4 STABILITY OF THE BANKING SYSTEM

4.1 Introduction

There is widespread agreement on the fact that the earlier than expected recovery of the global economy is a prelude to improvements in both consumer as well as producer confidence; however the process remains uneven and patchy leaving some countries, sectors, industries, and at the micro level, some firms, still struggling to break-even. In Pakistan, the indirect impact of the Global Financial Crisis (GFC) and ensuing recession in advanced economies was clearly evident in 2009. As in the rest of Asia, the indirect impact of the GFC manifested itself in various forms in the real sector of the economy. However, the major challenges facing the domestic economy during the year can only be partly attributed to the GFC itself. Indeed there was a decline in exports due to recession in economies which are Pakistan's major trading partners, and there was pressure on capital flows[1] where strained liquidity position in global financial markets impacted foreign portfolio investment. However, factors such as the energy crisis leading to under-utilization of industrial capacity and rise in the cost of production, the long-standing issue of inter-corporate circular debt, considerable decline in foreign direct investment due to weak economic fundamentals, and above all, the mounting fiscal deficit breaching previous records in the country's economic history, all had a role to play in keeping the process of economic recovery in Pakistan tenuous at best.

The leading evidence of these various pressures on domestic firms and industries was that their loan repayment capacity was compromised, with a consequent rise of NPLs on the banks' balance sheets. Even though the pace of increase in NPLs in CY09 was much slower than CY08, it has nevertheless tested the resilience of the banking sector in that banks have been forced to build contingency reserves and provide for infected assets. Such requirements affected their dividend payments, putting pressure on their share prices.[2] Notwithstanding the various challenges in the economic environment, banks have managed to continue to perform well, as is evident from the fact that their overall ROA (net of taxes) is 0.9 percent in CY09, still less than the conventional norm of 1.0 for banks, but an improvement over ROA of 0.8 percent in CY08. This indicates their capacity to withstand challenges from their operating environment.

Notably, there were also some positive developments during the year. These include a substantial decline in the international oil and commodity prices[3] which eased the pressure on the external current account deficit, improved crop outputs, and substantial improvement in banks' liquidity position, etc. These various developments helped to mitigate persistent inflationary pressures and offered room for lowering the SBP policy rate from 15.0 percent at end-CY08 to 12.5 percent during CY09. This easing of monetary policy was consistent with signs of improvement in economic indicators.[4]

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1 Main components of capital flows are workers' remittances, foreign direct investment (FDI) and foreign portfolio investment (FPI). Although workers' remittances increased from USD 7 billion in CY08 to USD 8.7 billion in CY09, yet this improvement has been offset by the fall in FDI from USD 5.4 billion in CY08 to USD 2.4 billion in CY09 and further deterioration in FPI from outflows of USD 269 million in CY08 to outflows of USD 608 million in CY09.

2 Cash dividend distributed by the banking sector in CY09 declined by 22.8 percent on YoY basis from Rs. 26.5 billion to Rs. 20.4 billion.

3 World *Spot Price* of crude oil declined from 97 USD/barrel in 2008 to 61.5 USD/barrel in 2009. Using 2000 as base year, *HWWA World Price Index* reports that commodity price excluding oil fell from 184.1 in 2008 to 156.8 in 2009. Source: Haver Analytics Database.

4 YoY inflation dropped to 17.2 percent in April CY09 from its peak of 25.3 percent in August CY08, large-scale manufacturing (LSM) grew by 7.5 percent in CY09 against a decline of 2.5 percent in CY08, there was relative stability in the exchange rate which depreciated by 6.1 percent in CY09 as against 21.9 percent in CY08, remittances grew by around 25 percent to reach USD 8.7 billion in CY09, etc.

During CY09, the overall assets of the banking sector increased by 15.8 percent, amounting to Rs. 6.5 trillion. There was a notable change in the composition of the asset base, with an increase of 60.0 percent in banks' investments portfolio, constituting mainly of government securities, and only a meager increase of 2.1 percent in the advances portfolio. This development served to increase the share of investments in total assets from 19.3 percent in CY08 to 26.7 percent in CY09. As a result of this portfolio rebalancing, the share of advances (net of provisions) declined by 6.7 percent, with an almost corresponding rise in the share of investments by 7.4 percent. These developments are indicative of the changing risk appetite of banks and the demand pressure on the loanable pool of funds, with a perceptible shift in credit allocation from the private to public sector. The increase in assets was funded largely by deposits which increased by 13.5 percent in CY09, as against 9.4 percent in CY08.

Banks' resilience to withstand adverse developments can be assessed by the strength of their equity base. Capital is considered to be an important indicator of banks' loss absorption capacity. In CY09, banks' equity base widened by a healthy 17.3 percent as against only 3.4 percent in CY08. Increase in banks' minimum capital to Rs. 6.0 billion by end-CY09 in line with SBP's requirements lead to an increase in the aggregate risk-weighted capital adequacy ratio (CAR) to 14.0 percent in CY09, compared to 12.2 percent at end-CY08, well above the requirement[5] of 10.0 percent. Of the 40 banks in the banking sector, 27 banks had their respective CAR in excess of 12.0 percent, and are considered as well-capitalized banks. However 6 banks were below the minimum required level of 10.0 percent for CY09.

In line with the shift in asset composition, the credit risk profile of the banking sector also underwent a major change during CY09. The loan portfolio (net of provisions) which grew by 18.0 percent in CY08, expanded by a mere 2.1 percent in CY09. Major factors behind the overall decline in the growth rate of loans include: (1) a shift in banks' risk preferences from lending to the private sector to investments in risk-free government securities, and (2) decline in credit demand due to the general slowdown in the economy.

At the same time, the YoY growth in gross NPLs, the main indicator of credit risk, decelerated to 24.2 percent in CY09 from 64.8 percent in CY08. As opposed to CY08 when the first three categories of NPLs' classification[6] had contributed 62.4 percent to the overall growth in the stock of NPLs, the cumulative incremental contribution of these partially provided categories declined to -4.7 percent in CY09. Notably, the previous stock of NPLs in these categories deteriorated into the loss category in CY09, increasing its share in total NPLs from 56.0 percent in CY08 to 65.5 percent in CY09. As NPLs in the loss category are fully provided for, there was an increase in the share of provisions for this category, from 79.5 percent to 84.5 percent. However, banks availed the benefit of the Forced Sale Value (FSV)[7] on collateral in making provisions such that the increase in provisions was less than the increase in the flow of NPLs into this specific category. Notwithstanding the FSV benefit, on an overall basis, increase in provisions was higher than the increase in NPLs due to higher growth of NPLs in the loss category. The total provision coverage of the NPLs portfolio at end-CY09 was approximately maintained at 69.9 percent compared to 69.6 percent in CY08.

The potential risk to the solvency position is visible from the slight surge in the net NPLs to capital ratio of the banking system to 20.4 percent in CY09, compared to 19.4 percent for CY08. The distribution of the NPLs to capital ratio across banks indicates that majority of the large and medium-sized banks (with an asset share of 61.2 percent) have this ratio at below the industry average, though some small banks, with cumulative asset share of 7.4 percent,

[5] BSD Circular No. 19 dated September 5, 2008.
[6] OAEM, Substandard, and Doubtful.
[7] Details in section 4.4.1.

have this ratio in excess of 50 percent. In the previous year, there were only 4 such banks, with an asset share of 5.3 percent.

A key development in CY09 was the easing-off of liquidity pressures experienced in the second half of CY08. The impact of SBP policy actions, which were taken to address the liquidity strain at that time, enabled the banking system to maintain a relatively more comfortable liquidity position in CY09, even though there were intermittent episodes of liquidity stress during the year. This is evident from the substantial rise in banks' holdings of excess liquid reserves, considerably above the stated requirements by SBP.

Banks' deposit base, the biggest source of funding for banks in Pakistan and inextricably linked to their liquidity position, grew by 13.5 percent during CY09, slightly lower than the average growth of 15.3 percent since CY01, but considerably better than the growth of 9.4 percent in CY08. This growth was primarily contributed by incremental deposit flows in the second half of CY09 which is when deposits grew by 12.9 percent.

One of the quantitative performance criteria in the IMF Stand-by Arrangement (which the country entered into in November CY08) pertains to the restriction of government budgetary borrowings from the central bank in the form of end-quarter targets. Consequently, the Government resorted to borrowing from commercial banks.[8] This is one of the primary factors behind the increase in banks' holdings of liquid reserves well above the required SLR. In addition to this, the relatively more comfortable liquidity position in CY09 is attributed to: (1) meager growth in credit to the private sector due to both banks' risk averse tendencies given the rising non-performing loan portfolio, and subdued demand for credit; (2) improved remittances and deposit mobilization; and (3) the introduction of the explicit interest rate corridor facility which facilitated liquidity management for market participants. In particular, the implementation of this facility was a key policy measure implemented during the year, aimed at reducing the volatility in overnight rates, in addition to making monetary policy implementation effective and transparent. Improved liquidity position was also evident from the various liquidity indicators in CY09: the liquid assets to total assets ratio stood at 32.7 percent in comparison to 28.2 percent in CY08, whereas the advances to deposit ratio declined to 63.4 percent from 71.3 percent in CY08.

In terms of banks' earnings performance, overall profitability (net of tax) exhibited a rise of 25.7 percent in CY09, which led to a slight improvement in the ROA to 0.9 percent in CY09 relative to 0.8 percent in the previous year. This profitability position was however somewhat skewed rather than broad-based, since 11 banks with a cumulative market share of 62.3 percent recorded above average profits, and 10 out of 40 banks with asset share of 60.4 percent had their respective ROA at more than 1.0 percent.

While the overall performance and stability assessment of the banking sector has been summarized in the introductory section, the rest of the chapter analyzes the details of these developments. The chapter is organized into five sections. Section 4.2 assesses the asset and funding structure of banks. The impact of these changes on various risks to the banking sector is analyzed in section 4.3. Section 4.4 examines the ability of the banking sector to absorb losses stemming from changes in the risk factors, whereas the final section concludes the chapter.

4.2 Asset and Funding Structure

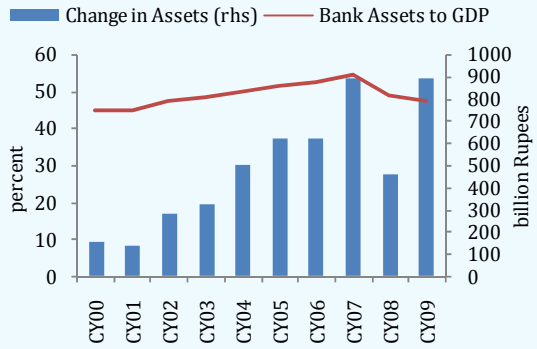
Assets of the banking system exhibited a growth of 15.8 percent to reach Rs 6.5 trillion by end-CY09, surpassing the average annual growth of 14.8 percent since CY01. Bank assets as a

[8] Details in "Chapter 2: Government Borrowings from the Banking System: Implications for Monetary and Financial Stability", in this edition of the FSR.

proportion of GDP stood at 47.4 percent, undergoing a small decline of 1.6 percent in CY09 relative to the previous year (**Figure 4.1**). On the face of it, the increase in the asset base was a remarkable achievement, especially given the growth of only 8.8 percent in CY08.

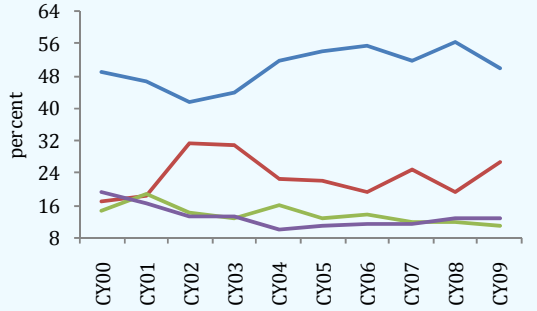
However, a key characteristic of this growth was the significant expansion in investments instead of the advances portfolio. Investments grew by 60.0 percent, such that their share in the consolidated asset base of the banking industry surged to 26.7 percent by end-CY09, relative to 19.3 percent in CY08. A closer look at bank-wise investments reveals that foreign banks recorded the highest growth in investments (132 percent). Given that among the various categories of banks, growth rate of NPLs was the highest for foreign banks in CY08 and CY09,[9] it is not surprising that this particular group of banks is more risk-averse than the rest.

Figure 4.1: Bank Assets



Source: BSD, SBP

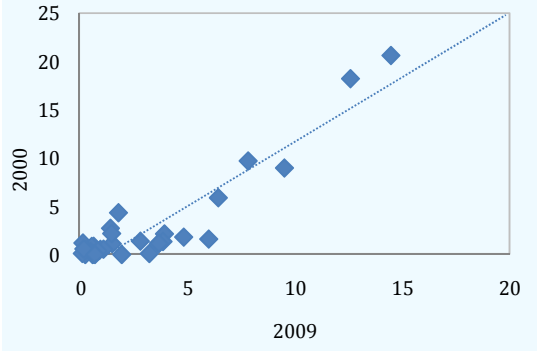
Figure 4.2: Asset Composition of the Banking System



Source: BSD, SBP

In line with these developments, there has also been a structural shift in the overall composition of assets with an increase in the share of investments by 7.4 percent in CY09, and an almost corresponding decline in the share of advances by 6.7 percent **(Figure 4.2**). Reasons attributed to the rise in the investment portfolio of banks include factors such as: (1) change in banks' risk perception due to mounting non-performing loans (NPLs), and (2) greater borrowing needs of the government from scheduled banks for budgetary purposes, for settling inter-corporate receivables and to finance commodity operations.

Figure 4.3: Decade-wise Scatter of Bank Concentration



Source: SBP Calculations

In terms of concentration in the banking sector, the share of individual bank's assets in the total asset base continues to decline as the industry's competitive position gradually improves. Two big banks, which held a cumulative share of 38.7 percent in the total asset base of the banking sector in CY00, have seen their share drop to 27.1 percent over the last 10 years (**Figure 4.3**). However, for CY09, an analysis of banks' asset base indicates that 7 small banks,[10] with a cumulative share of 4.0 percent, registered negative growth in the range of 7.5 to 30.1 percent during CY09. A more traditional measure of concentration, the M-concentration ratio, shows that the smallest5 banks have a cumulative market share of less than 1.0 percent, indicating market fragmentation.

[9] 118.4 percent and 107 percent respectively.
[10] These include 3 domestic private banks, 2 specialized banks and 2 public sector commercial banks.

A decline in the concentration of large banks is also evident from the fact that the market share of the big 5 banks decreased by 160 bps to 50.8 percent during the year. The Herfindahl-Hirschman Index (HHI),[11] another widely used measure of market concentration which takes into account both the relative size and number of banks in the industry, also shows that concentration in the banking sector, especially for the biggest players, continues to decline over time (**Table 4.1**).

Table 4.1: Measures of Concentration

percent

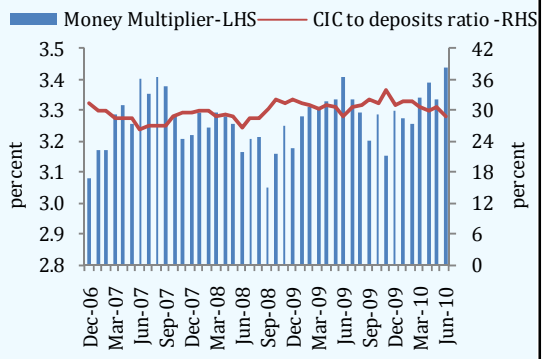
	CY00	CY01	CY02	CY03	CY04	CY05	CY06	CY07	CY08	CY09
HHI	1023	993	973	912	850	762	745	739	735	712
Coefficient of Variation	1.9	1.8	1.7	1.6	1.5	1.4	1.4	1.4	1.4	1.4
M-Concentration Ratios										
Share of top 5 banks	63.2	61.2	60.8	58.8	56.0	54.0	52.3	52.0	52.4	50.8
Share of top 10 banks	76.5	75.8	76.7	75.1	73.1	72.5	75.1	74.6	73.6	73.0
Share of smallest 5 banks	0.7	0.6	0.4	0.3	0.5	0.5	0.6	0.6	0.6	0.5

Source: SBP calculations

Disaggregated analysis of assets shows that advances, which form the major component of banks' asset base with a share of around 50 percent at end-CY09, recorded a marginal growth of 2.1 percent during the year. Heightened element of credit risk due to surge in non-performing loans coupled with low demand for credit contributed to the negligible growth in advances.

