

Reversals in provisions of PKR 96 million were enough to offset the operating loss of the sector which managed to achieve nominal profits before tax of PKR 45 million- the first positive figure since FY12. However, reversal of deferred tax asset of PKR 220 million by a single company overwhelmed the sector's after-tax performance landing it in red (negative PKR 163 million).

Re-emergence of positive yet insufficient cash flows from operations…

Cash flows from operations, a primary determinant of debt-servicing ability and one of the decisive factors in credit analysis, seems to be a constraining factor in the companies' ability to raise financing.

The sector is facing serious problems in terms of liquidity based on the cash flow generated from operations. Cash flows of PKR 239 million generated from operations in FY15 were only 25 percent of the maturing liabilities of PKR 942 million.

Inability of the core income to cover the maturing liabilities will present liquidity constraints over the coming year as well. The companies will continue to face the need to re-structure their present obligations or draw on funds from disposals of non-earning assets to meet impending commitments.

Non-compliance under NBFC regulations continues…

Unfavorable business environment over the years coupled with accumulated losses has eroded net worth of most of the companies; as a result, six of the companies remained non-compliant under the Non-Banking Finance Companies and Notified Entities Regulations 2008 regarding Minimum Equity Requirement. The non-compliance further extends to fund and non-fund based exposure limits which have been linked to equity.

SECP, under the new regulations has linked the Minimum Equity Requirement (MER) with deposit taking and has given a year to the existing deposit taking investment finance companies for compliance with the new MER or opt out of the deposit taking category while freezing the deposits at the existing level.

The fund and non-fund-based exposures have been revised downwards[141], further constraining the limits for IFCs which opt out of the non-deposit taking status. Deposit taking finance companies have further been required to maintain a Capital Adequacy Ratio of 8 percent for the first two years and 10 percent thereafter.

This while being challenging for those investing in unlisted equity, risky debt securities and unsecured financing (highest capital charge category of 150 percent) would provide for additional capital cushion adding to immunity from adverse business outcomes.

Should the expected outlook of the equity markets materialize, the companies capitalizing on the

[141] Fund and non-funds from 30 percent to 20 percent and fund-based from 20 percent to 15 percent of equity.

generated business opportunities for investment banking services may generate funds enough to cover at least their operational costs.

Box 5.1: Revamped Regulatory Framework for NBFCs

SECP introduced major amendments to the regulatory framework for NBFCs in November, 2015. The amendments seek to improve on the risk management practices of NBFCs, link Minimum Equity Requirements (MER) with the respective business activities of the NBFCs and enable SECP to regulate the non-bank micro finance institutions.

The amendments categorize NBFCs as lending NBFCs and Fund management NBFCs. Lending NBFC i.e. Leasing Companies, IFCs, HFCs, Discount Houses and Non-Bank Microfinance Companies. NBFCs have been further segregated into non-deposit taking and deposit-taking entities with distinct regulatory requirements. The definition of NBFC has been broadened to include Discount Houses and Non-Bank Micro Finance Companies (NBMFCs). With the addition of new entrants, NBFIs are expected to play an important role in mobilizing investments to the sectors that need special attention such as micro finance, SME financing, housing and infrastructure development.

The concept of small and mid-sized non-deposit taking NBFCs has been introduced with significantly reduced equity requirements. MER for non-deposit taking leasing companies and housing finance companies has been reduced to PKR 50 million from PKR 700 million and that of non-deposit taking investment finance services has been reduced from PKR 1,000 million to PKR 100 million. Moreover, housing finance companies, in addition to the consumer financing, have been permitted to undertake commercial housing finance activities.

Lending NBFCs can apply for permission to raise deposits after complying with the prescribed criteria related to MER, CAR (initially at 8 percent), credit rating etc. However, leasing companies, discount houses and house finance companies are required to invest 70 percent of its total assets in its licensed form of business.

Measures have also been adopted to support sustainable growth of fund management industry. In order to reduce the cost of setting up a company, Fund Management NBFCs have been allowed to undertake different Fund Management Services i.e. Asset Management, Investment Advisory, Private Equity & Venture Capital Fund Management Services and REIT Management Services under a single entity. In order to encourage private fund management, the eligibility criteria for Fund Management Company has been redefined and now a company other than a public limited company may also obtain license for private fund management. In addition, a new type of fund i.e. Private Fund has been introduced. Now, the fund management company may launch private funds with varied objectives of investing in wide range of financial assets including equity securities, debt securities etc.

For mutual fund industry, expense ratio has been capped according to the type of fund. Management fee has further been reduced to limit the maximum expenses that can be charged to a mutual fund to improve investors' return.

Box 5.2: Real Estate Investment Trusts (REITs) in Pakistan

Real Estate Investment Trust (REITs) is a mutual fund that invests in a pool of properties/mortgages bundled together and offered as a security in the form of unit investment trusts. These units can then be traded on stock markets. Each unit in a REIT represents a proportionate fraction of ownership in each of the underlying properties/mortgages providing its holders a simple way to invest in real estate without the cost or illiquidity associated with owning a property directly. There are two main types of REITs: equity REITs and mortgage REITs (mREITs). Equity REITs invest in real estate by acquiring properties and developing or renting them. Mortgage REITs invest in the debt required to finance real estate, including mortgage loans and Mortgage Backed Securities (MBS).

Global perspective

The global real estate securities market has seen a major transformation with the adoption of REITs and similar structures as countries sought to encourage broader public investment in commercial real estate. The market grew to approximately US $1.5 trillion in March 2016[142] with more than sixty six percent of investment in REITs.

REIT legislation was first introduced in 1960 in the United States, followed by the Netherlands (1969) and Australia (1971). In the early 1990s, faced with a downturn in the commercial real estate and the savings-and-loan crisis, private real estate companies began to adopt the REIT structure thereby accessing capital from public markets. As a result, more than 100 U.S. companies formed as REITs and became public between 1991 and 1997.

Encouraged by the positive impact REITs had on the investment landscape, real estate industry, capital markets and real economy, other countries began to implement similar legislation. From the late 1990s Asian governments started passing legislation allowing for establishment of REITs. The earliest Asian markets to adopt the structure were Japan and Singapore, later followed by Hong Kong, Malaysia, Thailand, Taiwan, and South Korea.

Benefits and Risks

REITs under a product offering that derives value from both the real estate and trading components is expected to simultaneously promote the development of the real estate and capital markets. A new product's trading while adding depth to the capital market will build professional capacities in the areas of valuation, fund management and trusteeship. The disclosure requirements of a REIT (which equate those of a public limited company) and the improved price discovery for rental and sale transactions of properties are further expected to bring the much needed transparency in the current murky real estate market.

Equity REITs are subject to the location-specific risks of their properties including any negative developments in the nearby locations which may depress REIT valuations. Phases of boom and bust, typical of the property market, may introduce further volatility in valuations.

In the mortgage REITs, the Global Financial Crisis has already demonstrated the potential hazards of leverage, maturity transformation and repo borrowings. These risks are typical of the mREIT model which borrows in the repo market to invest in the longer-term MBS-earning the yield differential. Despite that, the US mREIT market capitalization has grown significantly in recent years to reach US$ 52 billion. The policymakers seem to go soft on this asset class given the desirability of an active and liquid market for MBS and its favorable effects on the housing market development.

Regulatory environment in Pakistan

Globally, REITs are open-end structures. But in Pakistan, REITs have been initially introduced as closed

[142] FTSE EPRA/NAREIT Global & Global ex US Indices as at March 31, 2016.

end funds to avoid high redemptions thereby safe guarding against systemic risk.

The three types of REIT schemes introduced by SECP in Pakistan are the Developmental, Rental and Hybrid REITs. Developmental REIT schemes focus on developing acquired properties for Industrial, Commercial or Residential purposes through construction or refurbishment and then selling it for profit. Rental schemes invest in commercial or residential Real Estate to generate rental income. Hybrids are a combination of the two.

SECP initially notified the REIT Regulations in 2008 licensing two REIT Management Companies (RMCs), Arif Habib REIT Management Company Limited and AKD REIT Management Company Limited. However, sufficient interest was induced after the launch of fresh REIT regulations in 2015[143]. The specified parameters for REIT schemes under the previous regulations tended to encourage developmental REITs and large-sized rental REIT schemes. The new regulations tend to encompass the whole spectrum of schemes.

Entry barriers have been lowered whereby capital requirements for starting an RMC have been revised downwards from PKR 200 million to PKR 50 million. Limits on single investor ownership of fund units (IPOs capped at 5 percent and Pre-IPOs at 10 percent of fund units) has been done way with to facilitate admission of large-scale REIT projects. Concept of strategic investor has been introduced making RMC and the strategic investors the fall-back entities which are to hold the specified investments units in blocked accounts until the winding up of the scheme. The scheme's fund size has been linked with the listing regulations of the relevant exchange.

Utilization of customer advances has been capped to a percentage of construction cost as specified in the business plan and offering document. Unsecured borrowing for capital expenditures and to meet cost overruns has been permitted to the extent of 30 percent of land/real estate value. This resulting reliance on capital market for liquidity is expected to deepen capital markets and protect unit holder's right on the underlying property as it avoids excessive leveraging of a high-ticket business.

REITs investments have been encouraged further by providing tax benefits. As per finance bill 2015-16, the capital gains of a person who sold property to a REIT development scheme have been exempted from Income Tax till June 30, 2020. Further, income tax chargeable on dividend income from a REIT scheme set up by June 30, 2018 for the development of a housing sector has been reduced by 50 percent for the first three years.

State Bank of Pakistan also took an initiative to develop REIT market by relaxing its concentration limits for banks' exposure in equity market. Previously, banks were allowed to hold aggregate equity investment up to 30 percent of their own equity. However, for REITs investment, they can add another 10 percent exposure. This measure will help to develop the REIT market by creating demand from the banking sector.

Current status of REITs in Pakistan

Pakistan's first Real Estate Investment Trust fund was launched on June 12, 2015 which was oversubscribed; indicating huge interest of investors in indirect real estate market. Bringing together the strengths of the Arif Habib group and the Dolmen Group, the "Dolmen City REIT" floated 25 percent of its fund size of 22.237 billion. The Dolmen City REIT is close-end, listed, Shariah compliant Rental REIT offering investors to become unit holders of two components of the Dolmen City project, the Dolmen Mall Clifton and The Harbor Front. The fund management paid its first month's profit of PKR 169.612 million as dividends, yielding 9.6 percent return to its investors in only a month.

Outlook

Traded equity characteristics of the REIT structure may make them vulnerable to swings of the stock market.

[143] Currently four RMCs have been licensed under the new regulations- AKD, Arif Habib Dolmen, Orange and ISE Towers.

However, backing of a real asset as the fall-back value coupled with the structure's currently small share in the NBFI sector assets (3 percent) points towards its relative insignificance in terms of posing financial instability threats to the financial system.

6 Insurance

The trend of improved premiums and strengthening of asset base prevailed in the insurance sector during the last two years which are reflected in comfortable stability indicators. Growth in gross premiums helped in improving asset base of life insurance, which now constitutes more than 80 percent of the overall insurance sector of Pakistan. This also resulted in an increase in insurance penetration in the country to 0.8 percent. Despite rise in management expenses, deceleration in net claims and growth in investment income improved the profitability of life insurance. The non-life insurance sub-sector and the takaful business, in general, are also growing. Growth in assets of insurance sector has remained consistent for the last two years.

The insurance sector[144] has considerably prospered in recent years **(Figure 6.1).** Life insurance continues to dominate the sector with over 80 percent share as of H1CY15. Since H1CY13, the growth in life insurance has consistently remained around 21 percent (YoY). On the other hand, non-life insurance grew by only 6.2 percent (YoY) as of H1CY15 compared to 12 percent (YoY) as of H1CY14.

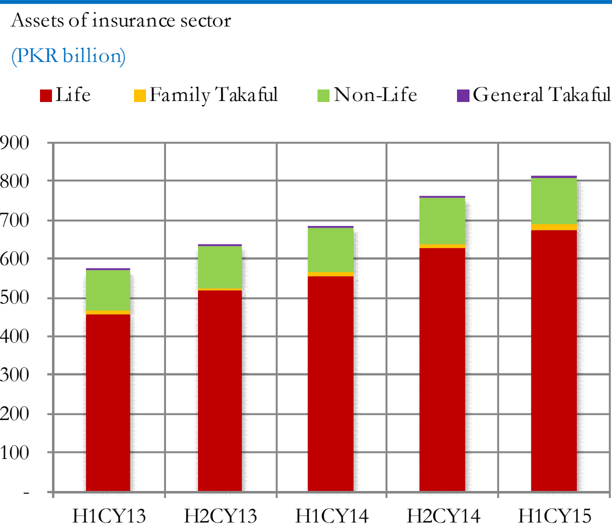
Family takaful grew by another 35.6 percent (YoY) in H1CY15 compared to 44 percent (YoY) in H1CY 14. Similarly, there was an increase of 29.3 percent (YoY) in general takaful business during H1CY15 (9.0 percent (YoY) growth in H1CY14). Overall, both family and general takaful business only comprised 1.9 percent of the total assets of the insurance sector in H1CY15 against 1.6 percent in H1CY14.

…as gross premiums of conventional insurance sector have flourished

During H1CY15, gross premiums of conventional insurance grew by PKR 18.3 billion (or 24.9 percent (YoY)) to reach PKR 91.8 billion as compared to an increase of PKR 9.5 billion (or 14.8 percent (YoY)) during H1CY14 **(Figure 6.2)**. Around two-third of these premiums were contributed by life insurance business. Gross premiums of life insurance grew by 32 percent, while that of non-life insurance increased by 11.8 percent for the half-year ended Jun-15.

Figure 6.1

Steady growth in size of insurance sector



Source: Unaudited/Audited published financial statements of life insurers, non-life insurers, family takaful and general takaful companies.

Domestic sector fared well when compared with international emerging markets

In comparison with other emerging markets and rest of the world, the domestic conventional insurance market performed reasonably well as the growth in

[144] The analysis is based on the data of 5 life insurers and 22 non-life insurers covering 98 percent and 83 percent of the life and non-life insurance sectors, respectively. The analysis covers data up to half-year ending June 2015. The financial close for insurers is December of the corresponding year. All growth ratios are on year-on-year basis.

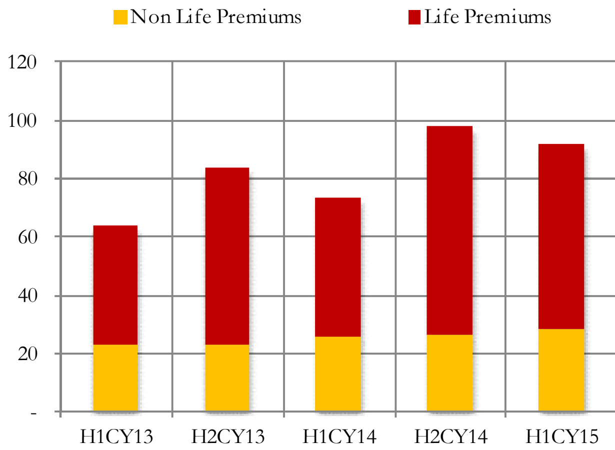
real premiums was well beyond other markets **(Table 6.1)**.

Figure 6.2

Consistent rise in gross premiums of insurance sector

Gross premiums (flows) of the insurance sector

(PKR billion)



Source: Unaudited/Audited published financial statements of life and non-life insurers.

Table 6.1

Real Premium Growth Rates in 2014

	Life	Non-life	Total
	percent		
Advanced Countries	3.8	1.8	2.9
Emerging Countries	6.9	8.0	7.4
Pakistan	12.7	18.0	16.6
World	4.3	2.9	3.7

Source: Swiss Re Sigma http://www.swissre.com/sigma/ and unaudited/audited published financial statements of insurance companies.

However, despite higher growth in the domestic sector, the insurance penetration still remained one of the lowest in the world. During CY14, the insurance penetration was 0.8 percent[145] which did manage to increase from 0.5 percent in CY13 and 0.3 percent in CY12[146]. As a result, Pakistan was ranked 80th among sample of countries.

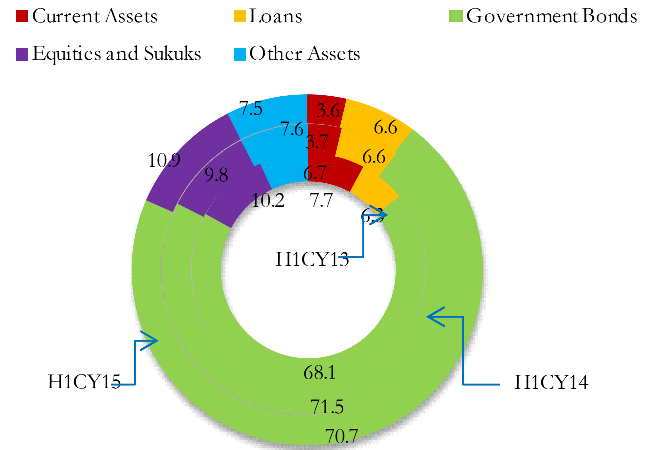
Life Insurance

Figure 6.3

Government securities continue to be the main investment avenue

Structure of Life Insurance

(percent)



Source: Unaudited published financial statements of life insurance companies.

Life insurance business continues to grow during last two years…

The life insurance segment has performed well during the last two years in terms of strengthening of asset base and rising premiums. The asset base further increased by 21.5 percent (YoY) during H1CY15 as the companies kept on building investments largely in long-term risk free government securities funded by rising premiums and accumulated profits. As a result, 70.7 percent of assets of life insurance constituted of government securities while 10.9 percent of investments were made in other avenues such as listed shares, mutual funds and Sukuks **(Figure 6.3)**.

145 For further information, please see: http://www.swissre.com/

146 The Securities and Exchange Commission of Pakistan (SECP) has given different penetration ratios: 0.67 percent for 2011-12; 0.73 percent for 2012-13; and 0.77 percent for 2013-14. For further information, please see: http://www.secp.gov.pk/annualreport/2015/Annual-Report-2015.pdf

Gross premiums significantly flourish…

The gross premiums surged by 32 percent for the half year ending Jun-15 compared to 16.3 percent rise for the half year ending Jun-14. This was largely on account of attractive returns on unit-linked[147] policies and improved distribution channels including bancassurance[148].

