1 Process of Financial Intermediation

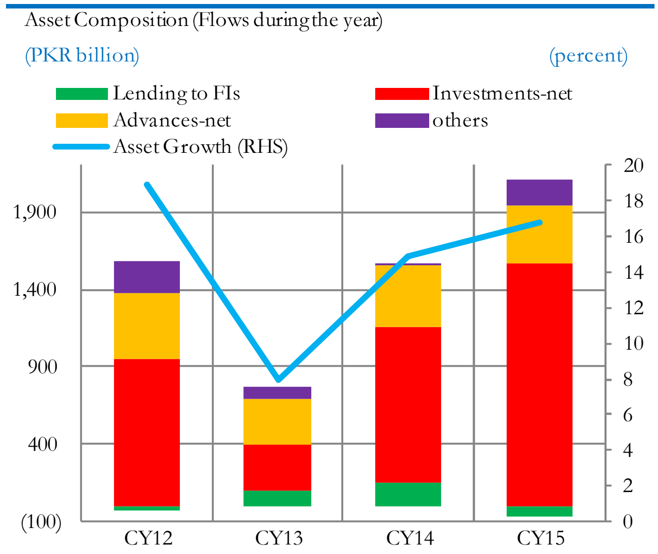
The momentum in credit demand from the private sector continues during CY15; though, the surge has not been as sharp as the decline in weighted average lending rates (WALR). Government papers – being credit risk free instruments – have attracted banking funds resulting in further rise in investment to 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.

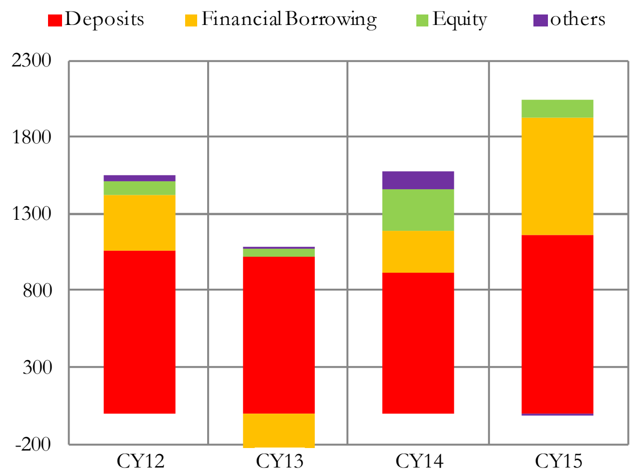
growth in advances portfolio, relative to deposits[30], due to host of factors including structural bottlenecks (such as power shortages, security concerns etc.) and subpar export performance due to global economic slowdown. Growing credit risk in some key sectors such as textiles and lengthy judicial 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.

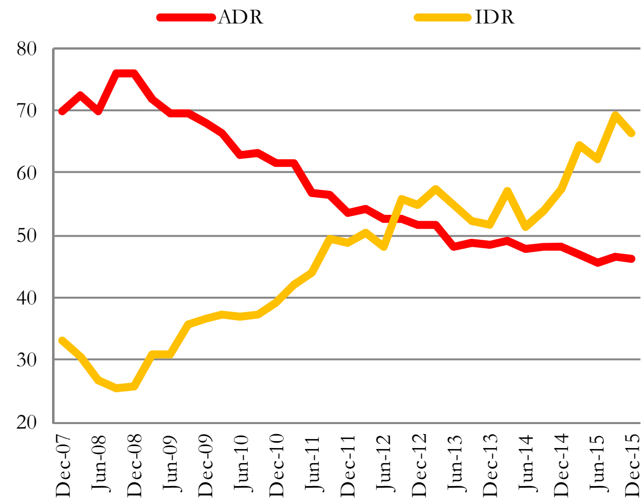
Although banking sector's exposure to government, being domestic in nature, carries no credit risk, yet it has some inherent issues. The holding of sovereign papers (particularly of longer-term maturity) exposes banks to market risk. Aggressive funding to public sector may also create some bouts of liquidity 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

