State Bank of Pakistan

Banking Surveillance Department

Quarterly Performance Review of the Banking System

December 2008

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List of Abbreviations

ADD	Authorized Derivatives Dealer
ADR	Advances to Deposits Ratio
BIA	Basic Indicator Approach
bps	Basis Points
CAR	Capital Adequacy Ratio
CB	Commercial Bank
CCF	Credit Conversion Factor
CCS	Cross Country Swaps
CDR	Credit to Deposit Ratio
CPI	Consumer Price Index
CPV	Credit Portfolio View
CRM	Credit Risk Mitigants
CRR	Cash Reserve Requirements
CRWA	Credit Risk Weighted Amounts
CY	Calendar Year
DFIs	Development Finance Institutions
ERF	Export Refinance
EURIBOR	Euro Interbank Offered Rate
EXR	Exchange Rate
FB	Foreign Bank
FDBR	Financial Derivatives Business Regulations
FDR	Financing to Deposits Ratio
FR	Forward Rate Agreements
FSV	Forced Sale Value
GDP	Gross Domestic Product
Govt.	Government
HTM	Held-to-Maturity
IBIs	Islamic Banking Institutions
IRS	Interest Rate Swaps
KIBOR	Karachi Interbank Offered Rate
KSE	Karachi Stock Exchange
LIBOR	London Interbank Offered Rate
LoLR	Lender of Last Resort
LPB	Local Private Bank
LR	Interest Rate
MCR	Minimum Capital Requirement
MRWA	Market Risk Weighted Amounts
MTB	Market Treasury Bill
NII	Net Interest Income

NMI	Non-Market Maker Financial Institution
NOP	Net Open Position
NPF	Non Performing Finance
NPL	Non Performing Loan
NPLR	Loan Infection Ratio
NSS	National Saving Scheme
OMO	Open Market Operation
ORWA	Operational Risk Weighted Amounts
OTC	Over the Counter
PAT	Profit After Tax
PIB	Pakistan Investment Bond
PICIC	Pakistan industrial Credit and Investment Corporation
PKR	Pak Rupee
PSCB	Public Sector Commercial Bank
PTCs	Participation Term Certificates
QoQ	Quarter on Quarter
QPR	Quarterly Performance Review
QRC	Quarterly Report of Condition
ROA	Return on Asset
ROE	Return on Equity
RSA	Rate Sensitive Assets
RSL	Rate Sensitive Liabilities
RWA	Risk Weighted Assets
SA	Standardized approach
SB	Specialized Bank
SBP	State Bank of Pakistan
SECP	Securities and Exchange Commission of Pakistan
SLR	Statutory Liquidity Requirements
SME	Small and Medium Enterprise
TFCs	Term Finance Certificates
USD	United States Dollar
YoY	Year on Year

Glossary

Capital Adequacy Ratio is the amount of risk-based capital as a percent of risk-weighted assets.

Consumer Financing means any financing allowed to individuals for meeting their personal, family or household needs. The facilities categorized as Consumer Financing include credit cards, auto loans, housing finance, consumer durables and personal loans.

Corporate means and includes public limited companies and such entities, which do not come under the definition of SME.

Credit risk arises from the potential that a borrower or counter-party will fail to perform an obligation or repay a loan.

Discount rate is the rate at which SBP provides three-day repo facility to banks, acting as the lender of last resort.

Duration (Macaulay's Duration) is a time weighted present value measure of the cash flow of a loan or security that takes into account the amount and timing of all promised interest and principal payments associated with that loan or security. It shows how the price of a bond is likely to react to different interest rate environments. A bond's price is a function of its coupon, maturity and yield.

Force Sale Value (FSV) means the value that can currently be obtained by selling the mortgaged / pledged assets in a forced / distressed sale conditions. This value fully reflects the possibility of price fluctuations.

GAP is the term commonly used to describe the rupee volume of the interest-rate sensitive assets versus interest-rate sensitive liabilities mismatch for a specific time frame; often expressed as a percentage of total assets.

Gross income is the net interest income (before provisions) plus non-interest income; the income available to cover the operating expenses.

Interbank rates are the two-way quotes namely bid and offer rates quoted in interbank market are called as interbank rates.

Interest rate risk is the exposure of an institution's financial condition to adverse movement in interest rates, whether domestic or worldwide. The primary source of interest rate risk is difference in timing of the re-pricing of bank's assets, liabilities and off-balance sheet instruments.

Intermediation cost is the administrative expenses divided by the average deposits and borrowings.

Liquid assets are the assets that are easily and cheaply turned into cash – notably cash and short-term securities. It includes cash and balances with banks, call money lending, lending under repo and investment in government securities.

Liquidity risk is the risk that the bank will be unable to accommodate decreases in liabilities or to fund increases in assets. The liquidity represents the bank's ability to efficiently and economically accommodate decreases in deposits and to fund increases in loan demand without negatively affecting its earnings.

Market risk is the risk that changes in the market rates and prices will impair an obligor's ability to perform under the contract negotiated between the parties. Market risk reflects the degree to which changes in interest rates, foreign exchange rates, and equity prices can adversely affect the earnings of a bank.

Net interest income is the total interest income less total interest expense. This residual amount represents most of the income available to cover expenses other than the interest expense.

Net Interest Margin (NIM) is the net interest income as a percent of average earning assets.

Net loans are the loans net of provision held for NPLs.

Net Non-Performing Loans (NPLs) is the value of non-performing loans minus provision for loan losses.

Net NPLs to net loans means net NPLs as a percent of net loans. It shows the degree of loans infection after making adjustment for the provision held.

Non-Performing Loans (NPLs) are loans and advances whose mark-up/interest or principal is overdue by 90 days or more from the due date.

NPLs to loans ratio/Infection ratio stands for NPLs as a percent of gross loans.

Paid-up capital is the equity amount actually paid by the shareholders to a company for acquiring its shares.

Rate Sensitive Assets (RSA) are assets susceptible to interest rate movements; that will be re-priced or will have a new interest rate associated with them over the forthcoming planning period.

Repricing risk arises from timing differences in the maturity of fixed rate and the repricing of floating rates as applied to banks' assets, liabilities and off-balance sheet positions

Return on assets measures the operating performance of an institution. It is the widely used indicator of earning and is calculated as net profit as percentage of average assets.

Return on equity is a measure that indicates the earning power of equity and is calculated as net income available for common stockholders to average equity

Risk weighted Assets: Total risk weighted assets of a bank would comprise two broad categories: credit risk-weighted assets and market risk-weighted assets. Credit risk weighted assets are calculated from the adjusted value of funded risk assets i.e. on balance sheet assets and non-funded risk exposures i.e. off-balance sheet item. On the other hand for market risk-weighted assets, first the capital charge for market risk is calculated and then on the basis of this charge amount the value of Market Risk Weighted Assets is derived.

Secondary market is a market in which securities are traded following the time of their original issue.

SME means an entity, ideally not a public limited company, which does not employ more than 250 persons (if it is manufacturing/ service concern) and 50 persons (if it is trading concern) and also fulfils the following criteria of either 'a' and 'c' or 'b' and 'c' as relevant:

(a) A trading / service concern with total assets at cost excluding land and building upto Rs50 million.

(b) A manufacturing concern with total assets at cost excluding land and building upto Rs100 million.

(c) Any concern (trading, service or manufacturing) with net sales not exceeding Rs300 million as per latest financial statements.

Tier-I capital: The risk based capital system divides capital into two tiers- core capital (Tier I) and supplementary capital (Tier II and Tier III). Tier 1 capital includes fully paid up capital, balance in share premium account, reserve for issue of bonus shares, general reserves as disclosed on the balance-sheet and un-appropriated /un-remitted profit (net of accumulated losses, if any).

Tier-II capital or Supplementary Capital (Tier II & III) is limited to 100 percent of core capital (Tier I). Tier II includes; general provisions or general reserves for loan losses, revaluation reserves, exchange translation reserves, undisclosed reserves and subordinated debt.

Tier-III capital consists of short-term subordinated debt and is solely held for the purpose of meeting a proportion of the capital requirements for market risks.

Yield risk is the risk that arises out of the changes in interest rates on a bond or security when calculated as that rate of interest, which, if applied uniformly to future time periods sets the discounted value of future bond coupon and principal payments equal to the current market price of the bond.

Yield curve risk materializes when unanticipated shifts have an adverse effect on the bank's income or underlying economic value.

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Quarterly Performance Review of the Banking System December 2008[1]

1. Overview

Though the concerns about the solvency of top banks of the world are weighing on the investors' confidence across the globe, the banks in Pakistan are still maintaining their resilience. The strength of the banking system largely comes from the prudent regulatory and supervisory regime, strengthened risk management and governance standards in banks as well as the improved solvency and earning capacity of banks.

During the quarter under review, the banking system successfully weathered a liquidity stress. The stress emerged in usual timeframe i.e. Eid-ul-Fitar deposit withdrawal and a number of global, domestic and industry specific factors further compounded it. Specifically, the news of failure of some global financial giants burdened the liquidity profile of banks that together with closure of capital market raised concerns about the strength of the Pakistani banks. The situation aggravated by the intensive rumormongering, leading to deposit withdrawal from the banking system and severely affecting some banks. However, strong capacity developed by the banks and regulators over the years and the offsetting measures taken by the State Bank of Pakistan(SBP) enabled the system to avert this transitory stress from converting into a financial crisis .

This temporary liquidity stress however decelerated growth of the system, which had already been showing the signs of stabilization for the last one year or so. The quarter under review, which is historically characterized by acceleration in economic activities and strong growth in banks' credit and deposits witnessed a passive growth. Despite slight increase in credit risk and some relapse in the earnings, key financial soundness indicators of the banking system remain within satisfactory ranges, though challenged considerably. The stress testing results also substantiate strong resilience of the banking

[1] The report presents performance of the banking system on the basis of unaudited Quarterly Report of Condition submitted by banks for the quarter ended 31st December, 2008. The figures in the report may vary from the annual audited results which provide full year coverage of the banking system.

system towards the major risk factors as capital base of the system remains strong.

Asset base of the banking system increased by 2.6 percent over the quarter to Rs5,653 billion. This growth was supported by 3.6 percent growth in deposits and 7.0 percent growth in equity. Resultantly, the system's reliance on borrowed funds decreased by the end of quarter, although some of the small banks remained highly dependent upon borrowings. Loans growth also remained low i.e. 3.7 percent with a significant portion of these additional loans going to public sector enterprises (PSEs). Building vulnerabilities in the credit risks and constrained liquidity profile increased the banks interest in short-term government papers. However, the liquidity profile of the banking system remained constrained during most part of the quarter. Relatively stronger advances growth in the recent quarters had significantly increased Advances to Deposits Ratio (ADR) of the system by the inception of Dec-08 quarter. Further, due to the shift in asset mix away from marketable Government (Govt.) papers, the fund-based liquidity of the system had also contracted. However, the post-quarter figures indicate a reversal in trend and gradual improvement in liquidity of banks.

Due to slower growth in advances, which carry higher risk weights, Risk Weighted Assets (RWA) remained stable at the previous quarter's level. Further, fresh injection of equity and satisfactory earnings improved Capital Adequacy Ratio (CAR) of the banking system under Basel-II framework to 12.2 percent (12.6 percent for commercial banks), while the CAR improved to 13.0 percent jointly for banks and Development Finance Institutions (DFIs). The composition of the risk-based regulatory capital also improved with contraction of the supplementary capital due to write down in revaluation surpluses, thus improving the core capital to RWA ratio of banks to 10.2 percent.

Building pressures in the economy increased the Non-Performing Loans (NPLs) of the banking system by 12.5 percent to Rs313 billion (Rs278 billion in Sep-08). Infection ratio further deteriorated to 9.1 percent. With major increase in substandard and doubtful categories, which require partial provision coverage, the net infection ratio and NPLs coverage ratio deteriorated to 2.5 percent and 75[2] percent, respectively, corresponding to the levels of CY04 and CY05. The worsening business and economic environment somewhat increased the credit risk, which compelled the banks to adopt cautious lending strategy, particularly in consumer sector where the advances have been decreasing since the start of CY08. Meanwhile banks are already strengthening their credit extension and administration processes and gearing up efforts for the recovery of NPLs.

The banking system maintained its strong earning capacity and posted a profit after tax (PAT) of Rs63 billion, though lower than last couple of years. The aggressive asset loss recognition strategy of some banks, additional provisions for the loan loss charges and the proportionately higher increase in operating expenses has to some extent affected the profitability and brought the key earning indicators under pressure over the past quarter. The pre-tax ROA deteriorated to 1.7 percent (2.0 percent in Sep-08 and 2.2 percent in CY07).

The SBP, keeping in view the present depressing environment, has devised a comprehensive strategy and contingency plan for effectively managing troubled banks and coping with any liquidity stress, burgeoning NPLs and solvency issues. For addressing liquidity problem in a bank/DFI, the strategy envisage a tri-tiered arrangement viz liquidity support from market, SBP and the Federal Government. This together with a multifaceted approach developed for the resolution of solvency issues provides SBP with host of options for tackling problem banks.

Going forward, the impending economic slowdown may dampen the growth rates of the banking system in coming quarters. Low demand for banks' advances will shift asset mix away from advances to Govt. papers, and deposits are likely to grow at a steady pace. This respite in liquidity may have positive bearing on interest rates. The latest post

[2] The quarterly financial position is required to be submitted within 30 days of the quarter end. For Dec-08 quarter, results were submitted by end January, 2008. The policy for recognition of provisioning requirements, allowing benefit of FSV, was introduced in the last days of January 2009. The effect of resultant reduced provisioning requirements was not fully recognized in the unaudited quarterly financials. These changed requirements when incorporated in the annual audited financial accounts may result in lower provisioning charges for some of the banks.

quarters statistics of Mar-09 also vindicate these trends. Since the last week of Dec-08, the asset base over these weeks has grown by 2.3 percent - with 1.8 percent and 11.3 percent increase in deposits and investments, respectively, while advances declined by 2.3 percent. The present tough economic environment will also heighten the credit risk and affect the earnings due to increased loan loss charges and constrained incomes. The system is expected to remain profitable in the coming quarters, though this phenomenon may not be widely shared across the market players.

Box: 1

Quality of Unaudited Quarterly Data Reported by Banks

The Quarterly Performance Review of the banking system (QPR) is based on unaudited Quarterly Report of Condition (QRC), which banks/DFIs submit to SBP within 30 days of the close of each quarter. Till 2007, SBP had a practice of issuing QPR for first three quarters ending March, June and September. The December quarter embodies the full year performance results, which are subject to full scope audit and are covered in annual financial statements. The process of compilation of annual financial statements, getting them audited and publishing them after due approval of the Annual General Meeting usually takes 90 days. The regulatory requirements also allow publishing the audited annual accounts by end March. Compilation of the annual data and presentation of the annual performance of the banking system take few more months after finalization of annual results. In order to bridge this gap as well as keeping in view the importance of timely presentation of performance in existing tough times for the business, QPR for December 2008 has been prepared. The review for the final quarter poses another challenge i.e. difference between quarterly and annual data. To understand the difference and judge the quality of the two variant of December data following brief analysis has been prepared.

A comparison of the audited results vis-a-vis provisional QRC data of the last five years shows that both statistics have insignificant variation. Particularly, basic asset and liability components viz. advances and deposits show the lowest variations. The variation is slightly higher in case of NPLs and earnings; (see Table A).

Table-A: Variation between QRC Data and Audited Data

	CY-03	CY-04	CY-05	CY-06	CY-07	Average Variation	Average Variation (Absolute)
Total Assets	0.1	-0.1	-0.5	-2.0	-0.2	-0.5	0.6
Loans (net)	0.0	-0.1	0.1	-1.6	0.2	-0.3	0.4
Deposits	0.0	0.1	0.1	-1.6	0.0	-0.3	0.4
NPLs	0.0	0.8	0.9	-2.5	4.6	0.8	1.8
Pre-Tax Profit	-3.0	-2.6	-0.9	-6.1	6.0	-1.3	3.7
After-Tax Profit	-3.2	0.5	-2.1	-7.2	6.6	-1.1	3.9

** Variation is defined as [(QRC data - Audited Data)/Audited Data X 100]*

Further analysis shows relatively higher divergence between audited annual and unaudited QRC data for the last couple of years. However, this variation resulted from extraordinary events viz; high value amalgamation transactions and changes in regulatory requirements for loan classification at or about year-end 2006 & 2007. Therefore, QRC that has shorter reporting time (30 days) could not fully cover the financial dynamics of such developments that were fully accounted for in annual audited accounts. Nevertheless, the average variations between quarterly and annual data over last five years is generally well within ± 1.5 percent while average variation in absolute terms remains less than 4 percent. Therefore, the quality of quarterly data, except for profitability and NPLs figures for the year 2006 and 2007 which were marked with extraordinary events, can be considered up to the mark and largely compatible with annual audited data.

2. Asset and Funding Structure

Figure 2.1: Total Assets Growth Rates (Quarterly Basis)

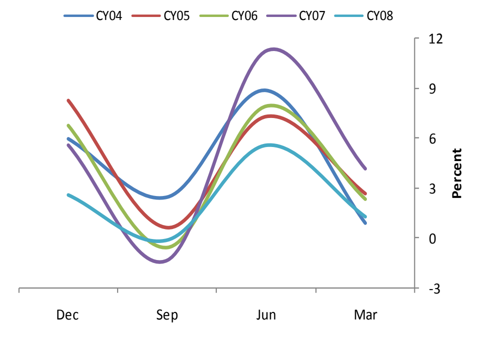


Figure 2.2: Quarterly Growth Rates of Deposits

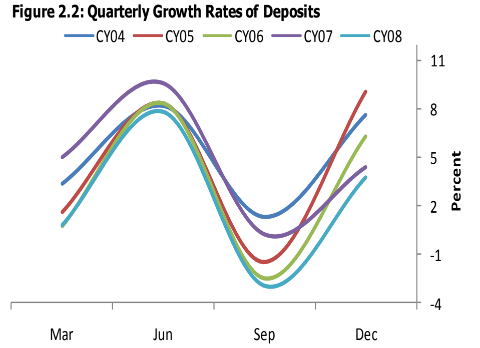


Figure 2.3: Quarterly Growth Rates of Loans

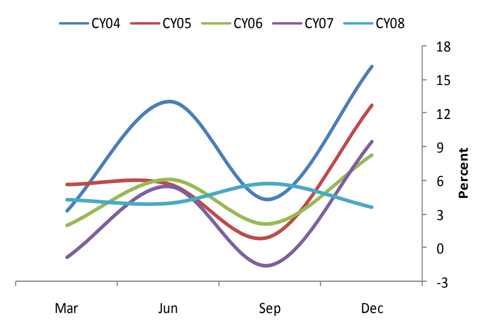
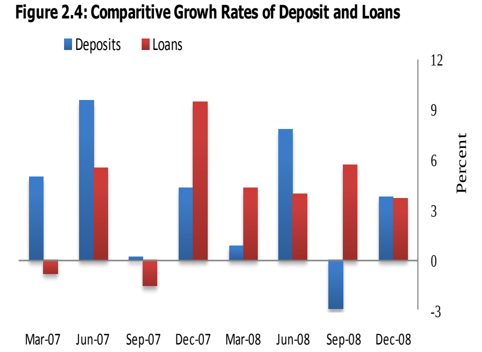


Figure 2.4: Comparitive Growth Rates of Deposit and Loans



The provisional results of the last quarter of CY08 indicate that an over the quarter increase of Rs144 billion (2.6 percent) in total assets has been significantly lower than the trends for corresponding quarter of the past years (see Figure 2.1).