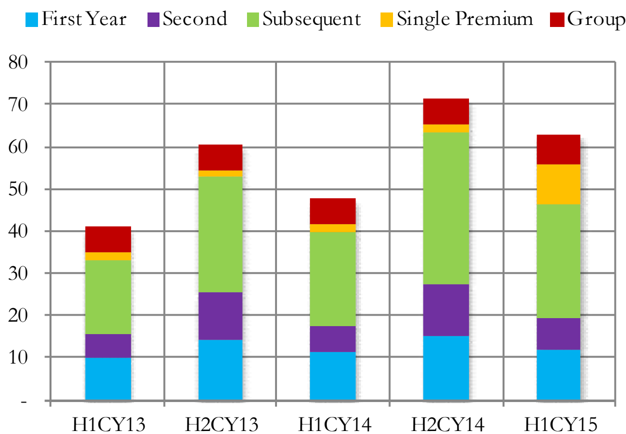
The first year premiums showed a growth of 7.5 percent for the half year ending in June 2015; however, its share in gross premiums declined to 19.4 percent from 23.8 percent in H1CY14. Similarly, although subsequent premium (beyond two years) grew by 22.3 percent in H1CY15 (YoY), its share in gross premiums declined in H1CY15.

Figure 6.4

Life insurance premiums considerably grew

Life insurance premiums (flows) and claims ratio

(PKR billion)



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

This was due to a significant increase in single premiums which increased its share in gross premiums to 15.3 percent in H1CY15 from 3.8 percent in H1CY14. One major company's success of a single premium product with a bank partner, who has been very aggressive in its distribution strategy, has been the major reason for the rise.

Besides individual premiums, the group premiums also witnessed 15.3 percent growth in H1CY15, while its share declined to 11.4 percent owing to higher single premiums **(Figure 6.4)**.

…while growth in net claims decelerated

The net claims witnessed significantly lower growth in H1CY15; 13.1 percent compared to 26.3 percent in H1CY14. Much of the claims were on account of maturity (17.8 percent) and events of death (10.9 percent) of the insured. However, the share of claims incurred on account of surrender of policies also increased to 48.1 percent.

The common reasons for cancelation of policy by the insurers could be their inability to pay premiums or expecting less benefit out of it. However, the surrenders have also increased as investment-linked policy holders tended to book immediate profits from rising unit prices (possibly as the investments were mostly made in long term government securities whose prices increased as the interest rates declined).

Therefore, the down-side risk of unit-linked insurance products is very high as it might affect the profitability of the life insurance providers. However, the very same product has also increased the business of companies during the last few years.

Higher investment returns also supported life insurance profitability…

Besides improvements in core underwriting business, the life insurers also witnessed 14 percent return on investments as of H1CY15 **(Figure 6.5)**. Specifically, the return on government securities

[147] "Unit-linked" in relation to life insurance means individual life insurance contracts offering life insurance coverage coupled with saving component where the saving component is managed through operating unit-linked investment funds.

[148] Bancassurance is an alternate distribution channel to sell life insurance products through banks. This line of insurance business ensures wide coverage at lesser procurement cost.

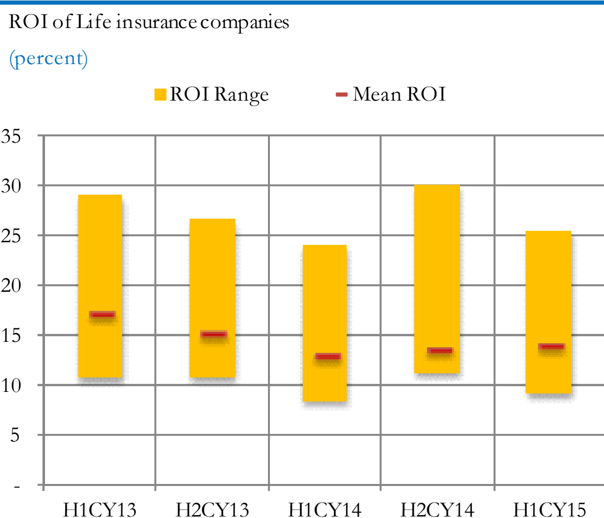
stood at 11.5 percent. Due to long-term nature of investments, life insurance is not faced with an immediate rollover risk. However, decline in government yields during the last two years has started to impact investment returns. As a result, insurers have moved some funds to more attractive yet riskier avenues of equity investments; the share of fixed securities and equities investments to total assets has increased from 9.8 percent in H1CY14 to 10.9 percent in H1CY15.

Figure 6.5

Return on investments continues to support reveneues

ROI of Life insurance companies

(percent)



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

Overall profitability of life insurance considerably improved during the last two years…

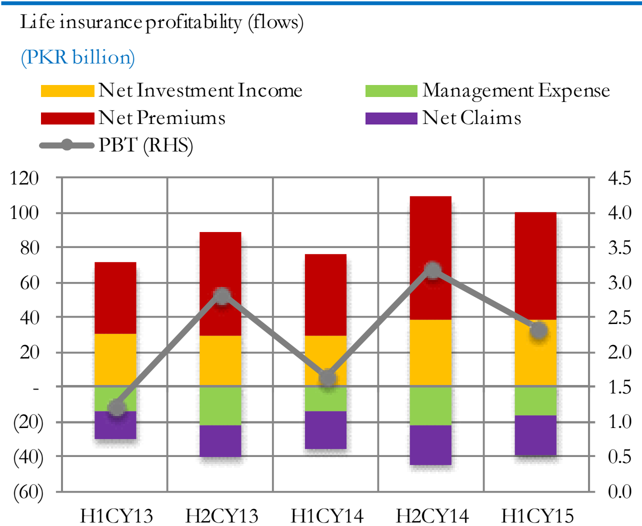
Given the aforementioned increase in premiums and investment income, and deceleration in claims, profitability of the life insurance segment significantly improved over the last two years. Profit before tax (PBT) has reached to PKR 2.4 billion (a surge of 42 percent (YoY)) during the half year ending Jun-15 compared with profits of PKR 1.7 billion (an increase of 33.9 percent (YoY)) during the half year ending Jun-14 **(Figure 6.6).** As a result, the ROA of the life segment also improved from 0.6 percent in H1CY14 to 0.7 percent in H1CY15.

Figure 6.6

Life insurance profitability

Life insurance profitability (flows)

(PKR billion)



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

Table 6.2

Soundness of Life Insurance

	H1CY13	H2CY13	H1CY14	H2CY14	H1CY15
	percent				
Capital to Assets	1.6	1.7	1.7	1.7	1.6
Claims to Capital	224.4	396.7	227.9	402.4	227.1
Claims Ratio	41.5	35.3	45.0	37.3	38.4
Expense Ratio	32.9	34.9	29.5	30.1	25.1
Combined Ratio	74.5	70.1	74.5	67.4	63.5
Premium Retention	98.0	98.3	98.2	98.5	98.6
Return on Investment	17.3	15.2	13.1	13.7	14.0
ROA	0.5	0.8	0.6	0.8	0.7

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

Not surprisingly, the financial soundness indicators of life insurance remained stable…

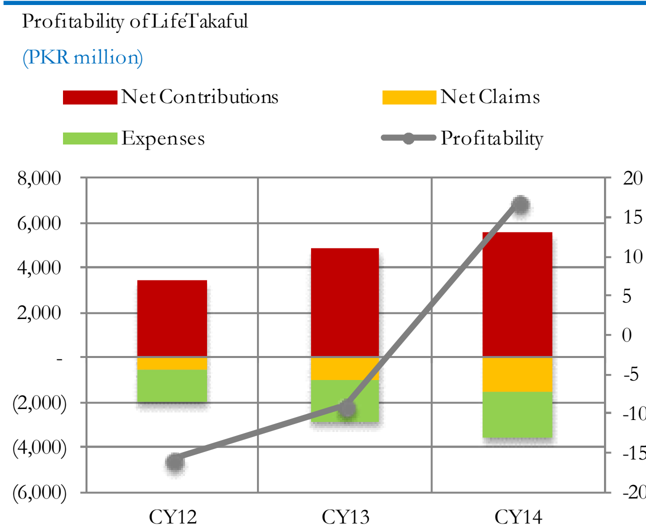
Solvency profile of the life insurance segment remains steady as claims to capital ratio slightly declined, while capital to assets ratio also minutely decreased as of H1CY15. Although, management

expenses rose during the half year ending June 2015, the expense ratio improved on account of higher growth in gross premiums. By the same token, the claims ratio came down to 38.4 percent during the same period **(Table 6.2)**.

The life insurance segment carries concentration risk as it is dominated by a single public sector entity. The company can be categorized as "too big to fail" i.e. its financial distress can have systemic implications and may require government intervention. However, the risk of contagion spreading across other insurance segments might be limited; its subsidiary, a non-life insurer, has minimal market share in the non-life segment.

Figure 6.7

Profitability of LifeTakaful business improved



Source: Unaudited/Audited published financial statements of family takaful companies.

Family takaful business shows promise…

During CY14[149], family (life) takaful companies also witnessed improvements in gross contributions and asset buildup by 15.3 percent (YoY) and 37.6 percent (YoY), respectively **(Figure 6.7)**.

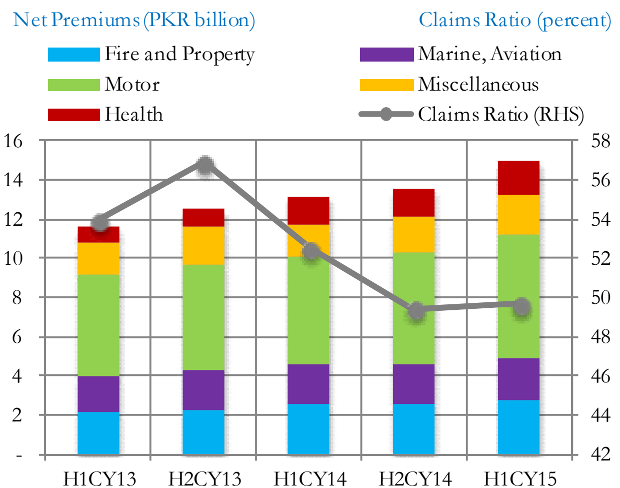
In the past, higher management expenses had significantly dented the profitability of family takaful companies. However, this trend changed in CY14 as family takaful business posted profit after continuous losses in CY12 and CY13. This was largely attributable to deceleration in expenses; 9.8 percent rise in CY14 compared to 29.2 percent increase in CY13. Overall, with improving share in insurance sector and opening of a number of family takaful windows of conventional life insurance companies, family takaful business shows a lot of promise in near future.

Non-life Insurance[150]

Figure 6.8

Non-life claims ratio remained steady

Non-life net premium flows and claims ratio



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

Non-life insurance business moves ahead…

The non-life insurance segment witnessed an 11.8 percent (YoY) increase in gross premiums in H1CY15; while premium net of reinsurance registered an increase of 13.6 percent (YoY) with

149 Analysis in this section is based on results up to CY14.

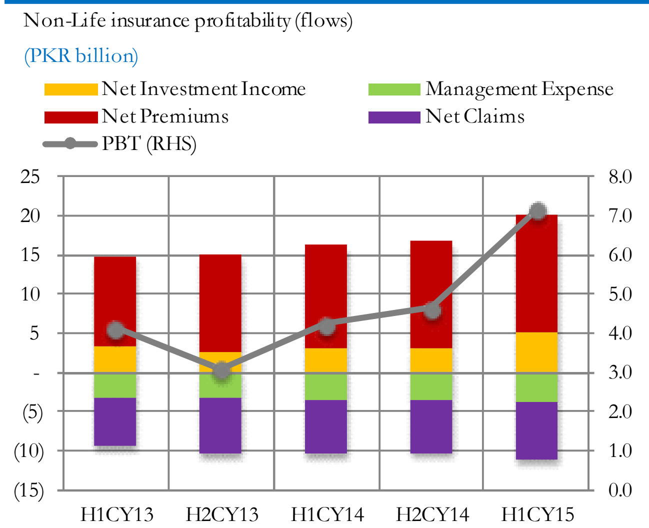
150 The data covers more than 83% of the general insurance industry assets. The insurance industry data does not encompass National Insurance Company Limited which has not published its annual accounts since 2009.

motor vehicle and miscellaneous sub-sectors being the main drivers for growth in net premium. Meanwhile, the motor vehicle sub-sector remained the highest contributor towards premium accumulation with a share of 42 percent. **(Figure 6.8)**

During the same period, however, net claims increased by 7.5 percent (YoY). As the net premiums increased more rapidly than the net claims, there is an overall decrease in the claims ratio (49.7 percent as of H1CY15 against 52.5 percent as of H1CY14). This implies better underwriting performance by non-life insurers.

Figure 6.9

Non-Life insurance profitability improved



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

The profit of the non-life segment grew by 68.6 percent mainly due to an increase in investment income of 66.2 percent; investment income is also the main component of gross revenue at 58.6 percent. Overall, the Profit Margin has significantly increased to 40.1 percent. **(Figure 6.9)**

The financial soundness indicators show that the non-life insurance segment is relatively stable **(Table 6.3)**. The combined ratio indicates that the net premium underwritten is sufficient to cover the claims and expenses.

Improved earnings due to an increase in net premiums and investment income have led to an increase in ROA to 11.7 percent. Return on Investment has significantly increased to 16.6 percent as of H1CY15.

Table 6.3

Soundness of Non-Life Insurance

	H1CY13	H2CY13	H1CY14	H2CY14	H1CY15
	percent				
Capital to Assets	11.1	12.7	13.4	13.6	13.8
Claims Ratio	53.9	55.5	52.5	50.9	49.7
Expense Ratio	26.8	26.7	26.3	25.9	24.3
Combined Ratio	80.7	82.2	78.8	76.9	74.0
Premium Retention	50.6	52.0	51.3	51.5	52.1
Return on Investment	13.3	11.0	10.8	10.5	16.6
ROA	8.1	6.7	7.4	7.6	11.7

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

In order to improve financial soundness, the pubic non-life insurer needs to publish its financials to improve transparency. Pending litigation cases pertaining to the company also need to be speedily addressed to reduce systemic risk.

In order to expand the non-life insurance segment further, the government needs to allow private non-life insurers to provide general insurance coverage to public property; the Insurance Ordinance, 2000 provides that all insurance business relating to any public property or to any risk or liability pertaining to any public property, shall be placed with the pubic non-life insurer only and shall not be placed with any other insurer[151].

[151] Government urged to end NICL 'monopoly' at http://www.dawn.com/news/1183000 http://www.secp.gov.pk/corporatelaws/pdf/InsuranceOrdAmended-Nov2011.pdf

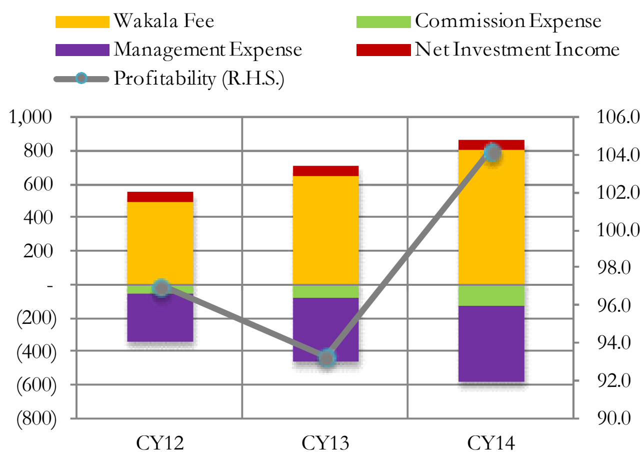
General takaful asset base has significantly increased…

General (non-life) takaful[152] only comprises 2 percent of the non-life insurance business but is expected to grow rapidly due to the entry of non-life (conventional) insurers into the general takaful segment. They are allowed to offer takaful services through dedicated windows under Takaful Rules 2012 as Window Takaful Operators. Accordingly, general takaful's asset base has increased by 29.3 percent as of H1CY15 (YoY).

The general takaful segment witnessed an increase in profitability by 11.8 percent (YoY) in the shareholder's fund, mainly due to an increase of 22.5 percent in Wakala fee; the increase in profitability was offset by increases in commission and management expense. **(Figure 6.10)**

Figure 6.10

Profitability of General Takaful business increased



Source: Unaudited/Audited published financial statements of general takaful companies.

However, the Participants' Takaful Fund (PTF)[153] of general takaful is still reporting losses; it reported losses of PKR 221 million for the year ended Dec-14.

…potential for further growth in insurance sector

Pakistan has a low insurance penetration rate which implies that there is a lot of potential for growth of the insurance industry.

The future for the insurance sector looks stable. CPEC and Iran-Pakistan gas pipeline can provide insurance companies an opportunity to underwrite related developmental projects. However, the government may consider allowing local insurers to underwrite such large developmental projects in conjunction with large international insurers. The withdrawal of reinsurers may also deter the government from allowing local insurers to underwrite large developmental projects on their own.

The lack of reinsurers has also contributed to increased concentration risk. This has been slightly mitigated by insurers establishing reinsurance contracts with international reinsurers. However, all insurers are mandated to offer 35 percent of their surplus business to Pakistan Reinsurance Company[154] in the form of cession; thus, limiting the business which can be reinsured with international reinsurers.

In order to strengthen the market infrastructure and the regulatory regime, SECP, the insurance industry regulator, is considering revising the insurance regulatory framework, establishing an insurance repository, issuing a Code of Corporate Governance for the Insurance Sector[155] etc.

SECP is also considering policies to promote micro insurance which may focus on lower capital requirements for dedicated micro insurance companies, introduction of minimum quota for

[152] Analysis in this section is based on results up to CY14.
[153] The Participants' Takaful Fund (PTF) is managed by the takaful operator; it is separate from the shareholders' fund.

[154] Pakistan Reinsurance Company Limited (PRCL) is a public sector company under the administrative control of the Ministry of Commerce.
[155] SECP has issued revised Code of Corporate Governance vide SRO 160(i)/2016 dated February 26, 2016.

micro insurance business, etc. Subsequently, insurers, including State Life, are looking to launch micro insurance products like micro insurance accidental cover and micro-health insurance, specifically catering to this segment.