On the liability side, deposits of the banking system registered a significant growth of 13.5 percent in CY09, higher than the 9.4 percent increase in CY08, despite the stiff competition posed by instruments of the National Savings Schemes (NSS).[12] Trends in deposit mobilization indicate that the growth in deposits was primarily concentrated in the second half of the year, as banks' deposit base grew by 12.9 percent in H2-CY09. Increase in deposits in the latter half of the year is largely attributed to monetary expansion on the back of rising Net Domestic Assets (NDA) (due to substantial government borrowing) and an increase of 23.9 percent (in US$ terms) in home remittances, an important source of bank deposits **(Figure 4.4)**.

Figure 4.4: Trends in Currency to Deposits Ratio & MM



Source: BSD, SBP

Dissecting the increase in deposits reveals that incremental flows were primarily recorded in demand deposits (current and saving). This is in contrast to the trend in the previous year, where fixed deposits recorded an increase of 26.3 percent. In a macroeconomic environment of the then prevalent monetary easing and declining interest rates, banks focused on mobilization of demand deposits instead of fixed deposits so as to contain the cost of deposits. Analyzing the increase in deposits in tems of various deposit-holders reveals that the increase was primarily contributed by deposits of Government and Non-Financial Public Sector Enterprises (PSEs). These categories have a cumulative share of 18.8 percent in the

[11] The calculated values of HHI are less than 1000: a level below which market structure is considered to be competitive.
[12] Details in Chapter 3, "Role of the Government in Promoting Savings" in this edition of the FSR.

deposit base. Given that more than 70 percent deposits of government bodies are classified as demand deposits, any significant growth in this catgeory of deposits partially explains the overall increase in demand deposits.

Borrowings from financial institutions, another key component of liabilities, witnessed a substantial growth of 42.3 percent in CY09, in sharp contrast to the meager growth of 1.7 percent in CY08. In CY09, these borrowings mainly constituted of borrowings from SBP (for EFS and LMM), and repurchase agreements in the interbank market. Dissecting the increase in borrowings on a quarterly basis reveals that borrowings specifically increased during the latter half of the year, due to liquidity constraints in December CY09 emanating from less than expected retirements for commodity operations and slower NFA inflows.

Lastly, the equity base of the banking sector increased by a substantial 17.3 percent during CY09, compared to only 3.4 percent in the previous year. Banks were required to increase their minimum capital to Rs 6.0 billion by end-CY09 which contributed to this increase. Notably, banks' minimum capital requirement (MCR) was rationalized by the SBP in CY09.[13] The MCR was revised in view of the prevalent challenging economic environment, which had negative implications for banks' profitability and consequently their reserve accumulation.
Analyzing the growth in equity base in CY09 reveals that 'revaluation gains' contributed significantly to this growth. Compositional breakup of revaluation gains reveals that the banking sector booked a gain of Rs 5.0 billion on equity investments due to the relative stability in the equity market in CY09, after the free fall of the stock market from April CY08 onwards which led to the imposition of the floor on the KSE-100 index in August CY08. Moreover, revaluation gains of Rs 6.8 billion were recorded on other investments, including derivatives' transactions.

4.3 Assessment of Risks

While the global financial system continues to recover gradually, the risk of potential aftershocks[14] remains sizable. On the domestic front there were some macroeconomic gains during CY09 however the economy faced challenges such as fiscal imbalances, pressure on balance of payment, circular debt, energy crisis, etc. These risks have had their bearing on the size as well as the structure of banks' balance sheets. Given the unprecedented scale and scope of such tremors, banks continually strived to adapt to the evolving environment. The impact of these developments on the banking sector's risk profile is analyzed in the following sections in terms of credit, market, operational and liquidity risk.

4.3.1 Credit Risk

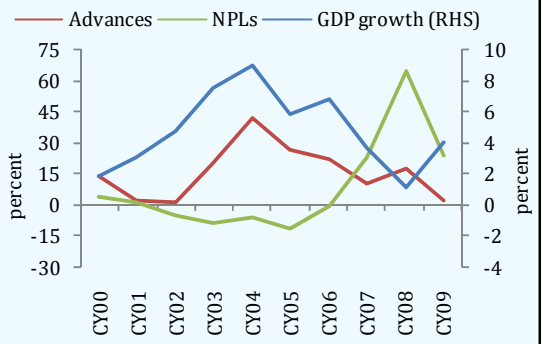
The indirect impact of the global recession and slowdown in domestic economic activities increased the potential risk of losses for banks, particulalry since end-CY08, due to the increase in the probability of default of outstanding loans, with the impairment of borrower's repayment capacity. Economic recovery is now underway in most of the developed world, with the pace and strength of the rebound differing across countries, depending on the severity of the crises hitting respective regions. World output[15] which had fallen to -0.6 percent in 2009, is expected to rise by 4.8 percent in 2010, driven largely by the growth in emerging economies like China and India. Domestic economic growth also plummeted by

[13] BSD Circular No. 7, dated April 15, 2009.
[14] A variety of aftershocks are unfolding in the current phase of the crisis. Major risks include management of the mammoth fiscal debts which have the potential to trigger another round of instability. Given the introduction of new legal reforms, there would be increased scrutiny and oversight of financial institutions which would increase the cost of doing business. There is also the pressure to identify and separate weak institutions from stronger ones and lay down a cost minimizing framework for their exit from the market in crisis times; and there are ramifications for international financial institutions to update their charters and improve their capacity to design and implement stricter stabilization and structural programs in countries hit by shocks and crisis. Source: IMF papers and speeches.
[15] World Economic Outlook, October 2010, IMF.

250 bps to reach 1.2 percent in FY09, but recovered thereafter to reach 4.1 percent in FY10.[16]

The inverse relationship between credit risk and overall economic activities is a well established fact, and also discussed in detail in last year's Financial Stability Review.[17] In line with the analysis, the gradual improvement in economic indicators has led to a deceleration in the growth in NPLs: from 64.8 percent in CY08 to 24.2 percent in CY09 **(Figure 4.5)**.

Figure 4.5: Advances, NPLs, GDP Growth*



** Real GDP (FC) has been calculated on fiscal year basis.*
Source: BSD, SBP

Notwithstanding the deceleration in NPLs, credit risk is the key challenge in the banking system. An assessment of the loan portfolio of the banking system will help in understanding the movements in asset quality indicators during the year. Banks' advances' portfolio increased by Rs. 67.1 billion in CY09, translating into a growth rate of 2.1 percent, a sharp decline from the growth of 18.0 percent in CY08. This miniscule growth is much less than the average growth of 15.9 percent over the last ten years, and is actually the lowest growth in net advances in the last seven years. Among various factors, there was a significant change in the lending behavior of local private banks, which constitute three-fourths of banking sector loans: their advances grew by a miniscule 0.2 percent (YoY) during CY09.

Banks' loan classification by major segments indicates that in line with the overall slow growth in advances, the shares of loans to the corporate sector, SMEs, Agriculture and Consumer Finance all declined in CY09. The only substantial increase seen was in the share of commodity finance which grew by around 78 percent during the year, with a corresponding increase in its share in total loans (**Table 4.2**). Given the deterioration in the quality of loans for SMEs and consumer finance in particular, banks showed high risk aversion in extending new loans to these segments. As a result, their respective growth declined by -7.2 percent and -19.1 percent on YoY basis. Notably, the negative growth in consumer finance is contributed by the sharp decline in the YoY growth of all its components, some more than others.

Table 4.2: Segment wise Distribution of Loans
percent share in total loans

				Growth
	CY07	CY08	CY09	CY09
Corporate	56.3	63.2	61.9	2.5
SMEs	16.2	11.7	10.4	-7.2
Agriculture	5.6	4.9	4.7	0.7
Consumer	13.8	10.4	8	-19.1
Commodity	5.5	7.4	12.5	77.8
Miscellaneous	2.7	2.4	2.5	5.1
percent share in Consumer				
Credit cards	12.6	12.3	11.6	-23.3
Auto loans	30	28.7	24.7	-30.5
Durables	0.3	0.1	0.1	-51.8
Mortgage	18.1	20.2	22.9	-8.1
Personal loans	38.9	38.8	40.7	-15

Source: BSD, SBP

Table 4.3: Loan classification by end-use for Corporate and SMEs
percent growth

End-use	CY07	CY08	CY09
Fixed Investment	21.1	21.1	13.7
Trade Finance	23.6	15.6	8.1
Working Capital	10.0	25.7	-9.9

Source: BSD, SBP

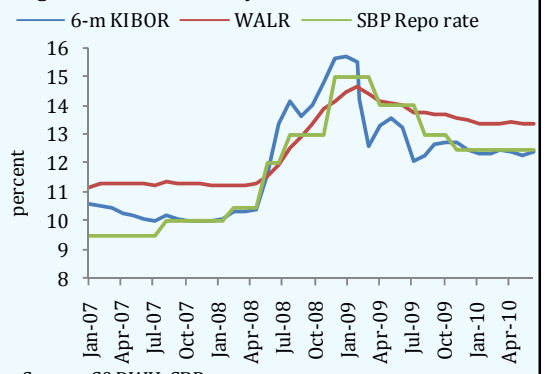
Table 4.3 focuses on the growth rate of loans to firms (both corporate and SMEs). This classification explains the nature of allocation of funds for investment purposes (e.g. plant expansion) and operational needs

[16] The State of Pakistan's Economy 2009-10, State Bank of Pakistan Annual Report, Volume 1.
[17] Special Section 1: Growth in NPLs, Cyclical or Structural, Financial Stability Review 2008-09, State Bank of Pakistan.

(e.g. building inventories) of the firms. Compared to CY08, there was subdued growth in all three categories of loans – fixed investment, working capital and trade finance – during CY09. In particular, working capital loans, which form a major proportion in this classification, show the highest decline in growth, from 25.7 percent in CY08 to -9.9 percent during CY09; again a visible indication of the slowdown in the economy.

The structure of interest rates in the economy is another important determinant of credit risk in the banking sector. Interest rate volatility, besides affecting interest rate risk, alters the cost of borrowing which is inextricably linked to the repayment capacity of the borrowers. **Figure 4.6** shows trends in leading interest rates like the SBP repo rate, which sets the tone of the term structure of interest rates, alongwith the weighted-average lending rate (WALR) and the 6-month KIBOR, which is the benchmark for pricing loans. With the start of CY09, two developments took place with the easing in the monetary policy stance: (1) lending rates in the primary as well as secondary market started declining, and (2) interest rate volatility, which aggravates uncertainty in the system, started subsiding. The introduction of the interest rate corridor in August CY09 proved to be instrumental in stabilizing the overnight money market repo rate. As the level of interest rate directly impacts the cost of borrowing, therefore any reduction in its level as well as volatility helps in managing the credit risk profile.

Figure 4.6: Trends in Key Interest Rates



Source: S&DWH, SBP

Table 4.4 gives details on advances by type of borrowers. This table shows the government as a dominant borrower of the banking sector in CY09:[18] compared to the increase of 93.6 percent in CY08, government borrowing from commercial banks for commodity operations more than doubled during CY09 (compared to CY07, government has borrowed more than four times in CY09). Consolidated banking data shows that the share of the government sector in gross loans increased from 11.1 percent in CY08 to 17.4 percent in CY09. The steep rise in government borrowings was on account of: (1) only partial retirement of government borrowings for commodity operations which are generally self-liquidating in nature (with potential risk of another circular debt building up similar to the one in the energy sector), and (2) increased demand for bank credit due to rise in commodity prices.

Table 4.4: Classification of Advances by Borrowers

Amount in billion Rupees

			YoY growth (%)	
	CY08	CY09	CY08	CY09
Government	150.5	333.4	93.6	121.6
Non-financial PSEs	186.9	225.4	49.0	20.6
Private Sector	2,240.8	2,221.5	18.9	-0.9
o/w manufacturing	1,299.4	1,282.4	19.0	-1.3
All others	478.3	411.5	-8.9	-14.0

Source: Statistical Bulletin, SBP

Despite the lingering issue of inter-corporate debt[19] in the energy sector, low advances' disbursement to a few POL related PSEs limited the net expansion of PSEs advances in CY09, compared with a strong increase in CY08. This deceleration was in a way expected, given that some PSEs had availed bank advances more aggressively in CY08 and had thus almost fully

[18] Unlike fiscal measures in advanced countries where government deficit has ballooned on the back of hefty financial support programs for ailing financial institutions, fiscal challenges in Pakistan emanate from the low tax-base, excessive current expenditures, heavy subsidies to selected sectors, expenditures on war on terror etc., all of which leads to the government's dependence on borrowing from the banking system.

[19] Inter-corporate debt is a situation where a company facing problems in its cash flows tends to withhold payments to its suppliers such that the suppliers are then forced to stop making payments to their creditors.

utilized their prescribed credit limits with various banks, particularly in H1-CY09. Therefore some banks were reluctant to extend incremental advances to these entities. With the issuance of two Privately Placed Term Finance Certificates (PPTFCs)[20] in CY09, a few POL related PSEs had settled some of their loan obligations with banks, however, it was observed that they subsequently again sought advances from banks as they got room for fresh borrowing. On the other hand, loans to the private sector showed net retirement of 0.9 percent in CY09, compared to the growth of 18.9 percent in CY08.

The shift in the classification of loans by borrowers and segments seem to be in line with banks' general approach to credit risk management during a period of gradually reviving economic growth, by reflecting a preference to transact business with the government and with large, strong counterparties to contain credit risk. Notably, these changes in the overall loan portfolio have increased the element of *credit concentration risk* in the banking system. **Table 4.5** shows the distribution of loans by size of account. Consistent with observations made earlier, data shows that at the end of CY09, only 0.6 percent of the total number of borrowers with loan sizes of Rs. 10 million and above, had availed 75.3 percent of outstanding loans, as against 71.7 percent in CY08. The average loan size for this particular category has also increased from Rs 77.6 million in CY08 to Rs 87.1 million in CY09. On the other hand 96.3 percent of borrowers with loan size of Rs. 1.0 million (or below) have a share of only 12.9 percent in the total loans of the banking sector. This indicates a severe degree of concentration of outstanding credit in the hands of a few large borrowers, and carries potential systemic implications for the banking system, where such clients have credit lines with banks across the industry.

Table 4.5: Distribution of Loans by Size

Share in percent, Amount in million Rupees

	CY08		CY09	
Loan Size	Account	Share	Account	Share
Up to Rs 0.1	70.3	5.0	66.8	4.1
Up to Rs 1.0	96.9	15.6	96.3	12.9
Up to Rs 10.0	99.5	28.3	99.4	24.7
Over Rs 10.0	0.5	71.7	0.6	75.3

Source SBP calculations

Sector-wise distribution of loans to the private sector also highlights credit risk concentration as loans to the textile sector alone constitute 20 percent of banks' loans portfolio. Hence both the high infection ratio of these loans, as evident in **Table 4.6** (discussed in detail below) and the small number of big borrowers reflect the increasing element of credit concentration risk.