In terms of asset mix and growth of advances and deposits, banking system usually follow an established pattern. CY08 however observed a deviation in the growth pattern of advances (see Figures 2.2 & 2.3). Slackness in the demand for bank credit during CY07 in the face of slowdown in economic activities and tightening of monetary regime, forced the banks to reposition their lending strategy and asset profile. The asset mix of the banking system gradually shifted from lending to investments during the first three quarters of CY07 – investment reaching the peak levels i.e. 26.6 percent of total assets in Sep-07. However, the significant rise in inflation rates pushed the real lending rates down and increased credit needs of the public sector enterprises enlivened the demand for bank advances in last quarter of CY07. Moreover, a rising trend in interest rates dissuaded banks' investment in long-term govt. papers. The advances and their share in asset base again started to inch up. This trend, though with passive intensity, prevailed throughout CY08 while the growth in deposits remained quite low over this period (see Figure 2.4). Consequently, the ADR witnessed a sharp increase, reaching 76.0 percent by the inception of quarter under review. The quarter, though faced with significant liquidity stress, also witnessed a marginal increase in advances and their share in total assets.

Major dampening factors like global financial turmoil, economic slowdown and contractionary monetary policy were compounded by an unusual liquidity stress during Oct-Nov 2008. As a matter of fact the usual phenomenon of pre-Eid-ul-Fitr heavy deposit withdrawal (see Figure 2.5) was aggravated by a number of factors. The current account deficit was quite high and the real exchange rate had significantly appreciated to unsustainable levels which ultimately put pressure

Figure 2.5: Trends in Composition of Liabilities

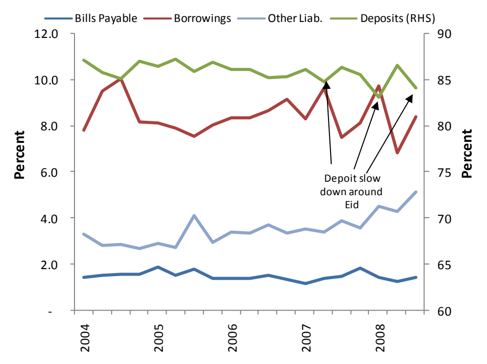


Figure 2.6: Trends in Deposits and Advances

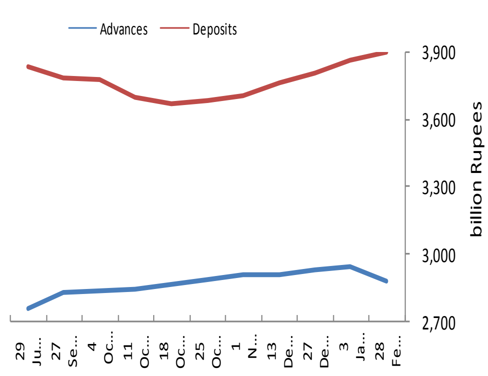
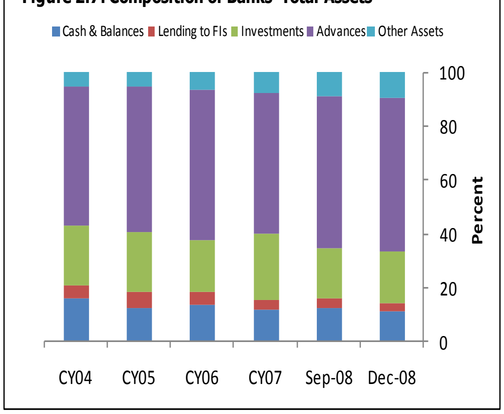


Figure 2.7: Composition of Banks' Total Assets



on PKR/USD exchange rate and led to capital outflows. On top of it, breakdown of capital market in Pakistan and the series of news on the financial meltdown in the advanced markets raised general public doubts about the financial strength of some Pakistani banks. By this time, due to relatively higher growth in advances, the liquidity profiles of the banks had already been burdened. In this backdrop, the usual post Eid liquidity pressure in interbank market led to rumormongering about the banks. Resultantly, banking system lost the deposit base to the tune Rs115[3] billion over the first three weeks of October 2008. The impact was severe in some banks especially the small banks with the constrained liquidity profile in terms of ADR. However, deposit base regained the initial levels in second week of December while the latter half of the month produced an over the quarter growth of 3.8 percent (see Figure 2.6). The banks and SBP took timely measures for stemming the liquidity problem, averting any likely threats to the stability of the system. These measures helped the system in successfully weathering transitory liquidity stress and enabled it meeting the economy's usual high credit demand in last quarter (see Box 2).

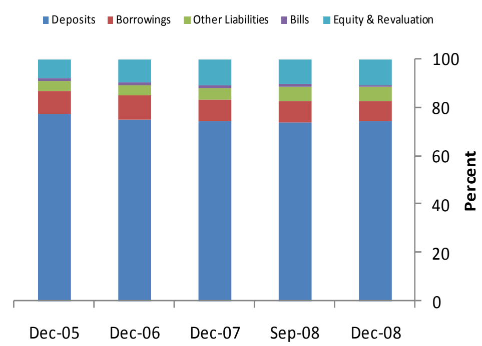
The reduction in Cash Reserve Requirements (CRR) and Statutory Liquidity Requirements (SLR) in early weeks of October 2008 to manage the liquidity stress resulted in a significant decline in cash and treasury bank balances by the end of Dec-08 quarter thus releasing funds for financing the growth of advances. However, the investments, especially the Govt. papers, which declined in both absolute rupee terms as well as a proportion of total assets during the first nine months of CY08, registered a slight increase during the quarter. Actually, the heightened credit risk on account of deterioration in macroeconomic fundamentals and already constrained liquidity profile induced the banks to shift their preference towards risk-free Market Treasury Bills (MTBs) (see Figure 2.7).

On the funding side, despite a significant liquidity crisis at the inception of quarter, the deposits posted an increase higher than growth in asset base. Similarly, due to injection of fresh equity by a

[3] Based on figures quoted in various issues of press communiqué at" www.sbp.org.pk/publications/press-com/index.htm ".

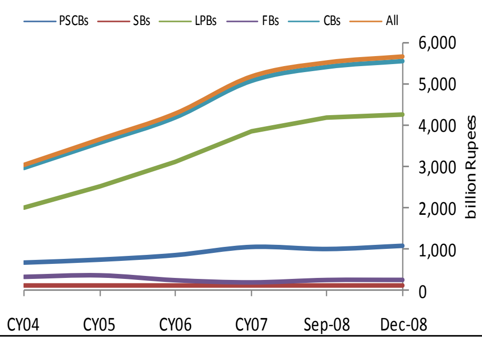
few banks and satisfactory earnings, shareholders' equity also increased. Resultantly, the share of deposits and equity in overall funding structure slightly improved while systems' reliance on borrowings receded towards the end of the quarter (see Figure 2.8).

Figure 2.8: Funding Structure of the Banking System



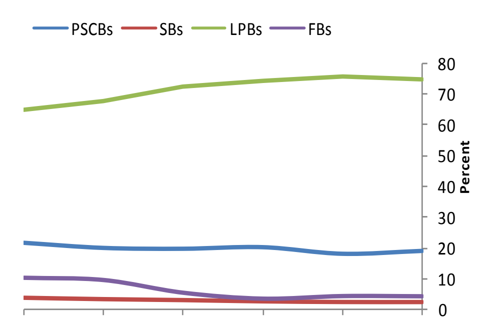
The group-wise analysis shows passive growth of 1.4 percent in the asset base of LPBs during the quarter. PSCBs that witnessed significant reduction in their asset base in previous two quarters, grew by 7.6 percent. Accordingly, the market share of the group improved to 18.8 percent. FBs over the years have witnessed a persistent decline due to the mergers and reorganization of the group banks into LPBs. However, entry of a new foreign bank slightly improved the market share of the group during 2008 (see Figures 2.9 & 2.10).

Figure 2.9: Trend in Total Assets of Banking System



The banking system is marked with a high concentration as a fewer number of banks hold a major share of the system's total assets and deposits. This concentration has been following an overall declining trend as the medium-sized banks gradually gained market share. However, due to unusual liquidity stress that affected mainly the small and medium sized banks, the market share of five large banks inched up to 52.4 percent (51.3 percent in Sep-08). Annex-II shows the market structure of the banking system on key financial indicators.

Figure 2.10: Trends in Market Structure of Banking System



Deposits constitute the largest portion of banks' funding structure. The deposit component, which used to witness a strong growth in last quarter, registered a slow growth of Rs153 billion (3.8 percent) this year. Since the asset base grew at even slower pace, the share of deposits in funding structure improved by 0.8 percent to 74.6 in last quarter. Year-on-Year basis 9.5 percent growth in deposits fell short of 18.9 percent growth in advances. Incidentally, foreign remittances, a key factor behind the recent years' strong growth in deposits, maintained the momentum and grew by 17 percent over CY08. Though there was a significant slowdown in remittances during October 2008, the pattern was restored in following months.

Figure 2.11 Composition of Deposits

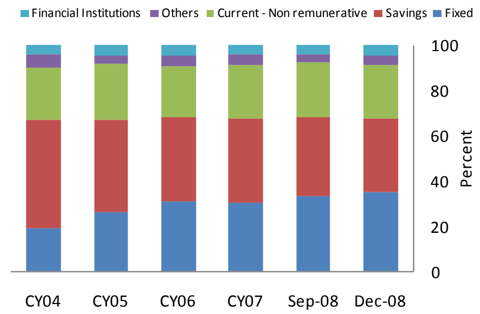
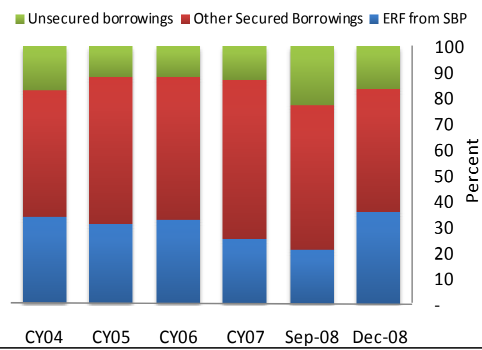


Figure 2.12: Composition of Banks' Borrowings

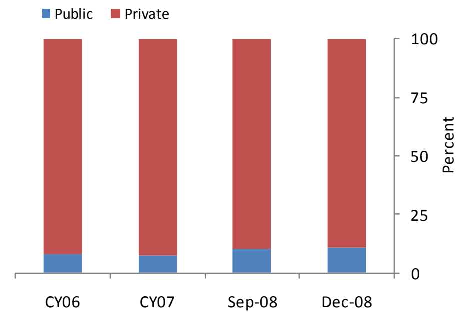


A disaggregated analysis of the deposits indicates surge in share of fixed deposits while the share of saving accounts receded during the quarter. The industry has been witnessing a gradual shift in deposits from savings to fixed-term deposits for quite some time. This trend emerged largely in response to SBP's policy incentives to encourage the mobilization of longer terms deposit so as to reduce the maturity mismatches. Consequently, fixed deposits gained a significant share of savings deposits since 2004. This trend of gradual shift stabilized to some extent during CY07. However, SBP's policy drive to increase the CRR and SLR in last week of Jun-08 and exemption of long-term deposits also from SLR requirements during the quarter under review seem to have considerably invigorated this trend (see Figure 2.11). Other factors like general rise in interest rates and innovative deposits scheme have also augmented depositors preference for terms deposits. During the weeks of liquidity stress, SBP though reduced the CRR; the exemption from SLR is likely to induce further increase in the share of long-term deposits in coming quarters.

The currency wise composition of deposits shows a shift away from foreign currency deposits which declined to 12.4 percent of total deposits from 13.2 percent in last quarter. This shift in deposits mix emanated from reduction in foreign currency deposits which declined by 4.7 percent over the quarter neutralizing the effects of slight devaluation in Pak rupee.

Due to slower growth in asset that was effectively covered by greater increase in deposits as well as growth in equity, banks reliance on ***borrowings*** for financing the earning assets declined by the end of quarter under review. Over the quarter, borrowings itself declined by 5.9 percent and its share in overall funding structure slightly came down to 8.2 percent. The composition of borrowings however witnessed significant shift as the unsecured borrowings declined by 33 percent and its share in overall borrowings reduced to 16 percent (23 percent in Sep-08, see Figure 2.12). Among secured borrowings, due to a number of incentives announced for export sector, ERF borrowings from SBP witnessed a substantial

Figure 2.13: Banks' Advances to Public & Private Sector (Domestic Operations)



increase of 58 percent. Nonetheless, during the stress weeks of October 2008 some of the individual banks showed high dependence on borrowings.

During the quarter under review, ***Shareholders' Equity*** grew by 7 percent; that was also dampened by significant year-to-date losses posted by a few banks. Nevertheless, fresh equity injection and overall steady earnings led to YOY growth of 19.9 percent in the Equity, increasing its share to 9.6 percent of total assets. This increase in capital base was largely influenced by SBP's Minimum Capital Requirement (MCR) policy, encouraging the banks' retention of higher portion of earnings and injection of fresh equity for meeting the enhanced MCR. A general rise in interest rates and slow down in stock market during the recent quarters significantly marked down the value of both fixed-income and equity securities of banks. Accordingly, the overall revaluation surpluses of the system eroded by Rs47 billion (54 percent) over the year. Resultantly, the share of net worth (shareholders equity plus revaluation surpluses) in total assets marginally declined to 10.4 percent (10.5 percent in CY07).

During the quarter under review, ***Advances*** witnessed a significant slowdown in sharp contrast to industry's established patterns for the last quarter (see Figure 2.3). Advances grew by 3.7 percent even slower than Sept-08 quarter which is traditionally characterized by low credit demand. However, demand for bank credit, which started picking up in the last quarter of CY07, subsisted during CY08 and caused a YoY strong growth of 18.9 percent (12.7 percent in CY07). As highlighted above, this growth was mainly led by heightened demand from public sector enterprises, which accounted for 28 percent of this increase in advances. Resultantly, the share of public sector advances in total advances rose to 10.8 percent (see Figure 2.13). Segment wise analysis[4] shows that mainly Corporate and Commodity Operations increased their usage of bank credit during the quarter under review, while SME sector advances saw a slight increase. The later sector had

[4] The following analysis of composition of advances and shift therein is based on the banks' domestic operations only.

Figure 2.14: Composition of Banks' Advances (Domestic Operations)

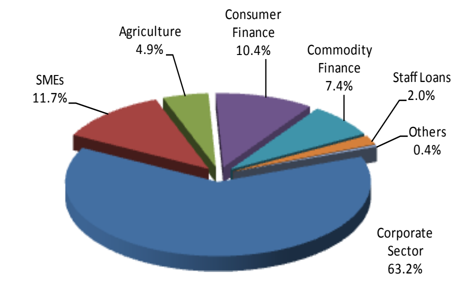


Figure 2.15: Composition of Consumer Loans Dec-08

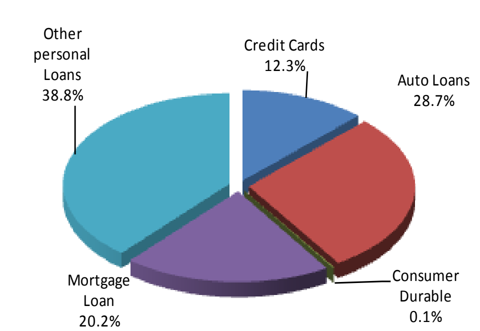


Figure 2.16: Break up of Investments Dec-08

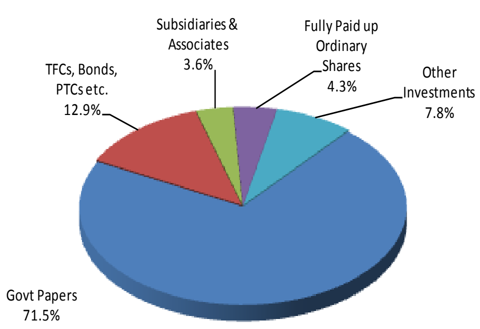


Table 2.1: End-use of Advances (net)

amount in billion Rupees, share in percent

	Dec-07		Sep-08		Dec-08	
	Amount	Share	Amount	Share	Amount	Share
Fixed Investment:	**609.2**	**22.6**	**727.1**	**23.8**	**738.1**	**23.1**
Corporate Sector	549.0	20.3	682.6	22.4	694.2	21.7
SMEs	60.3	2.2	44.5	1.5	43.9	1.4
Trade Finance:	**415.9**	**15.4**	**459.0**	**15.0**	**480.6**	**15.1**
Corporate Sector	348.0	12.9	411.7	13.5	438.3	13.7
SMEs	67.9	2.5	47.3	1.5	42.3	1.3
Working Capital:*	**1,231.6**	**45.6**	**1,448.5**	**47.4**	**1,562.9**	**49.0**
Corporate Sector	623.2	23.1	832.1	27.3	883.3	27.7
SMEs	309.1	11.4	269.8	8.8	288.8	9.0
Agriculture	150.8	5.6	157.7	5.2	155.5	4.9
Commodity Financing	148.4	5.5	188.8	6.2	235.4	7.4
Consumer Finance:	**371.4**	**13.8**	**344.6**	**11.3**	**332.2**	**10.4**
Credit Cards	46.8	1.7	43.1	1.4	40.7	1.3
Auto Loans	111.4	4.1	102.9	3.4	95.3	3.0
Consumer Durable	1.1	0.0	0.4	0.0	0.3	0.0
Mortgage Loan	67.4	2.5	67.2	2.2	66.9	2.1
Other personal Loans	144.7	5.4	130.9	4.3	128.8	4.0
Staff Loans:	**52.2**	**1.9**	**61.6**	**2.0**	**64.5**	**2.0**
Housing Finance	36.8	1.4	44.1	1.4	46.7	1.5
Others	15.4	0.6	17.5	0.6	17.8	0.6
Others	**20.6**	**0.8**	**12.6**	**0.4**	**13.5**	**0.4**
Total	**2,700.9**	**100.0**	**3,053.4**	**100.0**	**3,192**	**100.0**

* agriculture and commodity finance are added in this category for analysis in this section only.

gradually reduced its borrowing from banks during the last couple of quarters. There was only a minor shift in the end use of advances. Working Capital finance registered a 1.6 percentage point increase in its share, while Fixed Investment registered a meager reduction. The advances to Agriculture sector marginally contracted which declined their relative share in banks' advances (see Figure 2.14). The ***consumer finance*** after showing a strong and persistent increase up till the end of CY07 has been gradually declining since then. Further decline during the quarter has reduced its share in overall advances to 10.4 percent (see Table 2.1). The breakup shows that all consumer finance categories decreased during the quarter; however, the decline was most significant in Auto Loans category that came down by 7.4 percent. However, the internal composition of the consumer finance largely remained stable, with Personal Loans contributing the largest share of consumer finance followed by Auto and Mortgage Loans (see Figure 2.15).