In order to reduce systemic risk in the insurance industry, the issue of inadequately-capitalized insurers needs to be resolved. Inactive and active insurers which are inadequately capitalized may consider mergers to meet the provisions of the Insurance Ordinance, 2000 (which requires that paid-up capital should be PKR 300 million for non-life and PKR 500 million for life insurers, respectively). The issue of inadequately capitalized insurers will become more critical as the SECP intends to increase the minimum paid-up capital requirements to PKR 500 million and PKR 700 million for non-life and life insurers, respectively, by the year end 2017.

Pending litigation cases pertaining to various insurers also need to be expeditiously resolved.

Pakistan is also host to (at least) two global-systemically important insurers (G-SIIs); Allianz SE and AIG. However, due to their small marker share, Pakistan is not particularly susceptible to global market risks.

…expect acceleration in growth of general takaful assets

Recently, many conventional insurers have also been allowed to undertake takaful business as Window Takaful Operators under Takaful Rules, 2012. It is, therefore, expected that the larger insurers will enter the takaful segment to expand their business.

This may be disadvantageous for full-fledged takaful companies which have limited outreach; Window Takaful Operators will have greater outreach to expand their takaful business through their larger branch network and extensive agency arrangements (Bancassurance, mobiles, internet etc.) for distribution of their products.

Section C: Financial Markets & Infrastructure

7 Financial Markets

The financial markets showed strong resilience to external spillovers owing to improved economic conditions, effective policy implementation, and positive sentiments of domestic and foreign investors. The overall stability of financial market strengthened; PKR showed relative stability against US$ compared to most of the other regional currencies, though some volatility was observed in equity market post Yuan devaluation period. More transparent and effective monetary policy implementation mechanism complemented by prudent liquidity management by SBP helped in effective implementation of SBP's monetary policy stance in the financial markets. The positive prospects and adequate capacity on domestic front is expected to keep financial markets running smoothly during CY16.

Global environment has been non-conducive for emerging markets in CY15…

The global financial markets were hit by bouts of volatility in CY15 due to dull growth prospects of the world economy and uncertainty about the future direction of economic policies in major economies. The currency and equity markets in majority of the emerging economies remained under pressure as the Chinese economy continued to slowdown, growth in the European Union remained subpar and commodity prices kept tumbling.

The devaluation of Chinese Yuan in August 2015 coupled with the – long anticipated - rise in policy rate by the Federal Reserve (Fed) led to market corrections and assets re-pricing in most emerging markets. The fears of global slowdown, deflation and declining world trade further aggravated the stress in the markets.

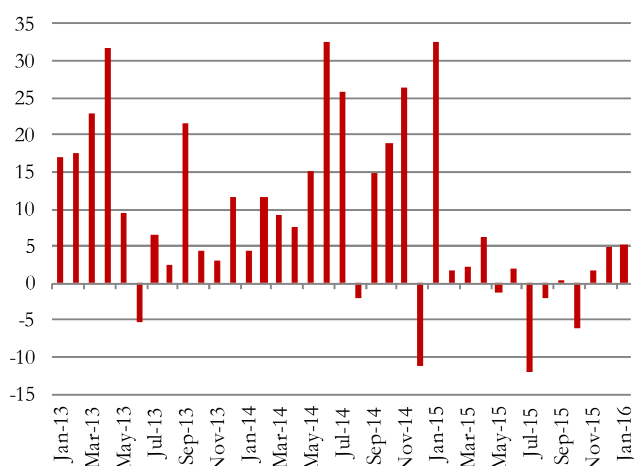
Owing to such non-conducive global environment, investors' risk appetite for emerging markets dwindled and funds not only flew out of the equity markets but investments also decelerated in debt markets **(Figure 7.1)**.

Figure 7.1

Net portfolio flows (debt) in emerging markets declerated

Net Portfolio Flows (debt) in emerging markets

(IIF debt index)



Source: Institute of International Finance (IIF) / Bloomberg

Domestic financial markets exhibited strong resilience …

Despite the spillover of global environment transmitting to the financial markets of Pakistan, the volatility in domestic markets remained relatively low. Positive developments on domestic front and strong performance in few corporate sectors helped instill some stability in the Equity market.

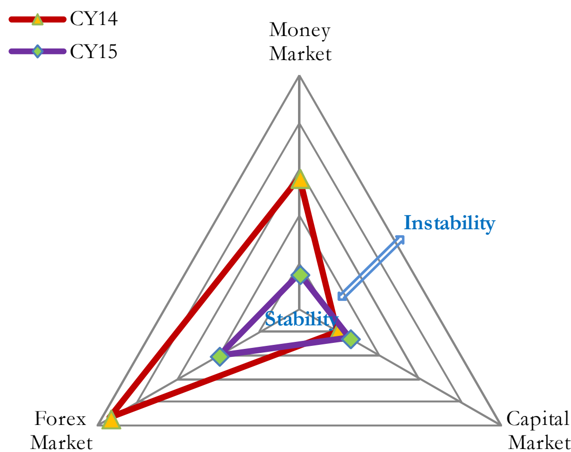
The introduction of SBP policy rate which targets the overnight money market repo rate in May 2015 coupled with prudent liquidity management that kept the short-term market rates relatively stable and

closer to the target rate, on average, succeeded in keeping the money markets calm.

Further, large accumulation of liquid foreign exchange reserves and improvements in external accounts kept the domestic currency stable against US$.

Overall the stability prevailed in the money, capital and foreign exchange markets in CY15 **(Figure 7.2).**

Figure 7.2
Stability in financial makets have improved in CY15



Note: Volatility in respective markets calculated using Exponential Weighted Moving Average (EWMA) method. Weekly ONR, daily KSE-100 index and daily ER in the interbank have been used as the indicators in the money, capital and forex markets. For details please see Technical Appendix.
Source: SBP

Money Market

Structural Changes in interest rate corridor initiated concurrent with monetary easing …

After remaining flat at 10 percent throughout most of the CY14, SBP slashed its policy rate, cumulatively, by 400 bps since November CY14 to bring it down to multi-decade low of 6 percent at the end of CY15. The reduction was aggressive during the first half of CY15- down by 350 bps. Receding inflation and its benign outlook, improvement in balance of payment position, and economic growth objective were some of the major reasons that motivated the change in the direction of the monetary policy.

The rate cut in the first half of CY15 was followed by structural changes in SBP corridor in May 2015. A target rate for overnight interbank money market repo rate (ONR) - set 50 bps below the SBP reverse repo rate or ceiling rate – was introduced as the new policy rate and the width of the Interest rate corridor (ICR) was reduced to 200 bps from 250 bps[156]. The intension behind the former policy change was to give unambiguous signal of SBP's stance of monetary policy and the latter was to curtail the dispersion in short-term rates in the money market[157].

Introduction of SBP policy target rate curtailed volatility in the money market…

The initiatives paid off with the stronger transmission mechanism leading to a marked reduction in the volatility in the money market liquidity during the second half of CY15 **(Figure 7.3)**. The weighted average ONR closely tracked the SBP target rate in comparison to last year[158]. The regulatory induced discipline is expected to help market participants plan their liquidity operations in a way so as to minimize disturbance of the market.

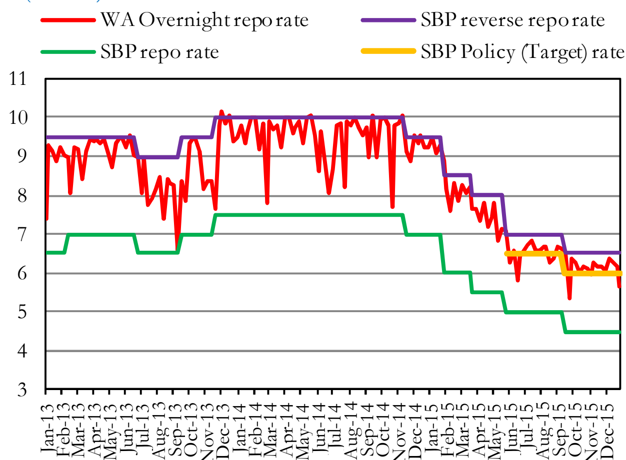
156 Besides, SBP also withdrew the penal rate on frequent access (7 times in a quarter) to SBP Reverse Repo and Repo facilities.
157 The unnecessary volatility in short-term rates creates disconnection between short-term and long-term rates which reduces the effectiveness of monetary policy and weakens its power to effect long-term rates.
158 Standard deviation of weekly ONR reduced to 0.35 and 0.16 in Q3 & Q4 of CY15 compared to 0.60 and 0.50 in Q1 & Q2 of CY15.

Figure 7.3

Volatiliyt in overnight repo rate (ONR) reduces after introduction of SBP target rate

Trend in ONR

(Percent)



Source: DMMD, SBP

Increased volume and frequency of OMOs were in line with monetary policy objectives…

Increased instances of liquidity injections via frequent OMOs were needed to align market interest rates with the target rate. Average outstanding OMOs injections of PKR 1.2 trillion were recorded during Jul-Dec, 2015 (average acceptance to bid ratio of 0.94) compared to average injections of PKR 0.71 trillion during the first half of CY15[159] **(Figure 7.4)**. Liquidity injections in CY15 were primarily in line with the easy monetary policy stance of SBP which envisaged money supply (M2 growth) to be consistent with keeping inflation low and providing support to growth[160].

Overwhelming banks' interest in PIBs remains intact…

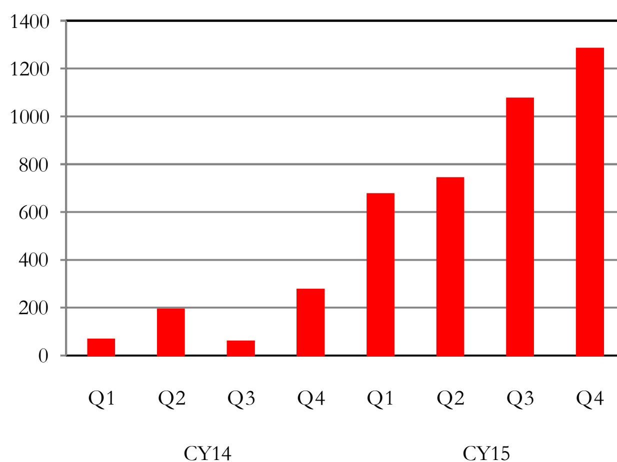
Investment in the Government securities, serves as a credit risk free source of income stream, continued to drive market liquidity. Medium tenor (3 and 5 years) PIBs were the main attraction for the market **(Figure 7.5).** During CY15, banks offered aggregate amount of PKR 2.2 trillion for PIBs with bid-cover ratio (i.e. offer to target ratio) of around 3 on average.

Figure 7.4

SBP conondurted more OMOs in order to keep ONR close to the targe rate

Average outstanding Open Market Operations (OMOs)

(PKR billion)



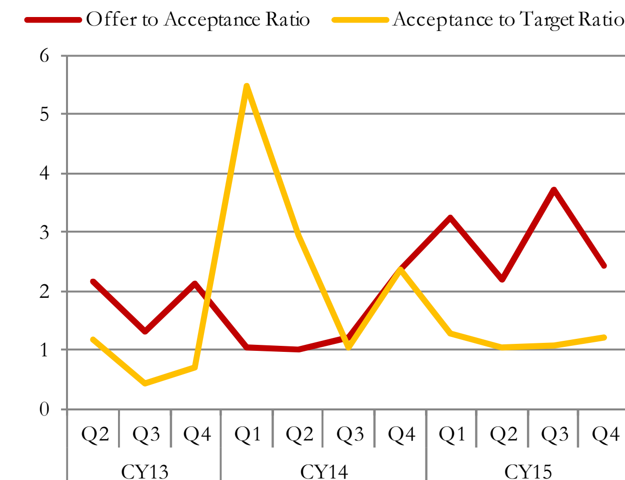
Source: DMMD, SBP

Figure 7.5

Banks' offer to purchase PIBs remained overwhelming

Target, Offer and Acceptance of PIBs

(percent)



Source: DMMD, SBP

The banks' inclination to lock in their income stream through PIBs in CY15 might have been

[159] Besides, higher injections in second half of CY15 was also driven by high fiscal need and pick up in credit demand from private sector

[160] For detail explanation, please see the press release at http://www.sbp.org.pk/press/2015/Liquidity-13-Jan-15.pdf

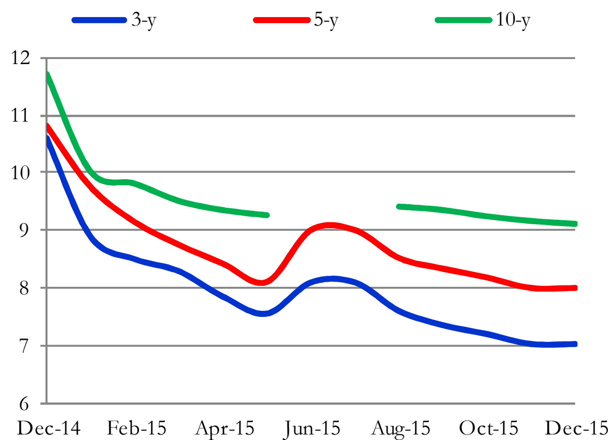
driven by an anticipation of expected lower interest rates (due to falling inflation in the short-run and easing-off on external front)[161] **(Figure 7.6).** From the supply side, government's choice to raise longer-term debt might have been driven largely due to maturity preference (to avoid roll-over risk)

Figure 7.6

PIBs yeild responded to easy monetary policy stance

Primary Yeild Pattern for PIBs

(percent)



Note: Bids for10-year PIB tenor were rejected in both June and July 2015 Auctions.
Source: DMMD, SBP

MTB's witness no compositional change…

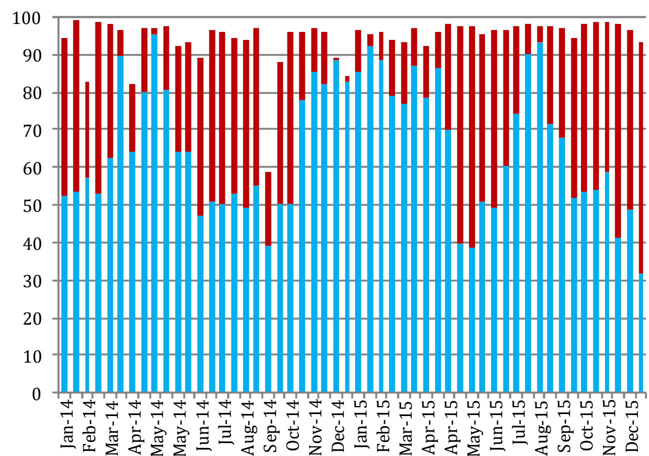
Banks participation in MTBs remained strong and was almost entirely distributed within 3 months and 6 months maturity buckets **(Figure 7.7).** Banks subscription of 12 months MTBs during CY15 was similar to their marginal participation in CY14.

Figure 7.7

T-Bills investment offers concentrated wihtin 3 & 6 months securities

T - Bill Tenure Offer

(Percent Share)



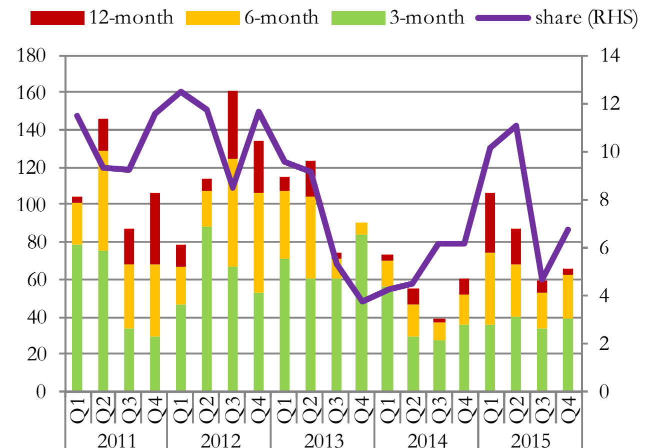
Source: DMMD, SBP

Figure 7.8

Non-competitive bids' share rises in CY15

Share of Non-Competitive Bids

(PKR billion) (percent)



Source: DMMD, SBP

NCB's were also geared towards longer tenor …

Meanwhile, the participation of retail investors in the Non-Competitive Bids (NCBs) also picked up pace during CY15 **(Figure 7.8).** NCBs share in total acceptance increased to 8.2 percent, on average, in

161 The average monthly yield spread complement this fact as spread between 3 years and 6 months tenor significantly reduced during CY15 (yearly average 53 bps) compared to CY14 (yearly average 191 bps).

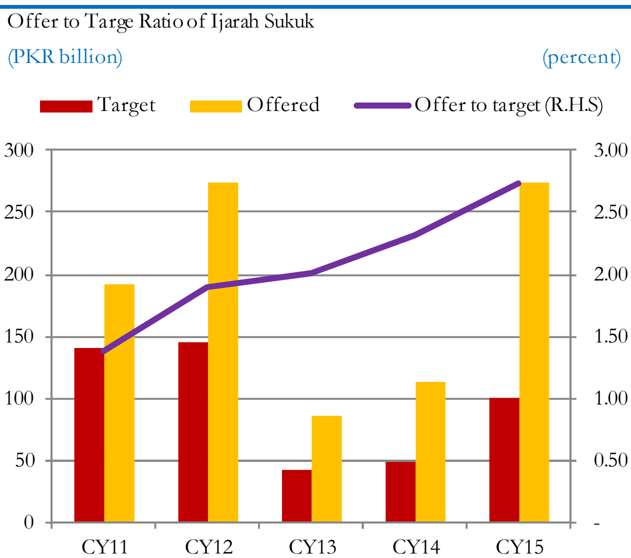
CY15 against average 5.3 percent in CY14. Government papers of short term maturity (3-months T-bills) remained attractive for liquidity purposes but longer term maturity papers (6 months & 12 months T-bills) gained popularity due to interest rate expectations.