Table 4.6: Infection Ratio by Sectors

percent

	CY08	CY09
Chemical & Pharmaceuticals	7.7	6.7
Agribusiness	8.9	8.9
Textile	14.6	19.6
Cement	6.6	12.2
Sugar	9.1	19.6
Shoes & Leather garments	8.6	13.3
Automobile & Transportation equipment	7.5	16.6
Financial	5.4	12.6
Insurance	0.0	0.1
Electronic & Transmission of energy	3.4	7.4
Others	8.6	10.6

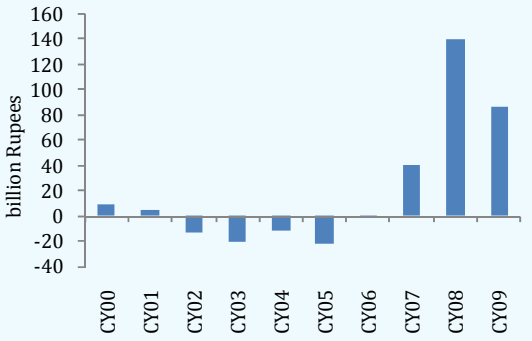
Source: BSD, SBP

In addition to the analysis of the quantum and various classifications of banks' loan portfolio, it is important to investigate the quality of loans in terms of their performance, in order to assess the degree of credit risk faced by the banking sector. Banks' financial performance is directly proportional

[20] To resolve the inter-corporate debt issue in the energy sector, the government issued Privately placed TFCs (PPTFCs) (against government guarantee) twice in CY09 for a cumulative amount of Rs. 165 billion: the first PPTFC worth Rs. 80 billion was issued in March CY09 by PEPCO and a second PPTFC worth Rs. 85 billion was issued in September CY09 by the Power Holding Company. The purpose of issuance of both PPTFCs was to reduce part of banks' claims on public and private sector enterprises and shift the outstanding debt to the government through a debt swap.

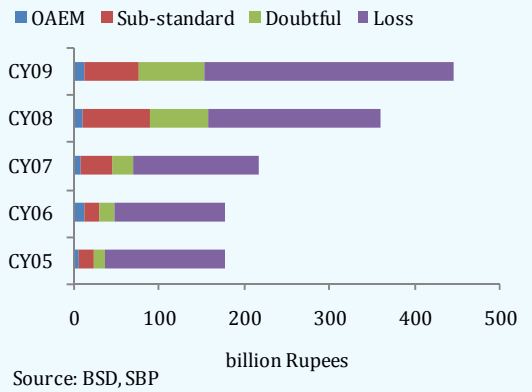
to the performance of their loans portfolio, the mainstay of their earnings. During CY09, NPLs increased by Rs 73 billion to Rs 432 billion **(Figure 4.7)**. Encouragingly though, after having increased by Rs. 141.3 billion in CY08, the growth rate of NPLs decelerated from 64.8 percent to 24.2 percent in CY09. Except for 3 specialized banks (whose lending facilities are relatively inactive as most of them are under restructuring) and 1 private commercial bank, the rise in NPLs was observed across the entire banking system.

Figure 4.7: Annual Change in NPLs of the Banking Sector



Source: BSD, SBP

Figure 4.8: Category-wise Break up of NPLs



Source: BSD, SBP

Given the strong correlation of NPLs with economic activities, a major portion of the increase in NPLs since CY08 was primarily of a cyclical nature due to the deceleration in real GDP growth, with negative implications on incomes and hence the repayment capacity of the average borrower. In a similar vein, the gradual process of economic recovery has had an impact in slowing down the accelerated pace of growth of NPLs in CY09. The classification of NPLs into various categories lends credence to this observation, as unlike CY08 when the first three categories contributed 62.4 percent in the growth of NPLs, in CY09 their contribution declined to -4.7 percent. Notwithstanding, NPLs booked in partially provided initial categories in CY08 matured into losses during CY09, and as a result the share of the loss category in total NPLs increased (**Figure 4.8**). However, banks availed the FSV benefit in making provisions, hence the increase in provisions was less than the flow of NPLs in this category, such that the provision coverage ratio of the loss category declined from 92.3 percent in CY08 to 86.2 percent in CY09. On an overall basis, however, provisions have increased more than the increase in NPLs despite the FSV benefit simply because of the higher growth of NPLs in the loss category.[21]

NPLs as a proportion of the loan ratio portfolio also increased from 10.5 percent in CY08 to 12.6 percent in CY09. Bank-wise information suggests that this increase was widely shared by banks.[22] The distribution of banks based on this ratio shows that compared to 15 banks in CY08, by the end of CY09 there were 18 banks with their NPLs to loan ratio below the average ratio for the industry. In addition, **Table 4.7** shows that in comparison with 17 banks with double digit

Table 4.7: Distribution of NPLs

percent, number

	CY07	CY08	CY09
NPLs to loan Ratio-%	7.6	10.5	12.6
Number of Banks			
< average	13	15	18
> average	26	25	22
< 5.0	20	13	4
5 < 10	9	10	13
10 < 15	2	5	10
15 < 20	3	3	3
> 20.0	5	9	11

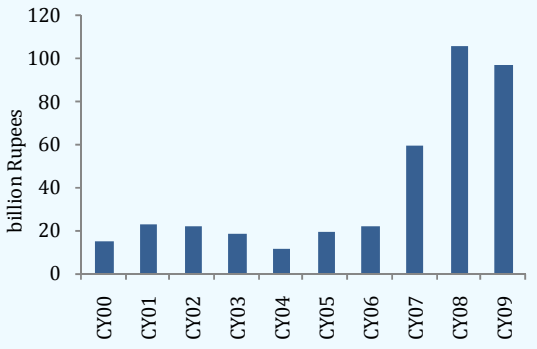
Source: BSD, SBP

[21] Details in section 4.4.1.
[22] Bank size-wise distribution highlights that the infection ration is high for small banks and low for large banks.

NPLs to loan ratios in the previous year, there were 24 such banks in CY09, out of which 11 banks had this ratio in excess of 20 percent. This rise can to some extent be also attributed to the fact that the loan book did not increase during the year, while the outstanding stock of NPLs continued to grow, albeit at a slower pace.

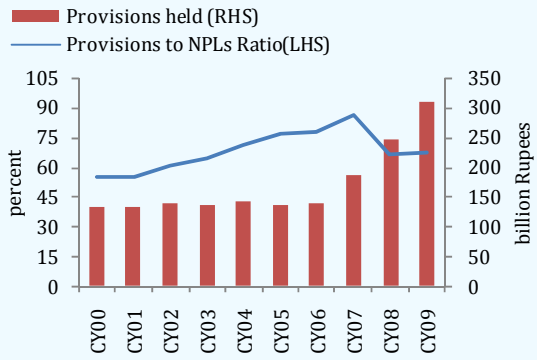
Irrespective of the factors responsible for the rising volume of NPLs, the high infection ratio has implications for the overall financial performance of banks. During CY09, banks booked Rs. 97 billion as loan loss expenses, lower than the amount of Rs. 106.1 billion booked in CY08 **(Figure 4.9)**. This slight reduction is in line with the decelerated growth of NPLs and the FSV benefit allowed in CY09. However, these expenses carry implications for banks' profitability, especially when majority of the outstanding NPLs (65.5 percent) are categorized in the fully provided loss category. Nevertheless, a decline in the flow of fresh NPLs indicates that in CY10, the provisioning requirement would fall, with a consequent positive impact on banks' bottom line. As mentioned earlier, provisioning coverage was maintained in CY09 and stood at 69.9 percent of NPLs compared to 69.6 percent in CY08. Given that banks have focused more on investments in expanding their asset portfolio, especially in risk-free government securities, therefore future provisioning requirements are not expected to rise substantially. Nonetheless, banks need to step up their efforts to improve the quality of the loan portfolio by closely monitoring loan recovery prospects and restructuring of existing classified loans **(Figure 4.10)**.

Figure 4.9: Provisions & Bad Debt Written off Directly



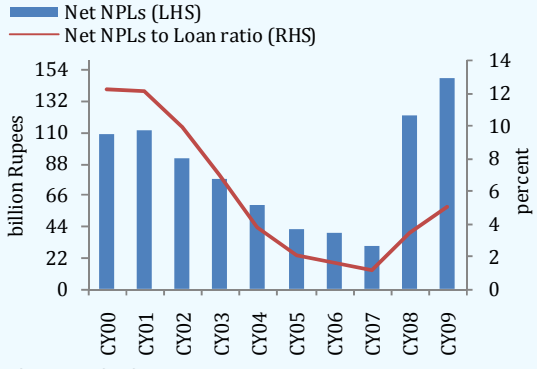
Source: BSD, SBP

Figure 4.10: Provisions Against NPLs



Source: BSD, SBP

Figure 4.11: Trends in Net NPLs



Source: BSD, SBP

The amount of net NPLs, another important indicator of asset quality, also reached Rs. 147 billion in CY09, from Rs. 121 billion in CY08 (**Figure 4.11**). Consequently, the net NPLs to loans ratio deteriorated during the year: from 3.4 percent in CY08 to 5.0 percent in CY09.

While some deterioration in all asset-quality indicators and the increased degree of concentration risk is patently obvious, a review of segment-wise NPLs shows that asset quality has deteriorated in almost all segments of loans **(Table 4.8)**.

The infection ratio for the corporate sector, which constitutes 61.9 percent of total loans, has increased from 8.9 percent in CY08 to 12.6 percent in CY09. Consequently banks have

showed reluctance in extending credit to the corporate sector which is also reflected from the increase of only 2.5 percent of corporate loans in CY09. As stated elsewhere, due to the general slowdown in economic activity, the loan repayment capacity of the corporate sector came under stress which is evident from the steep rise in its NPLs by 43.3 percent, which is in sharp contrast to previous years where the NPLs to loans ratio of the corporate sector was consistently below the overall infection ratio. This deterioration of the corporate sector's loan portfolio emanates largely from the high infection ratio of loans to the textile sector, and points to the need for close monitoring of these loans which are a likely source of systemic risk given their proportion in total loans.

Table 4.8: Segment-wise NPLs to Loan Ratio of the Banking Sector

percent

	CY06	CY07	CY08	CY09
Corporate	6.5	7.2	8.9	12.6
SME	8.8	9.4	15.8	22.1
Agriculture	20.8	18.7	15.8	16.5
Consumers	2.2	4.4	6.9	12.2
commodity finance	0.6	1.0	1.4	1.1
Overall	6.9	7.6	10.5	12.6

Source: BSD, SBP

The infection ratio for consumer finance, in particular, almost doubled in CY09, leading banks to cut back their exposure to this sector by 19.1 percent **(Table 4.9)**. There are many contributing factors to this deterioration: in particular, NPLs from credit cards have increased by 62.3 percent while facing a reduction of 23.0 percent in credit disbursement, resulting in more than doubling of the infection ratio in this sub-segment, and similarly NPLs for mortgage loans have increased by 98.4 percent. Given the overall share of 22.9 percent of mortgage loans in consumer loans, this is a reflection of the need for improvement in banks' credit risk appraisal systems.

Table 4.9: NPLs to Loan Ratio of the Consumer Segment

percent

	CY06	CY07	CY08	CY09
Consumer	2.2	4.4	6.9	12.2
Credit Card	1.4	3.4	5.5	11.6
Auto Loans	1.9	4.6	5.9	8.5
Durables	9.8	9.8	7.8	9.9
Mortgage	1.8	5.4	7.4	15.5
Personal Loan	2.7	4.1	7.8	12.4

Source: BSD, SBP

In sum, the detailed analysis of asset quality indicators and the classification of the loan portfolio by various dimensions point towards the increased element of credit concentration with the gradually dissipating element of credit risk, given the shift in bank' asset allocation from advances to investments. While asset quality indicators deteriorated further during the year, the composition of the stock of NPLs at end-CY09 shows a low degree of incremental NPL flows which is an encouraging development, and bodes well for containing provisioning expenses in CY10.

Notably, concentration risk, in terms of: (1) few big borrowers, (2) exposure to the corporate sector (and the consequent lack of diversification in financing options) and (3) sectoral concentration of loans, as in the case of the textile sector, carries significant implications for the overall risk profile of the banking sector.

4.3.2 Market Risk

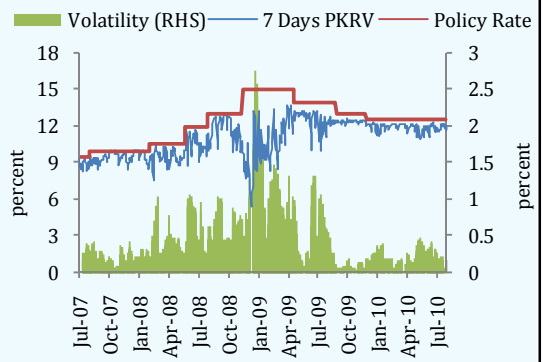
Relative stability in both international and domestic financial markets during CY09 contributed to a low degree of market risk for banks. This section presents market risk analysis in terms of its three major components; interest rate risk, exchange rate risk and equity price risk.

To give an overall perspective, SBP's monetary easing stance in CY09 had a beneficial impact on the element of interest rate risk for banks. Additionally, the improved liquidity position in CY09, in addition to subsiding interest rate volatility, also provided stability in both the money market and the foreign exchange market. Hence exchange rate risk also remained

low on account of improved foreign inflows and rising remittances during the year. Lastly, equity prices also recovered during the year, leading to substantial revaluation gains on banks' investments in equity.

Interest Rate Risk: Among the various market risk factors, interest rate risk is the most significant for banks in Pakistan, as around 71.3 percent of their investments are in fixed income government securities. On the liability side, although 31.9 percent of banks' deposits are categorized as fixed deposits, the PLS nature of these deposits tends to give banks the flexibility in managing their cost of funds.

Figure 4.12: Short Term Interest Rate Volatility



Source: FMA and SBP

CY09 started with the SBP policy discount rate at its maximum level of 15.0 percent.[23] It was reduced on three instances during CY09: first by 100 bps in April, then by another 100 bps in August, and finally by 50 bps in November CY09. This downward trend in short term interest rates was accompanied with a decline in interest rate volatility. The corresponding decrease in the short term revaluation rate along with increased volatility (proxied by 7 days standard deviation) is visible from **Figure 4.12** which shows higher volatility in the beginning of CY09, an indication of the uncertainty and liquidity pressures prevalent in the market at that time. However, by early April CY09 the volatility subsided and the 7-days PKRV moved within a band of 10.1 to 12.9 percent during June-December CY09, compared to 8.3 to 13.6 percent during January-June CY09. Albeit there was another period of interest rate volatility in June-August CY09, subsequent to which it remained largely contained mainly on account of the introduction of the interest rate corridor.[24]

Analysis of interest rates is a key factor in identifying, measuring and managing the element of market risk for banks. Apart from its role in the determination of credit risk, changes in interest rates have a direct bearing on the investment portfolio of banks which in CY09 has grown substantially and constitutes a share of 26.7 percent in total assets, relative to 19.2 percent in CY08. Further break-up of the investment portfolio shows that 71.3 percent of total investments are in fixed-income government securities, followed by 16.9 percent in TFCs, debentures, and corporate bonds, and 3.4 percent in fully paid-up ordinary shares.

Besides impacting short-term interest rates, the reduction in the policy rate also affected the secondary market yield of government securities. The yields for all types of government securities declined in H1-CY09, as shown in **Figure 4.13 (a)** and **(b)**, with a corresponding downward shift in the yield curve. Notably, the shift in the yield curve was not parallel – in Q1-CY09 it was flat for tenors upto 10 years and showed steepening subsequently while in Q2, the yield curve acquired a U-shape. During this time, the discount rate was reduced by 100 bps, and inflation expectations (which define the term premium of long-term interest rates) had started to change. Hence there was a lower demand for short-term securities which pushed up their yield, and a higher demand for medium term securities, in particular 7-year PIBs.

[23] Discount rate was increased to 15 percent on 13th November 2008. This was the highest level for the policy rate since 4th March 1999 when it was increased to 15.5 percent. In the last 50 years, the highest ever discount rate was 20 percent in November 1996.