Investments, the second largest component of the banks' asset base, had followed a declining trend since the last quarter of CY07. However, this declining trend reversed during the quarter under review and banks' investment portfolio (net) increased by Rs54 billion (5.2 percent), increasing its share in asset base to 19.1 percent (18.7 percent in Sep-08, 20.4 percent in Jun-08 and 24.7 percent in Dec-07). This increase was largely contributed by investment of Rs59 billion in Govt. papers and Rs13 billion in Bonds, Term Finance Certificates (TFCs), and Participation Term Certificates (PTCs). Accordingly, the internal composition of investments shifted towards Govt. papers and Bonds, TFCs, & PTCs and remained highly dominated by Govt. papers (see Figure 2.16). The composition of govt. papers shows increased preference for short-term MTBs over long-term PIBs which are more prone to mark to market losses and have limited SLR eligibility. During the quarter under review, banks investments in MTBs significantly increased by 17.1 percent while holding of PIBs declined by 12.1 percent. Accordingly, the share of MTBs inched up to 72.7 percent (67.2 percent in Sep-08) and that of PIBs declined to 17.3 percent (21.3 percent in Sep-08), corresponding CY07's composition (see

Figure 2.17: Break up of Federal Govt. Securities

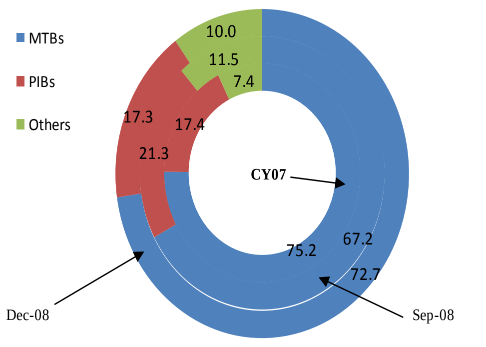


Figure 2.17). Equity investments, which constitute around 4.3 percent of banks' total investments, remained stable at the last quarter levels. However, this portfolio faced a significant mark down due to slump in capital market. KSE-100 index plummeted by 36 percent during the quarter to 5,865 by the end of December 2008. However, recent change in disclosure requirements allowing the deferment of impairment losses over the next year will keep this year's bottom line immune. In addition, the gradual recovery seen in the market is expected to make up for the impairment losses.

3. Financial Soundness of the Banking System

3.1 Solvency[5]

Figure 3.1.1: Risk-Based Capital Position

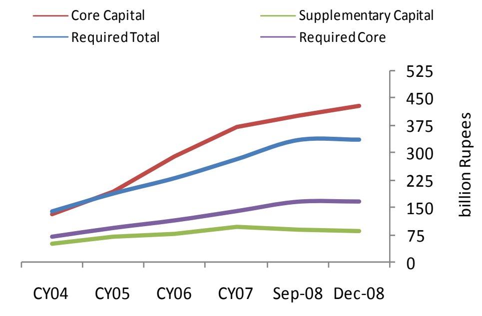


Figure 3.1.2: Capital Structure and Capital Adequacy

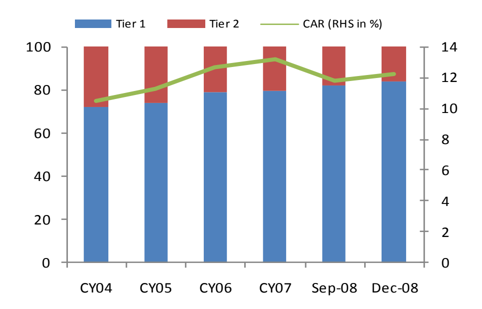
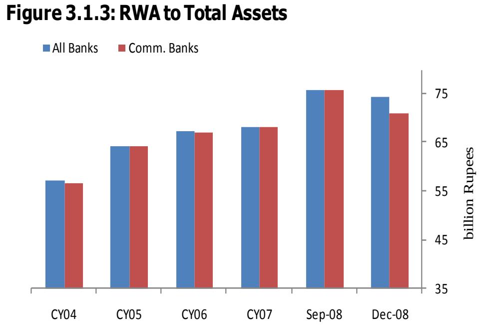


Figure 3.1.3: RWA to Total Assets



Solvency position of the banking system in terms of fundamental solvency indicators witnessed an improvement during the quarter. The weakening asset quality, however, poses a potential risk to solvency.

SBP's policy initiative of increasing MCR has led to both injection of fresh equity and merger & acquisition in the banking system. Accordingly, CAR of the banking system has improved significantly since CY04, though this period saw a swift increase in risk-based asset which grew by 141.7 percent over these years. The CAR touched the peak of 13.2 percent in 2007 but subsequently relapsed due to the impact of operational risk charge under Basel-II framework, which was implemented in CY08.

The qualifying risk based capital of the banking system increased to Rs512.8 billion in Dec-08 from Rs492.2 billion in Sep-08 and Rs466.4 billion in the CY07. The core capital, being the mainstay of banks' capital rose by 6.2 percent whereas the supplementary capital declined by 5.1 percent during the quarter under review (see Figure 3.1.1). As a result, the share of Core capital in total capital inched up to 83.6 percent from 82.0 percent in Sep-08. The trend of strengthening of the core capital to total assets has been continuing since CY04, when the ratio was 72.2 percent. (see Figure 3.1.2).

Slower growth in advances and increased interest of banks in risk-free Govt. papers led to marginal increase in Risk Weighted Assets (RWA) by 0.4 percent to Rs4,197.6 billion in Dec-08. In the wake of these developments, the CAR of the banking system increased by 0.5 percentage points to 12.2 (see Table 3.1.1). Similarly, the Core Capital to RWA increased by same margin to 10.2 percent. Both these ratios exceed the generally acceptable benchmarks for well-capitalized banks.

[5] The above discussion is based on the CAR calculations on Basel-II framework. Except for three SBs which are reporting on Basel-I reporting formats, all other banks have reported on Basle II. These three banks hold 0.5 percent of the banking systems assets.

Table-3.1.1: Capital Adequacy Indicators							
	Basel-I				Basel-II*		
Percent	CY04	CY05	CY06	CY07	Jun-08	Sep-08	Dec-08
CAR							
PSCBs	13.4	14.5	15.2	17.4	15.5	15.1	12.8
LPBs	10.1	10.6	12.7	12.8	11.6	11.2	12.2
FBs	17.4	16.4	15.0	13.5	14.0	18.5	19.8
CBs	11.4	11.9	13.3	13.8	12.4	12.2	12.6
SBs	(9.0)	(7.7)	(8.3)	(7.8)	(0.7)	(4.1)	(2.3)
All banks	10.5	11.3	12.7	13.2	12.1	11.8	12.2
Tier 1 Capital to RWA							
PSCBs	8.6	8.8	11.1	13.0	11.9	11.9	10.1
LPBs	7.5	8.3	10.4	10.5	9.5	9.3	10.3
FBs	17.1	16.1	14.3	12.9	13.4	18.0	19.3
CBs	8.6	9.1	10.7	11.1	10.1	10.1	10.7
SBs	(15.0)	(13.6)	(13.3)	(13.5)	(7.8)	(9.1)	(7.6)
All banks	7.6	8.3	10.0	10.5	9.7	9.7	10.2
Capital to Total Assets							
PSCBs	8.7	12.6	12.2	13.7	12.8	12.9	11.9
LPBs	6.5	7.0	9.2	10.2	9.8	9.8	10.1
FBs	8.9	9.5	10.1	11.2	10.5	13.3	13.9
CBs	7.2	8.4	9.9	10.9	10.4	10.5	10.7
SBs	(9.4)	(8.1)	(8.0)	(5.5)	0.4	(4.1)	(2.5)
All banks	6.7	7.9	9.4	10.5	10.2	10.2	10.4

Table-3.1.2: Distribution of Banks by CAR

	Total	Below Min CAR Ratio*	From Min CAR to 10%	10 to 15 %	Over 15 %
CY03	40	4	10	5	21
CY04	38	1	13	9	15
CY05	39	2	7	13	17
CY06	39	3	4	15	17
CY07	39	3	6	12	18
Sep-08	40	4	9	7	20
Dec-08	40	4	2	13	21

** From December 31, 2008, banks are required to maintain minimum CAR of 9 percent instead of preious requirement of 8 percent.*

Figure 3.1.4: Banks' Market Share by CAR

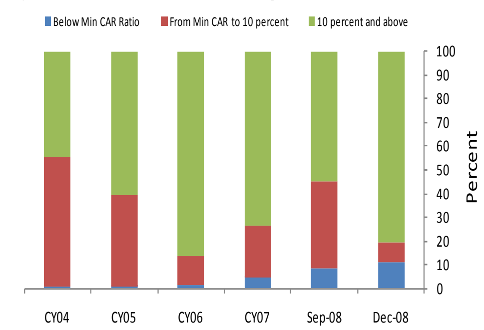
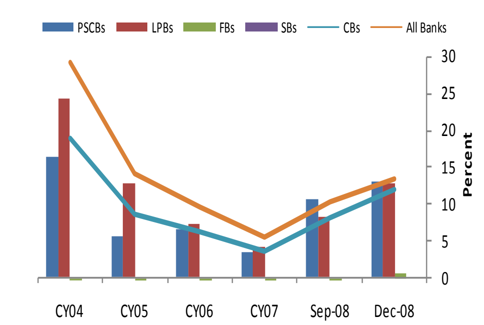


Figure 3.1.5: Net NPLs to Capital Ratio (in %)



The composition of the RWA shows that the Credit Risk is the largest category of risk assumed by banks i.e. constituting 84.7 percent of overall RWA. However, the risk-averse approach of banks reflects in over the quarter decrease in RWA to total assets by 1.6 percentage points to 74.3 percent. The ratio is still above the 68.1 percent in CY07 indicating substantially increased risk appetite of the banking system.

Group-wise position shows that CAR of all the groups increased except for the PSCBs which witnessed a decline by 2.4 percentage point to 12.8. The Core Capital to RWAs of PSCBs too registered decline of 1.8 percentage point. The capital adequacy of the PSCBs has been declining since CY07 due to receding earnings and recent losses suffered by one of the PSCBs.

Besides the increase in risk-based capital, the equity base of banking system also increased significantly. Shareholders' equity increased by 7 percent over the quarter and 19.9 percent on YoY basis. However, due to mark down of revaluation surpluses, net worth (equity + revaluation reserves) to total assets ratio witnessed marginal increase to 10.4 percent in the Dec-08 (10.2 percent in Sep-08 and 10.5 percent in Dec-07).

The major hazard to the solvency emanating from credit risk, however, increased during the quarter. Capital impairment ratio i.e. net NPLs to Capital ratio which touched the lowest of 5.6 percent in CY07 started to rise in CY08. During the quarter under review, the ratio further increased by 3.2 percentage points to 13.6 percent. (see Figure 3.1.5).

The disaggregated analysis shows that 36 banks have CAR above 9 per cent (see Table 3.1.2). Of the remaining 4 banks with CAR below 9 percent, 3 are expected to comply with the requirements shortly as they have already planned right issue. The market share of banks having CAR of 10 percent and above stood at 80.9 percent in CY08, whereas 89.2 percent of the banking system assets rest with the banks having CAR of 9 percent and above. (see Figure 3.1.4). Further, 27 banks including 4 foreign banks are fully compliant with the MCR. Most of the remaining banks are in the process of meeting the MCR, except 4 banks, which are under the process of restructuring/ privatization.

The solvency position of the banking system has thus far remained firm. However, it faces threat from the deteriorating asset quality. For creating sufficient capital cushion to cope with any risk, SBP has raised the CAR to 9 percent and introduced a policy for increasing MCR in a phased manner[6].

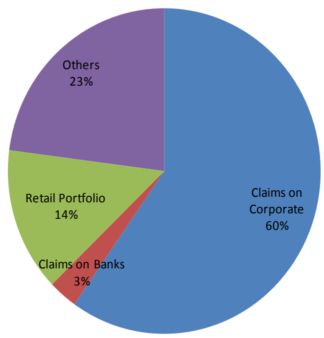
[6] See BSD Circular No. 30 & 19 of 2008.

3.2 Analysis of Capital Adequacy of Banks/DFIs under New Capital Standard

As discussed in the previous section, the CAR of the system over the quarter improved to 12.2 percent. The overall CAR for Banks and DFIs improved by 54 bps to 13.0 percent, while Tier-I capital to RWA and Tier-II Capital to RWA remained 11.1 percent and 1.9 percent, respectively. To date, no bank/DFI has issued Tier-III instrument, which is allowed for covering capital charge for market risk.

A brief analysis of MCR and CAR for the banks has been given in previous section. The following paragraphs provide a detailed analysis of credit, market and operational risk delineating the overall risk assumed by banks/DFIs. The detailed working of CAR of the system is given at Annex-5.

Figure 3.2.1: Composition of On-Balance Sheet Risk Adjusted Exposures



The composition of the **Risk Weighted Amounts** show that out of the total capital requirement, around 84 percent capital is required against credit risk, followed by 11 percent for operational and 5 percent for market risk. Under Basel-II banks and DFIs can opt from different approaches available for calculation of capital charge against credit, market and operational risk. All banks/DFIs are presently using Standardized Approaches (SA) for the calculation of Credit and Market risks. Two foreign banks have opted for the Standardized Approach whereas the rest are using the Basic Indicator Approach for calculating Operational Risk charge.

The Credit Risk Weighted Amounts (CRWA) in standardized approach have been calculated based on categorization of exposures into different types based on the types of the counterparties and the nature of exposure. The composition of on-balance sheet risk adjusted exposures in different exposure types is shown in figure 3.2.1.

For calculating the capital charge against off-balance sheet exposures, they are first converted into on-balance sheet equivalents using Credit Conversion Factor (CCF) viz. 100 percent, 50 percent, 20 percent, and 0 percent and then

Table 3.2.1: Exposure wise Rated and Un-rated Original Exposure

amount in billion Rupees, share in percent

Claims on	Rated	Unrated	Share Rated	Share Unrated
PSEs	67	247	21	79
Banks	233	64	79	21
Corporates	243	1890	11	89
Other Soverigen and GoP in Currencies other than PKR	86	23	79	21
Total	**629**	**2226**	**22**	**78**
Exposures which are not rated	**0**	**2596**	**-**	**-**
Total	**629**	**4822**		

Table 3.2.2: Banking Group wise Rated and Un-rated Exposures

amount in billion Rupees, share in percent

Banking Group	Rated	Unrated	Share Rated	Share Unrated
Public Sector Banks	98	436	18	82
Local Private Banks	469	1717	21	79
Foreign Banks	46	54	46	54
Specialized Banks	-	-	-	-
DFIs	16	22	43	57
Total	**629**	**2229**	**22**	**78**
Unrated Exposure	**0**	**2593**		
Grand Total	**629**	**4822**	**-**	**-**

Table 3.2.3: Composition of Credit Risk Mitigants against Major Exposures

share in percent

Claims on	Share of CRM used with Risk Weight 0%	20%	> 20%
PSEs	100.0	0.0	0.0
Banks	95.8	4.2	0.0
Corporates	66.4	21.5	12.1
Claims Categorized as Retail Portfolio	99.6	0.3	0.0

Table 3.2.4: Risk Adjusted Exposures vs original Exposures

amount in billion Rupees

Claims on	Basel II Original	Basel II Risk Adj	Percent of Risk Adj/ Orig
Public Sector Banks	1,050	611	58
Local Private Banks	3,997	2,381	60
Foreign Banks	218	98	45
Specialized Banks	105	71	68
DFIs	90	50	56
All Banks	**5,451**	**3,212**	**59**

different risk weights are assigned based on the underlying risk of the respective exposures.

The CRWA equals Rs3,609 billion[7] comprising on-balance sheet exposures of Rs3,209 billion (89 percent of CRWA) and off-balance sheet exposures of Rs400 billion (11 percent of CRWA). The on-balance sheet exposures have been further analyzed along three dimensions:

Rated and Unrated Exposure: Out of total on-balance sheet original exposure amount of Rs5,445 billion, 53 percent exposures (Rs2,853 billion) require external credit ratings for the calculation of respective capital charge. Out of the exposures requiring ratings, only 22 percent exposures are rated. The claims against corporate sector which dominates the on-balance sheet exposures are rated to the extent of 11 percent (see Table 3.2.1 & 3.2.2).

Credit Risk Mitigants (CRM): CRM benefit has been mainly taken against corporate. Out of total CRM under simple approach, the banks have primarily used the cash and cash equivalent collateral (with 0 percent risk weight). However, a significant share of CRM falls in risk weight of 20 percent for corporate exposures, which may include bank guarantees or certain debt securities. (see Table 3.2.3).

Original and risk-adjusted exposures: The amount of risk-adjusted exposure in terms of original exposure depicts the relative gross risk assumed by the banks/DFIs when compared to other banking groups. The greater the reduction in original exposure the lesser the presumed risk and the capital charge (see Table 3.2.4). The Market Risk Weighted Amount (MRWA) is derived from the capital charge against market risk that is allocated against those exposures which are exposed to the market movement in interest rates and equity prices in the bank's trading book[8] and, changes in foreign exchange rates in overall banking activity. Moreover, capital against market risk could be maintained in three different tiers of capital.

[7] Does not include data of three Specialized Banks which are in the process of restructuring and are exempt from Basel-II framework till the finalization of their restructuring process.

[8] Trading book consists of position in financial instruments held with trading intent or in order to hedge the other element of trading book.

Table 3.2.5: Groupwise Composition of Capital Charge

amount in million Rupees

	Interest Rate Risk	Equity Price Risk	Foreign Exchange Risk	Positions in Options	TMRWA
Public Sector Bank	465	140	2,852	0	**3,457**
Local Private Banks	3,428	2,158	2,042	58	**7,686**
Foreign Banks	801	7	358	0	**1,166**
Specialized Banks	0	0	0	0	**0**
DFIs	256	1,677	0	0	**1,933**
Total	**4,950**	**3,983**	**5,252**	**58**	**14,242**

Table 3.2.6: Operational Risk Weighted Assets

amount in million Rupees

	Sep-08			Dec-08		
	BIA*	SA**	Total	BIA	SA	Total
Public Sector Banks	86	0	86	101	0	101
Local Private Banks	305	26	331	316	35	351
Foreign Banks	21	1	23	21	1	22
Specialized Banks	17	0	17	16	0	16
DFIs	12	0	12	13	0	13
Total	**441**	**27**	**468**	**467**	**36**	**503**

* Basic Indicator Approach
** Standaridized Approach

However, no bank has kept its capital in terms of Tier III capital in Pakistan (see Table 3.2.5).