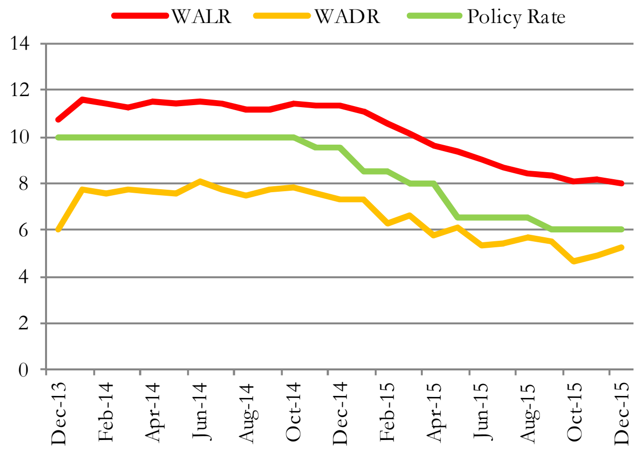
Though the recent credit growth is a positive sign, the surge has yet to find the crest considering the recent sharp dip in policy rate and weighted average interest rates **(Figure 1.4)**[33]. Besides the time lag involved in transmission mechanism, the partial resistance may be due to less than anticipated 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

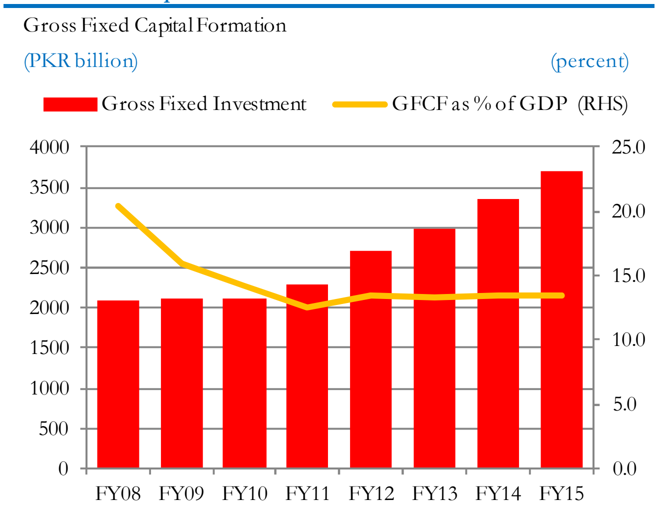
	Public Sector	Private Sector
	(PKR billion)	
Corporate Sector	**23.6**	**205.2**
Fixed Investment	108.8	177.8
Working Capital	(116.6)	113.9
Trade Finance	31.4	(86.5)
SMEs		**17.2**
Fixed Investment		33.5
Working Capital		(6.8)
Trade Finance		(9.5)
Agriculture		**26.5**
Consumer Finance:		**43.0**
Credit 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).

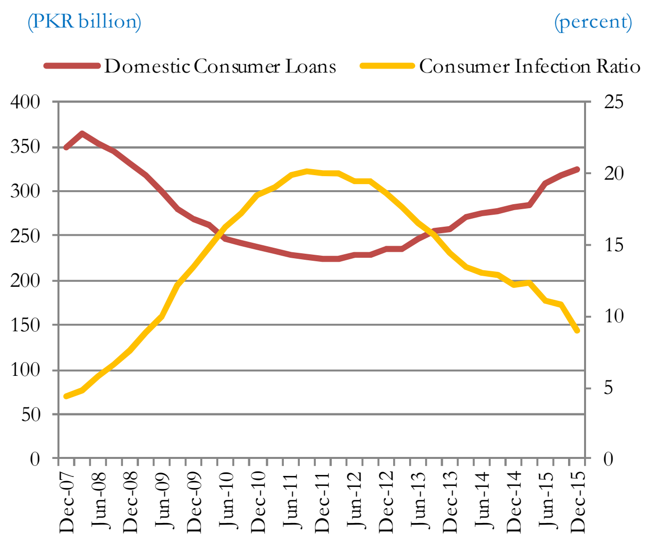
[35] CY15 and CY14 observed growth in fixed investment of 19.6 percent and 15.2 percent, respectively, compared to just 3.5 percent average growth during CY10-CY13 (4 years).
[36] Source: http://www.sbp.org.pk/ecodata/By-type-of-finance.pdf
[37] The capacity building usually requires mega projects of 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



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.