[24] Details in Chapter 7, Stability Assessment of Financial Markets, in this edition of the FSR.

Figure 4.13: Secondary Market Yields

Figure 4.13 a

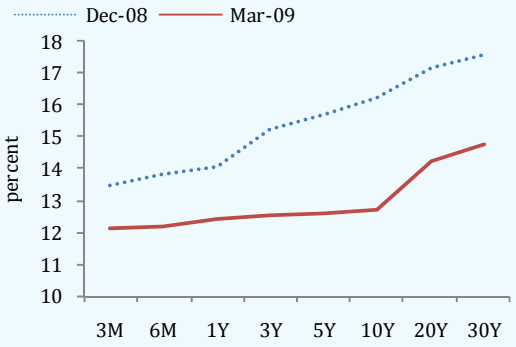


Figure 4.13 b

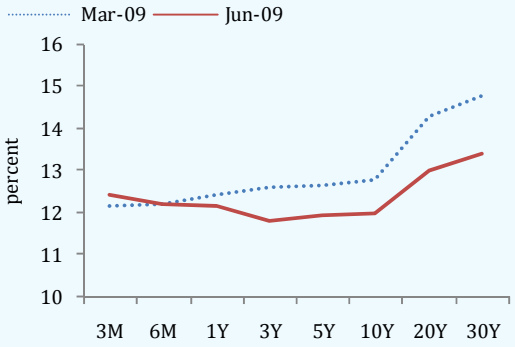


Figure 4.13 c

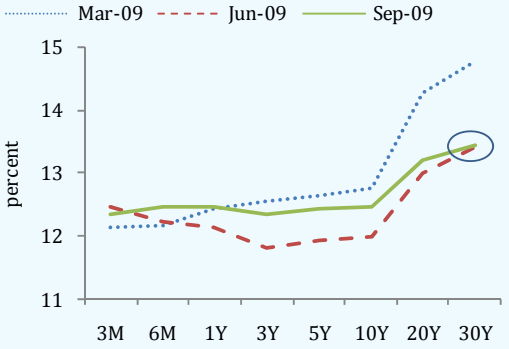
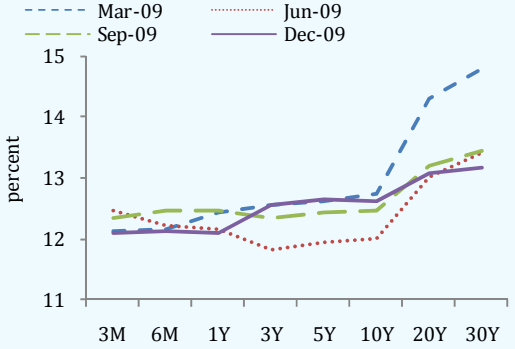


Figure 4.13 d



Source: Reuters

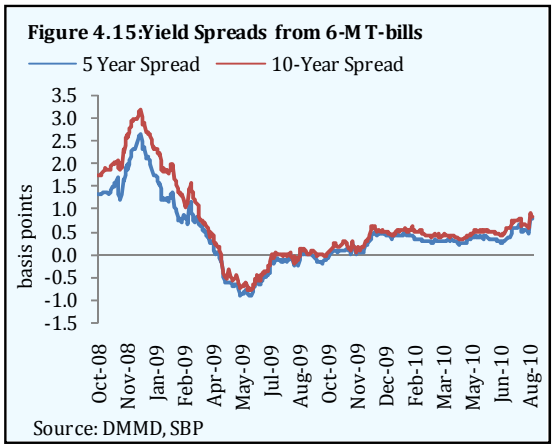
Figure 4.14: PKRV

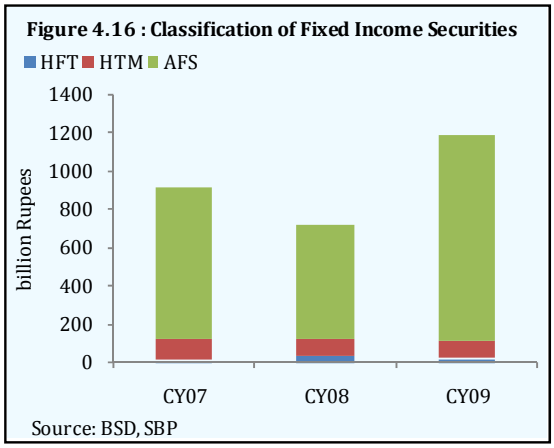
Source: FMA and SBP

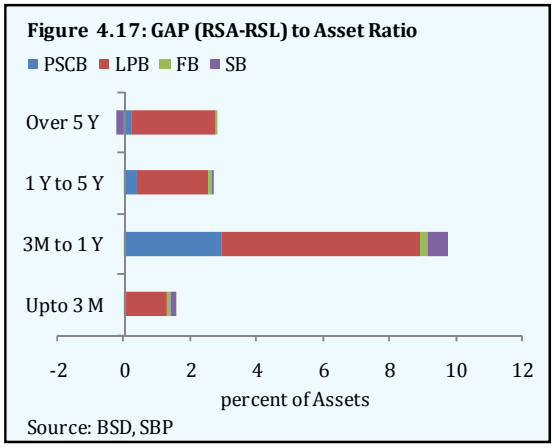
This development in the yield curve is also confirmed by the fact that short term revaluation rates (6 months PKRV) remained above the long term rates (10 years PKRV) between end-April CY09 and end-August CY09 **(Figure 4.14)**. Negative spreads of 5-years and 10-year bonds over 6-months security-bills in **Figure 4.15** also point to the same fact. However, during Q3-CY09, the yield curve shifted upwards for all tenors except for the 30-year bond, and lost its U-shape, becoming rather flat for tenors from 3 months to 10 years **(Figure 4.13c)**. By the end of CY09, the yield curve assumed a more upward sloping shape with slight rationalization of the term premium for different tenors. **Figure 4.13d** shows the yield curve at end-CY09 with lower yields for 3-months to 1-year instruments, rising somewhat for medium terms bonds, with the maximum yields in bonds with terms higher than 10-years. This again reflects a shift in inflation expectations, with the resurgence of inflationary pressures and expectation of reversal of SBP policy stance.

Notably, movements in interest rates are a source of *revaluation risk*, while a shift in the yield curve along with the steepening of its slope creates *yield curve risk*. The impact of these risks on the financial performance of banks depends on the extent and nature of their investments

in fixed income securities. Composition of the investment portfolio shows that the share of fixed income government securities (T-bills and PIBs) in total investments has increased from 66.3 percent in CY08 to 71.3 percent in CY09. The classification[25] (**Figure 4.16**) of these securities indicates that 91.2 percent of these securities were classified as Available for Sale (AFS) at end-CY09, as opposed to 84.2 percent in CY08, while the share of Held for Trading (HFT) securities declined from 4.3 percent in CY08 to 1.4 percent in CY09.







This classification suggests that the impact of any revaluation of securities on banks' income statement was likely to be minimum in CY09, as only a small fraction of investments is classified in the HFT category. The impact of the revaluation of securities classified as AFS, on the other hand, is taken to the 'surplus/deficit on revaluation of securities' account which is charged against banks' capital. Given the favourable interest rate environment, the revaluation deficit on investments in government securities declined to Rs 5.3 billion in CY09, from Rs 18.8 billion in CY08. Hence the element of revaluation risk on banks' hefty investments in government securities was rather subdued in an environment of monetary easing.

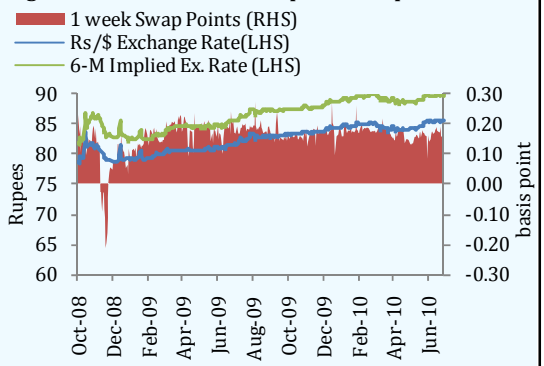
While the classification of investments helps in understanding the extent of revaluation surpluses / deficits, the overall impact of movements in interest rates on banks' financial position depends on the gap between rate sensitive assets (RSA) and rate sensitive liabilities (RSL). A positive gap in a declining interest rate environment is an adverse development for the banking sector as the RSA of banks (which is re-priced at lower interest rates) generally exceeds the RSL. Given banks' tendency of funding fixed maturity assets generally by demand liabilities, the existence of the gap is inevitable. Experience suggests that gap in the range of ± 10 percent of total assets is considered to be normal for the banking sector. The gap position of the banking sector for all categories is in the normal range of ±10 percent of total assets (**Figure 4.17**). On an overall basis, re-pricing risk is being managed well by banks.

Exchange Rate Risk: Another component of market risk is the currency or exchange rate risk, which arises from a change in the value of foreign currency assets and liabilities of banks due to movements in the exchange rate. The Pak Rupee has been shedding value

[25] BSD Circular No. 11, dated August 4, 2004.

against the US Dollar since CY06 due to the deterioration in the current account balance. The pace of this depreciation picked up momentum in CY08, as evidenced by the trends in the exchange rate and swap points (**Figure 4.18**). The monthly average exchange rate indicates that the Pak Rupee depreciated by 21.9 percent against the US Dollar during CY08. This almost continuous depreciation over a short period of time, stabilized by the end of the year on account of the SBA with the IMF, which helped in stemming the erosion of the foreign exchange reserves and easing off of concerns about the mounting BoP problems. Subsequently, in CY09 the PKR/USD parity was relatively more stable, with the PKR depreciating by 6.1 percent only **(Figure 4.18)**. Besides the IMF SBA, this stability is attributed to the sustained flow of foreign exchange in the form of remittances, improvements in the current account balance, and efforts to capture foreign currency flows from the informal channel, foreign exchange dealers, etc.

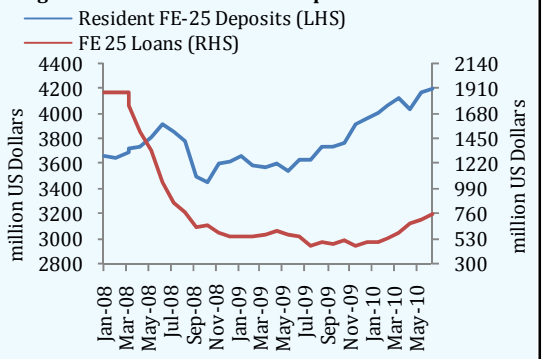
Figure 4.18: Ex. Rate and Swap Points Implied Rate



Source: SBP

In addition to exchange rate movements, currency risk also depends on the amount of foreign currency assets and liabilities of the banking sector. On the asset-side, foreign currency loans against FE-25 deposits witnessed continuous decline from Q2-CY08 until end-November CY09. On an overall basis, FE-25 loans declined by 20.2 percent in CY09, compared to a decline of 68.5 percent in CY08 (**Figure 4.19**). Specifically, foreign currency loans were only 2.7 percent of total loans as of end-CY09, indicating that the banking sector is not inordinately exposed to loans denominated in foreign currency.

Figure 4.19: Resident FE-25 Deposits & FE 25 Loans



Source: S&DWH , SBP

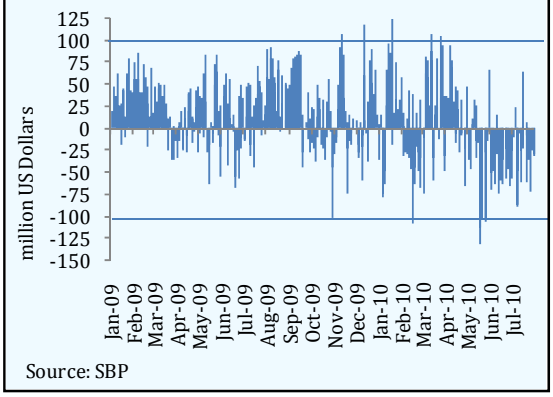
On the liability side, foreign currency deposits and banks' borrowing in foreign currency are the two major components. The currency composition of deposits indicates that the share of foreign currency deposits (rupee value) in the total deposits of the banking sector was 14.7 percent at end-CY09, as against 15.3 percent at end-CY08. FE-25 deposits started rising by Q2-CY09 and grew by 8.8 percent during the year, as compared to the decline of 1.4 percent in CY08 **(Figure 4.19)**.

Another component of liabilities which can potentially give rise to currency risk is the quantum of banks' borrowings in foreign currency. The currency composition of borrowings indicates that the share of foreign currency borrowing in total borrowing was only 3.1 percent at end-CY09, as against 7.8 percent in CY08. This fall in the quantum of banks' borrowings denominated in foreign currency is a welcome development in terms of containing currency risk.

While the discussion on foreign currency assets and liabilities gives information on banks' gross exposure towards foreign currency risks, a more useful indicator or banks' foreign

currency exposure is the Net Open Position (NOP) which includes both on- and off-balance sheet foreign currency assets and liabilities. NOP, which is the net balance sheet exposure of a bank in foreign currency, is used because a portion of gains (losses) on foreign currency liabilities are naturally hedged by losses (gains) on foreign currency assets. Unlike CY08, NOP of the banks fluctuated more in CY09 (standard deviation for CY09 is 35.8 as against 31.5 for CY08). However, barring few minor exceptions towards end-CY09,[26] NOP of banks remained within the generally acceptable narrow range of ±USD 100 million in CY09. This shows that banking industry successfully managed exchange rate risk by maintaining positive NOP on average **(Figure 4.20)**. The sensitivity analysis (discussed in section 6.4.3) also indicates that 25 percent depreciation is likely to improve the CAR of the banking sector by 70 bps, while an appreciation by 25 percent will cause it to decline by 10 bps only.[27]

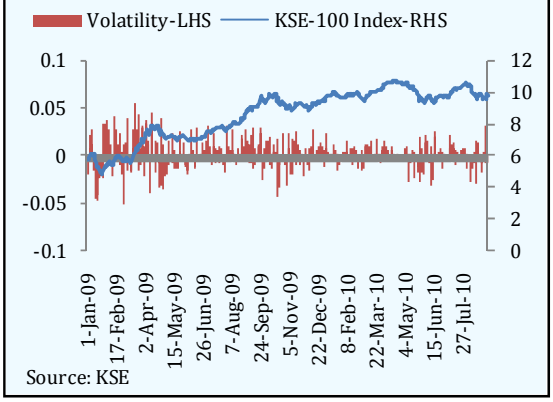
Figure 4.20: NOP of the Banks



Source: SBP

Equity Price Risk: The third important source of market risk is equity price risk, which is primarily driven by banks' investments in the equity market, and adverse movements in equity prices, in addition to the indirect exposure from the quantum of bank loans collateralized by shares. Stepping back a bit, CY08 was an eventful year for the KSE-100 index which touched its highest ever peak of 15,676 points and then lost more than 40 percent of its value over the next few months. This led to the imposition of a floor on the index and when the floor was lifted in December CY08, the index value declined further by almost 48 percent. In comparison, the KSE-100 index showed relative stability in CY09 and maintained an upward trend with an increase of 60.1 percent in its value **(Figure 4.21)**.

Figure 4.21: Volatility in KSE-100 Index



Source: KSE

During CY09, banks' investments in shares increased by Rs. 58.9 billion reflecting a 19.0 percent growth over the previous year. However as a percentage of total investments, investments in shares were only 3.4 percent in CY09, as against 4.4 percent in CY08. Notably, banks' investments in shares is capped by SBP's prudential regulations at 20.0 percent of their respective equity.[28] This drop in the share of equity investments again shows banks' preference to rebalance their investment portfolio in favor of the more lucrative and risk-free government securities. Bank-wise information indicates that 18 banks with asset share of 61.3 percent have their investment in shares in excess of industry average of 3.4 percent (**Figure 4.22**). On average these banks hold 15.1 percent of their total investments in shares.