Operational risk is the risk of losses due to inadequate or failed internal processes, people and systems, and from external events. Inclusion of capital charge for operational risk is one of the major distinctive features of Basel-II framework. Under Standardized Approach of the framework, banks are allowed to use either Basic Indicator Approach (BIA) or SA for arriving at Operational Risk Weighted Amount (ORWA). Basic Indicator approach is based on the average positive income of last three years resulting from overall banking activities. Under Standardized approach bank's activities are divided into eight distinct areas, and capital charge is calculated by multiplying the average income generated from each area by its distinctive factor. The ORWA of all banks and DFIs comes to Rs503 billion (Rs490 billion for banks) end Dec-08 (see Table 3.2.6).

3.3 Profitability

Table 3.3.1: Profitability of Banking System

amount in billion Rupees

	CY04	CY05	CY06	CY07	Sep-08	Dec-08
Profit before tax						
PSCBs	14.2	22.8	31.5	33.2	11.7	14.7
LPBs	31.0	60.5	85.6	69.7	66.3	74.5
FBs	7.2	11.6	6.3	2.5	3.2	0.4
CBs	52.4	94.9	123.5	105.4	81.3	89.6
SBs	(0.4)	(1.1)	0.1	1.7	1.8	3.9
All Banks	52.0	93.8	123.6	107.1	83.1	93.6
Profit after tax					-	
PSCBs	8.0	15.5	21.2	23.9	9.5	11.4
LPBs	21.8	41.1	59.1	47.4	43.9	49.5
FBs	5.8	8.0	4.3	1.2	1.5	(1.0)
CBs	35.6	64.6	84.6	72.4	54.8	59.9
SBs	(0.9)	(1.3)	(0.5)	0.9	1.1	3.3
All Banks	34.7	63.3	84.1	73.3	55.9	63.2

Table 3.3.2: Profitability Indicators

Percent

	CY04	CY05	CY06	CY07	Sep-08	Dec-08
After Tax ROA						
PSCBs	1.3	2.2	2.7	2.5	1.3	1.1
LPBs	1.2	1.8	2.1	1.4	1.4	1.2
FBs	2.0	2.5	1.5	0.7	0.9	(0.5)
CBs	1.3	2.0	2.2	1.6	1.4	1.1
SBs	(0.8)	(1.2)	(0.4)	0.7	1.2	2.7
All Banks	1.2	1.9	2.1	1.5	1.4	1.2
After Tax ROE *(based on Equity plus Surplus on Revaluation)*						
PSCBs	17.2	20.9	21.7	19.5	9.7	8.7
LPBs	20.2	27.2	25.3	13.9	14.5	12.1
FBs	21.5	27.1	15.6	6.3	7.7	(4.1)
CBs	19.6	25.4	23.7	15.0	13.0	10.7
SBs	-	-	-	-	-	-
All Banks	20.3	25.8	24.2	15.5	13.4	11.3

Figure 3.3.1: ROE After Tax

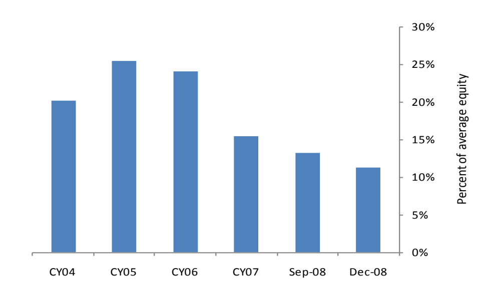
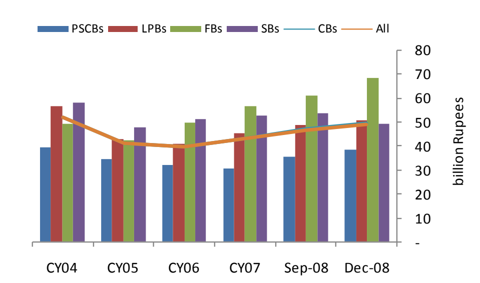


Figure 3.3.2: Operating Exp. to Gross Income



The banking system remained profitable during the quarter under review. The full year profits of CY08 were however lower than profits for the last couple of years. The lower profits coupled with higher-base effect resulted in decline in baseline indicators.

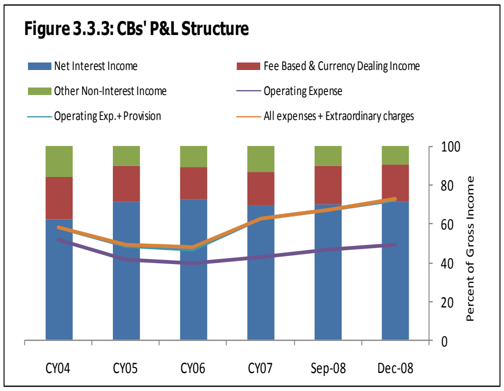
Higher loan loss charges and operating expenses affected the earnings of the banking system during Dec-08 quarter. Profit before tax grew by Rs10.5 billion over the quarter; translating into full year profit of Rs93.6 billion whereas after tax profit remained at Rs63.2 billion in Dec-08 (see Table 3.3.1).

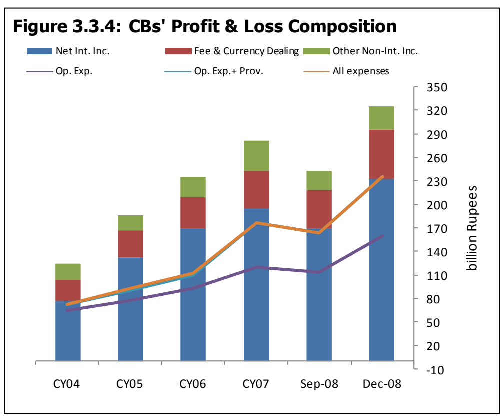
Group-wise, LPBs shared 78 percent increase in profitability of the system, while PSBs and SBs contributed rest of it. However, increase in non-mark up expenses of FBs weighed heavily on their profitability and turned the bottom line red. Non mark-up expenses in terms of gross income of FBs increased by 11.7 percentage point during CY08, resulting mainly from the entry of a new FB.

Deceleration in the growth of earning resulted in marginal reduction in earnings ratio over the quarter. The return on assets (ROA) has declined by 0.2 percentage point to 1.2 percent owing to higher provisions and operating expenses. Similarly return on equity (ROE) declined by 2.1 percentage points to 11.3 percent (see Table 3.3.2 and Figure 3.3.1).

The operating expenses to gross income (cost to income) increased over the quarter by 2.2 percentage points to 49.1 percent in Dec-08 (43 percent in Dec-07). Though the ratio has increased for all the categories, it is more pronounced for FBs where it increased by 7.9 percentage points to 68.1 percent due to entry of a new FB and enhanced efforts to increase the market share. The ratio observed a decrease of 4.3 percentage points to 49.2 percent for SBs. (see Figure 3.3.2 and Annex-I).

In line with the trend, the profit both before and after tax of CBs increased by 10.3 percent and 9.3 percent respectively, during the quarter though





declined on YoY basis. This was despite the fact that the net interest income had increased both on quarterly as well as annual basis. In the last couple of years, increase in non-interest income complemented the substantial increase in mark-up/interest income. However, during the Dec-08 quarter as well as for the full year, the overall profitability was neutralized due to more than proportionate increase in operating expenses and provisioning for loan losses. The share of net interest income increased to 71.4 percent of gross income (69.3 percent in CY07) (see Figure 3.3.3).

The analysis of core income reveals that CBs' net mark up/interest income in proportionate terms has surged by 36.5 percent to Rs232.6 billion during the quarter (YoY increase of 19.1 percent). The NII soared due to higher spread between outstanding loans and deposits, larger increase in earning assets compared to interest bearing liabilities and enhanced recovery efforts.

The income composition has witnessed shift since CY04; as the share of net interest income has increased, the non-interest income has seen its share trailing down to 28.6 percent of gross income in Dec-08 from 30.2 percent in Sep-08 (30.7 in Dec-07). Further analysis of the non-interest income indicates that the fee based and currency dealing income has increased during the quarter by 30.5 percent to Rs62.8 billion, whereas other income constituting trading gains and dividend income increased by 20.5 percent during the quarter under review to Rs30.6 billion.

On overall basis, all expenses as a percentage of gross income increased by 5.2 percentage points to 72.5 percent by end Dec-08. In absolute terms expenses increased by 33.4 percent to Rs235.8 billion in CY08, which affected the overall profitability of the system. In addition to higher provisions, enhanced branch network with increased human resource base has soared the expense of the system during the quarter under review. (see Figures 3.3.3 and 3.3.4).

The Provisions charges and direct write-offs increased by Rs25.8 billion over the quarter and stood at Rs75.6 billion for CY08 - significantly higher than CY07 levels of Rs56.5 billion. In terms of gross income, these charges were 23.2 percent in Dec-08 (20.73 percent in CY07).

Couple of post quarter regulatory developments that may influence the profitability of the system, are worth mentioning; firstly, the rationalization of the provisioning requirements would limit the increasing provisions to some extent. Secondly, change in disclosure requirements allowing the deferment of impairment losses on AFS securities over the next year, will keep this year's dampening profitability under check. The annual audited results of the top five banks for the year 2008 show that their profitability on average has remained at the previous year's level.

Table 3.3.3: Percentage Breakdown of Banking System's Total Assets (TA) by ROA

	CY05		CY06		CY07		Sep-08		Dec-08	
ROA	No. of Banks	Share in TA	No. of Banks	Share in TA	No. of Banks	Share in TA	No. of Banks	Share in TA	No. of Banks	Share in TA
O and below	7	3.5	6	2.1	10	8.5	12	11.0	17	15.9
0 to 0.5	4	2.8	3	1.8	2	2.4	6	9.0	3	9.7
0.5 to 1	2	7	6	9.9	4	1.9	3	1.5	2	6.5
1.0 to 1.5	5	4	5	9.6	10	34.9	5	14.1	6	6.3
1.5 and Over	21	82.7	19	76.6	13	52.3	14	64.4	10	61.6

The phenomenon of decline in earning capacity has been widely shared by individual banks. The assets distribution on the basis of ROA shows that 16 banks, holding 67.9 percent market share, have ROA of one percent and. As ROA of the banking system has declined, the number of banks with ROA below 1.0 percent increased to 22 from 21 whereas their share in total banking sector assets has increased from 21.6 percent to 32.1 percent during the quarter under review.

The banking sector in Pakistan has remained somewhat insulated from the global financial turmoil and has maintained its profitability albeit the slower growth. The prevailing global economic downturn nevertheless has the potential to impair corporate and business profitability that may ultimately heighten the credit risk and may affect the earnings of the banking sector in the quarters ahead.

Figure 4.1.1: NPLs of Banking System

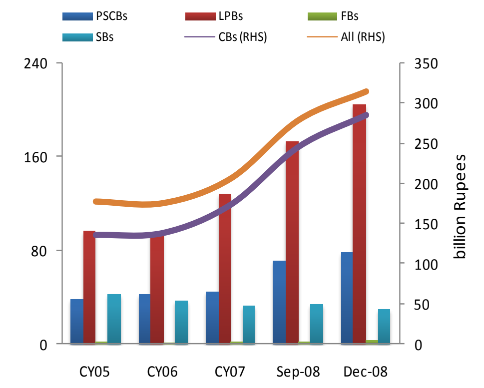


Figure 4.1.2: Category-wise Breakup of NPLs

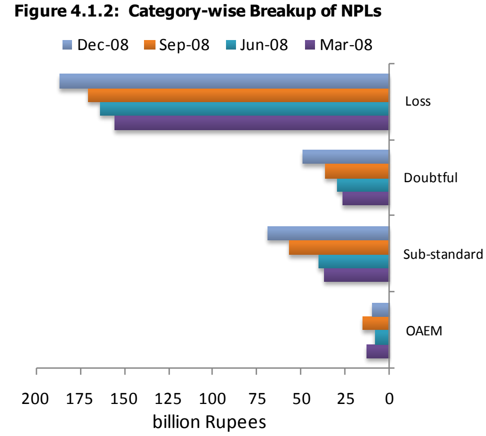
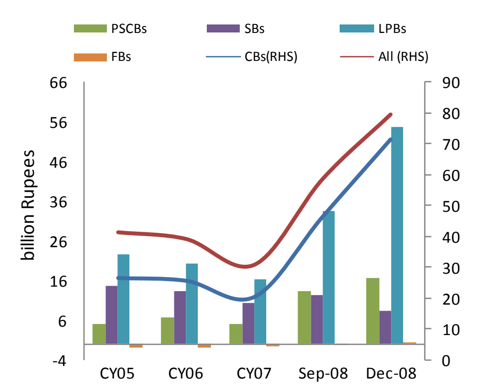


Figure 4.1.3: Net NPLs of Banking System



4. Risk Assessment of the Banking System

4.1 Credit Risk

The credit risk of the banking system increased further as reflected by a 12.5 percent surge in NPLs during the quarter. The QoQ increase in advances by 4 percent and YoY 20 percent though somewhat contained overall impairment ratios.

The NPLs of the banking system increased by Rs35 billion to Rs313 billion during the quarter (Rs100 billion during the year). This rise in NPLs is observed across all the banking groups except specialized banks, where NPLs have actually decreased (see Figure 4.1.1). Doubling-up of cash recoveries to around Rs12 billion and loans written-offs during the quarter have, to some extent, tapered the increase in NPLs.

The spurt of NPLs is observed in all classification categories requiring provisions, with proportionately higher increase in Substandard and Doubtful categories. However, the inflow of fresh NPLs and deterioration of existing NPLs have substantially increased the amount of NPLs in Substandard, Doubtful and Loss categories. Though major portion of the NPLs reside in Loss category, the share of NPLs in first three categories have increased to 43 percent from 33 percent a year earlier. This trend indicates that in periods ahead, banks might have to provide additional loans losses in case they are not able to recover/restructure these NPLs (see Figure 4.1.2).

As a result of rising NPLs, a visible addition is observed in Net NPLs (see Figure 4.1.3). Two factors contributed to this increase; firstly the flow of NPLs into categories requiring partial provisions and secondly, the inception of FSV benefit. Though FSV benefit may have increased net NPLs, it may keep in check the dampening profitability of the system.

Increase in NPLs during the quarters reflects in worsening of the asset quality ratios. NPLs to Loan ratio of the banking system increased by 0.7 percentage points to 9.1 percent. The ratio has increased across all the banking groups, with a significant increase for LPB and FBs. The trend

Figure 4.1.4: NPLs to Loans (Gross)

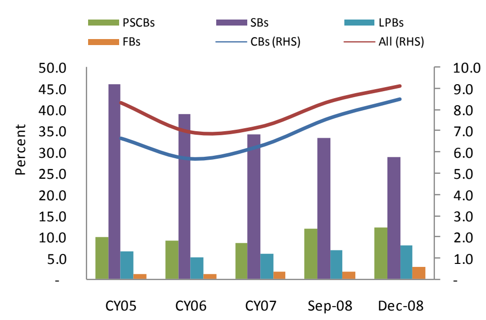


Figure 4.1.5: NPLs to Loans (net)

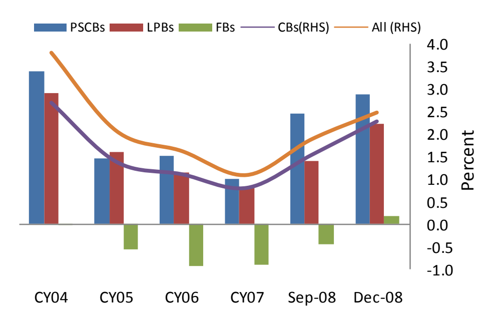


Figure 4.1.6: Provision against NPLs

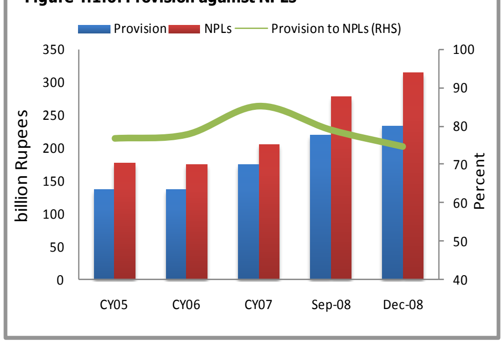
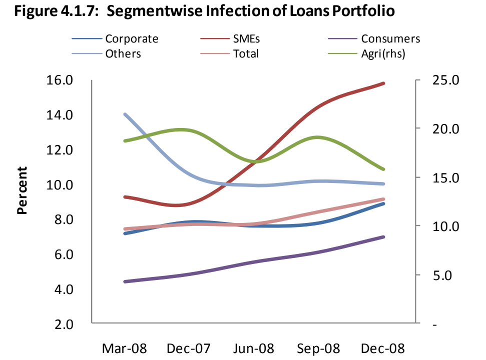


Figure 4.1.7: Segmentwise Infection of Loans Portfolio



analysis show that the ratio for commercial banks and over all banking sector is converging due to increasing share of LPBs in asset and advances portfolio of the system (see Figure 4.1.4). Moreover, most of the PSCBs and the banks undergoing consolidation and restructuring over the past three years, have infection ratios higher than industry average. The NPLs to loans ratio (net) which declined to below 1 percent by the end of 2007 started to inch up during 2008 and reached 2.5 percent during the quarter under review. (see Figure 4.1.5).

The provisions against NPLs increased in absolute terms. However, this increase fell short of increase in NPLs. Rationalization of provisioning requirements by allowing FSV benefit also contributed towards the lower loan loss charges. Therefore, NPLs coverage ratio declined by 4.3 percentage points to 74.7 percent. (see Figure 4.1.6). Capital impairment ratio (Net NPLs to capital) of the system also soared by 3.2 percentage points to 13.6 percent.

The composition of segment-wise NPLs of the banking system shows that infection ratio of all the segments except agriculture have increased (see table 4.1.1). The exposure to corporate sector has crept up to around 63 percent of the total loan portfolio, from around 54 percent a year ago. However, with worsening business climate, the infection ratio of the corporate sector, which remained almost at same level during the previous two quarters, increased by 1.2 percentage point to 8.9 percent during the quarter under review[9]. NPLs of the SME sector are also rising at relatively fast pace (see Figure 4.1.7). Analysis of NPLs by the end use of loans shows that infection is more pronounced in working capital finance; indicating slackness in turnover of inventories and receivables, in the wake of general slowdown in business activities.

Consumer financing has been reducing since the inception of CY08. However, NPLs of the sector have been increasing in absolute as well as in

[9] Earlier Quarterly Performance Reviews of the Banking System (QPR) quoted only the domestic data on segment wise NPLs, whereas credit risk section of the present report the overall data. As such the figures may vary from the ones reported in earlier QPRs.