Ijarah Sukuk attracted IBIs…

The much awaited Ijarah Sukuk of PKR 100 billion was issued in the last quarter of CY15. High liquidity parked with Islamic banks and limited avenues available to invest in Shariah compliant products made each issue of Sukuk extremely appealing. There is a consistent rising trend in offer to target ratio of Sukuk since CY13 and in CY15 the offer was 2.7 times the target of PKR 100 billion set by the government **(Figure 7.9).**

Figure 7.9

Ample liqudity resulted in high offer to target ratio for Ijarah Sukuk



Source: DMMD, SBP

The current behavior of market for Shariah compliant investment products, on the one hand, implies that government can easily tap additional resources from this avenue. But, on the other hand, it also reveals that there are limited alternate avenues available in the private sector for Islamic banks to finance. Perhaps, the lack of demand in the economy and the risk aversion of Islamic banks are the driving factors behind buildup of liquidity with the IBIs.

Secondary market for government securities is working smoothly…

An efficient and deep secondary market of government securities is prerequisite for better price discovery, diversification of investor base, liquidity management, and reduction in cost of borrowings. Pakistan has a mature secondary market for marketable government debt securities (MTBs, PIBs, and Sukuks).

CY15 has observed an overall trade of around PKR 11.0 trillion of government securities (PKR 10.6 trillion in CY14). In addition, if repo borrowings of PKR 13.4 trillion in the secondary market during CY15 (PKR 15.5 trillion in CY14) are also included, the overall trade volume reaches to PKR 24.4 trillion during CY15 (PKR 26.1 trillion in CY14). In recent years, SBP has taken several measures to improve the efficiency and depth of trading in secondary markets (e.g. online auction of government securities, issuance of international securities identification numbers, trading of government securities at stock exchange etc).

Shape of the yield curve hints at rising inflation expectations beyond CY16…

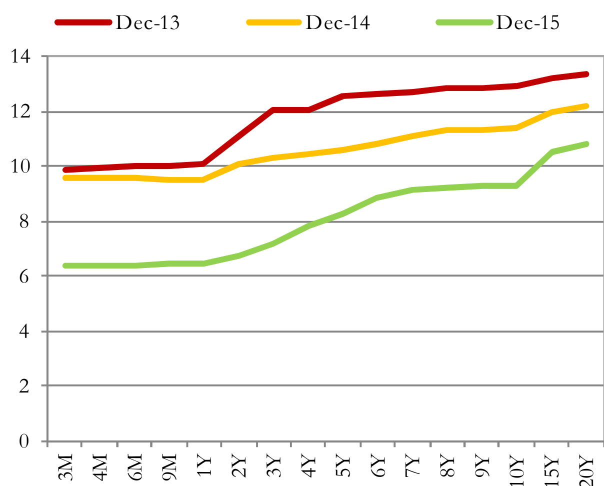
The 350 bps fall in the policy rate during CY15 has led to a downward shift in the yield curve **(Figure 7.10)**; indicating the effectiveness of SBP's monetary easing policy. The yield curve as of end Dec-15 is quite flat till 1-year horizon and then rises afterwards. Also, in relation to Dec-14, the gap between the two yield curves is wider at the shorter end but narrower at the longer end.

Figure 7.10

Yield curve depicts rising inflation expectations beyond CY16

Term Structure of Interest Rates

(Percent)



Source: DMMD, SBP

The shape of the yield curve, therefore, suggests that market is anticipating benign inflation in the short-term and no change in the policy interest rate. However, market expects bottoming out of inflation on account of foreseeable recovery in international commodity prices[162] in the medium-term and likely rise in interest rates.

Since the banking book, at the moment, is exposed to market risk, any movement in interest rates against these market expectations would have adverse consequences for the profitability and solvency of the banking sector.

The pattern of government borrowing will also be a major factor driving the liquidity and volatility in the money market.

Foreign Exchange Market

Improved BOP position and accumulated reserves helped stabilize domestic currency…

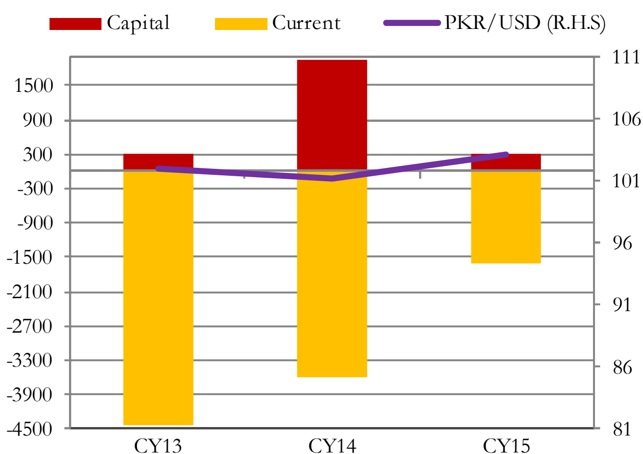
PKR against US$ remained broadly stable, owing to improvement in the external account as well as favorable macroeconomic conditions[163] (**Figure 7.11**).

Figure 7.11

BOP improved during CY15

Developments in External Accounts

(USD million) (PKR/USD*)



* Monthly weighted average Mid buying-selling of interbank rate

Source: S&DWHD, SBP

The low global commodity prices paid off in terms of low import bill, particularly, due to the reduced payments on oil products. This helped in narrowing the trade deficit down to USD 16.6 billion during CY15 as against 17.9 billion during CY14. The successful negotiations with IMF in each quarterly review mission under EFF program, consistent net inflows through worker remittances, receipts against coalition support funds (CSF) and issuance of Pakistan sovereign Bonds helped country's liquid foreign exchange reserves touch the unprecedented

[163] Owing to continued strengthening of external payment position and sustained progress in structural reforms under the government program with IMF, Moody's Investors Service upgraded Pakistan's foreign currency issuer and senior unsecured bond ratings to B3 from Caa1, and assigned a stable outlook in June 2015.

peak in Dec 2015[164]covering almost 28 weeks[165] of imports.

Though strengthening external sector stabilized the market sentiments which translated into relative stability in the foreign exchange markets, few concerns are still worth considering:

i. The exports of Pakistan are consistently on the declining path (export growth: CY15: negative 8.2 percent, CY14: negative 1.2 percent). The economic slowdown in china (one of Pakistan's major trade partner) and devaluation of Euro have had a dismal impact on the exports of many emerging counties including Pakistan. The consistent appreciation in Real Effective Exchange Rate (REER) over the last couple of years[166] may also have impacted the export competitiveness.
ii. Already low Foreign Direct Investment (FDI) in CY14 reduced further in CY15. Though, in recent past, FDI flows have also declined globally due to fragility in the global economy, policy uncertainty for investors and elevated geopolitical risks, FDI decline in Pakistan was much higher than the global trend[167].
iii. The recent dip in oil prices, if continues, may impact the inflow of remittances coming from the oil exporting countries,[168] going forward. The growth in remittances has decelerated to 12.1 percent in CY15 from 17.9 percent during CY14[169].
iv. To better negotiate with future contingency on external front, permanent nature of foreign exchange inflows (e.g. exports, FDI etc) are needed.

The favorable external position and positive market sentiments complemented with SBP's prudent polices helped stabilize the value of domestic currency against most foreign currencies despite decline in exports receipts during CY15 **(Table 7.1)**.

PKR depreciation in CY15 is in line with trends in emerging markets…

Though domestic currency recorded depreciation against USD by 4.2 percent during CY15 (mostly in second half of CY15), this was synchronized with accelerating exchange rate depreciation in many emerging economies against USD. The capital flight from emerging markets in search-for yield since US announced "tapering of quantitative easing" had started to build pressure on the currencies of these economies. Further, the devaluation of Chinese Yuan[170] in August 2015, probably to restore its export competitiveness, followed by replica of the same policy stance by many emerging economies - to keep their global share in exports intact - even hit the value of these currencies harder.

164 Further, Net International Reserves (NIR) also remained comfortable meeting IMF performance criteria in most of its quarterly review missions.
165 Source: http://www.sbp.org.pk/ecodata/FER/2016/Forex-11-Mar-16.pdf
166 REER appreciated by 5.2 percent during CY15 and 16.0 percent in CY14.
167 Source: United Nation Conference on Trade and Development (UNCTD)
168 Around more than 60 percent of worker remittances inflows are coming from GCC countries. http://www.sbp.org.pk/ecodata/Homeremit.pdf
169 Partially, this deceleration may also be due to high base effect.
170 In August 2015, the china devalued its Yuan by 3 percent in order to gain export competitiveness. China observed negative growth in its exports during July 2015.

Table 7.1

PKR Apr/Dep (-) against other currencies - CY15

(Percent)	
South Africa	29.3
Malaysia	17.8
Canada	15.0
Australia	7.4
Euro	6.7
Thailand	5.2
Sweden	4.3
Singapore	2.5
UK	0.8
India	0.4
China	0.4
Kuwait	-0.5
Japan	-3.4
Switzerland	-4.0
UAE	-4.1
USA	**-4.2**
Saudi Arabia	-4.1
Hong Kong	-4.1

Source: Bloomberg

Pakistan did not opt for the herd prescription of manipulating exchange rates and instead relied on domestic interest rates to spur growth. Moreover, the export growth in Pakistan, besides exchange rate, is mainly dependent upon structural bottlenecks which are beyond the control of any central bank.

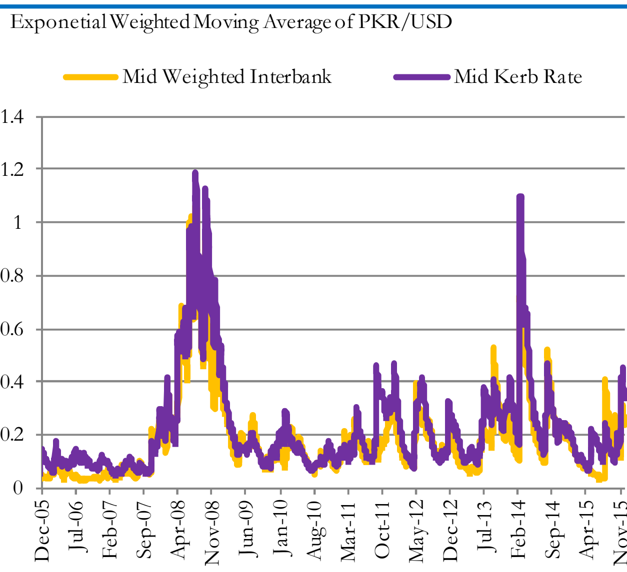
Volatility in currency market declines…

The exchange rate both in the interbank and kerb markets remained stable[171]; though, some volatility was seen post Yuan devaluation after August, 2015 **(Figure 7.12).**

However, during CY15, daily average risk premium on PKR/USD exchange rate in the KERB market (over interbank market) slightly widened and moved up to 0.78 PKR/USD from 0.59 PKR/USD during CY14 **(Figure 7.13).** The deviation was more pronounced in the second half of CY15.

Figure 7.12

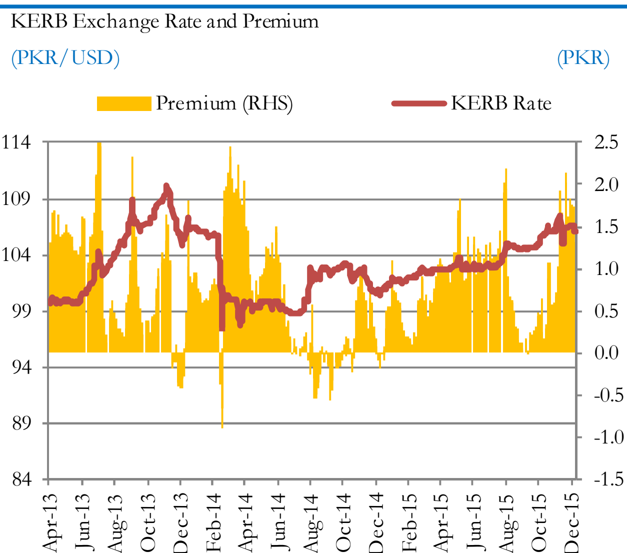
Volatility in foreign exchange market curtailed



Source: DMMD, SBP

Figure 7.13

KERB premium escalated post Yuan devaluatoin



Source: DMMD, SBP

During the reviewed year, the speculative sentiments in retail currency market slightly emerged, perhaps, due to further depreciation of the local currency in

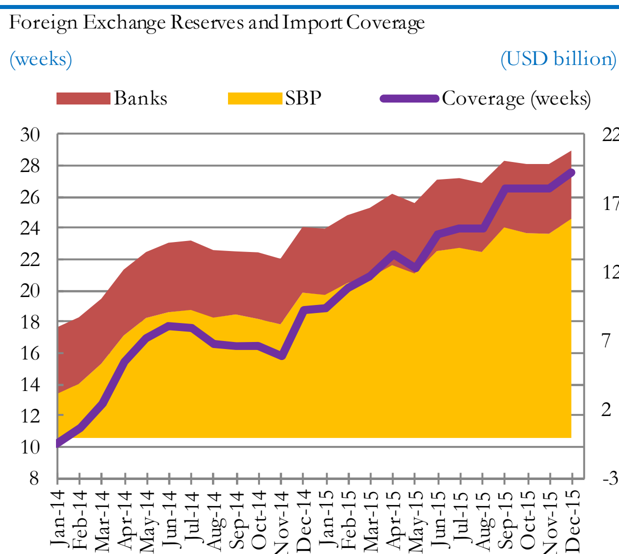
anticipation of rate rise by FED[172]. Further, the average bid-ask spread in Kerb market moved up to PKR 0.26 during CY15 (more so during the second half) compared to PKR 0.21 during CY14.

Foreign exchange reserves rise in CY15…

With the addition of USD 5.5 billion during CY15 (almost entirely in SBP), the liquid FX reserves of the country touched unprecedented USD 20.8 billion as of end December 2015. Importantly, the scheduled obligations maturing during the year are fully covered by reserves **(Figure 7.14).**[173]

Figure 7.14
Foreign Exchange (FX) Reserves reach unprecedented level

Foreign Exchange Reserves and Import Coverage



Source: DMMD, SBP

Going forward, the stability in foreign exchange market may keep on track keeping in view the adequate buffer in the form of liquid foreign exchange reserves held by SBP and depressed outlook of commodity prices especially oil prices.

Further, expected global recovery and developments on the CPEC front will lift up the FDI as well as exports from Pakistan – more permanent sources of foreign exchange inflows. However, worker remittance inflows may decelerate further from oil producing countries if oil prices continue their current declining trend and development spending in these countries subsides.

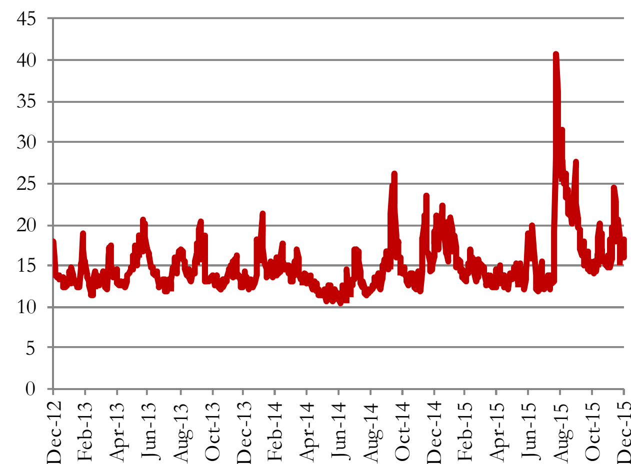
Capital Market

Global Equity markets remained volatile in CY15…

Marked with global uncertainty, the reviewed year observed accelerated pace of market corrections in equity markets across the globe. The net selling and capital flight from emerging economies prompted high scale of volatility as gauged by Chicago Board Options Exchange (CBOE) Volatility Index[174] **(Figure 7.15).**

Figure 7.15
CY15 observed large correction in global equity markets

Chicago Board Options Exchange (CBOE) Volatility Index



Source: Chicago Board Optoin Exchange (CBOE)

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[172] Finally, US Fed raised its policy rate by 25 bps in December 2015.

[173] As of end December 2015, foreign exchange reserves has import coverage ratio to around 28 weeks; much higher than the 3 months which is considered the minimum bench mark for reserve adequacy.

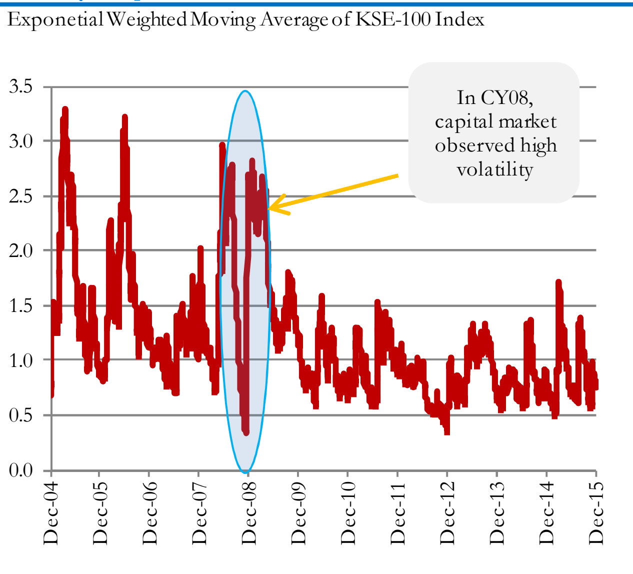
[174] CBOE index is a popular measure of the implied volatility of S&P 500 index options. VIX is a ticker symbol of CBOE index (https://en.wikipedia.org/wiki/VIX)

Higher but manageable volatility in domestic equity market…

A little bit higher volatility in the equity market of Pakistan during CY15 compared to CY14 was a natural outcome owing to spillover transmitted from the stress in international markets. However, it remained within a range not threatening to the stability of the market. In fact, the volatility was significantly lesser than the extreme levels seen during the 2008 and 2009 stressed years **(Figure 7.16).**

Figure 7.16

Volatility in capital market increased



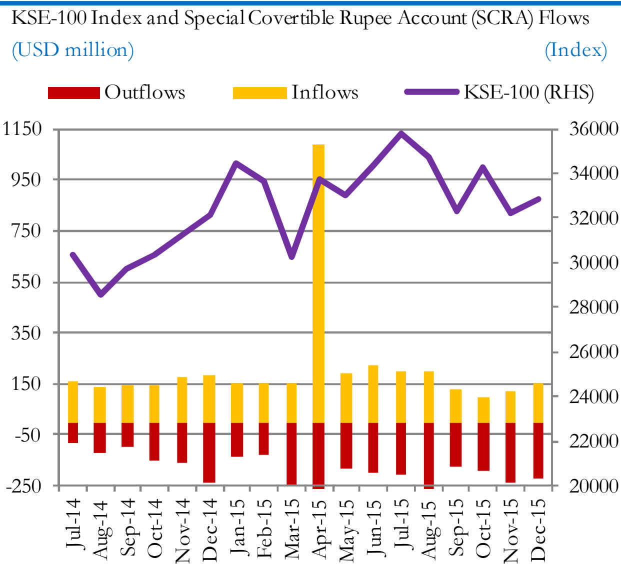
Source: Pakistan Stock Exchange

Positive sentiments of domestic investors shield the equity market…

Despite net selling by foreign investors in Pakistan in the second half of CY15 **(Figure 7.17)**, a host of factors resisted freefall in equity markets: (a) optimistic sentiments of domestic investors based on positive economic outlook and improved economic fundamentals, (b) corporate profitability in fertilizer, auto and cement sectors and (c) positive impacts of low commodity prices on the economy in general and inflation in particular. On aggregate basis, KSE-100 index moved up by 2.1 percent during CY15 (27 percent in CY14) to reach 32,816 as of end, December 2015.