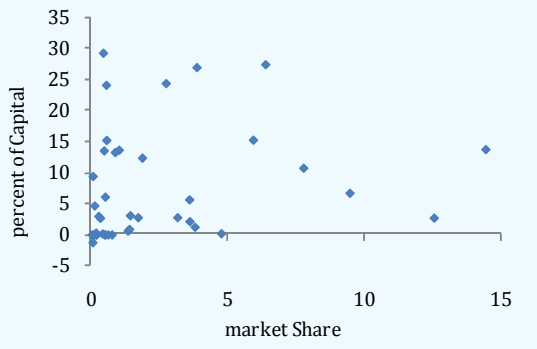
[26] The complete transfer of oil payments to the inter-bank market by end-December CY09 did exert some pressure on commercial banks' Net Open Position. Consequently, in most months of FY10, banks maintained net short positions in foreign currency despite continued rupee depreciation.

[27] In case of positive NOP, banks actually gain from the depreciation of the local currency, as this implies that foreign currency assets are in excess of foreign currency liabilities.

[28] Regulation R-6, Prudential Regulations for Corporate / Commercial Banking, State Bank of Pakistan.

The analysis indicates that the overall equity exposure of the banking system is considerably well-contained as against its risk-taking capacity and the prescribed limit in prudential regulations. The sensitivity analysis also indicates that an assumed decline in equity prices by 30 percent and 50 percent, will impact the CAR of the banking sector by only 11 bps and 24 bps respectively.

Figure 4.22: Investment in Shares



Source: BSD, SBP

4.3.3 Operational Risk

Although operational risk has always been a crucial component amongst the various risks that the banking industry faces, it is gaining ever more importance in response to new threats to financial stability as a consequence of a stressed geopolitical environment, issues related to corporate governance and systemic vulnerabilities arising from interconnected financial markets.[29] The Basel Committee on Banking Supervision (BCBS) defines operational risk as the 'risk arising from direct or indirect loss resulting from inadequate or failed internal processes, people and systems or from external events', with the definition incorporating legal risk.[30] Strategic and reputational risk is excluded from this definition for the purpose of a minimum operational risk capital charge. In reviewing the progress of the industry in terms of measurement of operational risk the Committee is aware that causal measurement and modeling of operational risk is at a nascent stage. For the banking sector, the Committee has set out further details on operational losses in terms of loss types for ease of measurement. These are illustrated in **Table 4.10**.

Table 4.10: Business Lines, Loss Types and Suggested Exposure Indicators

Business Units	Level I Business Lines	Write Downs	Loss of Recourse	Restitution	Legal Liability	Regulatory and Compliance (Inc. Taxation)	Loss of or Damage to Assets
Banking	Retail Banking	Vol. of Transactions	Vol. of Transactions	Vol. of Transactions	Vol. of transactions and value of salaries	No. of transactions	Value of fixed assets
	Commercial Banking	-do-	-do-	-do	-do	-do-	-do-
	Payment and Settlement	-do-	-do	-do-	Vol. of transactions (client liability)	-do-	-do-
	Agency Services	Vol. of Assets in custody	Vol. of Assets in custody	-do-	Vol. of corporate actions (client liability)	No. of corporate actions	-do-

Source: BIS

Operational risk therefore arises from complicated and diverse external and internal disruptions to business activities. The inherent unpredictability of these disruptions and their ramifications on the banking industry make its measurement and regulation difficult.[31] Operational risk mainly deals with tail events rather than structured projections or

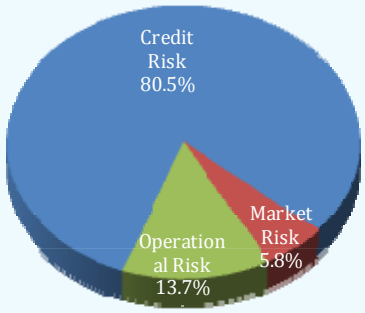
[29] Jobst, A.A (2007).
[30] BCBS (2001). Legal risk includes, but is not limited to, exposure to fines or punitive damages resulting from supervisory actions, as well as private settlements.
[31] Ibid.

tendencies, exhibiting uncharacteristic behavior or situations.[32] Moreover, extreme operational risk losses are usually unique one-off events which have no historical precedents.

Notably, operational risk varies considerably across banks in the industry. Incidence and scale of internal or external disruption to the banking industry is critically dependent on the nature of banking activities and the sophistication of risk measurement standards and internal controls present in the bank.[33] While banks normally rely on interest margins to cover potential internal or external failures, they also need to hold requisite amount of capital reserves to cover unexpected losses.

In the case of the domestic banking industry, the share of risk weighted assets (RWA) assigned to operational risk is 13.7 percent of total risk-weighted assets, and has registered an increase of 1.8 percent relative to the previous year (**Figure 4.23**).

Figure 4.23: Composition of Risk Weighted Assets in CY09



Source: BSD, SBP

Although the central bank has a framework in place to curtail operational risk through Customer Due Diligence (CDD)/Know Your Customer (KYC) measures, it continuously monitors the progress of banks and amends these guidelines for stricter compliance. Ideally efficient operational risk management hinges on several issues: (1) the judicious combination of qualitative and quantitative measures of risk estimation, (2) the robustness of these measures, given the rare incidence of high-impact operational risk events without historical precedence, (3) the sensitivity of regulatory capital charges to the varied nature of operational risk and reporting standards across different business activities.[34]

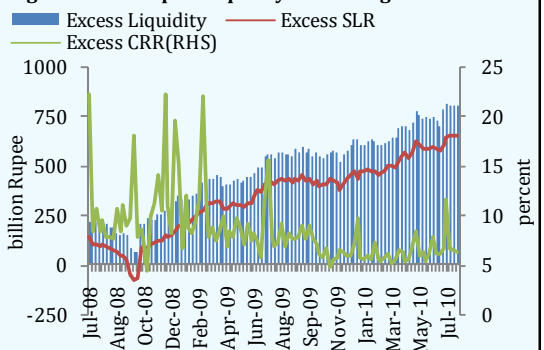
4.3.4 Liquidity Risk

An important lesson from the recent global financial crisis for both financial institutions and regulators is that liquidity risk management is of paramount importance in ensuring the stability of the financial system. Since its introduction in 1988, the Basel Accord led to an inordinate focus on standardization of capital requirements for credit and market risk management, while a charge for operational risk was added on later. However matters related to liquidity risk management remained relatively neglected and intermittent episodes of excess or shortfall of liquidity, both at the overall system and individual institution's level were addressed on a case-to-case basis by national regulators. The occurrence of the GFC, which was a liquidity crisis in its initial phase, prompted the Basel Committee on Banking Supervision (BCBS) to initiate work on establishing internationally accepted standards for liquidity adequacy. Both the BCBS and the Financial Stability Board (FSB)[35] are expected to introduce a new set of reforms focusing on strengthening the global capital and liquidity standards besides deepening and strengthening banks' stress testing practices and supervisory assessment of these practices.

[32] Jobst, A.A (2007).
[33] ibid.
[34] Jobst, A.A (2007).
[35] The Financial Stability Board (FSB) was established in April 2009 as the successor to the Financial Stability Forum. FSB has been established to coordinate at the international level the work of national financial authorities and international standards setting bodies and to develop and promote implementation of effective regulatory, supervisory and other financial sector policies. It brings together national authorities responsible for financial stability in significant international financial centers, international financial institutions, sector-specific international groupings of regulators and supervisors, and committees of central bank experts. Source: BIS.

In the domestic regulatory framework, standard indicators of the liquidity position of the banking sector under the CAMELS supervisory framework are deemed sufficient to address elements of liquidity risk. Notably, statutory liquidity requirements (CRR and SLR), primarily used as a monetary policy tool, appear to be the key determinant of banks' liquidity position.

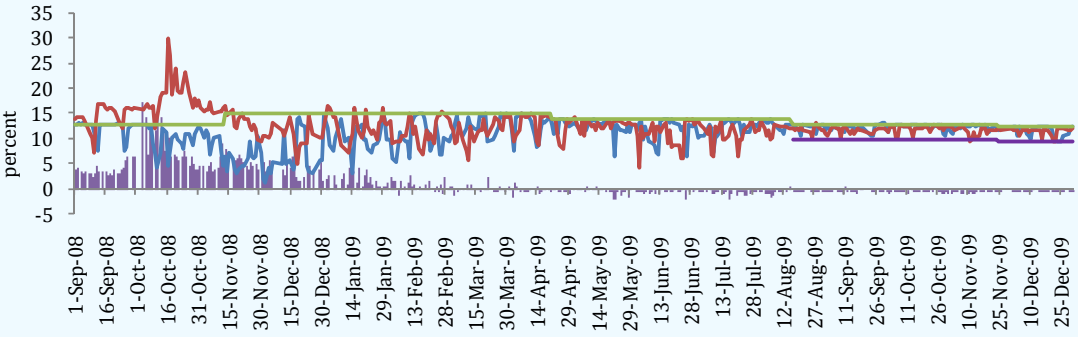
Figure 4.24: Surplus Liquidity of Banking Sector



Source: SBP

In retrospect, severe but temporary liquidity strains seen in the domestic financial market in September-October CY08, subsided by the end of the year on account of SBP policy actions due to which CY09 started with relatively improved liquidity position (**Figure 4.24**) and less volatility in overnight rates (**Figure 4.25**), which in particular has improved since the introduction of the interest rate corridor facility.

Figure 4.25: Trends in O/N rates and Liquidity Premium



Source: SBP

The overall liquidity position in CY09 can be assessed to be relatively more comfortable despite the occurrence of recurrent but mild episodes of liquidity stress during the year. SBP changed gears on the monetary stance during the year after the prolonged period of monetary tightening since CY05, and started to gradually ease the monetary stance. The policy discount rate was reduced by 250 bps during the year. Overall liquidity position benefited from better deposit mobilization and improved foreign inflows as evidenced by higher NFA of the banking system. However factors like surge in credit demand by public sector for budgetary borrowing as well as for commodity operations, subsequent non-retirement of funds for the latter which was further compounded by inter-corporate circular debt, were the various challenges which carried implications for liquidity management.

Quarter-wise assessment of liquidity shows that despite the high demand for government budgetary borrowing and negligible flow of funds to the banking system (in the form of bank deposits and foreign inflows), the liquidity position remained comfortable in Q1-CY09. This was largely due to net repayments in private sector credit[36] and continued impact of SBP policy actions taken during the Q4-CY08. This is evidenced from the fact that: (1) weighted average overnight repo rates remained significantly lower than the policy rate during January-March CY09; (2) banks' excess reserves with SBP increased from Rs. 58 billion as on

[36] Net repayment of private sector credit amounted to Rs. 106.1 billion in Q1-CY09.

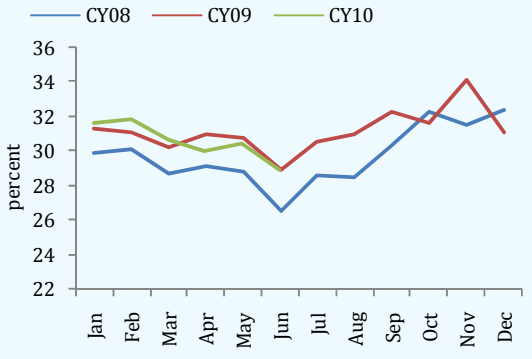
October 4th, CY08 to Rs. 452 billion by March 24th, CY09; and (3) from November CY08 to March CY09, SBP mopped up Rs. 630 billion (on net basis) from the market, in an effort to neutralize the impact of excess liquidity.

Higher credit demand from government and surge in seasonal commodity financing exerted liquidity pressures during Q2-CY09, although factors like higher deposit mobilization, improved foreign inflows and net repayment of private sector credit[37] provided some respite to the market. Nonetheless, the liquidity position remained tight with overnight rates remaining close to the policy rate, averaging at 12.5 percent for Q2-CY09 (**Figure 4.25**).[38] Banks' excess liquidity position would have deteriorated even more had it not been for their higher investments in government securities. The liquidity strain in Q2-CY09 coincided with stable macroeconomic conditions in the form of subsiding inflationary pressures with YoY inflation averaging at 14.9 percent for Q2-CY09 relative to 20.2 percent in the previous quarter (Q1-CY09). Resultantly, SBP lowered its discount rate twice by 100 bps each, first in April CY09 and again in August CY09,[39] entering the relatively short-lived monetary easing phase which lasted until end-CY09. Disregarding the impact of some seasonal pressures during August-September CY09 due to Ramadan and Eid, monetary easing was followed by improved liquidity position in the market in Q3-CY09.

Liquidity strains re-emerged and continued in Q4-CY09 contributed by: (1) lower than expected retirement of loans for commodity operations, (2) persistence of the inter-corporate circular debt problem, (3) erratic foreign inflows (lower NFA), and (4) net credit off-take by the private sector on the back of improved economic activity. SBP monitored these developments closely and injected nearly Rs. 1,610.7 billion into the market in Q4-CY09. On account of the decline in inflationary pressures, SBP lowered its policy rate further by 50 basis points in November CY09 with a view to support economic growth. In spite of these actions, the liquidity stress continued, with overnight rates remaining consistently on the upper side of the interest rate corridor, touching the ceiling rate frequently. Volatility in overnight rates, however, was largely contained on account of the interest rate corridor (**Figure 4.25**).

Regardless of the surge in bank deposits during CY09, the currency to deposit ratio (CDR) continued to increase during the year except for a dip in June CY09, and reached a high level of 34.1 percent in November CY09 (**Figure 4.26**). Average CDR for CY09 was 31.2 percent, as against 29.7 percent in CY08. Notably, the lower proportion of monetary assets held as bank deposits continue to pose challenges for banks' liquidity position. Given this overview of the liquidity position, the standard indicators of liquidity risk are analyzed in the following discussion.

Figure 4.26: Trends in Currency to Deposit Ratio



Source: SBP

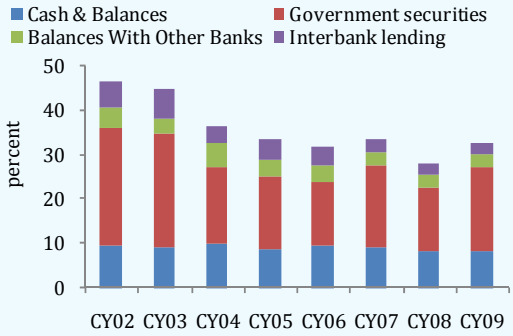
Liquidity of an asset is based on its ability to be sold with a minimum loss of value. The most widely used indicator of liquidity risk is the share of liquid assets in total assets. Banking data shows that this indicator increased to 32.7 percent by end-CY09, up from 28.6 percent

[37] Net repayment of private sector credit amounted to Rs. 78.2 billion in Q2-CY09.
[38] The policy rate was 14 percent at that time.
[39] SBP also introduced an explicit interest rate corridor in its MPS decision in August CY09, in an effort to contain the day-to- day volatility in overnight rates besides making monetary policy implementation effective and transparent.

in CY08. This is consistent with the easing of the liquidity position in the banking sector in comparison with CY08. Component-wise analysis suggests that this rise in liquid assets mainly emanates from the rise in investments in government securities, with only a marginal growth in loans (**Figure 4.27**).

Distribution of banks on the basis of the liquid assets to total assets ratio reveals a similar improvement in the overall liquidity position of the banking industry. Specifically, the number of banks below the industry average declined to 16 from 20 in CY08 (**Table 4.11**). Also, 1 bank (against 2 in CY08) had this ratio below 10 percent while 4 banks (against 3 in CY08) had a ratio ranging between 10 and 20 percent. This suggests that some small banks are still facing liquidity stress despite improvements in the overall liquidity position.