Table 4.1.1: Segmentwise Infection of Loans Portfolio

In percent

Sector	All Banks		Share in total laons (%)
	Sep-08	Dec-08	Dec-08
Corporate	7.6	8.9	62.7
Consumers	6.4	6.9	10.5
Credit Cards	5.1	5.5	1.2
Auto Loans	5.3	5.9	2.8
Consumer Durables	42.5	7.8	0.0
Mortgage Loans	8.0	7.4	2.4
Others	6.7	7.8	4.1
Commodity Finance	1.1	1.4	6.9
Staff Loans	0.7	1.0	1.9
Others	6.1	10.0	2.3
Total	8.3	9.1	100.0

Table 4.1.2: Sectorwise Infection of Loans Portfolio

Sectors	Sep-08	Dec-08	Share in	
	Loans		Loans	NPLs
Chemical & Pharmaceuticals	7.4	7.7	3.5	3.0
Agribusiness	11.8	8.9	4.5	4.3
Textile	14.6	14.6	19.5	31.2
Cement	9.9	6.6	2.6	1.9
Sugar	8.2	9.1	1.9	1.9
Shoes & Leather garments	23.7	8.6	0.7	0.7
Auto & Transportation	9.2	7.5	2.3	1.9
Financial	0.7	5.4	1.8	1.0
Insurance	0.0	0.0	0.1	0.0
Elec.& transmission of energy	1.4	3.4	9.9	3.7
Individuals	9.1	8.7	13.8	13.2
Others	6.6	8.6	39.4	37.2
Total	8.4	9.1	100.0	100.0

Table 4.1.3: Credit shocks-Descriptions

C-1	**15% of performing loans moving to substandard, 15% of substandard to doubtful, 25% doubtful to**
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.**
C-3	**Deterioration of loans to the textile sector (25%) directly downgraded to doubtful category**
C-4	**25% of consumer loans (auto loans, personal loans & consumer durables only) classified into doubtful category.**
C-5	**Default of three largest exposures (Fund Based exposures)**

percentage terms. The infection ratio of consumer finance portfolio increased by 0.9 percent to 6.9 over the quarter (2.3 percent over the year). Rising inflation and contained disposable incomes coupled with increasing lending rate have reduced consumers' appetite for credit as well as their repayment capacity, resulting in increasing defaults rate in the consumer finance.

Analysis of the NPLs by sector of economy delineates a mixed trend. (see Table 4.1.2). Comparison over the quarter shows that Electronics & Transmission of Energy, which has 10 percent share in the loan portfolio, witnessed increase in infection ratio by 2 percentage points, coming mainly from classification of electronics sector portfolio. The ratio marginally increased for Chemical & Pharmaceutical and Sugar sectors while it improved for a number of sectors including agribusiness. All the sectors have NPLs to loan ratio either below or equal to the industry ratio. The Textile sector which is the largest user of bank credit, managed to maintain the NPLs to Loan ratio at previous quarter's level due to high loan disbursement to sector during the quarter. Interestingly, in the wake of economic slowdown, banks seem to facilitate the businesses through rescheduling/ restructuring of loans; Textile sector being the major beneficiary.

In order to check the resilience of the banking system to adverse movements in credit portfolio, it has been stress tested for five different types of shock (see Table 4.1.3).

The credit shock C-1 leads to reduction in the CAR of the system by 2.4 percent to 9.8 percent (See Table 4.1.4). Similarly, by tightening the provisions under shock C-2, the overall CAR of the banks faces a reduction of 0.9 percent to 11.3 percent. The textile sector specific shock C-3 leads to decline in the CAR of the banking sector by 1.5 percent. When consumer portfolio is stressed under shock C-4, the CAR of the banks marginally declined by 0.6 percent. The impact of concentration risk shock C-5 is the largest on the CAR. The CAR of banking sector would declined by 4.7 percentage points to 7.6 percent (see Table 4.1.3).

Table 4.1.4: Credit shocks		
	Impact of shocks	
Shock	% point change in CARafter Shock	Adjusted CAR after shock
Credit Shock C-1	(2.44)	9.8
Credit Shock C-2	(0.93)	11.3
Credit Shock C-3	(1.48)	10.7
Credit Shock C-4	(0.58)	11.6
Credit Shock C-5	(4.66)	7.6

The overall results of stress shock on the banking system show sufficient resilience of the banking system. The results of the macro stress testing have also confirmed the resilience of the system in face of the adverse movements in financial as well as economic factors (see Special Section: Macro-stress Testing of Credit Risk). Banks, however, need to work for improving concentration profile of their lending portfolio and enhancing vigilance of their large exposures.

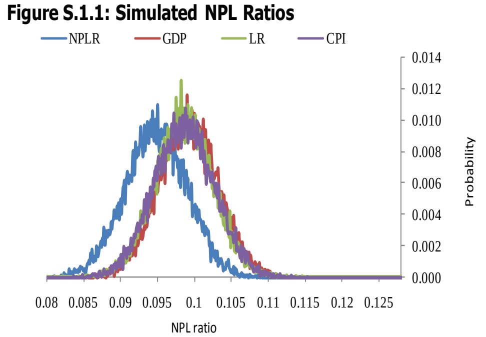
The credit risk which saw a modest increase during the previous quarter, has increased further during Dec-08 quarter. However, the banking system remains resilient to adverse credit shocks at the back of improved CAR. Banks need to make efforts for managing their troubled loans and to develop ingenious approach, avoiding any clogging of their balance sheets. The available annual audited results show that banks are making efforts for keeping their balance sheets clear and recognizing and providing for NPLs on criteria that are more stringent. This approach may affect their earnings and asset quality indicators, however, this approach will benefit the banks in the long run by creating sufficient cushion to withstand future losses. Nevertheless, the dynamics of the credit risk and response of the banking industry and regulators will largely depend on the macro-environment in the country.

Special Section 1: Macroeconomic Stress Testing of Credit Risk

Table S.1.1: Simulated percent NPL ratios under different severity of Shocks for Q1-2009

	Baseline	NPLR under Stress		
	NPLR	GDP	LR	CPI
Expected	*9.475*	9.912	9.850	9.852
Un-expected Movements at percentiles				
90.0	*10.016*	10.432	10.344	10.381
95.0	*10.160*	10.576	10.486	10.534
99.0	*10.451*	10.848	10.750	10.821
99.5	*10.543*	10.947	10.861	10.936
99.9	*10.790*	11.110	11.096	11.159

Figure S.1.1: Simulated NPL Ratios



The macroeconomic stress testing is based on the relationships among key macroeconomic and banking sector variables. It assumes that leading macroeconomic indicators such as the GDP, interest rates, exchange rate and inflation affect the performance of the banking system. The inter linkages between the macroeconomic indicators and the banking sector variables are modeled along the scenarios for testing the stressed position under different exceptional but plausible events.

Though there are host of approaches to conduct macro-stress testing, the widely used approach is the Credit Portfolio View (CPV) methodology, which has been applied in the analysis. The CPV methodology explicitly relates the loan infection ratio (NPLR) to overall output level (GDP), interest rates (LR), consumer prices (CPI) and the exchange rate (EXR). The CPV methodology stresses the macroeconomic variables to forecast its impact on the default rate for period (t+1), i.e. for one future period. As the present analysis is based on quarterly data with December, 2008 as current (t) period, the CPV methodology forecast the default rate for next quarter (i.e. Q1-2009). The detailed technical discussion on the CPV methodology and model specification is presented in Appendix A.

Under the present methodology, NPLR is stressed for reduction in GDP, increase in LR and CPI. The current analysis employs historical quarterly data of GDP[10], CPI, LR and EXR for the period Q4-1996 to Q4-2008 and provisional NPLR for the Dec-08 quarter to forecast NPLR for the period Mar-2009 (i.e. t+1 period). Based on the above, the CPV methodology constructs the following relationship;

NPLR=f(GDP, CPI, LR, EXR)

As EXR was statistically insignificant, it has not been included as a shock variable. This functional relationship is then quantified using the regression analysis and its results are employed in Monte Carlo simulation procedure, which create 20,000

[10] The yearly data on GDP was converted in quarterly by using the factorization approach mentioned by *Arby and Batool (2007* "Estimating Quarterly Gross Fixed Capital Formation", SBP working paper series No.17.

scenarios to stress test the NPLR. The results of the simulations are given in table 1.

The NPLR for the period Q1-2009 is forecasted at 9.48 percent in case of baseline scenario without any economic shock, which is 0.35 percent higher than the current quarter NPLR of 9.13 percent. Under stressed scenarios for various macroeconomic variables, NPLR is expected to range between 9.85 percent to 9.91 percent.

Under the baseline scenarios with increasing confidence interval (probability of occurrence) from 90 to 99.99 percentile, the NPLR may worse-off from 10.0 percent to 10.8 percent. Similarly, the macroeconomic shocks for various confidence intervals will increase NPLR in the range 10.38 percent to 11.2 percent. However, given the present state of banking system, we do not expect the extreme level of NPLR to happen over a period of one quarter. From the perspective of resilience of the system, based on the macro stress test results, the system is expected to remain profitable and achieve the required capital levels under the expected baseline and stress scenarios.

Figure 4.2.1: Shift in Yield Curve

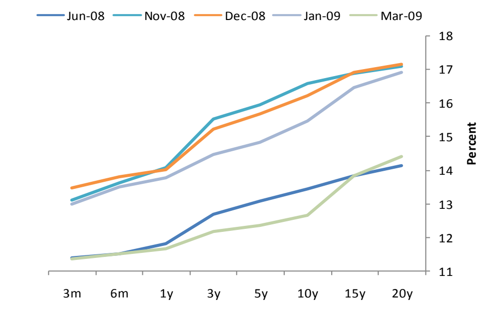


Figure 4.2.2: 3m & 10y PKRV Rates

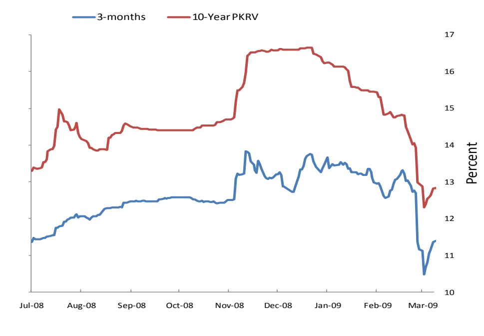


Figure 4.2.3: GAP between Rate Sensitive Assets and Laibilities to Total Assets (in %)

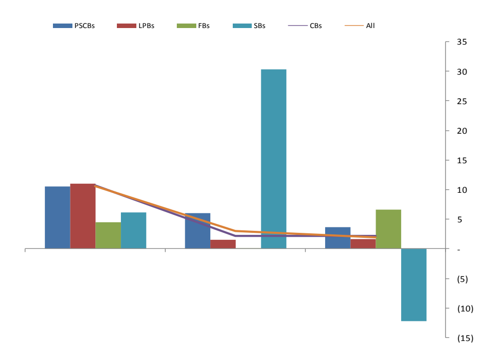
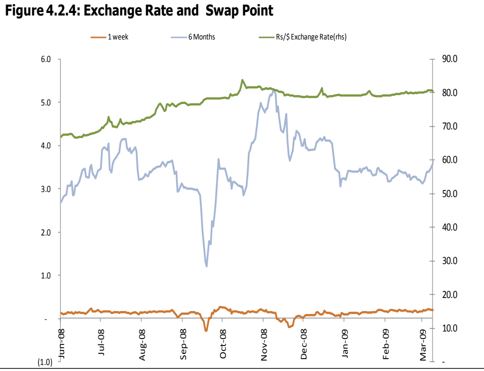


Figure 4.2.4: Exchange Rate and Swap Point



4.2 Market Risk

Interest Rate risk has a strong bearing on the overall Market Risk profile of the banking system. Rising interest rates during the quarter added to the interest rate risk, though it eased out in post quarter weeks. The liquidity tightening and rising interest rates increased the yield curve risk during the Dec-08 quarter. As a result yield curve peeked in Dec-08 after shifting in the range of 2-3 percent for different maturities. However, with easing out of the liquidity stress, it started shifting downwards post quarter and reached below the level of Jun-08 by mid Mar-09. The yield spreads also moved down to the Jun-08 levels. The curve for the Mar-09 flattened over short term depicting expectations of the banks regarding easing out of the rates. (see Figure 4.2.1). Similarly, the PKRV interest rate for 3m came down from peak of 13.8 in Nov-08 to 11.4 percent in Mar-09 (see Figure 4.2.2).

The changes in term structure of interest rate heighten the interest rate risk if there are considerable re-pricing GAPs. The GAP position of banks shows that for the time buckets of 3-12 months and over 1 year buckets, re-pricing GAPs between the rate sensitive assets and rate sensitive liabilities of the banking system were generally at comfortable levels i.e. within the ± 10 percent range of the total assets. The GAP in up to 3 months timeframe remains slightly above the ± 10 percent range. GAPs in almost all the time buckets stayed in positive range. Group wise, SBs have negative gap in longer term as one of the SBs has large negative equity, which has been covered through rate sensitive liabilities. (see Figure 4.2.3)

On the Exchange Rate risk front, until the latter half of 2008, on the back of increasing current account deficit and high inflation, there had been a significant appreciation in real exchange rate. This led to increased preference for USD over PKR and flight of capital, ultimately PKR depreciated by around 25 percent, which increased the PKR-USD parity to Rs84 by mid October, 2008 (see Figure 4.2.4). The announcement of IMF package eased the pressure on USD/PKR exchange rate and PKR appreciated by 5.5 percent to Rs79.1 by 31st

Figure 4.2.5: NOP of all Banks (in Million $)

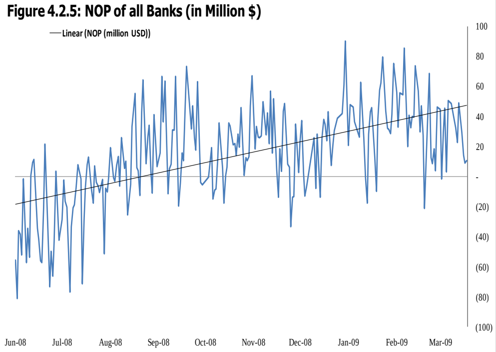


Figure 4.2.6: Exposure of Banks in Equities

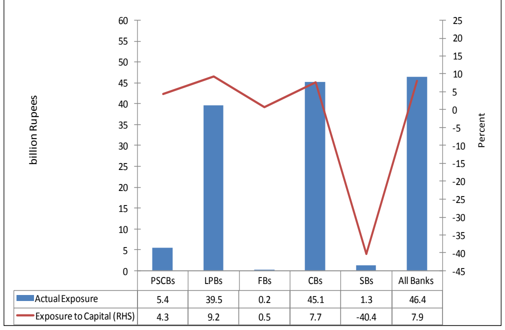


Figure 4.2.7: Investment in Fully Paid up Ordinary Shares

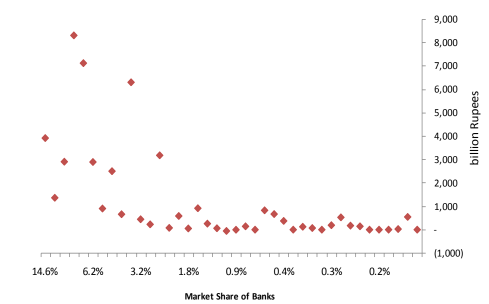
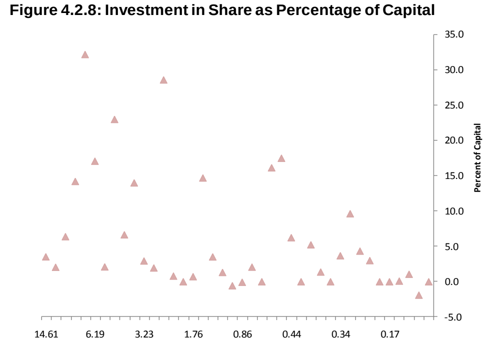


Figure 4.2.8: Investment in Share as Percentage of Capital



December, 2008. In post quarter week's rupee-dollar parity has hovered around Rs80 for a dollar (see figure 4.2.4). Since the banks net open position mainly remained positive during the quarter, the devaluation had positive effect on the earnings and equity of the banks (see figure 4.2.5). The stress test results also confirm that the depreciation/appreciation of PKR against USD and other currencies will be having least impact on the on the solvency of the banks.

Equity price risk of a bank is correlated with the direct exposure of banks in the equities market. Equity exposure of the banking system (including investments in fully paid up shares both in listed and unlisted stocks but excluding the subsidiaries and associates) remained steady at around Rs46 billion at the end of the quarter Dec-08 (see Figure 4.2.6). However, due to increase in banks' equity, these investments in terms of banks' equity (net worth) marginally decrease to 7.9 percent (8.1 percent in Sep-08). Group wise, LPBs continued to dominate equity exposure at Rs39.54 billion, followed by Rs5.4 billion exposure of PSCBs.

Disaggregated analysis indicates that top 5 banks (holding about 52 percent of the total banking assets), hold just about 51 percent of exposure in the total equity investment (see Figure 4.2.7). Further 27 out of 40 banks have exposures of less than 5 percent in terms of their equity (see Figure 4.2.8). With only 3 banks' having equity market exposures of more than 20 percent, the exposure of the banking sector is at comfortable levels.

Though system's equity exposures remained low vis-à-vis its risk absorbing capacity, the stock market developments during the quarter do raised some concerns. The plunge in the KSE-100 index of approx. 30 percent, almost immediately after removal of floor has implication for banks. The deficit on revaluation of equity investments of banks increased by 120 percent over the quarter to Rs13 billion which comes to around 28 percent of banks' investment in equities. This slump in prices has affected banks risk based capital. However, due to change in disclosure requirements whereby impairment losses has been deferred to next year, CY08 earnings remained immune to the significant decline in market prices.

Table 4.2.1: Stress Tests - Market Risk

Interest Rate Shock	
IR-1	Increase in interest rates by 500 basis points
IR-2	Shift coupled with flattening of the yield curve by increasing 500, 300 and 20 basis points in the three maturities respectively
Exchange Rate Shock	
ER-1	Depreciation of currency exchange rate by 25%
ER-2	Appreciation of currency exchange rate by 25%
ER-3	Depreciation of PRs against all currencies (25%) and deterioration of un-hedged FX loans
Equity Price Shock	
EQ-1	Fall in the equity prices by 50%.
EQ-2	Fall in the equity prices by 60%.
EQ-3	Fall in the equity prices by 70%.

To evaluate the resilience of the banking system to changes in the Market Risk profile, it has been stressed for eight different kinds of shock (see Table 4.2.1). The stress test results for the Market Risk indicate that banks have strong capacity to withstand the adverse movements in market risk factors.

Increase in interest rates by 500 bps under shock IR-1 would reduce the CAR of the banks by 0.77 percentage points to 11.4 percent. Similarly, the shift in yield curve under shock IR-2 would impact the CAR of the banks marginally by 0.36 percent to 11.9 percent.

The exchange rates shocks ER-1 would reduce the CAR of banks by 0.03 percent. A decrease in CAR reflects that assets of the banks in foreign currency are less than liabilities of the banks denominated in the foreign currency. However, in shock ER-2, the CAR of the banks increases by 0.03 percent when the domestic currency is assumed to be appreciated by 25 percent. In case of shock ER-3 the CAR of the banks reduces by 0.86 percentage points to 11.40 percent.