Figure 7.17

SCRA observed relatively higher outflows duirng CY15



Source: S&DWHD,SBP and Pakistan Stock Exchange

The overall market capitalization, however, declined by 5.9 percent during CY15 to reach PKR 6.9 trillion as of end December, 2015 against PKR 7.4 trillion as of end December, 2014 **(Table 7.2)**.

In comparison to trends in other emerging economies, equity market fared relatively better …

More fragility was seen in equity markets during second half of CY15 **(Table 7.3)**. However, the post Yuan devaluation impact was lesser in Pakistan than many other emerging economies. During this stressed period, KSE-100 index observed 5 percent decline as against 18 percent fall in MSCI index of emerging economies.

Table 7.2

Progress of Capital Markets in Pakistan during CY15

Million PKR except companies, index and bond data	31-12-2014	31-12-2015
Total No. of Listed Companies	557	554
Total Listed Capital - PKR	1,168,485	1,269,703
Total Market Capitalisation - PKR	**7,380,532**	**6,928,497**
KSE-100™ Index	**32,131**	**32,811**
KSE-30™ Index	20,772	19,309
KSE Meezin Index (KMI-30)	50,735	55,647
KSE All Share Index	23,398	22,868
New Companies Listed during the year	6	8
Listed Capital of New Companies - PKR	26,973	29,941
New Debt Instruments Listed during the year	6	2
Listed Capital of New Debt Instruments - PKR	15,000	25,000
Average Daily Turnover - Shares in million	219	258
Average value of daily turnover - Rs.	9,402	11,465
Average Daily Turnover (Future™) YTD	24	36
Average Value of Daily Turnover - YTD	2,205	3,142

Source: Pakistan Stock Exchange

Shariah compliant equity instruments outperform the market…

The Shariah compliant equity instruments performed relatively better than overall market as reflected through 9.6 percent growth in KMI-30 (i.e. KSE Meezan Index) during CY15 (though growth decelerated compared to CY14: 19.6 percent).

KSE-100's performance is being acknowledged globally…

Based on progress witnessed in market liquidity, framework and regulations, recently, MSCI Inc. - a US-based provider of equity, fixed income, and hedge fund stock market indices – is considering to reclassify the MSCI Pakistan Index from 'Frontier Markets' to 'Emerging Markets' in 2016.

Table 7.3

World Equity Market Indices

	Dec-14	Jun-15	Dec-15	Change in CY15	Change Jun-Dec, 2015
	indices			percent	
USA (DJIA)	13,823	17,620	17,425	26.1	(1.1)
Euro (Euro Stoxx)	319	354	345	8.2	(2.5)
Japan (Nikkei)	17,451	20,236	19,034	9.1	(5.9)
France (CAC)	4,272	4,790	4,637	8.5	(3.2)
Germany (DAX)	9,805	10,945	10,743	9.6	(1.8)
China (SSEA)	3,234	4,273	3,539	9.4	(17.2)
India (BSE)	27,499	27,781	26,118	(5.0)	(6.0)
Pakistan (KSE)	32,131	34,399	32,816	2.1	(4.6)
Britian (FTSE)	6,566	6,521	6,242	(4.9)	(4.3)
Brazil (BVSP)	50,007	53,081	43,350	(13.3)	(18.3)
MSCI World	417	423	399	(4.3)	(5.7)
MSCI Developed	1,709	1,735	1,662	(2.8)	(4.2)
MSCI Emerging	954	972	794	(16.8)	(18.3)

Source: Bloomberg

Going forward, the overall improvement in domestic economy is expected to reflect in terms of resurgence in equity market.

8 Financial Market Infrastructure

In Pakistan, Payment System constitutes the major form of Financial Market Infrastructure (FMI) as it serves both large value and retail transactions through established channels. The Pakistan Real Time Interbank Settlement System (PRISM) observed a substantial hike in both the value and volume terms due to large securities settlement in the review period. Retail payment by virtue of paper and e-transactions showed consistent growth relative to the preceding years. The unfolding demands and challenges related to national payment systems are duly being taken into account by SBP in the form of various initiatives taken on developmental and regulatory front.

FMI includes a spectrum of institutions…

In Pakistan, there exists an effective and efficient infrastructure of FMI which is spread across the different entities and jurisdictions. Financial Market Infrastructure (FMI) of Pakistan largely consists of systemically important payments systems which include large value transactions executed through PRISM and retail transactions routed through the paper based and e-transactions. Besides payment systems, depository and clearing companies are also the key manifestations of the FMI which provide effective and efficient platform for the market players of the financial infrastructure to execute their transactions in a safe and structured manner.

FMIs are centric to the clearance and settlement of transactions in the financial institutions as well as the flow of money and securities. As per BIS[175], FMI essentially covers the Payment Systems[176], Central Securities Depositories[177] (CSDs), Securities Settlement Systems[178] (SSSs), Central Counter Parties[179] (CCPs), and Trade Repositories[180] (TRs). Detail view of the FMI framework is given in Annexure A at the end of this chapter.

State Bank of Pakistan manages the securities settlement system of government securities through PRISM on gross basis and in real time, which is secure, low cost and one window solution. Government securities are settled using Delivery versus Payment (DvP) model. Additionally, SBP acts as a primary central securities depository for the book based government securities. SBP also manages the issuance and recording of secondary market transactions including repos. The government securities include Treasury Bills (T-bills) – Market T-bills (issued to commercial banks) and Market Related T-bills (government borrowing directly from SBP), Government of Pakistan Ijarah Sukuk and Pakistan Investment Bonds. State Bank of Pakistan introduced an Electronic Bond Trading platform (EBND) in January, 2010 with an objective to bring efficiency in secondary market trading of Government Securities. It provides a central platform where investors can easily access marketable securities i.e. Market Treasury Bills, Pakistan Investment Bonds and Ijara Sukuk.

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175 Committee on Payment and Settlement Systems, (2012). "Principles for Financial Market Infrastructure", Bank of International Settlement.

176 A payment system is a set of instruments, procedures, and rules for the transfer of funds between or among participants; the system includes the participants and the entity operating the arrangement.

177 A central securities depository provides securities accounts, central safekeeping services, and asset services, which may include the administration of corporate actions and redemptions, and plays an important role in helping to ensure the integrity of securities issues.

178 A securities settlement system enables securities to be transferred and settled by book entry according to a set of predetermined multilateral rules.

179 A central counterparty interposes itself between counterparties to contracts traded in one or more financial markets, becoming the buyer to every seller and the seller to every buyer and thereby ensuring the performance of open contracts.

180 A trade repository (TR) is an entity that maintains a centralized electronic record (database) of transaction data. TRs have emerged as a new type of FMI particularly in the OTC derivatives market.

EBND helps in improving price discovery and enhancing liquidity in the Government securities. Further, the availability of real-time information about yields and turnover is beneficial for all investors and corporate issuers as it facilitates benchmarking of their upcoming corporate bonds or funding requirements. This system also provides international investors an additional window to access the country's financial markets.

Central Depository Company (CDC) serves as the sole securities depository in the country as far as the capital market is concerned. CDC handles the transactions like deposit of securities, transfer of securities, pledging of securities, pledge release, pledge call, withdrawal of securities and corporate actions[181]. CDC handles the electronic (paperless) settlement of transactions (both equity and bonds) carried out at the stock exchange of the country. As of June 30, 2015, CDC has managed 117.7 billion shares, with a total market capitalization of PKR 4,649.6 billion in central depository system[182].

CDC is also providing the securities settlement of government securities Bond Automated Trading System (BATS).[183] Above arrangement has enabled the retail segment to participate in the trading of government securities.

Another significant FMI, National Clearing Company of Pakistan Limited (NCCPL) provides clearing and settlement services to the Pakistan Stock Exchange Limited (PSX) through fully automated National Clearing and Settlement Services (NCSS)[184]. NCSS is the integrated system which provides settlement mechanism on DvP basis, without the involvement of physical instruments and manual intervention. Following are the main segments of PSX which are dealt in the NCCPL for clearing and settlement purposes:

- Regular/Cash Market
- Odd-lot Market
- Derivative Markets (Futures and Stock Index)
- Negotiated Deal Market
- Debt Market
- Margin Trading System ("MTS")
- Margin Financing System ("MFS")
- Securities Lending and Borrowing System ("SLB")

Role of central counterparty (CCP) has not been taken by any institution in the country. In most of the countries, the clearing companies assume the function of CCP due to their very relevance and nature. In Pakistan, NCCPL intends to adopt the charge of CCP. In doing so, multiple factors have to be premeditated, primarily on the account of associated cost, default risk, systemic risk and oversights function.

Trade repository (TR) is the emerging form of FMI which has been trying to establish its position globally in the face of many legal and technical hurdles[185]. In the local context, low OTC derivative market has not inspired the formation of TR in the country.

In the wider sense, FMI also encompasses the supporting entities such as credit bureaus, stock exchanges and mercantile exchange etc. which indirectly impact the FMIs. Thus, FMI plays a vital role in the smooth functioning of the financial system and contributes towards the financial stability and, in the broader sense, economic growth. At the same time it carries various FMI related risks which if not managed properly can trigger a

[181] http://cdcpakistan.com/businesses/central-depository-system/
[182] http://cdcpakistan.com/downloads/
[183] http://cdcpakistan.com/media-center/cdc-to-provide-settlement-services-for-government-securities-traded-on-kses-bond-trading-system/
[184] http://www.nccpl.com.pk/

[185] https://www.bis.org/ifc/events/ifc_isi_2015/089_heitfield_presentation.pdf

systemic distress in the financial market, a key concern for the regulators.

Payment System landscape….

Payment System, the most prominent form of FMI, mainly accounts for large value transactions and retail transactions facilitated through well-established products and channels. An efficient and effective payment system is the responsibility of the stakeholders of the system and requires management of the ever evolving challenges and risks. Smooth functioning of payment system is critical not only for the stability of the financial markets but also for the uninterrupted transmission of the monetary policy signals.

As one of its core objectives, SBP has included the strategic goal on payment systems in its vision 2020. It aims to extend the focused efforts on the developing, modernizing, regulating and maintaining the modern and robust payment systems in the country. Such efforts will complement the SBP vision 2020 by facilitating the development of efficient, effective and robust financial system of the country. SBP has made concerted efforts to ensure payment system's safety, integrity, efficiency and reliability. Such endeavors remained well cognizant of market players' investment in IT and core banking solutions.

In recent times, Payment systems have migrated from the backroom to the boardroom…

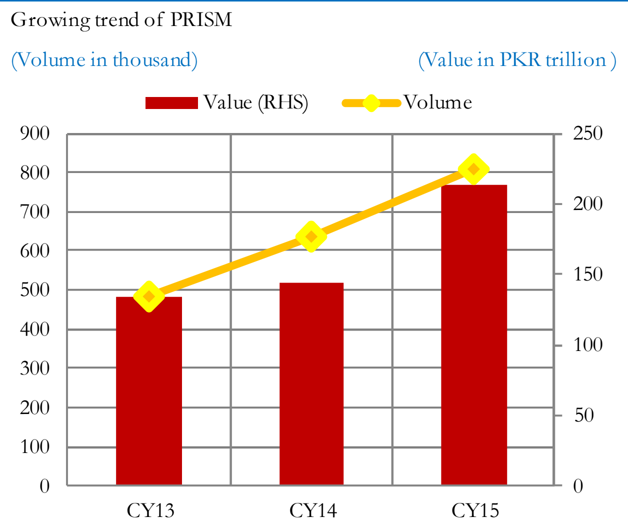
In CY15, payment system witnessed a robust growth in its various components significantly contributed by the large value transactions conducted through PRISM[186]. Growth of retail payment transaction is by and large consistent with the spike seen in the preceding years **(Table 8.1).** PRISM transactions accounted for almost 56.3 percent of the total value of the payment system in CY15.

Table 8.1
Profile of Payment System Mechanisms

Mechanism	CY13		CY14		CY15	
	Volume	Value	Volume	Value	Volume	Value
	Volume in thousands and value in PKR trillion					
PRISM	483.0	134.0	636.0	144.0	809.0	213.0
Retail Payments	718,312.0	140.4	802,020.0	158.0	856,298.0	165.0
Paper based	357,800.0	109.0	365,219.0	123.0	348,797.0	129.0
E-transaction	360,512.0	31.4	436,801.0	35.0	507,501.0	36.0

Source: PSD, SBP

Figure 8.1
PRISM shows hike in both value and volume terms



Source: PSD, SBP

PRISM transactions grow in volume and value…

In CY15, PRISM has shown a noticeable elevation in terms of value which reaches the figure of PKR 213.0 trillion (**Figure 8.1)**. Large value transactions observed rising trend which was characterized by

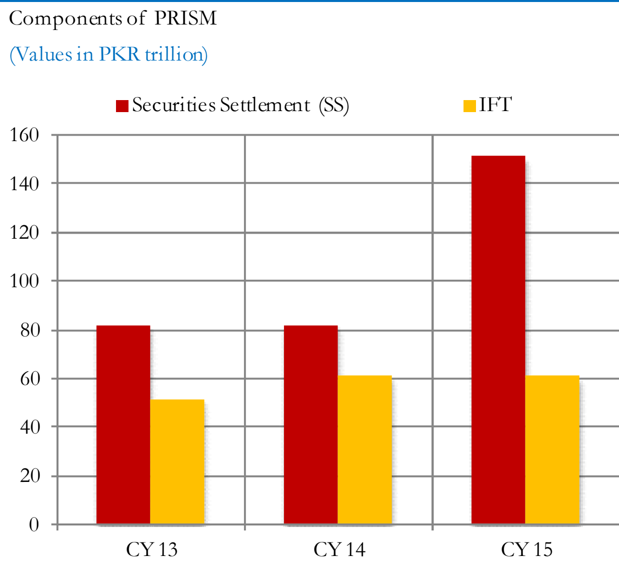
[186] PRISM started operations with the settlement of interbank money market transactions and the domestic leg of FX market operations in July 2008. Since then, the scope of PRISM has been enhanced over time to provide a range of services such as; a) settlement of government securities, b) Intraday Liquidity Facility (ILF), c) SBP's internal transactions, e) bank's own account transfer and f) access to stock exchange member through their settlement bank.

the high value transactions of government securities (PKR 151 trillion) **(Figure 8.2).**

The significant increase in value of Government Securities is basically due to increase in interbank Securities Settlement as well as Open Market Operations (OMOs) in CY15[187].

Figure 8.2

PRISM transactions increased substantialy



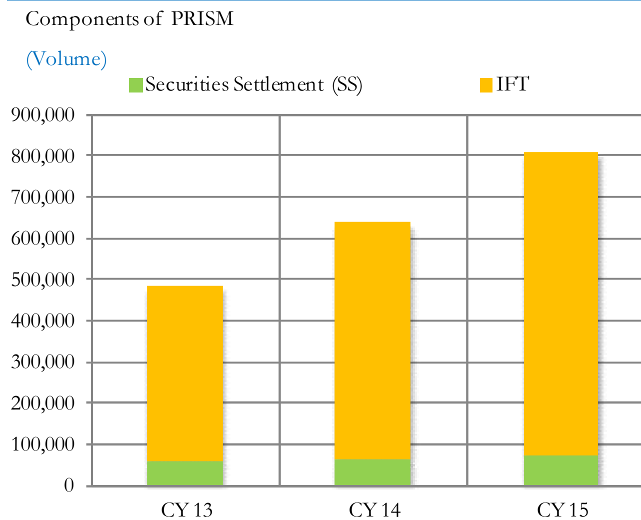
Source: PSD, SBP

In terms of volume also, PRISM transactions are growing steadily (**Figure 8.3**). Inter-bank Funds Transfer (IFT) carry the major portion in the PRISM transactions as far as the volume is concerned. In CY15, IFT transactions grew by 28.8 percent as compared to CY14. Rise in IFT is rationalized by the elevated confidence on the PRISM by banks for the speedy transfers and settlement among themselves.

Securities settlement transactions also kept growing and recorded 69,433 transactions in CY15. However, the instruments of retail cheque clearing are settled in PRISM on multilateral net settlement batch (MNSB).

Figure 8.3

Number of PRISM transactions shown uphill trend



Source: PSD, SBP

As against volume of transactions, the value of the IFT transaction has shown a slight dip of 0.5 percent in CY15. This contradictory trend of volume versus value shows that banks have used PRISM platform more frequently for relatively low value transactions **(Figure 8.2).**

Since transactions in PRISM are settled on real time gross basis, this feature requires its participants to have instant liquidity at the time of transaction settlement. To address the liquidity risk so that shortages at one participant do not spread throughout the system, various techniques like queuing arrangements, prioritization algorithms, netting arrangements (e.g. in hybrid systems), intraday credit arrangements, and securities lending arrangements are employed for better execution of the liquidity management.

SBP also provides certain facilities for efficient settlement of transactions. For example, liquidity deficient participant may avail either (a) Intraday

[187] Securities are settled in PRISM system on DVP Model 1, because of which settlement risk is totally eliminated.