Figure 4.27: Components of Liquid Assets as Share of Total Assets



Source: BSD, SBP

Table 4.11: Distribution of Banks by Liquid to Total Asset

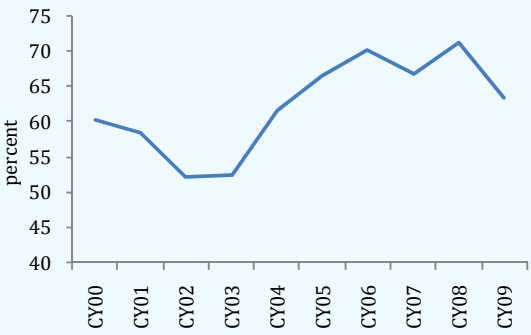
No. of banks

	CY06	CY07	CY08	CY09
Less than 10	1	0	2	1
from 10 to 20	2	1	3	4
< Industry average	19	16	20	16
Industry Average (%)	32.0	33.6	28.2	32.7

Source: BSD, SBP

Another important indicator of liquidity risk, the advances to deposits ratio (ADR) also improved in CY09 and declined to 63.3 percent from 71.3 percent in CY08 (**Figure 4.28**). Both the relatively strong growth in deposits as well as the substantial slowdown in loans disbursed during the year contributed to the improved ADR (net of EFS) ratio during CY09. While an indication of improved liquidity, the decline in ADR also points to both to the tightening of credit by banks, with their focus shifting towards investments, and to the subdued demand for credit from the private sector.

Figure 4.28: Advances (Net of EFS) to Deposit Ratio (ADR)



Source: BSD, SBP

The distribution of banks on the basis of the ADR suggests that only 1 bank has its ADR above 100 percent while for 4 banks this ratio ranges between 80 and 100 percent, with the number of banks below the market average remaining the same as in CY08, at 13 **(Table 4.12)**.

Table 4.12: Distribution of Banks by Advances to Deposit Ratio

No. of banks

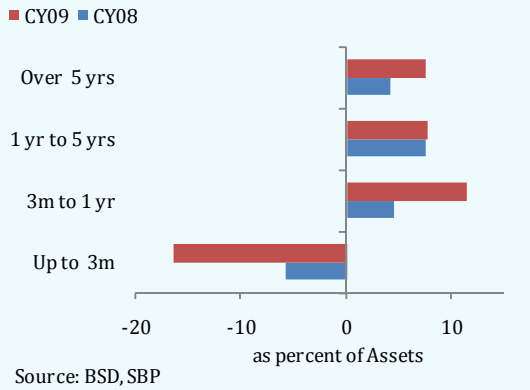
	CY06	CY07	CY08	CY09
>100	2	2	3	1
b/w 80 to 100	2	3	4	4
> Industry average	14	13	13	13
Industry Average (%)	70.3	66.8	71.3	63.4

Source: BSD, SBP

The analysis of the maturity gap presents another dimension for assessing banks' liquidity position. During CY09, the gap between assets and liabilities in different time buckets (except for assets and liabilities of 1 year to 5 year maturity) increased, and for short tenors of up to 3 months, and 3 months to 1 year, the gap breached the conventionally accepted range of ±

10.0 percent of total assets (**Figure 4.29**).[40] On the face of it, this suggests a deterioration in the maturity mismatch profile in CY09. However, such an assessment needs to be viewed in the context of the increasing share of investments in banks' total assets. While longer tenor investments can result in increasing the gap between assets and liabilities, these investments are in liquid government securities for which there is an active secondary market and market participants have access to an exit mechanism, which actually bodes well for the asset-liability maturity profile of banks.

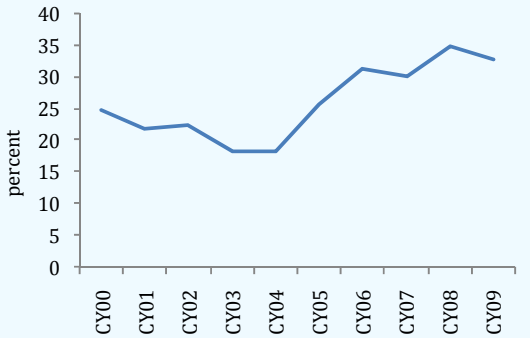
Figure 4.29: Maturity Gap (Assets-Liabilities)



Source: BSD, SBP

Notwithstanding, the classification of deposits indicates that the share of fixed deposits in total deposits has declined to 32.9 percent in CY09 as against 34.8 percent in CY08 (**Figure 4.30**), such that the growth in fixed deposits decelerated from 26.3 percent in CY08 to 7.1 percent in CY09. This considerable slowdown in growth in fixed deposits is despite the exemption of time liabilities (including time deposits with tenor of 1 year and above) from SLR requirements.[41] Not surprisingly however, share of fixed deposits of more than 1 year in overall fixed deposits has increased, suggesting that the dip in the share of fixed deposits is on account of the decline in the share of deposits of less than 1 year. As mentioned earlier, in a declining interest rate environment banks concentrated on mobilizing low cost deposits (current account / savings account) as opposed to the more expensive fixed deposits.

Figure 4.30: Share of Fixed Deposits in Total Deposits



Source: BSD, SBP

In sum, the analysis of liquidity risk from various dimensions indicates that the overall liquidity risk profile of the banking system improved during CY09. However small banks continue to face liquidity strains as evidenced by their low level of liquid assets to total assets ratio in conjunction with their high advances to deposit ratio. Although none of these banks is systemically important, and even their[42] aggregate market share is only 2.0 percent, their inability to overcome the persistent liquidity problems can have significant implications by undermining perceptions and the level of confidence in the banking sector.

4.4 Risk Absorption Capacity of the Banking System

With a continually evolving risk profile of the banking sector, systemic stability crucially depends on the risk-bearing capacity of individual institutions in the industry. Banks' ability to absorb risks is determined by their profitability and sustained by their capital position. Profits retained in the form of reserves and fully paid-up capital provide the first line of defense, acting as buffers against negative shocks. Besides the primary function of absorbing losses emanating from banking operations, profitability also serves to build a financial

[40] This gap is mainly attributed to banks' tendency to place demand deposits (the non-contractual liabilities which have a significant share in total liabilities) in this bucket.
[41] CRR on time liabilities was abolished on August 10, CY07, and SLR was removed on October 24, CY08.
[42] These include two specialized banks.

institution's capital base. In terms of *pecking order*[43] behavior, the supplementary benefit of building a healthy capital position is that it enables access to cheap internal resources to fund business operations. Capital then serves as the cushion available with banks to absorb unexpected losses.

Given the importance of profitability and capital adequacy in the analysis of the risk profile of the banking sector, the following sections provide a detailed analysis of these indicators.

4.4.1 Profitability

Profitability is imperative for the smooth functioning of the banking sector, serving as a cushion to absorb losses emanating from banks' operations. Profitability of the banking system posted a gain of 27.6 percent in CY09, with a (before tax) profit of Rs 80.7 billion. Overall, both ROA and ROE increased during CY09, a trend in contrast to the consistent decline in these ratios since CY06.

Table 4.13: Profitability of the Banking Sector

billion Rupees

	CY00	CY01	CY02	CY03	CY04	CY05	CY06	CY07	CY08	CY09
Profit Before Tax	4.5	1.1	19.0	43.8	52.1	93.8	120.8	106.9	63.2	80.7
Profit After Tax	-2.8	-9.8	2.9	24.7	34.7	63.3	81.9	73.1	43.3	54.4
No. of banks in loss	10	12	6	8	5	7	7	10	16	18

Source: BSD, SBP

Table 4.13 gives details of banks' profitability position over the decade. In line with the increase in the profit before tax, profit after tax of the banking sector also posted a growth of 25.7 percent during CY09, increasing to Rs 54.4 billion. Bank-wise information of profit after tax reveals that 18 banks, with a cumulative share of 12.7 percent in assets, recorded losses during CY09. These include one mid-sized and 17 small-sized banks, where the cumulative market share of the latter is only 8.8 percent. However, the top 10 banks, with a market share of 73 percent, posted profits of Rs 70.6 billion in CY09, exhibiting a growth of 11.8 percent over the previous year **(Table 4.14)**. This indicates that banking sector profitability is dominated by the top players in the industry.

Table 4.14: Distribution of Banks by ROA

	CY07		CY08		CY09	
ROA	No. of Banks	% share in TA	No. of Banks	% share in TA	No. of Banks	% share in TA
0 & below	10	8.5	16	14.5	18	12.7
B/W 0 to 0.5	3	2.8	7	16.5	7	20.8
B/W 0.5 to 1.0	3	1.5	5	7.4	5	6.1
1.0 & above	23	87.2	12	61.6	10	60.4

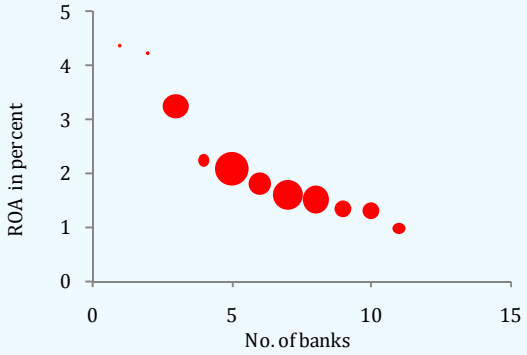
Source: BSD, SBP

ROA for the overall banking system was 0.9 percent for CY09. Eleven banks with a cumulative market share of 62.3 percent recorded an above average performance in terms of this profitability indicator in CY09. These include 2 specialized banks, 1 public sector bank, and 8 local private banks. **Figure 4.31** shows banks with ROA above the overall industry level of 0.9 percent, with size of the bubbles reflecting individual bank's market share. As evident from the graph, banks with the highest ROA are small-sized banks, reflecting the fact that not all small sized banks are in trouble.[44] Notably during CY09 the increase in profitability as indicated by ROA is in contrast to the falling trend since CY06.

[43] Pecking Order theory postulates that to finance firm projects, internal resources are preferred over external funds, then debt is issued and finally equity base is enhanced if more funds are required. Details in Myers and Majluf (1984).
[44] The bank with the highest ROA has a market share of 0.2 percent.

Data on conventional sources of banks' income – net interest income (NII) and non-interest income – shows that NII grew by 11.5 percent in CY09, relatively lower than the growth of 17.8 percent in the previous year. On the other hand, non-interest income increased marginally by 0.8 percent, compared to an increase of 6.8 percent in CY08. However, the major reason for the improved profitability position in CY09 comes from a significant reduction in provisioning expenses.[45] Provisioning expense benefited from the amendments in prudential regulations on availing the benefit of Forced Sale Value (FSV) on collateral. This benefit had been completely withdrawn in CY07,[46] however revised guidelines issued in January CY09 allowed banks to avail 30 percent of the FSV benefit, which was subsequently increased to 40 percent in October CY09. Even though the circular issued in January CY09 allowed banks to avail the FSV benefit w.e.f. 31.12.2008, banks were generally unable to offset the concession against their provisioning expenses for the year, as they were already in the process of closing annual accounts for CY08. Hence they were able to fully utilize this benefit when making provisioning expenses for CY09. **Table 4.15** shows that the FSV benefit was used more pronouncedly by domestic private banks and foreign banks.[47] In addition, prudential regulations were also amended to allow banks to upgrade a non-performing loan by one category in case of its successful restructuring.[48]

Figure 4.31: Banks With Above Average ROA



Source: BSD, SBP

Table 4.15 : Benefit of FSV availed in Provisioning

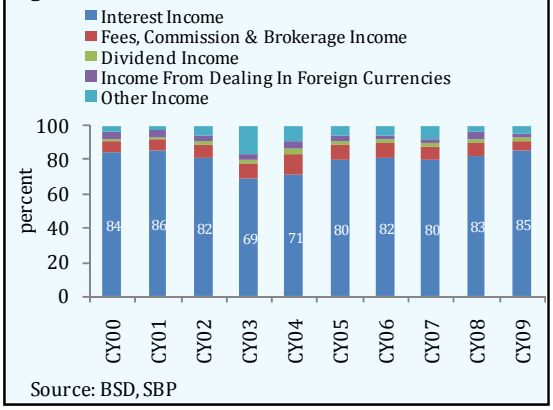
billion Rupees

	CY08	CY09	YoY Growth (%)
All Banks	**9.3**	**21.7**	**134.4**
PSCB	2.7	0.6	(76.8)
LPB	6.4	20.4	217.1
FB	0.1	0.6	278.8
SB	0.0	0.1	-

Source: SBP Calculations

Figure 4.32 shows that interest income which has a share of 85.5 percent in total income at end-CY09, increased by almost 2.6 percentage points over the previous year. During CY09 interest income earned on customer's loans increased by 22.1 percent, as against 26.3 percent in CY08. On the other hand, non-interest income which consists of: (1) fees, commission and brokerage income, (2) dividend income and (3) income from dealing in foreign currencies, increased only marginally by 0.8 percent. In particular, the depreciation of 6.1 percent in the rupee-dollar parity contributed to the 17.1 percent decline in income earned from trading in foreign currencies.

Figure 4.32: Sources of Gross Income



Source: BSD, SBP

[45] Amendments were introduced in the calculation of provisioning which allowed banks to avail 40 percent benefit of Forced Sale Value (FSV) of collateral as opposed to the previous concession of 30 percent, as detailed in BSD Circular No. 02 dated January 27, 2009 and BSD Circular No. 10, dated October 20, 2009.

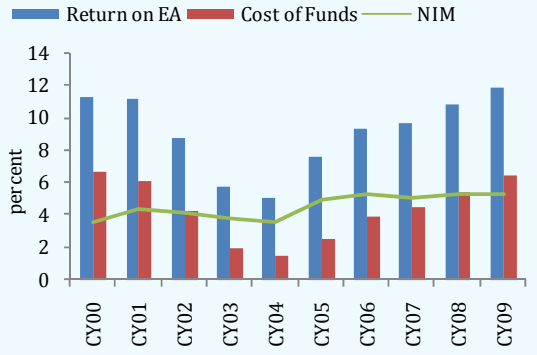
[46] BSD Circular No. 7 dated October 12, 2007.

[47] The biggest entity among PSCBs is National Bank. Given that a large proportion of its loans are backed by property as collateral, it does not find it feasible to conduct expensive valuations done in order to avail the FSV benefit.

[48] BSD Circular No. 10 dated October 20, 2009.

Fees, Commission and Brokerage Income, one of the major components of non-interest income, increased by only 3.6 percent, relative to 14.0 percent in CY08.

Figure 4.33: NIM and Average Spread



Source: BSD, SBP

An assessment of the change in the nature and quantum of earning assets provides useful information in analyzing banks' profitability. During CY09, earning assets primarily increased on account of growth in investments **(Figure 4.33)**. Bank-wise increase in earning assets gives credence to this trend; foreign banks exhibited the highest increase in earning assets which corresponds with the significant increase in their investments during the year. The key contribution to banks' profits comes from the net interest margin (NIM), a performance metric which measures the realized profit position of banks relative to their potential earning assets. The NIM in CY09 was 5.25 percent, just 4 bps less than 5.29 percent in CY08. Further analysis of the components of NIM reveals that although the spread between the return on earning assets and cost of funds showed slight improvement, the increase in earning assets was greater. Factors responsible for the marginal decline in NIM include monetary easing throughout CY09, leading to a decline in interest rates. This is also reflected from the fact that weighted average lending rates peaked in January CY09 at an all-time high of 14.7 percent, thereafter declining by 117 bps in CY09. The decline in lending rates had the effect of slowing down the interest earnings on advances as evident from deceleration in its growth from 32.8 percent in CY08 to 14.8 percent in CY09. In addition to the decline in lending rates, the continued minimum floor of 5 percent on the return on saving deposits also put further pressure on the NIM. Given the declining interest rate environment, although banks' interest income increased, growth rate of interest income declined by 4 percent in CY09. However, banks earned a substantial amount in the revaluation of assets, augmenting their existing pool of income.