Table 4.2.2: Impact of Shocks

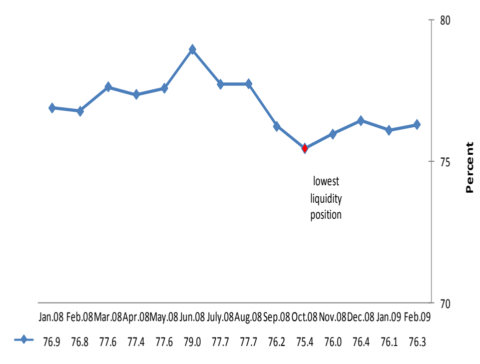
Shock	% point change in CAR after Shock	Adjusted CAR after Shock
IR-1	-0.77	11.4
IR-2	-0.36	11.9
ER-1	-0.03	12.2
ER-2	0.03	12.2
ER-3	-0.86	11.4
EQ-1	-0.87	11.3
EQ-2	-0.98	11.2
EQ-3	-1.08	11.1

The various equity price shocks will be having maximum impact of around a percentage point on the CAR. Under the equity price shock EQ-1, the CAR of the banks falls by 0.87 percent, which will increase to 0.98 and 1.08 percentage point under EQ-2 and EQ-3.

With the CAR of the system at 12.2 percent, after 70 percent decrease in the equity prices, banking sector appears to be comfortably placed to absorb such kind of shocks.

4.3 Liquidity Risk

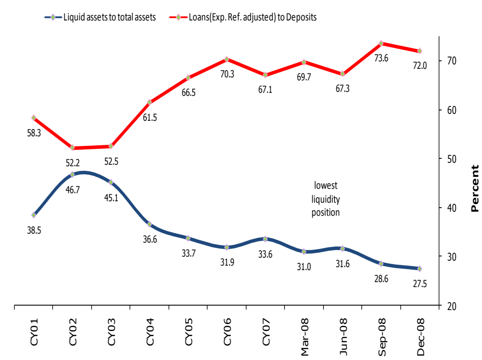
Figure 4.3.1: Deposit to M2 Ratio



In Pakistan, the post-Eid usual phenomenon of liquidity shortage was compounded by the shake in confidence of the depositors due to news of international financial meltdown, failure of capital market, and rumourmongering about targeted banks. Resultantly the deposits base of the banks witnessed significant depletion which was more pronounced in case of some small banks and a few large banks. The share of bank deposits in broad money (M2) witnessed a significant decline by the end of October 2008 (see Figure 4.3.1). The situation eased out afterwards with a steady increase in the deposit base of banks.

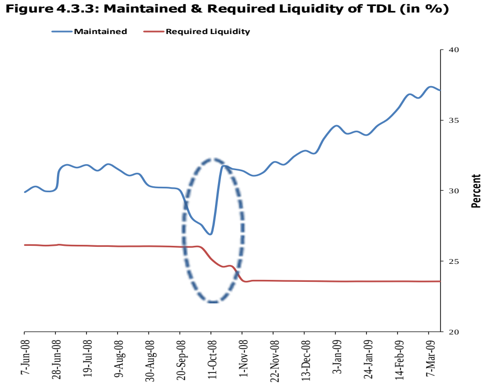
As Pakistan's banking system stands on conventional reserve based set-up, the country effectively handled this liquidity crunch, preventing it from turning into a solvency and stability crisis. The offsetting measures taken by SBP include reduction in CRR, liquidity support, incentive for mobilization of long term funds, mandatory minimum return on deposits, and above all effective communication policy that was well amplified by SBP's strong track record of ensuring a sound and stable banking system (see Box 2).

Figure 4.3.2: Liquidity Indicators



As highlighted in section 2, high ADR also provide explanation for liquidity stress. As the liquidity concerns eased off and deposits started returning to the system, ADR of the banking system also declined. ADR (ERF adjusted) came down to 72 percent from 73.6 percent in Sep-08 (see Figure 4.3.2). Recently available post quarter statistics shows consistent decline in ADR as loans are gradually declining and deposits inching up. The liquidity maintained by banks which almost converged to the required level in second week of Oct-08 has improved to 37.4 percent by mid of March 2009 (see Figure 4.3.3).

Figure 4.3.3: Maintained & Required Liquidity of TDL (in %)



Individual banks' liquidity profile has also improved significantly since the liquidity stress. In terms of compliance, only two small banks faced shortfalls in CRR in different weeks during the quarter under review. As far as SLR is concerned, the situation has improved considerably since the liquidity stress period of October and November 2008, when more than four banks, consistently faced the shortfall in

Figure 4.3.4: MTBs of the Banking System

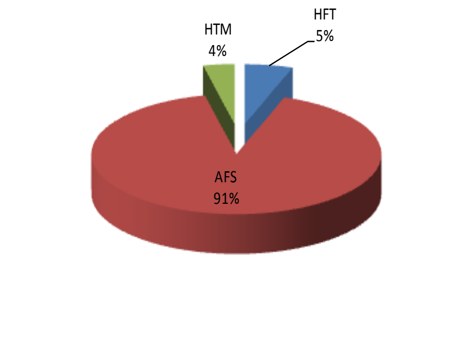


Figure 4.3.5: OMOs by SBP Vs Discounting availed by Banks

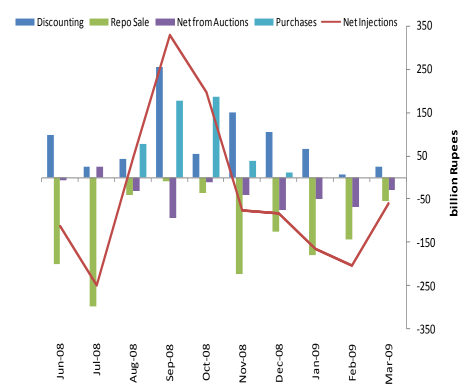
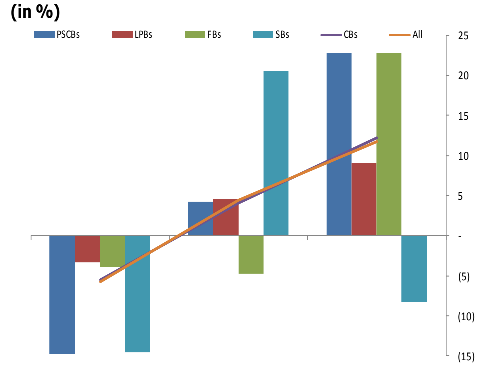


Figure 4.3.6: Maturity GAP (Assets - Liabilities) to Total Assets (in %)



different weeks. This number decreased to three banks by the year end and to one bank by second week of March, 2008.

The Government securities especially the short-term govt. papers (MTBs) in different investment categories represent the fund based liquidity available within the banking system. The MTB holdings have increased by 17 percent in Dec-08, mainly in HFT and AFS categories. MTBs in the AFS category increased by 1 percentage point to 91 percent (see Figure 4.3.4), while HFT category increased by 1 percentage point to reach 5 percent. However, the share of HTM decreased by 2 percentage points, which represents liquidity preference of banks.

SBP had to inject liquidity into the system during September and October 2008. However after the improvement in situation, SBP resorted to net mop-up afterwards for keeping the short term interest rates allied to its Monetary Policy. (see Figure 4.3.5). However, the overnight repo rate volatility increased though its level remained quite low due to the lingering effects of liquidity problems in some segments of the market.

The effects of the volatile liquidity situation during the previous quarter have shown impact on the GAPs between the maturity of assets and liabilities. The funding liquidity risk has become a bit concern due to slightly undesirable GAP position of the overall banking system. Group wise analysis also depicts that PSCB, FB and SB were carrying significant gaps of more than ten percentages of total assets in different maturity buckets. Although appropriate management was exhibited by LPBs, still, the GAP position for all Banks has gone beyond the limit of + 10 percent in Over 1 year bucket (see Figure 4.3.6).

Even in the backdrop of the global financial crisis and liquidity crunch, the stress tests results in respect of Pakistani banks remained satisfactory for the quarter ending Dec-08. Liquidity of the banks is evaluated by calculating net cash flows (cash inflows minus cash outflows) of banks after assuming certain level of daily deposit withdrawals and generating cash inflows by converting 80 percent of liquid assets and one percent of non-

Table 4.3.1: Liquidity Shock

		Number of Banks Becoming Insolvent after Shock		
		3 days	4 days	5 days
L-1	Withdrawal of customer deposits by 2%, 5%, 10%, 10% and 10% for five consecutive days respectively.	**2**	**4**	**8**

liquid assets into cash. This shock assumes withdrawal of customer deposits by 2 percent, 5 percent, 10 percent, 10 percent and 10 percent for five consecutive days, respectively. (see Table 4.3.1)

The results show that none of the banks becomes illiquid after two days of withdrawal. However, after three days of the consecutive withdrawal, 2 banks would become illiquid. After the consecutive 5 days withdrawal of deposits, 6 more banks would become illiquid.

Post quarter developments indicate that there has been considerable liquidity in the market and banks have over bidden in T-Bill auctions. As a result, the weighted average lending rate for 6-month T-Bill has come down to 13.0 percent at the end of Feb-09 from 14.0 percent in Dec-08. As liquidity has been in excess and advances have been marginally declining, KIBOR has also come down substantially and by the end of Feb-08, 6-month KIBOR (offer) stood at 13.0 percent.

Box: 2
SBP's Role in Preserving the Confidence in Banking System

Banking is the business of confidence. The banking system is marked with high leverage, maturity mismatches, and information asymmetries making the system prone to swings in the investor confidence. The preservation of general confidence depends upon a number of factors viz. strong financial standing and performance, high ethical standards, and presence of enabling regulatory and supervisory regime. Equally important is the flow of timely, accurate and relevant information to all the stakeholders for keeping them updated. The liquidity stress of October-November 2008 tested the ability of the system in maintaining the general confidence in the banking system. During the course of these 8 weeks, SBP and banks effectively strived to overcome a transitory shake in general public confidence in a few banks in particular and system in general.

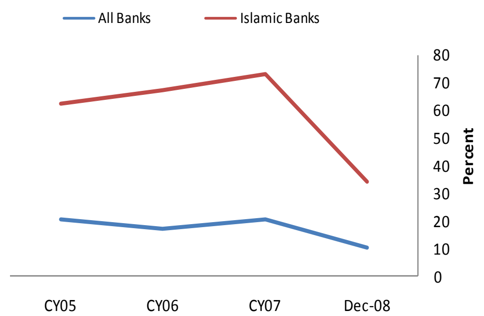
SBP approach during these stressed weeks, for keeping the confidence intact in the system, comprised following:

- SBP intensified its communication with media and public, explaining financial position of Pakistani banks and its support for the system to bolster the confidence on bank customers, particularly the bank depositors'. Starting early October, 2008, it iterated in the media that Pakistani banks' investment and lending portfolio are subject to prudent regulatory requirements and is sterile from the risks of structured products that underlined the financial turmoil in developed financial markets. The message, backed by SBP's six decades impeccable history of ensuring financial stability, was very well received by the media and general public and helped in dispelling the doubts about the stability of the banking system. SBP also conveyed its detailed assessments of the situation in its periodical publications.
- SBP further enhanced its daily monitoring of banks' liquidity profiles. And took host of measures for smooth functioning of the banking system and ensuring the sufficient funds for meeting the panic-stricken deposit withdrawals. These measures include routine 3 days LoLR facility, reduction in CRR, eligibility of PIBs for LoLR borrowings, and enjoining of mandatory ADR.
- SBP coordinated and worked with Federal Government and Securities and Exchange Commission of Pakistan. Consequently, Federal Government instituted a long-term LoLR facility for small institutions, which could have faced severe liquidity crisis due to heavy deposit withdrawals. On the other hand, SBP worked closely with SECP in devising effective strategy for the revival of capital market and resolving the financial disclosure issues, which rose in the wake of significant down turn in the capital market.

In addition to continuous and frequent communication with banks, the banks themselves also played an effective role in easing out the stressed situation. While ensuring that depositors are served in a timely manner, they carried out a very effective media campaign during the stress period. Even sponsors of one key bank facing liquidity pressures, came up with a strong advertisement campaign ensuring all out support for the bank. Most of the banks further intensified their deposit mobilization campaign that bear significant fruits by the end of quarter under review. Nevertheless, this transitory crisis has provided the system an opportunity to test the adequacy of contingency plans and improve upon the weaknesses, which have surfaced during these stressed weeks.

5. Performance of Islamic Banking

Figure 5.1: Asset Growth



Islamic banking industry in Pakistan continues to grow at a staggering pace despite economic slowdown. Islamic banking in Pakistan, which started in CY02, has grown at an average annual rate of 37 percent.

Right from its inception in CY02, Islamic banking has expanded at a greater pace than the overall industry. With exponential growth in asset base over the last half a decade, Islamic banks are gradually increasing their share in the banking system. (see Figure 5.1). The assets of Islamic Banking system reached Rs276 billion with 10.1 percent growth during the quarter (YoY growth 34 percent) against 2.6 percent increase for the banking system. Consequently, the share of Islamic Banks further increased by 30 bps to 4.9 percent by end Dec-08.

Table 5.1: Islamic Banking Participants

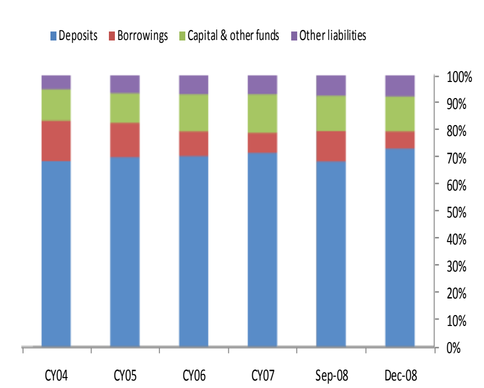
	CY02	CY04	CY06	CY07	Sep-08	Dec-08
No. of Islamic Banks (IBs)	1	2	4	6	6	6
No. of Branches	6	23	93	186	261	384*
No. of conventional banks operating Islamic Banking Branches	-	7	12	12	12	12
No. of Islamic Banking Branches (IBBs)	-	21	57	103	106	130**

* These numbers include 75 Sub Branches.
** These numbers include 2 Sub Branches.

Likewise, outreach of Islamic Banking continued to expand during the quarter under review. The branch network grew by 39 percent to 514 by the end of the quarter compared with 369 at the end of Sep-08 and 291 in Dec-07 (see Table 5.1).

Analysis of the sources and uses of funds exhibit increased share of deposits of the Islamic banking on the liability side of the balance sheet, while financing dominates the asset side. Despite slowdown in economic activity and strain on liquidity of the banking system, deposits for Islamic banking grew at a rate of 17.7 percent to Rs201.7 billion during the quarter (YoY growth 37 percent) increasing their share in overall funding structure to 73 percent (see Figure 5.2).

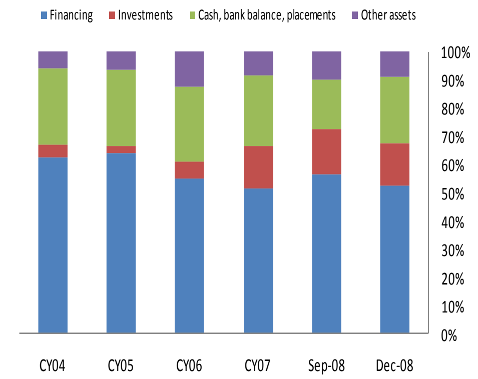
Figure 5.2: Composition of Liabilities



Against healthy growth in assets base, financing grew by a meager 1.8 percent in Dec-08 (YoY growth 36 percent) to Rs144.7 billion, a reflection of risk averse approach of the overall industry. Share of financing in overall composition of assets declined by 4.3 percentage point to 52.2 percent while Investments dipped by 80 bps to 15.3 percent. The financing and investments actually lost their share to Cash, bank balances and placements, which enhanced its share in assets by

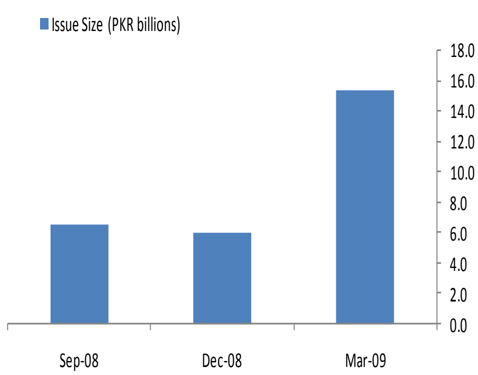
5.3 percentage point to 23.3 percent (see Figure 5.3).

Figure 5.3: Composition of Assets



High percentage share of cash and balances is itself a reflection of limited investment alternatives available to Islamic banking, which has affected the operating efficiency of these institutions. SBP in association of Government of Pakistan is committed to resolving the issue[11]. A positive step in this direction is that SBP has conducted three auctions of Sukuks of 3 years maturity amounting to Rs27.84 billion (see Figure 5.4). Increased investment in sukuk has enhanced the share of Government bonds in the overall investment portfolio of the Islamic banking.

Figure 5.4 GoP Sukuk Issues



Though the credit risk of the banking system has increased, the asset quality of the Islamic Banking seems less affected during the quarter. The infection ratio of the system increased by a mere 0.1 percentage points to 2.3 percent (Rs3.4 billion), while the net NPFs to financing increased by same percentage point to 0.8 percent (Rs1.1 billion). Islamic banks till the end of CY07 had a high NPF coverage ratio of above 100 percent, owing to low NPFs to financing ratio. With the increase in fresh NPFs in 2008, the coverage ratio started to decline. However, the ratio started to improve from third quarter of CY08 and increased to 68 percent by the end of Dec-08. The ratio is still below the industry ratio of 75 percent due to higher percentage of NPFs in classification categories requiring lesser provisioning (see Table 5.2).

Table 5.2: Key Performance Indicators

Percent

Indicator	CY04	CY05	CY06	CY07	Sep-08	Dec-08
NPFs to total financing	0.9	1.0	1.3	1.2	2.2	2.3
Net NPFs to net financing	0.2	0.2	0.4	(0.1)	0.7	0.8
Provision to NPFs	82.3	80.6	72.0	108.7	65.9	67.6
Net Markup Income to total assets	1.4	2.3	2.4	2.9	3.9	4.5
Non Markup Income to total assets	1.4	1.7	0.9	1.2	0.8	0.9
Operating Expense to Gross Incom	65.3	49.9	72.8	70.0	74.3	76.0
ROA (average assets)	1.2	1.7	0.9	0.9	0.8	0.8
Growth in Assets	241.8	62.0	66.9	72.9	6.7	10.1
Growth in Deposits	259.5	65.4	67.7	76.0	1.4	17.7
Growth in Financing	218.2	66.3	43.3	62.1	8.1	1.8

Due to relatively slow growth in financing and higher growth in deposits, financing to deposits ratio (FDR) decreased to 72 percent in Dec-08 from 83 percent in Sep-08. The deposit growth during the quarter was lack luster. However, deposit saw extraordinary increase during the last three weeks of the quarter, which provided a limited time to banks to deploy them into earning assets, which substantially declined the FDR by end Dec-08.