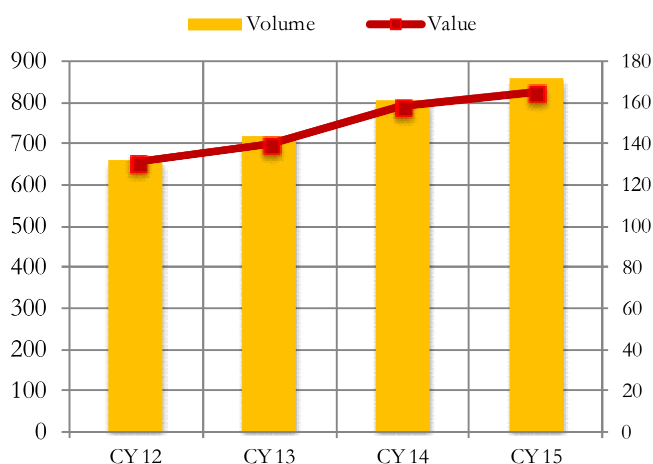
Liquidity Facility (ILF)[188] from SBP or (b) queue the pending transaction in PRISM till the availability of required funds. The ILF, generally, allows banks smooth settlement of transactions and avoids large queues and gridlock situations[189].

Figure 8.4

Retail payment growth trends consistent with previous years

Retail payment trend

(Volume in million) (Value in PKR trillion)



Source: PSD, SBP

Retail Payment transactions continue to grow…

Retail transactions are usually described as the transactions between consumers and the businesses. Consumers generally use the retail payments in areas like purchase of goods and services, bills payment, Person-to-Person payments (P2P) and cash withdrawals. In a granular view, paper based and e-transactions accumulate to form the retail transactions. Retail transactions of 856 million in number with a worth of PKR 165 trillion were executed in CY15; thus following the consistent growth pattern in line with previous years (**Figure 8.4**).

Within retail, paper based transactions remained dominant as they accounted for 78.1 percent of the aggregate retail value of all transactions. E-transactions also showed an improvement by recording the value of PKR 36 trillion as compared to PKR 35 trillion in CY14 **(Table 8.1).**

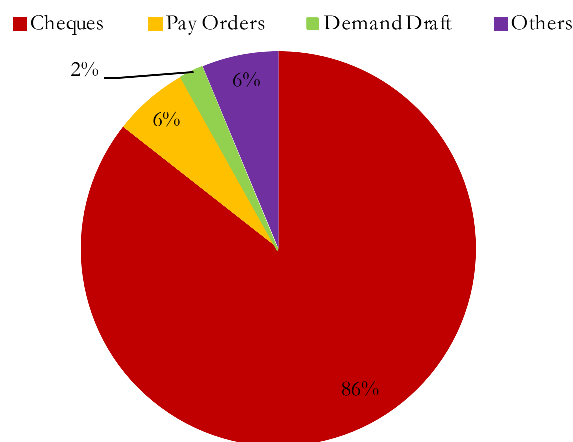
Prevalence of paper based transactions shows that the use of digital channels is limited and low due to lack of customers' (households and businesses) trust, financial illiteracy, digital divide and habit persistence etc.

Figure 8.5

Cheque transactions dominated the paper based transaction

Value-wise share of paper-based retail transactions during CY15

(percent)



Source: PSD, SBP

Cheques still the dominant part of Paper-based transactions…

Historically, consumers have been using cheques more often than any other retail payment instruments other than cash. The spread out of paper based transactions reveals that the dominance of cheque based transactions persists as they comprised 85.6 percent share in value and 93.6 percent share in volume terms (**Figures 8.5 & 8.6**).

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[188] The ILF is a fully collateralized liquidity facilities extended by SBP against approved government securities to ensure the smooth functioning of PRISM.

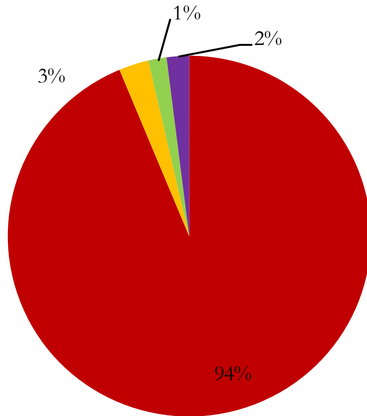
[189] If one bank face funding shortfall, it may create the shortage of funds for the recipient bank. A system wide similar situation where several banks' transactions are stuck is called Gridlock situation.

Other paper based transactions such as pay orders and demand drafts are low in value and volume depicting the limited but customized needs of the customer.

Figure 8.6

Cheque transactions remained highest in value

Volume-wise share of paper-based retail transactions during CY15 (percent)



Source: PSD, SBP

Among cheque based transactions, cash based transactions held the lead in volume terms by contributing 52.4 percent of the total chequing transactions, whereas cheque transfers were most preferred mode in value terms– about 61.4 percent of the total chequing transactions in CY15 **(Table 8.2).**

Table 8.2

Chequing Transactions in CY15

	Number (million)	Amount (PKR Billion)	Volume share (percent)	Value Share (percent)
Cash	172.0	18,354.0	52.4	16.5
Transfer	99.0	68,342.0	30.2	61.4
Clearing	57.0	24,444.0	17.4	22.0
Refund	0.0	210.0	0.0	0.2

Source: PSD, SBP

Keeping in view the high share of chequing transactions in the overall retail payment structure, there runs a parallel risk of frauds associated with the financial instruments like cheques. To address this important aspect, SBP has issued the guidelines[190] in 2014 on the standardization of security features and layout of cheques prescribing minimum requirements in respect of security features and printing techniques of cheques. This initiative is intended to speed up the overall cheque clearing process, facilitate truncation project and minimize fraudulent activities. Similar steps have been taken by SBP to standardize the layout and security features of Pay Order (PO), Demand Draft (DO) etc.

Clientele behavior, technology and regulation accelerating the E-banking......

Financial sector of Pakistan, with SBP's complementary efforts, has shown considerable growth in a wide spectrum of e-banking avenues, enabling customers to benefit from speedy, convenient and paperless ways of conducting financial transactions. With more banks stepping into the e-banking infrastructure and offering technology based banking services coupled with enhanced awareness among consumers; the e-banking is flourishing in a consistent manner.

E-banking has been growing in recent years. In CY15, value and volume of e-banking has increased by 14.6 percent and 40.7 percent respectively, as compared to CY13 **(Table 8.1).** The rising trend in e-banking was duly supplemented by enriched infrastructure such as ATMs, Real Time Online Branches (RTOBs), credit cards, debit cards etc. **(Table 8.3).**

[190] PSD's Circular No.1 of 2014 and CPD's Circular No.1 of 2014

Table 8.3

Overview of e-Banking in Pakistan (June 30, 2015)

Description	Numbers
Infrastructure	
Online Branches per 100,000 population	6
Mannual Branches	622
ATMs per 100,000 population	5
Interoperable switches	2
Banks managing POSs	6
POS Machines	41,183
Banks' Services	
Banks providing internet banking	21
Banks providing mobile banking	16
Banks providing call center & IVR banking	16
Banks issuing credit cards	12
Banks issuing debit cards	27
Banks issuing prepaid cards	9
Banks having ATMs	28

Source: PSD, SBP

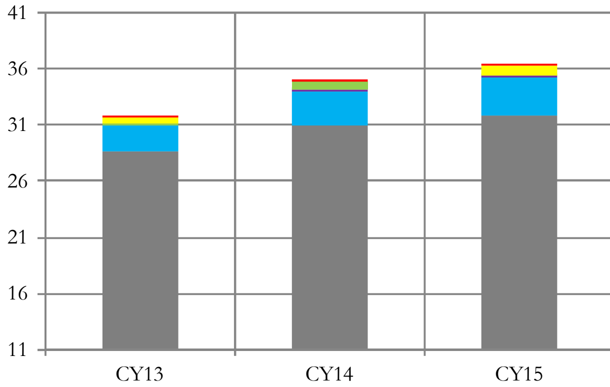
Figure 8.7

E-Banking transactions show slight improvment in value

Value of E-Banking Transactions

(PKR trillion)

Mobile Banking Internet Banking Call Center
POS ATM RTOB



Source: PSD, SBP

RTOB the lead component of e-banking in value terms…

Real Time Online Banking (RTOB) transactions are relatively large value-low frequency Alternative Delivery Channel (ADC) in e-banking which comprises the value share of around 87.6 percent compared to significantly low volume contribution of 24.3 percent in e-banking repertoire **(Figures 8.7 & 8.8).** With addition of 1,293 online branches in the banking network of Pakistan, the total figure of online branches reached 12,442 (around 95.6 percent of total branches) by the end of CY15. There is an addition of PKR 795 billion value in the RTOB transactions.

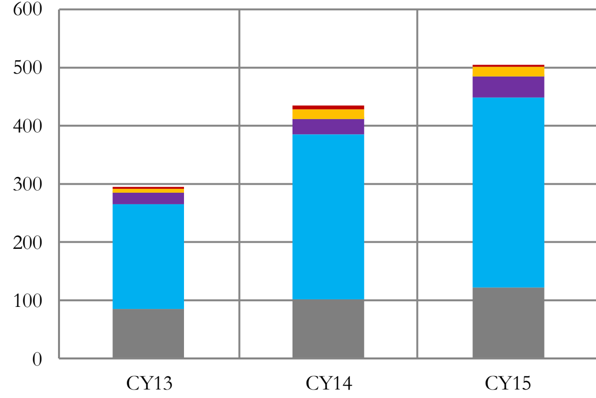
Figure 8.8

Number of E-Banking transactions increased

Volume of E-Banking Transactions

(In million)

RTOB ATM POS
Call Center Internet Banking Mobile Banking



Source: PSD, SBP

ATM's penetration has improved…

ATMs are one of the user friendly and convenient tools of e-banking. SBP has endeavored to ensure round the clock availability of ATMs with consistent monitoring, resolving issues (like out of cash, hardware/software issues, power outrages, connectivity or network issues) in minimum possible time and ATM penetration.

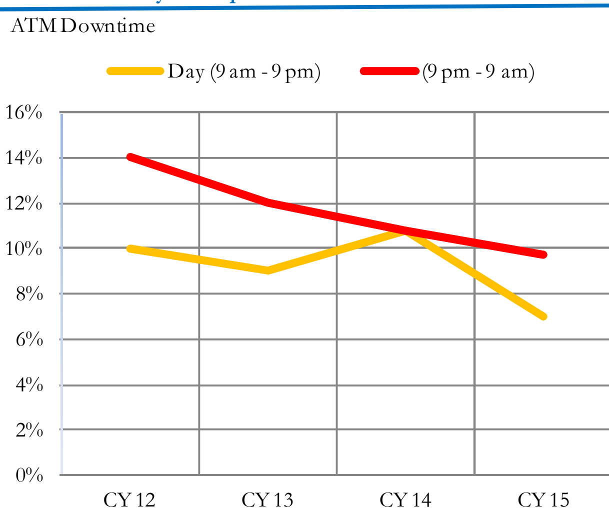
With a decent growth of 19.1 percent the cumulative number of ATMs reached 10,736 in CY15 (**Table 8.4).** Expansion of ATMs is spurred

by the business as well as regulatory reasons[191]. Though overall penetrations of ATMs have improved and on average 5 ATMs are available for 100,000 people, it still lags behind the international standards of outreach.[192]

In CY15, there were 325 million transactions routed through ATMs out of a total of 507 million e-banking transactions. The value shared by ATMs is PKR 3.4 trillion which is almost 9.4 percent of the total e-banking transaction value of PKR 36 trillion.

Figure 8.9

ATM Effeciency has improved



Source: PSD, SBP

Keeping a check on the operational efficiency of the ATMs, the downtime (time ATMs not operational) serves as an important yardstick. The downtime of the ATMs has reduced in CY15 when compared with the previous years. Enhanced regulatory efforts have been made and supervisory tools are exercised for the availability of working ATMs especially during occasion days. The average downtime has reduced to 7 percent and 10 percent for the day and night time, respectively from 10 percent and 14 percent in CY14 **(Figure 8.9**).

Stats related to issuance of ATM cards has also shown an unprecedented upheaval (419.9 percent) due to the fact that for the first time ATM cards of Microfinance banks have been included in the reported e-banking infrastructure (**Table 8.4).**

Table 8.4

E-Banking Infrastrcture Position

	CY12	CY13	CY14	CY15	Growth
	number				percent
ATMs	6,232.0	7,684.0	9,018.0	10,736.0	19.1
Online Branches Network	9,896.0	10,596.0	11,149.0	12,442.0	11.6
POS	34,724.0	33,734.0	34,945.0	50,072.0	43.3
Credit Cards (000)	1,271.2	1,336.0	1,332.0	1,394.0	4.7
Debit Cards (000)	18,571.5	20,048.1	23,727.0	26,489.0	11.6
ATM Only Cards (000)	873.8	996.2	935.0	4,861.0	419.9

Source: PSD, SBP

PoS, the other e-banking channel, also grow…

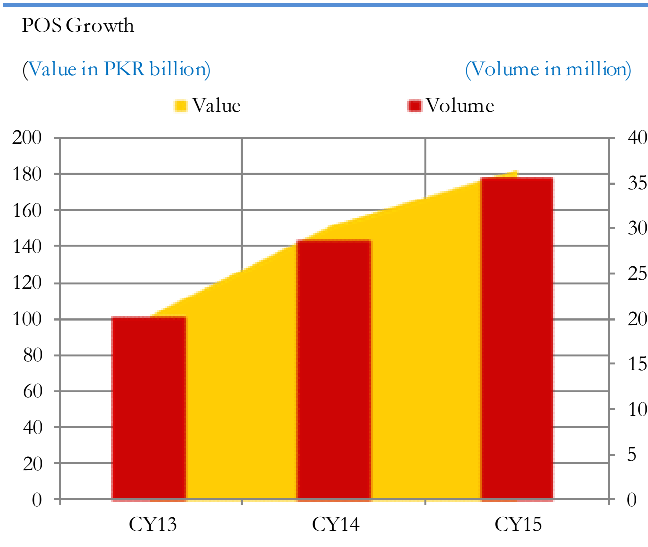
Among other e-banking channels, Point of Sale (PoS) was the most impressive channel of e-banking in CY15 as far as the growth rate (43.3 percent) is concerned. Elevated trust of customers accompanied with available PoS infrastructure has improved the PoS based transactions.

In consonance with the growth rate, PoS achieved the splendid increment of 78.4 percent and 76.5 percent in value and volume terms, respectively, in CY15 relative to the CY13. Though, proportionate share of the PoS is not prevailing in terms of both value and volume terms, when compared to other e-banking avenues, yet it has recorded improved figures of volume (35 million) and value (PKR 182 billion) on standalone basis in CY15 **(Figure 8.10).**

[191] As per SBP's instructions, banks are required to open at least one ATM with each new branch and bring number of ATMs at par with number of branches in next five years w.e.f. end December 2013 such as covering 20 percent gap each year.
[192] 17 ATMs per 100,000 people is the average of (50th percentile) 26 countries sample as per analysis in the report of World Bank. http://siteresources.worldbank.org/INTTOPACCFINSER/Resources/Bnkoutrch.pdf

Figure 8.10

POS recorded spike in volume and value



Source: PSD, SBP

Nonetheless, more efforts and investments are needed for the encompassing outreach of the e-banking services to the unbanked population of the country. At the same time, such efforts are needed to be accompanied by sophisticated and prudent risk management systems at bank level to minimize the losses and frauds associated with e-transactions.

Branchless Banking on the surge…

The Branchless Banking (BB) regulations, first of its kind and based on the spirit of financial inclusion, were developed and issued by the State Bank way back in 2008. Differing from the international models that were teleco-based, the central bank owing to peculiar social settings opted for the bank-led model; underlying themes being the "responsibility viz–a-viz the depositor", consumer protection and compliance with the AML/CFT.

Given the fact that the idea of financial inclusion revolves around the dispossessed sections of the society and the bank-led model matched the industries' move towards technology based banking, branchless banking initiative of the SBP gained early acceptance from the market, which took quick strides for its implementation. Seven years down the road, the experiment seems to strongly indicate that it has contributed positively in reaching the target audience.

The interest shown by the well-known banking groups illustrates the viability of the BB from a purely business development standpoint. There are about 8 players in the BB business, five belonging to main stream top private banks and three MFBs.

With the growing participation of banks in branchless banking, the sector holds promise for eliminating financial exclusion of the depressed sections of society. Fast expanding BB network, both due to entry of new players and increase in number of agents offering BB remained the key to this extraordinary growth.

Table 8.5

Key Highlights of Branchless Banking

	CY14	CY15	Growth (percent)
No. of Agents	204,073.0	301,823.0	47.9
No. of Accounts (thousands)	5,414.0	15,322.0	183.0
No. of Transactions (millions)	278.0	375.0	34.9
Average No. of Transactions Per Day (thousands)	772.0	1,041.0	34.8
Deposits (PKR million)	6,668.0	8,827.0	32.4
Value of Transactions (PKR billion)	1,353.0	1,872.0	38.4
Average Size of Transactions (PKR)	4,867.0	4,992.0	2.6

Source: AC&MFD, SBP

In CY15, number of accounts grew by 183.0 percent as compared to CY14, thus showing the interest of the public in the branchless banking **(Table 8.5).** Furthermore, the telecom companies' balance air time network has also been instrumental in padding up the agents' network. Elevated market penetration of BB network has duly impacted the value and volume, which hiked up to PKR 1,872 billion and 375 million, respectively, in CY15.

Risks, Challenges and Developments…

The host of risks associated with FMI includes major risks like systemic risk, credit risk, liquidity risk, legal risk and operational risk **(See Box: 8.1)** which are critical, especially in the context of supervisory oversight. Failure to address these risks can lead to sources of financial shocks such as liquidity dislocations and credit fallouts. Failure of payment system has a negative impact on the execution of the monetary policy and confidence of the public in the financial system at large.

SBP has largely eliminated the settlement risk in large value payments by implementing PRISM system and its success is evident as it is not only used by institutions but also by high value customers.

With the growing landscape of e-banking worldwide, the probability of cyber attacks has also increased. In 2015, there were 3 billion digital users and it is estimated that network traffic will be more than double from 2015 to 2019[193]. Accordingly, routes for exploitation and disruption will also augment. It is clear that the risks are on the rise and a growing cause of concern to the industry and regulators alike. Recent episode of cyber heist on Bangladesh bank has provoked the regulators and financial institutions globally to ramp up their efforts against cyber threats. SBP is aware of the recent cyber-attacks on various financial institutions and has reviewed its operational set-up and system security infrastructure for cross border payments. Adequate measures have already been taken to secure the SBP systems.