[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).

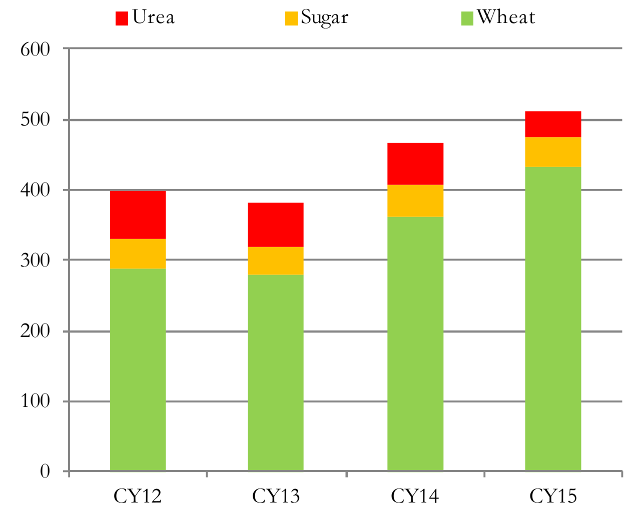
[44] In November 2011, government adjusted unpaid subsidy on commodity finance through issuance of PIBs and MTBs (http://www.sbp.org.pk/fsr/2011/pdf/2ndhalf/Chap-01.pdf)

Figure 1.7

Outstanding stock of wheat financing keeps on rising

Break-up of Public Sector Commodity Financing Stock

(PKR billion)



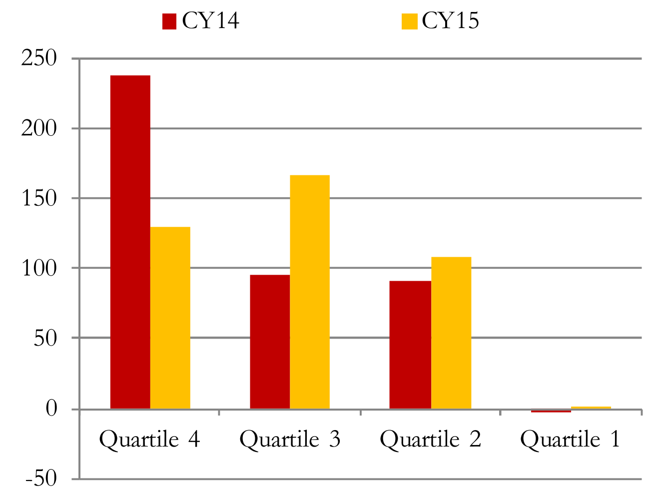
Source: FSD, SBP

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.

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

[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.

[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

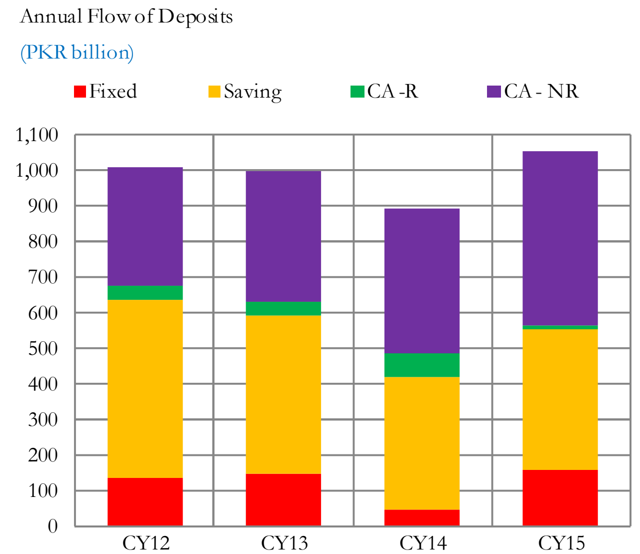
The stability in deposit growth may be attributed to customer's trust in banking, limited availability of alternate sources and lack of awareness about available ones, convenience which is further strengthened by better use of IT services, banks' efforts to convey and convince depositors through aggressive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