The solvency of the Islamic Banking System has further strengthened to 17.5 percent from 16.3 percent in Sep-08, and well above the industry ratio of 12.2 percent. This increase is despite

[11] For details of GoP Ijara Sukuk please refer to FSCD Circular 13 dated September 06, 2008.

Table 5.3 Islamic Banking Capital Adequacy Ratio (CAR)

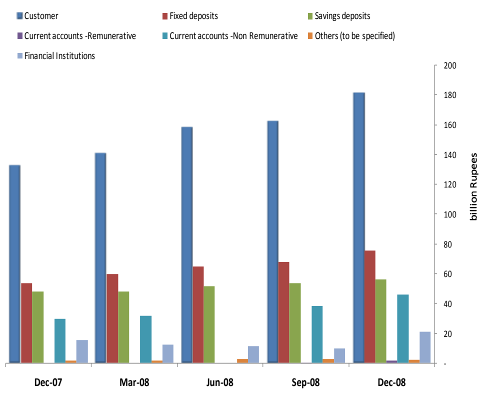
In Percent	CY07	Mar-08	Jun-08	Sep-08	Dec-08
Islamic Banks (IBs)	20.8	20.4	19.5	18.5	19.1*
Islamic Banking Branches (IBBs)	12.4	12.6	12.2	11.8	14.0
Combined CAR	18.4	18.2	17.3	16.4	17.5

* CAR is calculated on Basel-II basis.

inclusion of additional capital charge for operational risk in CAR under Basel-II requirements for full fledge Islamic Bank and a couple of IBDs. CAR has improved for both groups of Islamic Banking (see Table 5.3).

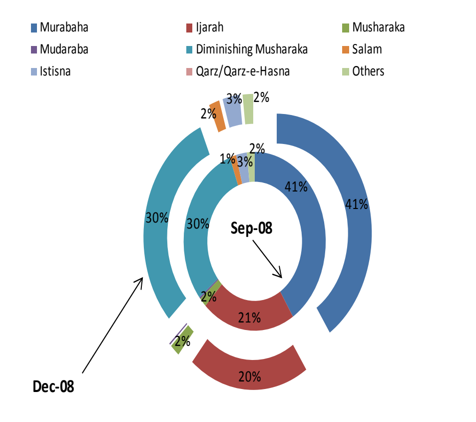
The disaggregated analysis of the deposit mix show increase across all categories of deposits. The customer deposits increased by 12 percent, while the financial institutions deposits increased by more than 100 percent. As a result, the share of customer deposits in overall deposits decreased by 3 percentage points to 90 percentage points. Among the customer deposits, major increase took place in fixed deposits' and the current accounts. Extraordinary increase in deposit has resulted from extra liquidity created subsequent to relaxation of liquidity requirements in October and November 2008. This left Islamic banks with excess liquidity which was placed in to various forms of deposits with other Islamic banks operating in the system. It is pivotal to note that these financial institutions' deposits are of very short tenor and therefore increase volatility in the deposit base of IBIs. In contrast, customer deposits are much more stable and have exhibited YoY growth rate of 37 percent (see Figure 5.5).

Figure 5.5: Composition of Deposits



Composition of financing exhibits the previous trends during the quarter under review. Murabaha financing holds the major share of financing with 40.5 percent compared with 41 percent in Sep-08, contracting its share in financing by 5 percentage points. Similarly, Diminishing Musharaka increased by 3 percent during the quarter, which increased its share in over all financing by half a percentage point to 30.5 percent. Importantly Musharaka and Salam financing increased by more than 25 percent to expand their share in total financing to 3.5 percent during the quarter. The combined share of the top three modes of financing witnessed a slight decrease of 40 bps to 91.6 percent compared to 92 percent in Sep-08 (see Figure 5.6)

Figure 5.6: Mode of Financing



Islamic banks continue to register healthy profitability. The IBIs after tax profit increased by Rs400 million to Rs 1.8 billion by end Dec-08. Earning performance is even better than CY07, when IBIs posted a profit after tax of Rs 1.6 billion (YoY growth 14.6 percent). The profitability has

Table 5.4 Income Statement

amount in billion Rupees

	CY04	CY05	CY06	CY07	Sep-08	Dec-08
Markup Income	1.1	3.2	6.4	12.7	15.0	22.0
Markup Expense	0.5	1.5	3.5	6.8	7.6	11.3
Net Markup Income	0.6	1.6	2.9	5.9	7.4	10.6
Provision Expense	0.0	0.2	0.2	0.8	0.7	1.0
Non Markup Income	0.6	1.2	1.1	2.4	1.5	2.1
Operating Expense	0.8	1.4	2.9	5.9	6.6	9.7
Profit Before Tax	0.4	1.2	0.8	1.7	1.5	2.0
Tax	0.0	0.3	(0.0)	(0.2)	0.1	0.2
Profit After Tax	0.3	1.0	0.9	1.6	1.4	1.8

been augmented by exceptional increase in net interest and non-interest income by 44 and 42 percent respectively during Dec-08 (see Table 5.3). Operating expenses also registered a growth of 47 percent during the quarter mainly emerging from the extraordinary expansion is branch network, which increased by 145 branches during the year. The strong profitability has helped the system to improve ROA by 0.05 percentage points 0.8 percent (see Table 5.4).

The overall performance of IBIs during the quarter has remained mixed. With improved profitability, increased deposit base coupled with sound capital adequacy, and well-maintained and expanding branch network, IBIs are well placed to expand and gain further share in the banking system in years to come.

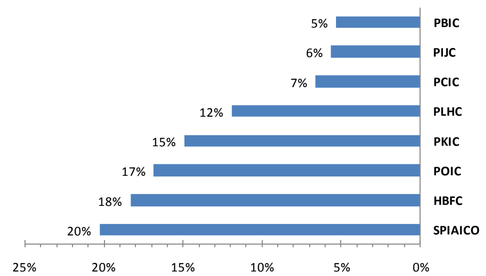
6. Development Finance Institutions (DFIs)

Table 6.1: DFIs at a Glance

	CY05	CY06	CY07	Sep-08	Dec-08
Assets	127.6	135.3	112.8	109.8	103.7
Lending to FIs	8.5	17.2	19.3	15.3	10.4
Investments	48.2	42.1	40.5	39.4	38.3
Advances	53.8	53.5	35.4	36.7	36.2
Liabilities	87.8	94.3	69.4	57.9	53.8
Borrowing from FIs	43.7	58.6	51.7	45.5	43.1
Deposits/COIs	38.0	29.4	11.9	7.3	5.9
Equity	39.8	41.0	43.3	51.9	49.9

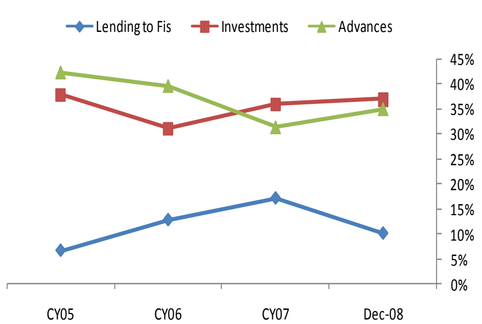
Last year proved challenging for DFIs with their balance sheets contracting, particularly in the last quarter of 2008. Assets of DFIs declined by 8 percent to reach Rs 104 billion by the end of Dec-08. However, a large part of this decline was observed in the quarter under review. (see Table 6.1). While exit of PICIC from the sector explained the contraction in assets during CY07, recent drop is the result of negative asset growth of major DFIs. Further breakup of the data for the last year suggests that Q4-08 was particularly onerous as virtually all main items of the DFIs' balance sheets registered a contraction. On a positive note, DFIs equity registered a 15 percent increase over the last year, partly because of a new entrant.

Figure 6. 1: Asset Distribution among DFIs



Asset distribution of DFIs exhibits a growing degree of competition, fueled by the entry of three new Joint Investment Companies in last couple of years, established with the collaboration of the Governments of Iran, Brunei, and China. While early entrants still enjoy strong market presence as top four DFIs constitute around 70 percent of the total assets, competition is likely to intensify in the years ahead, fostering innovation and improving service quality.

Figure 6.2: Asset Composition of DFIs



Asset composition of DFIs indicates that their investments and advances account for 72 percent of their total assets. DFIs' advances portfolio registered a marginal recovery during the first three quarters of 2008, and with slight relapse in the quarter under review it reached to 36 billion (growth of 2 percent) - compared to a decline of 34 percent during CY07 on account of merger of one DFI into an LPB (see Figure 6.1). Though barely perceptible, increase in advances during 2008 is encouraging; however, concerted effort is required on the part of DFIs to expand their lending operations to achieve their objective of financing medium and long-term projects in industry and agriculture. Lending to financial institutions contracted sharply, as liquidity conditions tightened, with its share in total assets plummeting from 17 to 10 percent.

Figure 6.3: Investment Porftfolio of DFIs

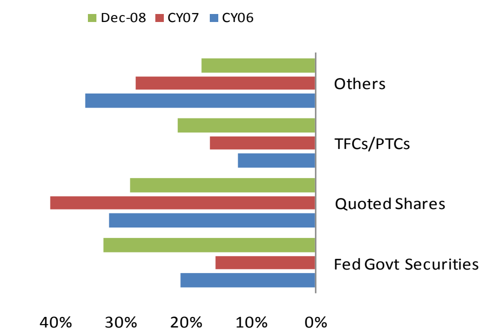
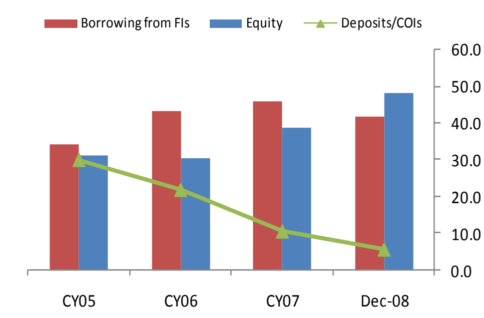


Figure 6.4: Funding Composition of DFIs (percent of assets)



The asset composition indicates that the existing DFIs are primarily involved in investment activities, which even with a negative growth of around 5 percent since CY07, still account for nearly 37 percent of total assets (see Figure 6.2). Further breakup of investments indicates that the DFIs' investments in government securities have substantially increased over the last year which now accounts for 33 percent of total investments, compared to 15 percent in CY07. Investments in corporate debt instruments (TFCs/PTCs) have also registered an upward trend since 2006, pushing its share in total investments to 21 percent by Dec-08 (see Figure 6.3). The sharp rise in investment in government securities as well as in TFCs/PTCS can be explained by new entrants' risk averse attitude in the face of less benign market conditions and flight to quality. On the other hand, investments in quoted shares have dropped during the same period, because of both volume and value losses in a plummeting stock market.

The funding composition of DFIs reveals their primary reliance on equity and borrowing from financial institutions, accounting for 90 percent of their assets (see Table 6.2). Significant capital injections have made equity as the chief source of funding during last year though the previous years witnessed a relatively stronger role of borrowings from financial institutions. Deposits/COIs dropped during the fourth year in a row, reflecting DFIs' inability to stem this slide in the face of fierce competition from commercial banks which were better able to raise and remunerate such funds.

The funding composition also shows that DFIs rely heavily on borrowings from financial institutions, though its share has declined from 46.0 percent to 41.6 percent by Dec-08, largely on account of tight liquidity conditions during the second half of last year.

Capital adequacy indicators of DFIs have strengthened over the last few years, thanks to the entry of new institutions, rising MCR, decrease in advances and increased investment in Government securities. As a result, their CAR improved to 49.8 percent by Dec-08 from 42.5 percent in Sep-08 (44

Table 6.2: Key Performance Indicators of DFIs
percent

	2005	2006	2007	Dec-08
Total Capital to Total RWA	32.0	41.0	44.0	49.8
Tier 1 Capital to Total RWAs	29.0	38.0	42.0	50.7
Capital to total Assets	36.0	31.0	35.0	46.1
Capital growth	32.0	3.0	6.0	15.1
Assets growth	34.0	6.0	-17.0	-8.1
Capital to liabilities	45.0	43.0	62.0	92.8
NPLs to total loans	47.0	21.0	9.0	26.0
Net NPLs to net loans	27.0	13.0	1.0	9.0
Provision to NPLs	58.0	43.0	88.0	71.0
Growth rate of loans	78.0	-1.0	-34.0	2.4
Growth rate of investment	13.0	-13.0	-4.0	-5.4
Interest income to total assets	7.0	7.0	5.0	9.4
Interest expense to total assets	4.0	5.0	3.0	4.5
Net interest income to total assets	3.0	2.0	2.0	4.9
Non-interest income to total assets	6.0	3.0	3.0	3.6
ROA before tax	6.0	2.0	4.0	3.9
ROA after tax	5.0	2.0	4.0	3.3
Loans to deposits	142.0	182.0	298.0	616.0
loans to borrowings	123.0	91.0	68.0	84.0
Loans to borrowings & deposits	66.0	61.0	56.0	74.0
Loans to borrowings & borrowings from FIs	123.0	91.0	68.0	84.0

percent in CY07). A similar improvement is also visible from the Tier-I capital to RWAs ratio, which increased by 8.1 percentage points to 50.7 percent over the same period (see Table 6.2). With strong capital base, DFIs are better placed to withstand unexpected losses (if any) on account of their business operations. The noticeable increase in the equity of the DFIs is also evident from the improved capital to liability ratio, which surged to 92.8 percent from the already high level of 62 percent by CY07.

Asset quality indicators, which recorded sharp improvements during CY07, continue to deteriorate in the wake of worsening business conditions. The NPLs to loans ratio surged by 23.2 percent in Sep-08 to 26 percent in Dec-08 (9 percent in CY07). Likewise, the net NPLs to net loans ratio jumped to 9.3 percent from 7.7 percent in Sep-08 (1 percent in CY07).

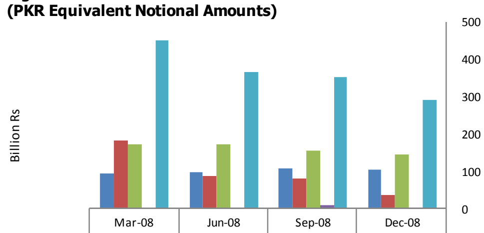
After a highly profitable CY07, DFIs' profitability deteriorated by 29 percent and profit before tax dropped to Rs4 billion by Dec-08 compared Rs6 billion in Sep-08 (Rs5 billion in CY07), because of 35 percent increase in administrative expenses and deficit on revaluation / sale of securities. Drop in profitability led to reduction in ROA after tax, from 6.5 to 3.2 percent. This decrease took place despite decrease in overall asset base of the system that delivered some comfort to the return indicator. The operating results, however, depict far better picture; net interest income to total assets improved over the quarter as DFIs changed their asset composition by increasing investment in government securities in the wake of tight monetary regime.

Loan portfolio of DFIs registered a marginal growth of 1 percent over the quarter under review (2.4 percent over the year); however, coupled with negative growth in investments, share of loans in their overall portfolio reached to 36 percent from 35 percent in Sep-08 (31 percent in CY07). Accordingly, ratios like loans to deposit as well as to borrowings sharply improved, though the former is equally attributable to gradually diminishing share of deposits in DFI liabilities.

As their funding composition reveal, DFIs lack a sustained source of funding, which is essential for the long term sustainability of operations. This also makes business expansion dependent on the lending decisions of other financial institutions, borrowing from whom is generally a high cost form of funding in comparison with deposit mobilization. While the growing share of equity in financing assets augers well for their soundness, DFIs need to beef up their funding sources particularly in the face of diminishing share of deposits over the last few years.

Special Section 2: Analysis of Financial Derivative Business

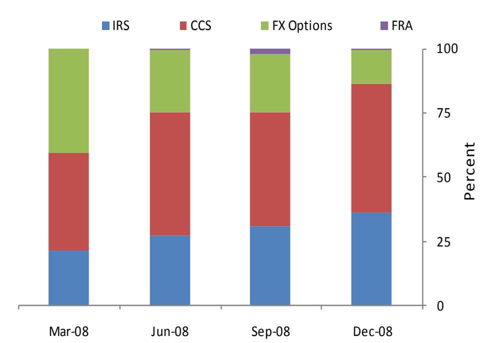
Figure S.2.1: Financial Derivatives Contracts (PKR Equivalent Notional Amounts)



	Mar-08	Jun-08	Sep-08	Dec-08
IRS	96	99	109	105
FX Options	183	88	80	38
CCS	172	174	157	146
FRA	0	3	7	2
Total	451	364	353	291

Financial derivative business started in Pakistan in 2003. Initially banks were allowed to undertake the business of financial derivatives after getting specific transactional approval from SBP. In 2004, with an objective to develop an over the counter (OTC) financial derivatives market in the country, SBP allowed Banks/DFIs to undertake derivatives business, provided they meet the eligibility criteria and obtain Authorized Derivatives Dealer (ADD) or Non Market Maker Financial Institution (NMI) status from SBP. For the purpose, SBP issued Financial Derivatives Business Regulations (FDBR), which not only contains the regulatory framework for the OTC financial derivative transactions but also includes specifics related to permissible derivative transactions. The permitted types of transactions include G7 Foreign Currency Options, PKR Forward Rate Agreements (FRA) and PKR Interest Rate Swaps (IRS). However, banks/DFIs can undertake any other type of transaction with SBP's prior approval.

Figure S.2.2: Composition of Financial Derivatives Contracts



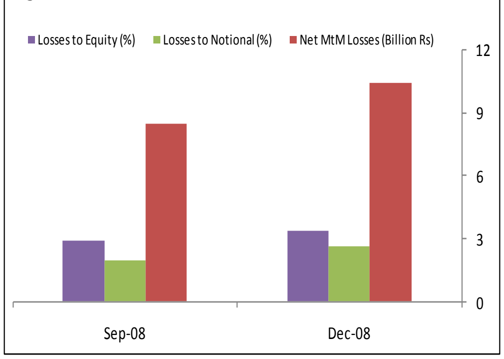
To date, SBP has granted ADD status to five financial institutions, however no institution has obtained the status of NMI so far. Any institution other then the five ADDs interested in undertaking derivative business requires prior approval from SBP.

The following paragraphs discuss the trend, composition, and mark-to-market dynamics of financial derivates.

The financial derivative business witnessed significant decline over CY08. Outstanding notional amount of all derivates declined by 35 percent to Rs291 billion[12] during CY08. Similarly, number of contracts declined to 392 (458 in Sep-08). However, internal composition of derivative portfolio shows divergent trends among the different types of derivates (see Figure S.2.1). Accordingly, the relative share of these derivates changed over the year (see Figure S.2.2).

[12] The amount pertains to 8 banks including 5 ADDs, excluding the hedging transactions with Resident/non Resident banks.

Most significant decline was observed in ***Foreign Exchange Options (FX Options)***[13] which declined by around 80 percent over the year to 38 billion and their relative share declined to around 13 percent by the end of CY08, constituting third major component as against the leading share at the inception of the year.