Dissecting the increase in interest income through changes in rate and changes in volume reveals that its growth during CY09 was primarily driven by a variation in loan volume contributing 63.6 percent to the total increase in interest income (**Table 4.16**). This is in contrast to the previous year where the increase in interest income was attributed to a rate variation. As mentioned above, monetary easing led to a decline in lending rates, which suppressed banks' ability to increase interest income through a variation in rate. On the other hand, variance analysis of non-interest income reveals that the change seen in CY09 was driven by a change in charges and commissions rather than change in volume of transactions. With slow growth in advances, banks made efforts to compensate for deterioration in income by increasing charges on sources comprising non-interest income.

Table 4.16: Sources of Change in Interest Income on Customers' Loans and Interest Expense on Deposits

Billion Rupees	Balance of the Previous Year	Change Due to Rate Variation	Change Due to Volume Variance	Balance for the year
Interest income on Customers' Loans				
CY04	67	-11.6	21.6	77
CY05	77	46.7	25.4	149
CY06	149.1	37.5	35.7	222.2
CY07	222.2	8.4	35.1	265.7
CY08	265.7	48.6	38.7	353.1
CY09	353.0	19.1	33.2	405.3
Interest Expense on Deposits				
CY04	33.4	-11.7	6.5	28.2
CY05	28.2	26.2	5.6	59.9
CY06	59.9	40.1	9.9	110
CY07	110	24.1	17.5	151.6
CY08	151.6	33.1	21.8	206.5
CY09	206.4	43.6	23.8	273.8

Source: BSD, SBP

On the other hand, decomposing the increase in interest expense into volumetric and rate changes reveals that the increase in interest expense on deposits was primarily driven by the variation in deposit rates. Almost 64.7 percent of the increase in interest expense was contributed by deposit rates, compared to 62.6 percent in CY08. Consolidated data for the banking sector reveals that the cost of incremental deposits increased by 1 percentage point over the year, resulting in the increase in interest expense by 32.6 percent in CY09.

In sum, the overall profitability of banking system improved in CY09 in comparison to the previous year. Bank-wise information indicates that fewer banks contributed to the growth in profits, with a large number of small-sized banks still constrained from achieving a profitable position. The profitability position of banks was however aided by the gradual recovery in the macroeconomic environment and monetary easing throughout the year, resulting in significant gains in terms of revaluation of securities. With rising non-performing loans and associated increase in provisioning expenses, in addition to the reversal in the monetary stance in CY10, maintaining this profitability position might be challenging in coming years.

4.4.2 Solvency and Capital Adequacy

Among other initiatives to strengthen the traditional banking business model, guidelines issued by the BCBS particularly focus on capital adequacy standards in recognition of the fact that capital works as a central buffer to absorb losses emanating from operational and financial activities of a bank. Both the level and the composition of capital (in terms of core and supplementary capital) demonstrate the capacity of an individual institution to withstand potential threats to its financial viability. An adequately capitalized bank earns strong ratings and is better able to protect stakeholders' interest in the face of unexpected events. SBP has been fully cognizant of the importance of enhancing banks' capital base and their solvency position, and has prescribed a phased plan[49] for banks to increase their paid-up capital (free of losses) to Rs. 10 billion by the end of 2013. This section provides a detailed assessment on the various measures of capital adequacy and solvency of banks.

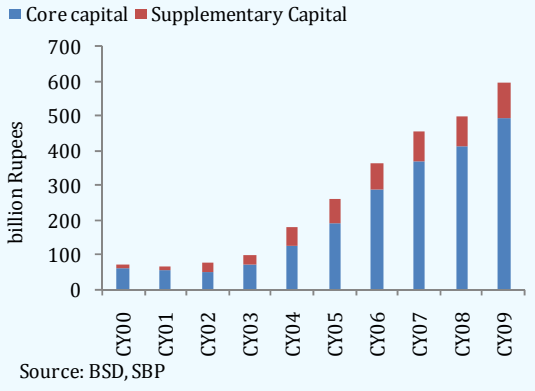
During CY09, banks' overall equity base increased by 17.3 percent (YoY) to Rs. 660.3 billion **(Table 4.17)**. Local private banks, with a share of 73.9 percent in total equity, were the main contributors to this growth. The increase in equity base during CY09 resulted largely from: (1) FSV benefit which limited the provisioning charge, (2) increase in un-appropriated profits by 25.6 percent, and (3) a substantial increase in the surplus on revaluation of assets. Corresponding changes are also visible in the qualifying capital (net of losses) for the MCR. At end-CY09, 23 banks were fully compliant with MCR while the remaining are in the process of increasing their capital base by injecting fresh capital or through mergers and acquisitions within the industry.

Table 4.17: Category-wise Position of Banks' Equity

	billion Rupees		% Share	% YoY
Equity	CY08	CY09	in Total	Growth
PSCB	112.0	139.2	21.1	24.3
LPB	421.2	487.7	73.9	15.8
Foreign	34.0	35.7	5.4	5.2
SB	-4.2	-2.4	0.4	41.8
All	563.0	660.3	100	17.3

Source: BSD, SBP

Figure 4.34 : Trends in Banking Capital



Source: BSD, SBP

Figure 4.34 shows corresponding changes in total capital (net of losses), which increased by Rs. 100.3 billion compared to

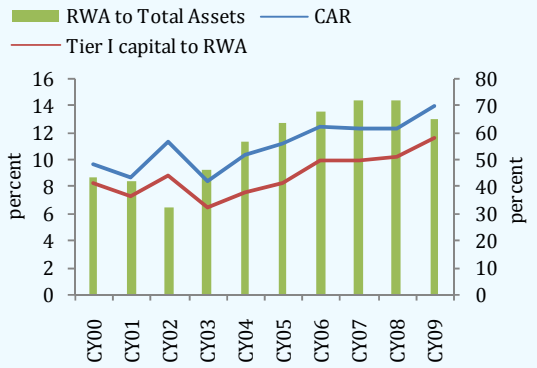
[49] BSD Circular No. 7 dated April 15, 2009.

Rs. 38.8 billion in CY08. This growth of 19.8 percent in capital is contributed by its two components – 82.5 percent by core capital and 17.5 percent by supplementary capital, the two components of regulatory capital. Adjusting core capital for goodwill, shortfall in provisions, etc. main components of core capital are paid-up capital, balance in share premium account, reserves (general and for issue of bonus shares), un-appropriated profit/loss, and minority interest. Core capital is the main anchor against risk to the survivability of an institution and its importance can be measured in terms of the recent enhancements in the Basel II (commonly known as Basel III) which emphasizes further refining/haircuts on the core capital and encourages increasing its share in total capital.

Tier-I data shows that 30 out of total 40 scheduled banks have increased their core capital whereas remaining 10 banks (with 7.1 percent share in total assets of the banking system) have registered decline in core capital. On net basis, core capital increased by Rs. 77.8 billion (18.7 percent increase over the previous year) for the whole industry. It is interesting to note that 64.2 percent of that increase in core capital comes from the big 5 banks.

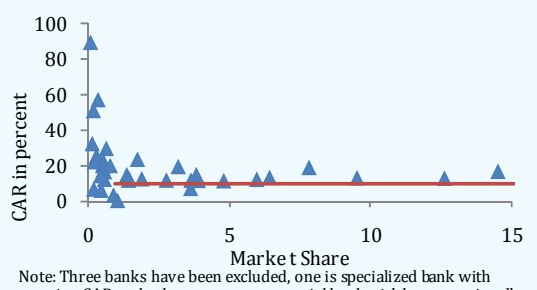
In addition to the absolute amount of the MCR, banks are also required to maintain capital according to their risk-weighted assets (RWA). The minimum capital to RWA ratio (CAR) for end-CY09 was 10.0 percent. Prior to going into details regarding the distribution of CAR across the banking sector, some details of RWA will help in understanding banks' risk bearing capacity. The consolidated balance sheet of the banking sector at end-CY09 shows that banks held Rs. 4,262.5 billion as RWA, which is 4.4 percent higher than the amount held in CY08. Notably, this growth in RWA is much less than the 15.8 percent growth in overall banking assets. The reason for this slow growth in RWA is clearly visible in the increased exposure of the banking sector to the government, both in the form of loans to PSEs and the federal government for commodity operations, and the substantial increase in investments in government securities, both of which carry low risk weights. These shifts have had a positive impact on risk-weighted CAR under Basel II, raising it from 12.3 percent in CY08 to 14.0 percent in CY09 (**Figure 4.35**). Consistent with this development, the ratio of core capital to RWA also inched up from 10.2 to 11.6 percent in CY09.

Figure 4.35: CAR & RWA



Source: BSD, SBP

Figure 4.36: CAR of Banks and Market Shares



Note: Three banks have been excluded, one is specialized bank with negative CAR and other two are commercial bank with has exceptionally high ratio , with 9.7 and 33.5 standard devition from mean value of 19.5 percent.

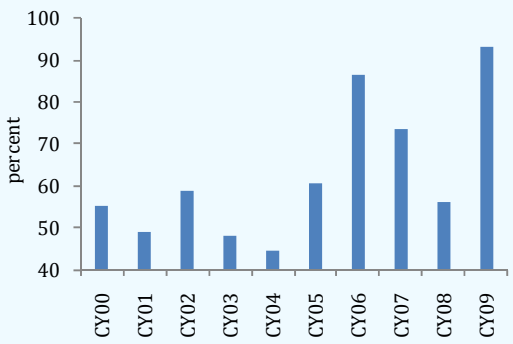
Source: BSD, SBP

Bank-wise information on CAR indicates that 34 out of 40 banks (with a share of 93.6 percent in total assets) have their respective CAR above the required ratio of 10 percent for CY09. The remaining 6 banks which are below the minimum required ratio include 2 public sector banks, 1 specialized bank and 3 local private banks.

Figure 4.36 shows that there were 6 banks with a market share of more than 5 percent on individual basis with average CAR of 15.1 percent. Improvement in capital adequacy may

also be judged from the fact that asset share of banks meeting minimum requirement of 10 percent CAR has increased to 93.4 percent in CY09 from 56.3 percent in CY08 **(Figure 4.37)**.

Figure 4.37: Asset Share of Banks with CAR Above 10 %

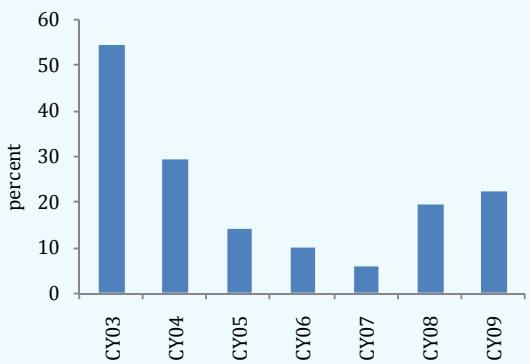


Source: BSD, SBP

4.4.3 Resilience of the Banking Sector

The analysis of the risk-profile and the risk-bearing capacity of the banking industry indicates that while the risk profile improved marginally, banks' risk-bearing capacity showed encouraging progress in terms of total equity in CY09. This section examines the resilience of the banking system by assessing the impact of the potential threat of deterioration in asset quality in terms of banks' capital base and single-factor stress-testing or sensitivity analysis.

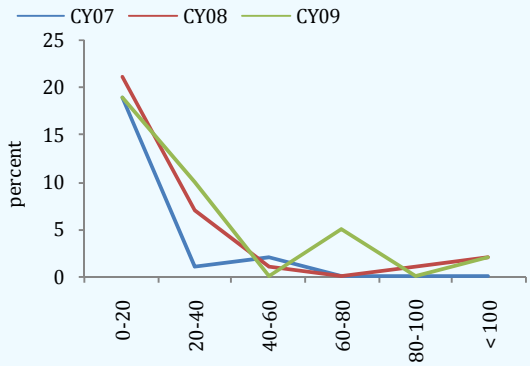
Figure 4.38: Net NPLs to Capital Ratio



Source: BSD, SBP

The amount of net NPLs (NPLs adjusted for provisions) is a key indicator in measuring the potential risks to banks' solvency position. Banks' net NPLs surged to Rs 147 billion in CY09, against Rs 121 billion in the previous year, an increase of 21.5 percent on YoY basis. Relative to 19.4 percent in CY08, the net NPLs to capital ratio deteriorated to 22.3 percent by end-CY09 (**Figure 4.38**). If the amount of net NPLs is written off directly against banks' capital base, then the overall CAR declines to 10.6 percent, still higher than the required level of 10.0 percent. However, while the threat to the capital base in aggregate seems to be in manageable limits, a similar conclusion can probably not be derived for individual banks.

Figure 4.39: Distribution of Net NPLs to Capital Ratio



Source: BSD, SBP

Bank-wise information reveals that in CY09, only 3 banks (as opposed to 7 in CY08), with a share of 4.2 percent in total assets, have registered an overall negative ratio. Moreover, 20 banks with 70 percent share in total assets, posted a net NPL to capital ratio in the range of 0 to 20 percent, i.e. less than the industry average (22.3 percent) (**Figure 4.39**). It is expected that these banks can reasonably manage the potential impact of the net NPLs on their respective capital base. Similar to CY08 however, 2 banks' ratio is over 100 percent, one being a medium-sized bank and the other a small bank. Although these banks do not pose any systemic risk, they need to be closely monitored. Further details show that there are 5 banks with net NPLs to capital ratio in the range of 60 to 80 percent, however their share in total assets of the banking industry is only 2.7 percent. All this information suggests that a few small-sized banks with a small market share in the industry are facing the threat of erosion of their capital base, however banks with a dominant share in the sector have the capacity to absorb loss emanating from a further deterioration in asset quality.

Another method to test the resilience of the banking sector is based on the single-factor sensitivity analysis,[50] conducted for three major risk factors i.e. credit risk, market risk and liquidity risk.[51] The magnitude of change (or 'shock' in terms of the stress testing methodology) in the risk factors is driven by the historical volatility in each variable and an analysis of future movement based on hypothetical scenarios. Specific shocks used in the analysis are summarized in **Table 4.18**. In order to calibrate the realistic impact of these shocks, change in profits has been tax adjusted while calculating the after-shock level of the capital adequacy ratio (CAR) based on the Basel II framework. Under each scenario, after-shock CAR is compared with the minimum required CAR of 10 percent at end-CY09 to assess banks' resilience towards specific shocks. Notably, this process employs a number of explicit and implicit assumptions.