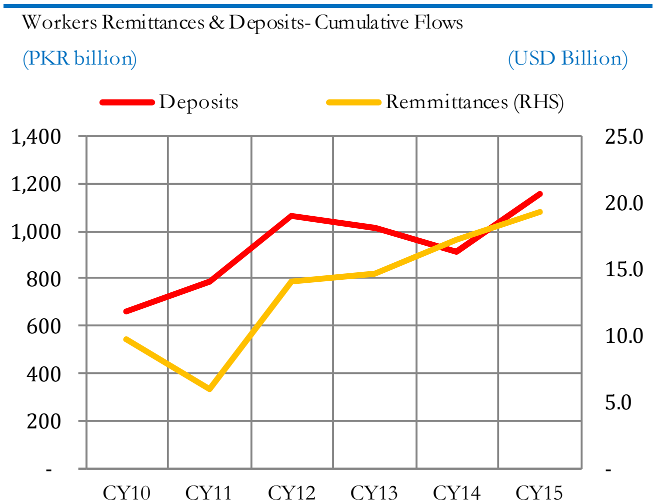
Decent growth in all segments of deposits



Source: FSD, SBP

Figure 1.10

Deposit flows and worker remittances appear synchronized



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.

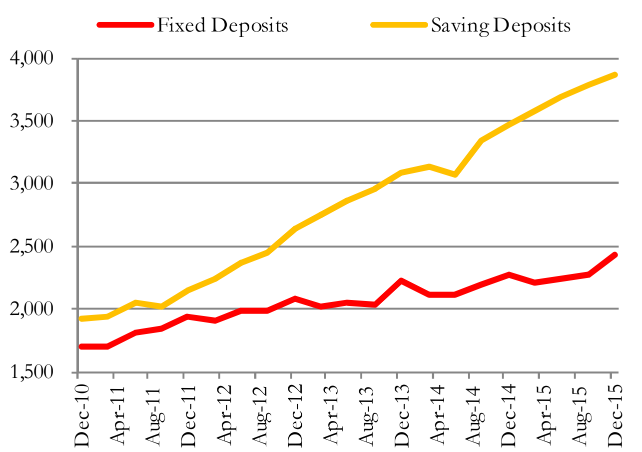
Historically, SBP introduced MSR, for the first time, as 5 percent per annum (p.a.) on all saving and term deposit in May 2008. It then raised MSR to 6 percent (p.a.) in May 2012, advised banks to calculate MSR on monthly average in March 2014, and linked MSR with lower bound of interest rate corridor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

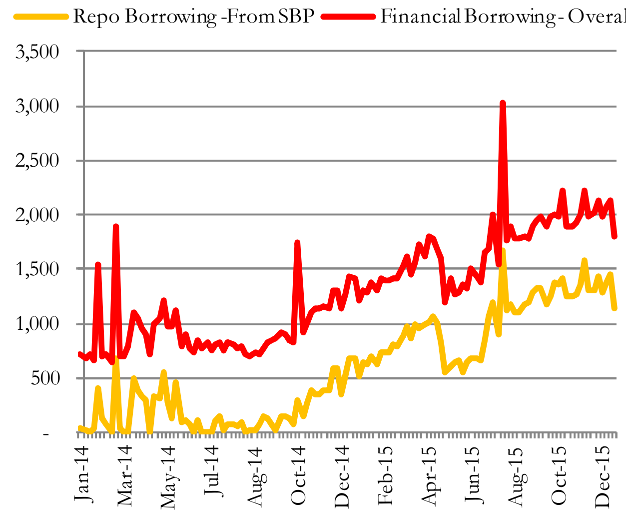
Equity base – one of the most important measures of banks' resilience against shocks – reveals a moderate increase of 9.6 percent during CY15. The overall high profitability – and retained earnings - and SBP's minimum capital adequacy policy that prompted few capital deficient banks to put in additional 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

Weekly Flows of Financial Borrowing

(PKR trillion)



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)