SBP has issued regulations[194] for security of internet banking that sets minimum benchmarks for financial institutions requiring the assessment of risks and implementing internal controls and security measures. Further, SBP is also working on other aspects like drafting regulations on card security etc.

Along with underlying risks, FMI also faces many challenges related to infrastructure and market discipline. Taking a stock of all these risks and challenges, SBP has remained engaged with a number of important domestic and international regulatory initiatives relevant to its mandate of payment systems and related infrastructure. Major developments in this connection include[195]:

- Real Time Gross Settlement System (RTGS) implementation and encouraging Financial Institutions to implement Straight Through Processing (STP)
- Enhancing access of PRISM for Microfinance Banks
- Interoperability of ATM Switches
- Branchless Banking Regulations
- Collaborative launching of Pakistan Remittance Initiative (PRI)
- Supporting government initiated social safety nets such as Benazir Income Support Program (BISP) by waving off inter switch fee.
- IBAN standard adoption.
- Introduction of cheque layout and security standards.
- Introduction of Guidelines on Standardization of Payment Orders (POs) and Demand Drafts (DDs),
- Introduction of domestic payment scheme i.e. PayPak.

In order to establish an environment conducive for competition and discipline among the payment

[193]https://www.ecb.europa.eu/press/key/date/2016/html/sp160113_1.en.html
[194] http://www.sbp.org.pk/psd/2015/C3-Annexure-A.pdf

[195] Payment systems review 2014-15- PSD-SBP http://sbpweb/payment/pdf/FY/FiscalYear-2014-15.pdf

system stakeholders, SBP has issued Rules for Payment System Operators (PSOs) and Payment System Providers (PSPs) in 2014. One of the objectives of these Rules is to encourage the participation of non bank entities in payment industry to provide new products and services. Under these Rules, existing and new Payment System Operators/institutions would come under a formal regulatory ambit.

Payment System Oversight…

Payment system oversight is a critical function of a central bank which is carried out by developing regulatory framework, effectively monitoring the existing systems, ensuring compliance of systems with best domestic laws/regulations and best international practices and promoting cost effective e-banking technologies and cross-border connectivity in a safe way.

With the growing concern about financial stability, the role of central banks oversight of payment and settlement system has gained immense attention as one of the key policy objectives. The scope of oversight has broadened multifold in response to more direct and active role of the private sector in providing payment and settlement systems.

Furthermore, other oversight demanding factors include significantly large increase in the value of transfers cleared and settled, centralized channeling of activities through smaller number of key systems, and enhanced technological interconnectedness of many systems. Besides ensuring efficiency with safety, payment system oversight helps in maintaining public confidence on money as a mean of exchange and performing the monetary policy in smooth and efficient way.

Quite cognizant of the importance of payment system oversight, CPMI introduced Principles of Financial Market Infrastructure (PFMI) **(See Box 8.1).** These standards stress upon that FMIs be more resilient to financial crises, particularly, the participant defaults to minimize likelihood of systemic risk. Importantly, PFMI also set forth responsibilities of central banks, market regulators and other relevant authorities for FMI related to the regulation, supervision and oversight of FMI. These responsibilities highlight that relevant authority;

- should have adequate powers and resources to develop regulation, supervise and to carry out oversight,
- should clearly define and disclose oversight policies,
- should apply CPMI-IOSCO principles,
- should cooperate with each other, both domestically and internationally, as appropriate, in promoting the safety and efficiency of FMIs

In Pakistan, SBP conducts the regulatory oversight of Payment System through a well established legal and regulatory framework. In 2007, Payment System and Electronic Fund Transfer Act was passed which empowers SBP to conduct oversight of payment system to ensure its safety, integrity, efficiency or reliability. The Act covers all areas related to payment system including RTGS, payment instruments, clearing, and electronic fund transfers, e-banking / ATMs, fines and penalties, etc.

Way Forward…

In the backdrop of ever evolving challenges and risks, efforts are being made to protect all FMI stakeholders. SBP has given guidance to banking industry on various aspects like efficiency and automation of payment systems. In the same vein, regulations for Electronic Funds Transfers are also under considerations at SBP which shall help in achieving the stable and uninterrupted payment system structure in the country.

On the part of PRISM participants, core banking and PRISM systems are not integrated, thus requiring manual feeding of the payment instructions which is inefficient and error prone. In order to improve efficiency and minimize errors in payment processing, SBP has instructed the participants of PRISM to implement "Straight Through Processing (STP)". It ensures automated processing of transactions through PRISM system by integrating it with their core banking systems.

Designation and oversight of payment system is important and in this realization, SBP is working on the framework of payment system oversight, which is in line with the related international best practices including CPMI & IOSCO supervisory & oversight principles.

Cybercrime risks emanating from the ever rising landscape of e-banking requires due attention of all market players as well as regulators. To circumvent cyber related risks, cyber resilience mechanism needs to be formulated and executed. Proactive steps are required to be taken on account of improved legislation, market awareness and program formulation to counter the cyber related risks. Part of this actualization has been translated into the legislation and approval of law on cyber crime titled as "Prevention of Electronic Crime Act 2015" by National Assembly of Pakistan. Enforcement of this law will extend the legal shelter for the market players of the industry against the cyber crimes.

In relation to global recognition on cyber threats, it is pertinent to mention that international "Committee on Payments and Market Infrastructures" (CPMI) and the "Board of the International Organization of Securities Commissions" (IOSCO) have joined their efforts in developing the **Guidance on cyber resilience for financial market infrastructures**[196]**.**

[196] CPMI-IOSCO consultative paper "Guidance on cyber resilience for financial market infrastructures", November 2015, https://www.bis.org/press/p151124.htm

Box 8.1
CPMI & IOSCO Supervisory & Oversight Principles for FMIs[197]:

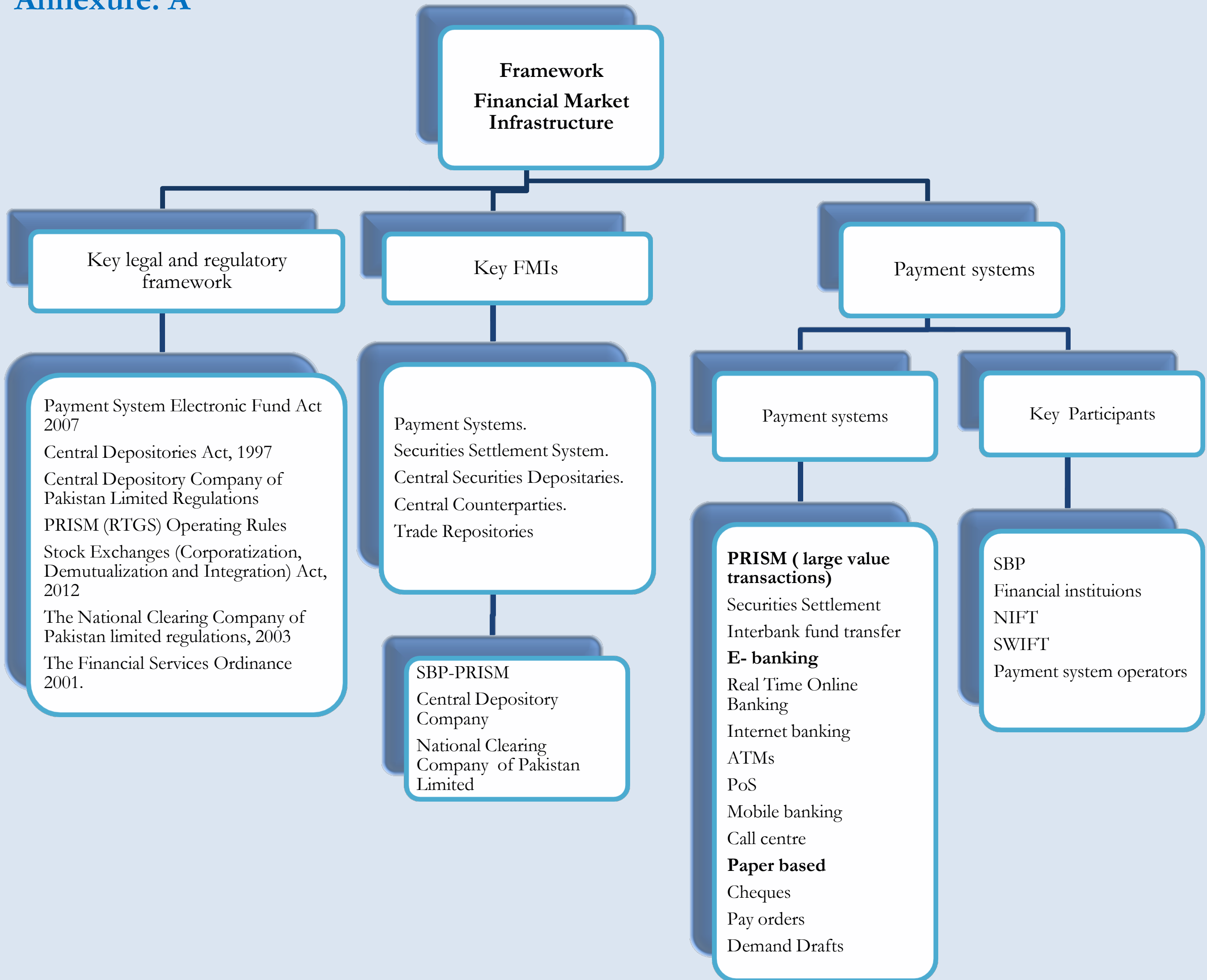
Committee on Payment and Market Infrastructure (CPMI) and Technical Committee of the International Organization of Securities Commissions (IOSCO) have jointly published 24 principles for financial market infrastructures (FMIs). FMIs are systemically important payment systems, securities settlement systems, central securities depositories, central counter parties and trade repositories. Some of the principles are applicable to all types of FMIs, while most of the principles are only relevant for specific FMIs. Key issues covered by the principles encompass financial risk, participant default rules and organization. A brief overview of the principles is listed below:

1. **Legal basis:** An FMI should have a well-founded, clear, transparent, and enforceable legal basis for each material aspect of its activities in all relevant jurisdictions.
2. **Governance:** An FMI should have clear and transparent governance arrangements aimed to promote the safety and efficiency of the FMI.
3. **Framework for the comprehensive management of risks:** An FMI should have a robust and overarching risk management framework for managing legal, credit, liquidity, operational, and other risks.
4. **Credit risk:** An FMI should measure, monitor, and manage its credit exposures to participants and those arising from its payment, clearing, and settlement processes.
5. **Collateral:** An FMI that requires collateral to manage its or its participants' credit exposure should accept collateral with low credit, liquidity, and market risks.
6. **Margin:** A central counter parties should cover its credit exposures to its participants for all products through an effective margin system that is risk-based and regularly reviewed.
7. **Liquidity risk:** An FMI should effectively measure, monitor, and manage its liquidity risk. An FMI should maintain sufficient liquid resources in all relevant currencies.
8. **Settlement finality:** An FMI should provide clear and certain final settlement, at a minimum by the end of the value date. Where necessary or preferable, an FMI should provide final settlement intraday or in real time.
9. **Money settlement:** An FMI should conduct its money settlements in central bank money where practical and available. If central bank money is not used, an FMI should minimize and strictly control the credit and liquidity risk arising from the use of commercial bank money.
10. **Physical deliveries:** An FMI should clearly state its obligations with respect to the physical deliveries and should identify, monitor, and manage the associated risks.
11. **Central securities depositories (CSDs):** A CSD should have appropriate rules and procedures to help ensure the integrity of securities issues.
12. **Exchange-of-value settlement systems:** Sometimes FMIs settle transactions that involve the settlement of two linked obligations. Settlement of one obligation should take place if, and only if, the associated liability is settled. This is called "delivery versus delivery" in foreign exchange settlement and "delivery versus payment" in securities settlement.
13. **Participant-default rules and procedures**: An FMI should have effective and clearly defined rules and procedures to manage a participant default.
14. **Segregation and portability:** This principle concerns the protection of CCP members' customers. In the case of a member default, the member's customer should be able to move their positions and the relevant collateral to an account in another institution.
15. **General business risk:** An FMI should identify, monitor, and manage its general business risk.
16. **Custody and investment risks:** An FMI should safeguard its own and its participants' assets and minimize the risk of loss on and delay in access to these assets.

[197] Committee on Payment and Settlement Systems, (2012). "Principles for Financial Market Infrastructure", Bank of International Settlement.

17. **Operational risk:** An FMI should identify the plausible sources of operational risk and mitigate their impact through the use of appropriate systems, policies, procedures, and controls.
18. **Access and participation requirements: An** FMI should have objective, risk-based, and publicly disclosed criteria for participation, which permit fair and open access.
19. **Tiered participation arrangements:** An FMI should identify, monitor, and manage the material risks to the FMI arising from tiered participation arrangements.
20. **FMI links:** An FMI that establishes a link with one or more FMIs should identify, monitor, and manage ink-related risks.
21. **Efficiency and effectiveness:** An FMI should be efficient and effective in meeting the requirements of its participants and the markets it serves.
22. **Communication procedures and standards:** An FMI should use, or at a minimum accommodate, relevant internationally accepted communication procedures and standards for communication
23. **Disclosure of rules, key procedures, and market data:** An FMI should have clear and comprehensive rules and procedures and should provide sufficient information to participants to have an exact understanding of the risks and related costs.
24. **Disclosure of market data by trade repositories**: A trade repository should provide timely and accurate data to relevant authorities and the public in line with their respective needs.

Annexure: A



Technical Appendix

A. Banking Sector Stability Map (BSSM)

Based on the methodology described by the IMF[198], the BSSM covers the risks faced by the banking sector in seven dimensions listed in Table 1. To gauge the magnitude of risk in each dimension, relevant indicators have been used.

Table 1: BSSM Dimensions and Corresponding Risk Indicators

Sr No.	Risk Dimension	Subcomponents	Judgment based Weights	Impact on Financial Stability
1	Capital Adequacy	Capital Adequacy Ratio	40%	Positive
		Tier I CAR	30%	Positive
		Capital to Total Assets	30%	Positive
2	Asset Quality	NPLs to Total Loans	30%	Negative
		Provision to NPLs	30%	Positive
		Net NPLs to Capital	30%	Negative
		Loss to NPLs	10%	Negative
3	Exposure to Public Sector	Public Sector Exposure/Total Assets	50%	Negative
4	Residual Growth	Growth in Investments	25%	Negative
	(growth financed by non-core liabilities)	Growth in Advances	25%	Negative
		Growth in Borrowings	25%	Negative
		Growth in Deposits	25%	Positive
5	Interconnectedness	Call Lending and Borrowings/Total Assets	50%	Negative
		Financial Liabilities(SBP exclusive)/Total Liabilities	50%	Negative
6	Earnings	Return on Assets (Before Tax)	20%	Positive
		ROE (Avg. Equity& Surplus) (Before Tax)	20%	Positive
		NIM	20%	Positive
		NII/Gross Income	15%	Positive
		Cost / Income Ratio	15%	Negative
		Trading Income to Total Income	10%	Negative
7	Liquidity	Liquid Assets/Total Assets	33%	Positive
		Liquid Assets/Total Deposits	33%	Positive
		Earning Assets/Deposits	33%	Negative

In each dimension, historical annual series of selected indicator ratios (up to 20 years), as listed in Table 1, have been collected. Based on each series, percentile rank for the year under consideration is computed. The ranks are then

[198] For methodology please see Dattels, P., McCaughrin, R., Miyajima, K., & Puig, J. (2010). "Can you map global financial stability?" *IMF Working Papers*, 1-42.

normalized on a scale of 1 to 10; indicators with positive impact are subtracted from 10 since lower values indicate more stability, while indicators having negative impact are simply normalized. Based on the weights of each series, as given in Table 1, an average summary measure having a single value of risk is arrived at for each dimension. Lower value of the summary measure indicates lower risk to the banking sector stability while higher values signify higher risk in that dimension.

B. Financial Markets Stability Map (FMSM)

The FMSM measures risks in three dimensions i.e. Equity Market, Money Market and Foreign Exchange Market. Historical daily series of KSE-100 index since August 9, 2000, daily series of mid average interbank selling-buying PKR/USD exchange rate since June 23, 2005, and weekly series of weighted average overnight repo rates since July 15, 2005 are used to compute Exponential Weighted Moving Average (EWMA) volatility[199] for each series. The smoothing factor, λ, is taken to be 0.94 and initial volatility, σ_0, of 0.01 is used.[200,201]

Based on daily or weekly values (as the case may be), average volatility was computed for each completed calendar year since CY06. The percentile rank of a particular year's volatility (say CY14), in each of the three dimensions, is then computed relative to their respective history (since CY06). Higher ranking in a dimension represents higher riskiness. The percentiles were subsequently rescaled from 1 to 10 so as to make them presentable in the map.

C. CPV Model Results

The variant of the CPV model used for the macro-stress testing exercise is reproduced below:

$$GNPLR_t = \alpha + \sum_{i=1}^{4} \beta_i GLSM_{t-i} + \sum_{i=1}^{4} \gamma_i GEXP_{t-i} + \sum_{i=1}^{4} \eta_i PSE_{t-i} + \sum_{i=1}^{4} \delta_i DR_{t-i} + \epsilon_t$$

The estimation results[202] of the model are, generally, in line with prior expectations (**Table X**). All variables have the expected signs except discount rate at second lag. However, the combined effect of discount rate implies a positive relationship with the dependent variable, GNPLR. Model fit is also reasonable. The Durbin-Watson statistics is in the satisfactory range (above 2.0).

Table X

Regression Results of CPV Model

Dependent Variable: Gross Non-Performing Loans (GNPLR)

Variables	Coefficents
GLSM(-1)	-0.3584 [0.0005]
GLSM(-3)	-0.4538 [0.0000]
GEXP(-4)	-0.1623 [0.0103]
PSE(-2)	-0.2237 [0.0062]
DR(-1)	0.6074 [0.0000]
DR(-2)	-0.7912 [0.0024]
DR(-3)	0.3250 [0.0351]
Intercept	-0.2984 [0.0018]
Observations	51
R-squared	0.72
Adj R-sqaured	0.67
Durbin Watson stat	2.29

199 The formula for computing EWMA volatility is: $\sigma_t^2 = \lambda * \sigma_{t-1}^2 + (1-\lambda) * \mu_t^2$, where, σ, is the standard deviation, λ, is the smoothing factor and μ, is the return.