Table 4.18: Shocks to Risk Factors and Impact on CAR based on data for end-December CY09

Shocks	Impact on CAR	After Shock CAR
Credit Risk		
C-1: 15% of performing loans moving to substandard, 15% of substandard to doubtful, 25% of doubtful to loss.	(1.61)	12.51
C-2: Tightening of loan classification i.e. all NPLs under OAEM require 25% provisioning, all NPLs under substandard require 50% and all NPLs in doubtful category require 100% provisioning.	(1.70)	12.42
C-3: 25 % of loans to the textile sector directly downgraded to doubtful category	(0.81)	13.31
C-4: 25% of consumer loans (auto loans, personal loans & consumer durables only) classified into doubtful category.	(0.28)	13.84
C - 5: Critical Infection Ratio (The ratio of NPLs to Loans where capital is wiped out)	(14.12)	-
Market Risk: Interest Rate Risk		
IR - 1: An increase in interest rates by 200 basis points.	(0.53)	13.59
IR - 2: An increase in interest rates by 300 basis points.	(0.79)	13.33
IR - 3: An increase in interest rates by 400 basis points.	(1.06)	13.06
IR - 4: An increase in interest rates by 500 basis points.	(1.33)	12.79
IR - 5: Shift coupled with flattening of the yield curve by increasing 500, 300 and 200 basis points in the three maturities respectively.	(0.58)	13.54
Market Risk: Exchange Rate Risk		
ER - 1: Depreciation of Exchange Rate by 25%.	0.58	14.70
ER - 1: Appreciation of Exchange Rate by 5%.	(0.12)	14.00
Market Risk: Equity Price Risk		
EQ - 1: Fall in the equity prices by 30%.	(0.11)	14.01
EQ - 2: Fall in the equity prices by 50%.	(0.24)	13.88
Combined Market & Credit Shocks		
COMB - 1: Interest rates increase (2%), deterioration of loans to the textile sector (25%) directly downgraded to doubtful category, and fall in equity prices by 30%.	(1.46)	12.66
COMB - 2: Deterioration in loan portfolio (performing to substandard: 15%, substandard to doubtful: 15%, doubtful to loss: 20%), fall in the equity prices (50%).	(1.86)	12.26
Liquidity Risk*	**No. of Illiquid Banks**	
L - 1: Withdrawal of customer deposits by 2%, 5%, 10%, 10% and 10% for five consecutive days respectively.	2	5

*: No. of Illiquid banks on 4th and 5th days

Source: SBP Calculations

[50] Information used in this section is provided by the Banking Surveillance Department. The results are based on the unaudited quarterly data for end-December CY08.

[51] These results, as of any stress test exercise, are not forecasts of expected outcomes, since the scenarios have been designed as "what-if" situations under plausible but extreme assumptions.

The results suggest that credit risk is the most dominant risk factor in terms of its impact on CAR. Amongst the credit shocks, C-1 is the most rigorous, causing the overall CAR of the banking sector to decline to 12.42 percent. While the overall post-shock CAR is above the minimum required benchmark of 10 percent, 3 banks in addition to the 6 banks whose CAR is already below the required level, would experience deterioration in their respective CARs in case of such a scenario.

Credit concentration in textile sector could possibly be another concern for the stability of the banking sector with its share of 19.9 percent in total loan portfolio of banking industry. Deterioration in the quality of loans to the textile sector alone can have a significant impact on banks' CAR, as implied by the assumption of deterioration in the quality of 25 percent of these loans in which case the CAR would decline to 13.31 percent. With a provisioning requirement of 50 percent under the NPLs' doubtful category, the impact of this shock is relatively subdued as none of the individual banks' CAR is impacted with the application of this shock.

The 'Critical infection ratio', which is the stressed NPL to loans ratio resulting in a complete erosion of capital of the banking system, is 29.8 percent as against the present level of actual NPL to loans ratio at 12.9 percent. This suggests that the deterioration in the quality of the credit portfolio needs to twice as bad as its present level to wipe out the equity of banking system.

The Banking sector is fairly resilient towards various market risk shocks (interest rate, exchange rate and equity price movements). CAR of none of the banks would be impacted under the market risk shocks except for the 6 banks with their pre-shock CARs already below 10 percent.

The combined application of credit and market shock (COMB – 2) which assumes 15 percent of performing loans deteriorate to substandard, 15 percent of substandard to doubtful, 25 percent of doubtful to loss, in addition to a decline in equity prices by 50 percent, is the biggest shock of this exercise. Under this shock, the overall CAR declines by 210 bps to 11.9 percent.

In order to assess the resilience of banks towards liquidity risk, a shock of deposits' withdrawal by 2, 5, 10, 10 and 10 percent successively for five consecutive days has a substantial impact on the banking sector. Results of this shock indicate that all banks can withstand this shock for 3 consecutive days, subsequent to which on day 4, 3 mid-sized banks would need to force-sell their non-liquid assets to honour the assumed withdrawals. Further, on day-5, one more bank from the big 5 group would have to sell its non-liquid assets to honour the assumed deposit withdrawal.

Thus the results of sensitivity exercise for data at end-CY10 suggests that the strong solvency profile of the banking system provides sufficient cushion to absorb losses in case of any significant adverse movements in the credit, liquidity and market risk factors.

4.5 Conclusion

Subsequent to the quagmire of challenges faced by the banking sector in CY08, CY09 was a year of risk consolidation for the banking sector, with a marked rebalancing of its asset portfolio from advances to investments. Banks' efforts to contain the element of credit risk were clearly visible from both: (1) their inclination to invest in government securities, and (2) their preference to meet the financing needs of the government rather than the private sector, from whom the demand for credit also remained subdued given the general economic slowdown.

The growth of non-performing loans, a key credit risk indictor, showed deceleration, and the emphasis on investments rather than expansion of the loan book, is expected to have a positive carry-over impact on provisioning expense in CY10. While SBP's monetary easing stance during CY09 had a beneficial impact on market risk elements, a reversal in the policy stance subsequently carries implications for both market risk and credit risk, as higher interest rates impinge on borrowers' repayment capacity.

Notably, profitability of the banking sector in CY09 was skewed towards the top 10 players rather than shared across the industry. This is an indication of the continued strains faced by some medium-sized and most of the small banks, particularly given high loan-loss provisions which have impacted their earnings, and consequently their capital base, making it difficult for them to comply with minimum capital requirements.

Sensitivity analysis based on single-factor stress testing exercise show that banking sector is well capitalized to withstand variety of shocks with respect to credit and market risk as well as combinations of the two. Bank-wise information indicates that except a few small banks which continue to face problems, individual institutions have further built up there risk absorption capacity and they are expected to cope with any potential deterioration in risk factors.

Developments in the Banking Sector in H1-CY10 - A Brief Review[52]

While CY08 was a challenging year for the banking sector when adverse developments in various risk factors severely tested its resilience, CY09 was a year of risk consolidation, with a marked shift in asset allocation from loans to investments, and a visible slowdown in the previously rapid process of deterioration of asset quality. The gradual process of macroeconomic recovery in CY09, no matter how tenuous, helped the banking sector in reassessing its approach towards improving its credit risk profile.

Continuing further into the first half of CY10, the process of macroeconomic recovery/stabilization was marred by the resurgence in inflationary pressures, from as early as January CY10, when CPI inflation increased to 13.7 percent, from 10.5 percent in December CY09, and continued to hover around this level until June CY10 when it declined to 12.7 percent. With an eye on the gradually recovering economic growth, SBP decided to adopt a more cautious stance and kept the policy discount rate unchanged in the monetary policy statement / decisions in January, March and May CY10. The reversal in the policy stance, from easing to tightening, was then put into place explicitly in July CY10, when the discount rate was increased by 50 bps to 13.0 percent, and then again by 50 bps in September CY10.

In the midst of this particular operating environment, banks were generally able to sustain the modest progress in their profitability, solvency and other performance indicators in H1-CY10. Except for a few small banks which continue to face difficulties in their risk-taking and risk-absorption capacity, the overall banking system continued to demonstrate its resilience to the frequently changing operating environment and associated risks.

The composition of the asset base in CY09, with incremental assets skewed towards investments rather than loans, remained the same during the first half of 2010. The lagged impact of various adverse factors continued to test the repayment capacity of the borrowers and served to increase banks' risk-averse posture. Growth in incremental NPLs had decelerated substantially in CY09. In H1-CY10 also, the overall risks to advances portfolio showed some respite, with growth in NPLs at 6.4 percent. Nonetheless, aging of the already classified loan portfolio from partially provided to fully provided loss category led to additional provisioning requirements.

In this backdrop, the financial performance of the banking sector during H1-CY10 is briefly reviewed in this section.

Having grown by 15.8 percent in CY09, banks' asset base increased by a mere 3.9 percent in H1-CY10. Quarterly data shows that this growth was largely concentrated in the second quarter of CY10. Assets actually contracted by 1.5 percent during Q1-CY10, however growth of 5.4 percent in Q2-CY10 offset that effect. Further detail on different components of assets shows that the contraction in assets was driven by net retirement in advances and deceleration in investment growth.

As mentioned in the introduction to this review, the pattern of asset composition, as shaped in CY09, persisted in H1-CY10 and banks continued to hold growing share of investments in their asset portfolio. However, when compared to the 30.2 percent growth in H1-CY09, growth in investments decelerated to 8.0 percent in H1-CY10. The loan portfolio, on the other hand, showed net retirement of 0.5 percent during H1-CY10, and its share in assets dipped from 49.7 percent by end-CY09 to 47.6 percent by end H1-CY10.

[52] Detailed analysis can be seen in the Quarterly Performance Review of the Banking System for quarter ended March and June 2010, Banking Surveillance Department, State Bank of Pakistan.

Details on banks' advances portfolio shows that during Q1-CY10 commodity finance, mainly obtained for wheat and cotton, was retired by 13.0 percent. However, in Q2-CY10 it expanded by 33.0 percent. The marginal decline in growth of advances was reflected in the fall in outstanding advances to major segments including corporate, SMEs, agriculture and consumer finance. In contrast to these retirements, government continued to be the dominant user of bank credit and its share in total loans grew to 18.4 percent by end H1-CY10, from 17.4 percent at end-CY09. The net impact of the continued change in asset mix is that the private sector, the engine of growth in the economy, is losing its share in total bank credit.

Breakdown of banks' funding base shows that the expansion in assets in the first half of 2010 was mainly funded by growth in deposits, which grew by 7.1 percent during in H1-CY10.[53] However, this increase was observed in Q2-CY09 only which can be attributed to the multiplier-effect of credit expansion for commodity finance, and banks' efforts to mobilize deposits to meet end-June targets. Unlike deposits, total borrowings declined by 14.2 percent in H1-CY10 (as against an increase of 11.1 percent in H1-CY09). Detailed data shows that secured borrowings, which constitute 83.6 percent of total borrowings, decreased by 18.8 percent in H1-CY10. On the whole, borrowings from both SBP and from the inter-bank market showed substantial decline.

Table 4.19: Key Financial Indicators

percent

	CY08	H1-CY09	CY09	H1-CY10
Growth of Assets	8.8	7.7	15.8	3.9
Investments Growth	-14.8	30.2	59.9	8.0
Advances Growth	18.0	-0.8	2.1	-0.5
Risk Weighted CAR*	12.3	13.5	14.0	13.9
Tier 1 Capital to RWA*	10.2	11.3	11.6	11.7
NPLs to total loans	10.5	11.5	12.6	12.9
Provisions to NPLs	69.6	70.2	69.9	73.2
Net NPLs to capital	19.4	18.6	20.4	17.2
ROA after tax	0.8	1.0	0.9	1.1
ROE after tax	7.8	9.5	8.9	10.8
Liquid assets to total assets	28.2	31.2	32.7	34.2
Advances to Deposits	75.2	69.6	67.7	63.0

* Figures for CY08 & H1-CY09 are based on Basel II framework.

Sources: BSD, SBP

Unlike the double-digit growth in the equity base during H1-CY09, equity of the banking system increased only marginally by 1.0 percent in H1-CY10. Component–wise detail shows that when compared to the 3.4 percent increase in H1-CY09, banks' reserves declined by 8.3 percent in H1-CY10. Another component that dampened equity growth was the revaluation of assets, which registered a deficit of 17.1 percent in H1-CY10, in contrast to the 62.2 percent surplus in H1-CY09.

Growth in NPLs, a key indicator of credit risk in the banking system, continued to decelerate in H1-CY10 and increased by 6.4 in H1-CY10, over end-CY09. This relatively small increase in banks' NPLs and decline in advances' portfolio translated into an NPLs to loans ratio of 12.9 percent, as against 12.6 percent at end-CY09 CY09. Despite the slowdown in growth of incremental NPLs, yet the provisioning expense related to the outstanding stock of NPLs increased in H1-CY10. The banking sector booked provisioning expense of Rs 30.4 billion during H1-CY10, which is less than Rs 41.8 billion recorded in the corresponding period of the previous year. In absolute terms, banks' net NPLs (NPLs net of provisions) reached Rs 123.1 billion by end H1-CY10.

An assessment of NPLs by category reveals that there has been a continuous increase in flow of NPLs in the loss category, which grew by 28.4 percent in H1-CY10. This explains the need for additional provisioning to accommodate aging of NPLs from partially provided to the fully provided category. Consequently, the provisioning coverage ratio increased to 73.2 percent by end H1-CY10, as against 69.9 percent at end-CY09.

[53] This growth in deposits is driven by 8.8 percent growth in government deposits and 8.1 percent growth in private sector deposits.

The shift in banks' assets composition from advances to investment has had a beneficial impact on the liquidity profile of the banking system and pushed the share of liquid assets in total assets to 34.2 percent by end H1-CY10, as against 32.7 percent at end-CY09. Improvement in liquidity outlook is also evident from the decline in the advances to deposits ratio, another key indicator of liquidity risk, to 63.0 percent by end H1-CY10 as against 67.7 percent at end the of CY09. This development in H1-CY10 emanates from the 7.1 percent increase in deposits and a marginal contraction of 0.5 percent in advances.

As a result of these various developments, banks' risk-bearing capacity improved during H1-CY10. The profitability position at end-CY09 was sustained in H1-CY10, and the banking sector earned after-tax profit of Rs 35.9 billion, as compared to profit of Rs 28.6 billion in H1-CY09. Other conventional indicators of profitability also indicate signs of improvements: the after-tax ROA and ROE of the banking sector for H1-CY10 was 1.1 percent and 10.9 percent, as against 0.9 percent and 8.9 percent for CY09, respectively.

Solvency of the banking system is judged by the amount of capital available to withstand risks to banks' risk profile, as well as by the capital adequacy ratio (CAR). In H1-CY10, regulatory capital increased by Rs. 4.4 billion, to reach Rs. 602.9 billion. In view of the enhanced minimum capital requirements (MCR), banks are required[54] to increase their minimum capital to Rs 7.0 billion by end-CY10. Bank-wise analysis shows that 21 out of 40 banks are already compliant, and it is expected that the remaining 19 banks will enhance their capital base during the year to meet the criteria set forth by SBP.

On an overall basis, risk-weighted assets (RWA) grew by 1.8 percent in H1-CY10, as against the increase of 1.3 percent in H1-CY09. Although the share of public sector in net advances has increased slightly, from 17.4 percent to 18.4 percent, yet the credit to Public Sector Enterprises (PSEs) increased by 59.4 percent,[55] which partially explains the increase in credit RWA even when there was net retirement in advances during H1-CY10. Market RWA, on the other hand, constitute 5.6 percent of total RWA and decreased by 1.7 percent on account of expansion in banks' investment portfolio in favor of zero-risk-weighted government securities. Given these development, the CAR of the banking sector remained comfortable at 13.9 percent compared to 14.0 percent for CY09 and 13.5 percent for H1-CY09. A similar development is also visible in the core capital to RWAs ratio, which reached 11.7 percent from 11.6 percent for CY09. As of end-June CY10, bank-wise information indicates that 6 out of 40 banks, constituting 6.6 percent share in total assets, are not compliant with the minimum requirement of 10.0 percent CAR. To ensure systemic stability of the banking sector, SBP is encouraging merger/restructuring[56] of these non-compliant banks. Furthermore, net NPLs to capital ratio, which focuses on threat to capital base from credit risk, declined from 20.4 percent at end-CY09 to 17.2 by end-June CY10.

To summarize, the review of the first half of CY10 shows that banks continue to consolidate their risk profile, a trend which started in CY09. Presently, the major risks facing banks include: (1) re-pricing of the investment portfolio which is largely concentrated in risk-free government securities in a rising interest rate environment; (b) credit concentration in commodity financing and in other government owned and controlled enterprises; and (c) lagged impact of the havoc caused by the nation-wide flood, as potential risk to the credit portfolio and operational efficiency of those banks which were operating in the worst-hit geographical areas. However, the continuity of reforms will enhance the systemic stability of the banking system.

[54] BSD Circular No 7 dated April 15, 2009.
[55] Based on data from Statistics Department.
[56] Quarterly Performance Review of the Banking System, June 2010, State Bank of Pakistan.

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