200 Riskmetrics (1996), J. P. Morgan Technical Document, 4th Edition, New York, J.P. Morgan.

201 Chang, C. L., Jiménez-Martín, J. Á., McAleer, M., & Pérez-Amaral, T. (2011). Risk management of risk under the Basel Accord: Forecasting value-at-risk of VIX futures. *Managerial Finance*, *37*(11), 1088-1106.

202 Since we estimated the model using step-wise OLS regression, lags of explanatory variables which are insignificant are dropped.

Acronyms

Acronym	Meaning
AC&MFD	Agricultural Credit & Microfinance Department
ADR	Advances Deposit Ratio
AFS	Available for Sale
AML	AML: Anti Money Laundering
ATM	ATM: Automated Teller Machine
BB	Branchless Banking
BIS	Bank for international settlement
BPRD	Banking Policy & Regulations Department
bps	basis points
CAR	Capital Adequacy Ratio
CASA	Current Account - Saving Account
CBs	Commercial Banks
CCP	Central Counter Parties
CD	Certificate of Deposit
CDC	Central Depository Company
CDNS	Central Directorate of National Savings
CDR	Currency in Circulation to Deposits Ratio
CEIFE	Center of Excellence in Islamic Finance Education
CF	Consumer Finance
CFT	Combating the financing of terrorism
CiC	Currency in Circulation
COI	Certificate of Investment
CPEC	China Pakistan Economic Corridor
CPMI	Committee on Payment & Market Infrastructure
CPPI	Constant Proportions Portfolio Insurance
CRR	Cash Reserve Requirement
CRWA	Credit Risk Weighted Assets
CSD	Central Securities Depository
CY	Calendar Year
DFI	Development Finance Institution
DMMD	Domestic Markets & Monetary Management Department
FBs	Foreign Banks
FCY	Foreign Currency
FDR	Financing to deposit ratio
FI	Financial Institution
FMI	Financial Market Infrastructure
FSD	Financial Stability Department
FSV	Forced Sale Value
FX	Foreign Exchange
G-SIIs	Global-Systemically Important Insurers
GDP	Gross Domestic Product
HFCs	House Finance Companies
HFT	Held for Trading
HTM	Held-To-Maturity
IBBs	Islamic Banking Branches
IBIs	Islamic Banking Institutions
IFC	Investment Finance Company
IFSB	Islamic Financial Services Board
IFT	Interbank Fund Transfer
IPO	Initial Public Offering
IRR	Interest Rate Risk
KAP	Knowledge, Attitude and Practices
KIBOR	Karachi Interbank Offer Rate
KSE	Karachi Stock Exchange
LCR	Liquidity Coverage Ratio
LPBs	Local Private Banks
LSM	Large Scale Manufacturing
MBS	Mortgage Backed Securities
MCR	Minimum Capital Requirement
MER	Minimum Equity Requirements
MMC	Modaraba Management Company
mREIT	Mortgage Real Estate Investment Trust
MRWAs	Market Risk Weighted Assets
MSR	Minimum Saving Rate
MTB	Market Treasury Bill
MUFAP	Mutual Funds Association of Pakistan
NAV	Net Asset Value
NBFC	Non-Bank Financial Companies
NBFC &NE	Non-Bank Finance Companies and Notified Entities
NBFIs	Non-Banking Financial Institutions
NBMFC	Non-Bank Micro Finance Companies
NII	Net Interest Income
NIM	Net Interest Margin
NPAs	Non Performing Assets
NPFs	Non Performing Financings
NPL	Non-Performing Loan
NPLR	Non Performing Loans Ratio

NSS	National Savings Scheme
OAEM	Other Assets Especially Mentioned
OICCI	Chamber of Commerce and Industry
OMOs	Open Market Operations
ONR	Overnight Rate
ORWAs	Operational Risk Weighted Assets
PBT	Profit Before Tax
PIB	Pakistan Investment Bond
PKR	Pakistani Rupee
PoS	Point of Sale
PRISM	Pakistan Real-time Interbank Settlement Mechanism
PSCBs	Public Sector Commercial Banks
PSD	Payment Systems Department
PSEs	Public Sector Entities
PSO	Payment System Operators
PSP	Payment System Providers
PTF	Participants' Takaful Fund
RCOA	Reporting Chart of Accounts
REITS	Real Estate Investment Trust
RMC	REIT Management Company
ROA	Return on Assets
ROE	Return on Equity
RSA	Risk Sensitive Assets
RSL	Risk Sensitive Liabilities
RTGS	Real Time Gross Settlement
RTOB	Real Time Online Banking
RWA	Risk Weighed Assets
S&A	Subsidiaries and Associated undertakings
SBP	State Bank of Pakistan
SBs	Specialized banks
S&DWHD	Statistics and Data Ware House Department
SECP	Securities and Exchange Commission of Pakistan
SLR	Statutory Liquidity Requirement
SME	Small & Medium Enterprise
SSS	Securities Settlement System
TCP	Trade Corporation of Pakistan
TR	Trade Repositories
USD	US Dollar
WADR	Weighted Average Deposit Rate
WALR	Weighted Average Lending Rate
WPI	Wholesale Price Index
YoY	Year on Year

Annexures

Annexure I - Balance Sheet and Profit & Loss Statement of Banks

PKR million

BALANCE SHEET	Dec-12	Dec-13	Dec-14	Dec-15
ASSETS				
Cash & Balances With Treasury Banks	805,672	840,233	723,664	909,429
Balances With Other Banks	191,599	186,221	149,631	198,395
Lending To Financial Institutions	169,630	273,991	429,380	360,772
Investments - Net	4,009,213	4,305,484	5,309,630	6,880,765
Advances - Net	3,760,289	4,046,587	4,447,300	4,815,827
Operating Fixed Assets	247,678	259,405	277,030	310,102
Deferred Tax Assets	75,542	78,855	67,077	65,644
Other Assets	501,219	546,214	702,550	602,301
TOTAL ASSETS	**9,760,842**	**10,536,989**	**12,106,261**	**14,143,234**
LIABILITIES			-	
Bills Payable	110,077	122,707	137,651	145,089
Borrowings From Financial Institution	1,035,671	723,828	1,001,447	1,766,145
Deposits And Other Accounts	7,300,687	8,318,058	9,229,773	10,389,260
Sub-ordinated Loans	55,160	40,070	44,329	51,366
Liabilities Against Assets Subject To Finance Lease	52	34	33	50
Deferred Tax Liabilities	17,924	18,288	37,149	47,622
Other Liabilities	359,444	375,374	448,432	420,935
TOTAL LIABILITIES	**8,879,016**	**9,598,360**	**10,898,816**	**12,820,468**
NET ASSETS	**881,826**	**938,629**	**1,207,445**	**1,322,767**
NET ASSETS REPRESENTED BY:			-	
Share Capital	463,647	481,250	587,053	619,862
Reserves	155,287	175,593	189,242	192,039
Unappropriated Profit	154,610	164,440	227,151	290,908
Share Holders' Equity	**773,544**	**821,283**	**1,003,446**	**1,102,809**
Surplus/Deficit On Revaluation Of Assets	108,281	117,346	203,999	219,958
TOTAL	**881,826**	**938,629**	**1,207,445**	**1,322,767**

PROFIT AND LOSS STATEMENT	Dec-12	Dec-13	Dec-14*	Dec-15*
Mark-Up/ Return/Interest Earned	800,800	776,653	919,821	981,760
Mark-Up/ Return/Interest Expenses	460,918	444,431	504,990	485,575
Net Mark-Up / Interest Income	**339,882**	**332,222**	**414,830**	**496,185**
Provisions & Bad Debts Written Off Directly/(Reversals)	32,492	36,252	25,323	38,874
Net Mark-Up / Interest Income After Provision	**307,390**	**295,970**	**389,507**	**457,311**
Fees, Commission & Brokerage Income	54,002	62,337	70,421	82,640
Dividend Income	21,686	14,606	14,098	16,910
Income From Dealing In Foreign Currencies	21,745	21,431	28,396	22,824
Other Income	40,559	42,036	54,434	86,369
Total Non - Markup / Interest Income	**137,993**	**140,409**	**167,349**	**208,743**
	445,383	436,379	556,856	666,053
Administrative Expenses	252,861	267,990	304,588	330,006
Other Expenses	4,813	3,237	5,726	7,231
Total Non-Markup/Interest Expenses	**257,674**	**271,227**	**310,313**	**337,237**
Profit before Tax and Extra ordinary Items	187,709	165,153	246,543	328,817
Extra ordinary/unusual Items - Gain/(Loss)	848.99	2.01	3.79	0.51
PROFIT/ (LOSS) BEFORE TAXATION	**186,860**	**165,151**	**246,539**	**328,816**
Less: Taxation	65,480	54,176	83,171	129,811
PROFIT/ (LOSS) AFTER TAX	**121,380**	**110,975**	**163,368**	**199,006**

Annexure II - Financial Soundness Indicators of the Banking Sector

percent

Indicators	Dec-12	Dec-13	14-Dec	Dec-15
CAPITAL ADEQUACY				
Risk Weighted CAR^	15.4	14.9	17.1	17.3
Tier 1 Capital to RWA	12.8	12.6	14.3	14.4
Capital to Total Assets	9.0	8.9	10.0	8.4
ASSET QUALITY				
NPLs to Total Loans	14.5	13.0	12.3	11.4
Provision to NPLs	71.8	78.4	79.8	84.9
Net NPLs to Net Loans	4.6	3.1	2.7	1.9
Net NPLs to Capital^^	19.4	13.4	10.1	7.7
EARNINGS				
Return on Assets (Before Tax)	2.1	1.7	2.2	2.5
Return on Assets (After Tax)	1.4	1.1	1.5	1.5
ROE (Avg. Equity& Surplus) (Before Tax)	22.7	18.4	24.3	25.8
ROE (Avg. Equity &Surplus) (After Tax)	14.7	12.4	16.1	15.6
NII/Gross Income	71.1	70.3	71.3	70.4
Cost / Income Ratio	53.9	57.4	53.3	47.8
LIQUIDITY				
Liquid Assets/Total Assets	47.4	47.3	49.2	53.8
Liquid Assets/Total Deposits	63.3	60.0	64.5	73.3
Advances/Deposits	51.5	48.6	48.2	46.4

^ 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-14	Dec-15
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 (22)	**B. Local Private Banks (22)**
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.
Burj Bank Ltd.	Burj Bank 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.
*KASB Bank Ltd.**	MCB Bank Ltd.
MCB Bank Ltd.	*MCB Islamic Bank Ltd.****
Meezan Bank Ltd.	Meezan Bank Ltd.
NIB 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 (6)	**C. Foreign Banks (4)**
Bank of Tokyo - Mitsubishi UFJ, Ltd.	Bank of Tokyo - Mitsubishi UFJ, Ltd.
*Barclays Bank PLC***	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.	
HSBC Bank Oman S.A.O.G. #	
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 (33)	**All Commercial Banks (31)**
Include A + B + C	Include A + B + C
All Banks (37)	**All Banks (35)**
Include A + B + C + D	Include A + B + C + D

** KASB Bank Limited was de-scheduled on May 7, 2015, on account of its amalgamation with and into BankIslami Pakistan Limited, under Section 47 of the Banking Companies Ordinance, 1962.*

***Barclays Bank PLC (Pakistan Branch Business) was de-scheduled on June 11, 2015, on account of its merger with and into Habib Bank Limited.*

**** "MCB Islamic Bank Limited" was declared as a Scheduled Bank with effect from September 14, 2015.*

 # HSBC Bank Oman S.A.O.G. was de-scheduled on November 04, 2015, on account of its merger with and into Meezan Bank Limited.

Annexure IV - Composition of Islamic Banking Institutions

	Dec-14		Dec-15
	Islamic Banks		**Islamic Banks**
1	AlBaraka Bank (Pakistan) Ltd.	1	AlBaraka Bank (Pakistan) Ltd.
2	BankIslami Pakistan Ltd.	2	BankIslami Pakistan Ltd.
3	Burj Bank Ltd.	3	Burj Bank Ltd.
4	Dubai Islamic Bank Pakistan Ltd	4	Dubai Islamic Bank Pakistan Ltd
5	Meezan Bank Ltd	5	MCB Islamic Bank Ltd.
		6	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	MCB Bank Ltd	8	MCB Bank Ltd
9	National Bank of Pakistan	9	National Bank of Pakistan
10	Silk Bank Ltd	10	Silk Bank Ltd
11	Sindh Bank Ltd	11	Sindh Bank Ltd
12	Soneri Bank Ltd	12	Soneri Bank Ltd
13	Standard Chartered Bank	13	Standard Chartered Bank
14	Summit Bank Ltd.	14	Summit Bank Ltd.
15	The Bank of Khyber	15	The Bank of Khyber
16	The Bank of Punjab	16	The Bank of Punjab
17	United Bank Ltd.	17	United Bank Ltd.
	Grand Total 22 (5+17)		**Grand Total 23 (6+17)**

Annexure V - List of Non-Banking Financial Institutions

	Development Finance Institutions
1	House Building Finance Company Ltd.
2	PAIR Investment Company Ltd.
3	Pak Brunei Investment Company Ltd.
4	Pak Libya Holding Company Ltd.
5	Pak Oman Investment Company Ltd.
6	Pak-China Investment Company Ltd.
7	Pakistan Kuwait Investment Company Ltd.
8	Saudi Pak Industrial & Agricultural Investment Company Ltd.
	Leasing Companies
1	Grays Leasing Limited
2	NBP Leasing Limited
3	Orix Leasing Pakistan Limited
4	Pak-Gulf Leasing Company Limited
5	Saudi Pak Leasing
6	Security Leasing Corporation Limited
7	Sindh Leasing
8	SME Leasing Limited
9	Standard Chartered Leasing Limited
	Investment Finance Companies
1	Escorts Investment Bank
2	First Credit and Investment Bank Ltd.
3	First Dawood Investment Bank Limited
4	IGI Investment Bank
5	Invest Capital Investment Bank Limited
6	Security Investment Bank Ltd.
7	Trust Investment Bank Limited

Annexure V - List of Non-Banking Financial Institutions

	Modarabas
1	Allied Rental Modaraba
2	B.F. Modaraba
3	B.R.R. Guardian Modaraba
4	Crescent Standarad Modaraba
5	First Al-Noor Modaraba
6	First Elite Capital Modaraba
7	First Equity Modaraba
8	First Fidelity Leasing Modaraba
9	First Habib Modaraba
10	First IBL Modaraba
11	First Imrooz Modaraba
12	First Islamic Modaraba
13	First National Bank Modaraba
14	First Pak Modaraba
15	First Paramount Modaraba
16	First Prudential Modaraba
17	First Punjab Modaraba
18	First Treet Manufacturing Modaraba
19	First UDL Modaraba
20	KASB Modaraba
21	Modaraba AL-Mali
22	Sindh Modaraba
23	Standard Chartered Modaraba
24	Trust Modaraba

Annexure VI - List of Insurance Companies

	Non-Life Insurance Companies
1	ACE Insurance Ltd.
2	Adamjee Insurance Company Ltd.
3	Alfalah Insurance Company Ltd.
4	Allianz EFU Health Insurance Ltd.
5	Alpha Insurance Company Ltd.
6	Asia Insurance Company Ltd.
7	Askari General Insurance
8	Atlas Insurance Ltd.
9	Capital Insurance Company Ltd.
10	Century Insurance Company Ltd.
11	Continental Insurance Company Ltd.
12	East West Insurance Company Ltd.
13	EFU General Insurance Ltd.
14	Excel Insurance Company Ltd.
15	Habib Insurance Company Ltd.
16	IGI Insurance Ltd.
17	Jubilee General Insurance Company Ltd.
18	National Insurance Company Ltd.
19	New Hampshire Insurance Company Ltd.
20	PICIC Insurance Ltd.
21	Premier Insurance Ltd.
22	Reliance Insurance Company Ltd.
23	Sahara Insurance Company Ltd.**
24	Saudi Pak Insurance Company Ltd.
25	Security General. Insurance Company Ltd.
26	Shaheen Insurance Company Ltd.
27	Silver Star Insurance Company Ltd.
28	Sindh Insurance Ltd.
29	The Asian Mutual Insurance Company (Guarantee) Ltd.*
30	The Co-operative Insurance Society of Pakistan Ltd.*
31	The Credit Insurance Company Ltd.*
32	The Crescent Star Insurance Company Ltd.
33	The Pakistan General Insurance Company Ltd.
34	The Pakistan Mutual Insurance Company(Guarantee) Ltd.*
35	The United Insurance Company of Pakistan Ltd.
36	The Universal Insurance Company Ltd.
37	TPL Direct Insurance Ltd.
38	UBL Insurers Ltd.

Annexure VI - List of Insurance Companies

	General Takaful Companies
1	Pak-Kuwait Takaful Company Ltd.
2	Pak Qatar General Takaful Ltd.
3	Takaful Pakistan Ltd.
	Life Insurance Companies
1	Adamjee Life Assurance Company Ltd.
2	Asia Care Health & Life Insurance. Company Ltd.
3	East West Life Assurance Company Ltd.
4	EFU Life Assurance Ltd.
5	IGI Life Insurance Ltd.
6	Jubilee Life Insurance Company Ltd.
7	State Life Insurance Corporation of Pakistan
	Family Takaful Companies
1	Dawood Family Takaful
2	Pak Qatar Family Takaful
	Reinsurance Companies
1	Pakistan Reinsurance Company Ltd.

** Stay Order from the Competent Court has been obtained by the insurer against the Directive issued by the Commission under Section 63(1) of the Insurance Ordinance 2000, prohibiting the insurer to enter into any new insurance contract.*

*** The proceedings seeking sanction under Section 309 (b) of the Companies Ordinance, 1984 for winding up of the Company are underway.*

Source: Securities & Exchange Commission of Pakistan (SECP)