Cross Currency Swaps (CCS) which now constitute the largest part (i.e. 50 percent) of total outstanding derivates contracts also witnessed an over the year decline of 15 percent. However, due to greater decline in FX Options, the share of CCS inched up. The leading factor behind the popularity of CCS has been the high gap between local and international interest rates that induced the local corporate with large export volumes to swap their local currency exposures with LIBOR or EURIBOR.

Interest Rate Swaps (IRS)[14] witnessed an increase of 9 percent over the year and their share improved to 36 percent. This increase is mainly due to expectations of rising PKR interest rates among market participants that were also augmented by increase in SBP Policy Rate during the year.

Forward Rate Agreements (FRAs)[15] which are recent phenomenon still have negligible share of 1 percent in total outstanding derivatives market.

The outstanding financial derivatives transactions pertain to eight banks, including 5 ADDs. These banks belong to different banking group: 5 LPBs, 2 FBs and 1 PSCBs. The mark-to-market position shows that all groups except PSCB are carrying negative mark-to-market values on their derivative books. Total mark-to-market losses over the quarter increased by 23 percent to Rs10 billion. These mark-to-market losses come to around 3.4 percent (2.9 percent in Sep-08) of equity base of the banks engaged in derivate business and 2.6 percent of outstanding notional principal amounts (2.0 percent in Sep-08). However, a couple of banks have significantly risky exposures that could

[13] As stated in the FDBR, dealing in FX options is permitted in G-7 currencies only. While there is no restriction on the minimum or maximum size of 'notional principal' amounts of FX options, the maximum tenor is restricted to one year.

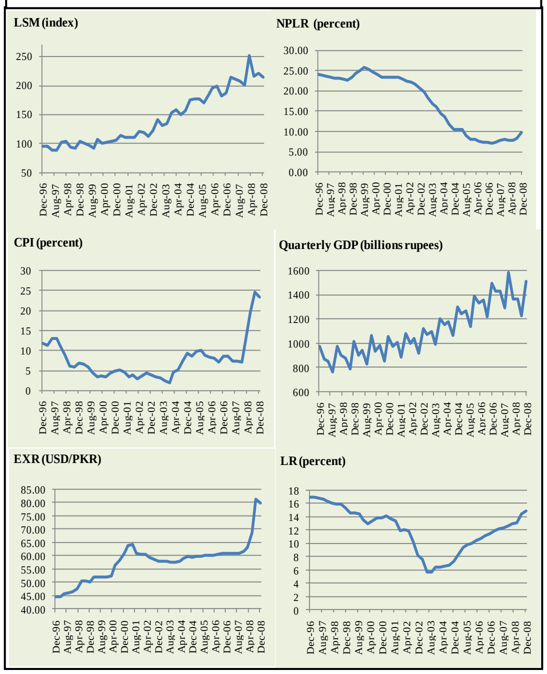
[14] As per FDBR, IRS transactions are permitted in PKR only, with a maximum tenor of 5 years and there is no restriction on the minimum or maximum size of 'notional principal' amounts of IRS.

[15] In the FDBR, dealing in FRAs is permitted in PKR only, with a maximum tenor of 2 years.

create further stress in case of any adverse movements in underlying prices (see Figure S.2.3).

Appendix A: Credit Portfolio View Methodology

Figure: A.1 Trend of data variables used in CPV model



The main inputs of the Credit Portfolio View (CPV) model are a set of macroeconomic variables (GDP, CPI, Exchange Rates, interest rate etc.) and the aggregate NPLs of the banking sector (see Figure A.1).

The CPV model first converts the NPL ratio into logistic form. The logistic form is used to model bankruptcies and to ensure that the default rate estimates are neither negative nor exceed 100 percent, i.e. the range is defined as [0, 1].

$PD_{j,t}$

$$PD_{j,t} = \frac{1}{1+e^{(y_{j,t})}} = L(PD_{j,t}) \Rightarrow y_{j,t} = \ln\left[\frac{1-PD_{j,t}}{PD_{j,t}}\right]$$

f

s

the probability of default for industry / sector "j" at time period "t". The transformed default rate is assumed to be determined by a set of macroeconomic factors.

$$y_{j,t} = \alpha_{j,0} + \alpha_{j,1}x_{1,t} + \alpha_{j,2}x_{2,t} \cdots + \alpha_{j,n}x_{n,t} + \nu_{j,t}$$

α_j is the set of regression coefficients for jth industry and $x_{i,t}$ is the set of macroeconomic variables. The error term is assumed to be independent, identical and normally distributed and is given by $\nu_{j,t}$

The model also considers the one of the basic macroeconomic assumption that macro variables are affected by their past values. For example, GDP for year 2007 will be affected by GDP for year 2006 and 2005. This type of macro variables are referred as autoregressive (AR). The usual practice is to take AR of order 2, however, in order to get more accuracy coupled with high complexity the analysis can go beyond AR (2) process. Hence the AR equation of macro variable(s) is given by

$$x_{1,t} = k_{i.0} + k_{i,1}x_{i,t-1} + k_{i,2}x_{i,t-2} + \sigma_{i,t}$$

Where**,** k_i is the set of regression coefficient and $\sigma_{i,t}$ is the residual / random error.

$$E = \begin{bmatrix} \nu \\ \sigma \end{bmatrix} \square\, N(0,\Sigma) \ , \ \Sigma = \begin{pmatrix} \Sigma_\nu & \Sigma_{\nu,\sigma} \\ \Sigma_{\sigma,\nu} & \Sigma_\sigma \end{pmatrix}$$

Table A.1: Estimation Results

Dependent variable: NPLR

Variable	Coefficient	t-Statistic	Prob.
C	0.5796	1.89840	0.05123
GDP Growth	-0.0924	-2.15173	0.03840
CPI	0.0414	1.99320	0.02408
EXR	-0.0171	-1.21652	0.23190
LR	0.01869	6.45377	0.00100
NPLR(-1)	0.9623	11.05514	0.00000
R-squared	0.957197	Prob	0.00000
Adjusted R-squared	0.956797	DW-Stat	1.97544

Table A.2: Covariance matrix

	GDP	EXR	CPI	NPLR	LR
GDP	1.00	-0.40	-0.58	-0.13	-0.57
EXR	-0.40	1.00	0.65	-0.57	-0.12
CPI	-0.58	0.65	1.00	-0.55	0.27
NPLR	-0.13	-0.57	-0.55	1.00	0.37
LR	-0.57	-0.12	0.27	0.37	1.00

After estimating the equation (Table A.1), we get the residuals that are arranged in matrix form $\sum$ (Table A.2). The variance-covariance matrix of error terms $\sum$ is then used to simulate values of residuals that simulate the future path of the joint default rates across all sectors/industries. The $\sum$ matrix is decomposed by using Cholesky decomposition. The Cholesky decomposition divides the symmetric matrix into upper and lower triangular matrices to solve for the system of equations. The Monte Carlo simulation is then applied to the decomposed matrix and simulated residuals of the estimated equations are computed (more than 20,000 times) to calculate the probability distribution of dependent variable (default rate) for the period t+1. The stress test is then applied on the simulated distribution by replacing the residuals of exogenous variables or either by assigning hypothetical values to macro variables to achieve forecast their values for period t+1.

The above mentioned model can be solved in ordinary least square format or in reduced form equation depending on data type and its frequency. Similarly, panel data can be introduced in the model as it covers various sectors / industries. This analysis can be done on single sector or on aggregate NPL ratios. The result of the analysis is the default probability distributions for each sector are then simulated while giving stress to macro variables.

Annex-I

Financial Soundness Indicators

Indicators	2004	2005	2006	2007	Sep 08	Dec-08
CAPITAL ADEQUACY						
Risk Weighted CAR						
Public Sector Commercial Banks	13.4	14.5	15.2	17.8	15.1	12.8
Local Private Banks	10.1	10.6	12.7	12.8	11.2	12.2
Foreign Banks	17.4	16.4	15.0	13.5	18.5	19.8
Commercial Banks	**11.4**	**11.9**	**13.3**	**13.8**	**12.2**	**12.6**
Specialized Banks	(9.0)	(7.7)	(8.3)	(7.8)	(4.1)	(2.3)
All Banks	**10.5**	**11.3**	**12.7**	**13.2**	**11.8**	**12.2**
Tier 1 Capital to RWA						
Public Sector Commercial Banks	8.6	8.8	11.1	13.0	11.9	10.1
Local Private Banks	7.5	8.3	10.4	10.5	9.3	10.3
Foreign Banks	17.1	16.1	14.3	12.9	18.0	19.3
Commercial Banks	**8.6**	**9.1**	**10.8**	**11.1**	**10.1**	**10.7**
Specialized Banks	(15.0)	(13.6)	(13.3)	(13.5)	(9.1)	(7.6)
All Banks	**7.6**	**8.3**	**10.0**	**10.5**	**9.7**	**10.2**
Capital to Total Assets						
Public Sector Commercial Banks	8.7	12.6	12.2	13.7	12.9	11.9
Local Private Banks	6.5	7.0	9.2	10.2	9.8	10.1
Foreign Banks	8.9	9.5	10.1	11.2	13.3	13.9
Commercial Banks	**7.2**	**8.4**	**9.9**	**10.9**	**10.5**	**10.7**
Specialized Banks	(9.4)	(8.1)	(8.0)	(5.5)	(4.1)	(2.5)
All Banks	**6.7**	**7.9**	**9.4**	**10.5**	**10.2**	**10.4**
ASSET QUALITY						
NPLs to Total Loans						
Public Sector Commercial Banks	13.3	10.0	9.0	8.4	11.8	12.3
Local Private Banks	9.0	6.4	5.2	6.0	6.9	7.8
Foreign Banks	1.6	1.2	1.0	1.6	1.7	2.9
Commercial Banks	**9.0**	**6.7**	**5.7**	**6.3**	**7.6**	**8.5**
Specialized Banks	54.1	46.0	39.1	34.3	33.4	28.9
All Banks	**11.6**	**8.3**	**6.9**	**7.2**	**8.4**	**9.1**
Provision to NPLs						
Public Sector Commercial Banks	77.0	86.8	84.5	89.0	81.1	78.8
Local Private Banks	69.9	76.4	78.7	87.2	80.7	73.2
Foreign Banks	101.9	145.9	191.7	157.0	126.0	94.2
Commercial Banks	**72.4**	**80.4**	**81.5**	**88.2**	**81.1**	**74.9**
Specialized Banks	64.9	64.8	64.1	68.6	63.2	72.1
All Banks	**70.4**	**76.7**	**77.8**	**85.1**	**79.0**	**74.7**
Net NPLs to Net Loans						
Public Sector Commercial Banks	3.4	1.5	1.5	1.0	2.5	2.9
Local Private Banks	2.9	1.6	1.1	0.8	1.4	2.2
Foreign Banks	(0.0)	(0.6)	(1.0)	(0.9)	-0.5	0.2
Commercial Banks	**2.7**	**1.4**	**1.1**	**0.8**	**1.5**	**2.3**
Specialized Banks	29.3	23.1	18.7	14.0	15.6	10.2
All Banks	**3.8**	**2.1**	**1.6**	**1.1**	**1.9**	**2.5**
Net NPLs to Capital						
Public Sector Commercial Banks	16.2	5.5	6.4	3.4	10.5	12.9
Local Private Banks	24.3	13.0	7.1	4.2	8.1	12.7
Foreign Banks	(0.2)	(3.0)	(5.1)	(4.1)	-1.4	0.5
Commercial Banks	**19.0**	**9.0**	**6.2**	**3.7**	**8.2**	**12.1**
Specialized Banks	-	-	-	-	-	-
All Banks	**29.2**	**14.3**	**9.7**	**5.6**	**10.4**	**13.6**
EARNINGS						
Return on Assets (Before Tax)						
Public Sector Commercial Banks	2.4	3.3	4.0	3.6	1.5	1.4
Local Private Banks	1.7	2.7	3.1	2.0	2.2	1.8
Foreign Banks	2.5	3.6	3.2	1.5	1.1	0.2
Commercial Banks	**2.0**	**2.9**	**3.2**	**2.3**	**2.0**	**1.7**
Specialized Banks	(0.4)	(1.0)	(1.3)	1.4	1.8	3.1
All Banks	**1.9**	**2.8**	**3.1**	**2.2**	**2.0**	**1.7**

Indicators	2004	2005	2006	2007	Sep 08	Dec-08
Public Sector Commercial Banks	1.3	2.2	2.7	2.5	1.2	1.1
Local Private Banks	1.2	1.8	2.1	1.4	1.5	1.2
Foreign Banks	2.0	2.5	2.1	0.7	0.3	(0.5)
Commercial Banks	**1.3**	**1.99**	**2.19**	**1.56**	**1.37**	**1.13**
Specialized Banks	(0.8)	(1.2)	(1.8)	0.7	1.1	2.7
All Banks	**1.2**	**1.89**	**2.08**	**1.54**	**1.37**	**1.17**
ROE (Avg. Equity& Surplus) (Before Tax)						
Public Sector Commercial Banks	30.8	30.7	32.4	27.2	11.8	11.2
Local Private Banks	28.8	40.1	36.2	20.4	22.2	18.3
Foreign Banks	26.7	38.9	30.0	13.5	9.9	1.6
Commercial Banks	**29.0**	**37.2**	**34.7**	**21.9**	**19.3**	**15.9**
Specialized Banks	-	-	-	-	-	-
All Banks	**30.5**	**38.2**	**35.2**	**22.6**	**19.8**	**16.7**
ROE (Avg. Equity &Surplus) (After Tax)						
Public Sector Commercial Banks	17.2	20.9	21.7	19.5	8.9	8.7
Local Private Banks	20.2	27.2	25.0	13.9	14.8	12.1
Foreign Banks	21.5	27.1	20.4	6.3	2.5	(4.1)
Commercial Banks	**19.6**	**25.4**	**23.7**	**15.0**	**12.9**	**10.7**
Specialized Banks	-	-	-	-	-	-
All Banks	**20.3**	**25.8**	**23.8**	**15.5**	**13.3**	**11.3**
NII/Gross Income						
Public Sector Commercial Banks	63.7	71.3	69.5	65.9	64.5	65.8
Local Private Banks	62.0	73.0	73.5	70.8	72.0	73.4
Foreign Banks	57.7	61.5	65.8	59.1	56.6	59.5
Commercial Banks	**61.9**	**71.3**	**72.1**	**69.3**	**69.8**	**71.4**
Specialized Banks	81.9	87.7	40.1	42.8	48.7	50.3
All Banks	**62.8**	**72.0**	**70.9**	**68.3**	**69.2**	**70.7**
Cost / Income Ratio						
Public Sector Commercial Banks	39.5	34.3	31.8	30.2	35.2	38.2
Local Private Banks	56.2	43.1	40.7	45.2	48.7	50.6
Foreign Banks	49.0	42.2	49.8	56.4	61.0	68.1
Commercial Banks	**51.7**	**41.2**	**39.4**	**42.6**	**46.7**	**49.1**
Specialized Banks	57.8	47.8	62.6	52.5	53.5	49.2
All Banks	**52.0**	**41.5**	**40.3**	**43.0**	**46.8**	**49.1**
LIQUIDITY						
Liquid Assets/Total Assets						
Public Sector Commercial Banks	43.9	35.6	33.9	37.5	27.6	27.6
Local Private Banks	34.3	32.4	31.1	32.5	28.2	26.6
Foreign Banks	39.8	41.8	41.0	41.5	43.6	45.3
Commercial Banks	**37.0**	**33.9**	**32.2**	**33.8**	**28.7**	**27.6**
Specialized Banks	25.3	25.8	23.0	25.9	21.2	24.3
All Banks	**36.6**	**33.7**	**31.9**	**33.6**	**28.6**	**27.5**
Liquid Assets/Total Deposits						
Public Sector Commercial Banks	52.6	44.7	42.6	47.7	36.0	35.8
Local Private Banks	42.3	40.3	40.6	42.8	37.2	34.8
Foreign Banks	53.4	57.9	61.1	61.0	71.4	71.3
Commercial Banks	**45.7**	**42.7**	**42.0**	**44.4**	**38.2**	**36.3**
Specialized Banks	154.1	183.2	205.4	229.6	217.1	233.8
All Banks	**46.5**	**43.5**	**42.7**	**45.1**	**38.7**	**36.9**
Advances/Deposits						
Public Sector Commercial Banks	49.7	59.8	64.6	60.0	71.6	69.6
Local Private Banks	67.3	70.8	74.5	70.1	75.2	75.7
Foreign Banks	70.1	68.7	80.1	75.2	69.8	69.1
Commercial Banks	**63.6**	**68.4**	**72.7**	**68.1**	**74.3**	**74.3**
Specialized Banks	370.5	400.7	528.4	507.2	638.4	602.7
All Banks	**65.8**	**70.2**	**74.6**	**69.8**	**76.0**	**75.9**

Annex-II

Selected Indicators for Different Categories of Banks in terms of Size-Dec-08

Indicators	Top 5 Banks	Top 10 Banks	Top 20 Banks	Industry
Share of Total Assets	52.4	73.6	92.8	100
Share of Total Deposits	54.7	76.4	93.8	100
Share of Gross Income	56.8	75.2	94.6	100
Share of Risk Weighted Assets	52.8	72.7	92.7	100
Capital Adequacy				
Capital/RWA	12.7	11.8	11.9	12.2
Tier 1 Capital / RWA	10.3	9.5	9.8	10.2
Net Worth / Total Assets	10.3	10.3	10.1	10.4
Asset Composition				
Sectoral Distribution of Loans (Domestic)				
- Corporate Sector	52.7	73.8	93.3	100
- SMEs	43.3	70.3	89.7	100
- Agriculture	30.7	41.4	94.7	100
- Consumer Finance	49.3	77.4	94.7	100
- Commodity Financing	78.8	92.4	99.5	100
- Staff Loans	59.8	75.8	91.3	100
- Others	83.0	95.5	96.3	100
- **Total**	**52.9**	**74.2**	**93.6**	**100**
NPLs / Gross Loans	8.8	9.2	8.9	9.1
Net NPLs / Capital	12.7	13.5	14.0	13.6
Earning & Profitability				
ROA	2.1	1.4	1.3	1.2
ROE	20.3	13.5	12.6	11.3
Net Interest Income / Gross Income	75.1	72.9	70.8	70.7
Income from Trading & Foreign Exchange / Gross Income	16.3	17.6	18.5	18.6
Non-Interest Expense / Gross Income	38.5	44.4	46.4	49.1
Liquidity				
Liquid Assets / Total Assets	28.2	27.0	27.1	27.5
Liquid Assets held in Govt. Securities / Total Liquid Assets	52.0	50.5	51.7	50.0
Liquid Assets / Total Deposits	36.1	34.8	36.0	36.9

Annex-III

Bank-wise Major Statistics December 31, 2008

amount in million Rupees

S. No.	Name of the Banks	Assets	Deposits	Equity
Public Sector Commercial Banks				
1	National Bank of Pakistan	825,614	625,084	110,935
2	First Women Bank Limited	7,285	5,939	1,088
3	The Bank of Punjab	199,177	164,073	9,918
4	The Bank of Khyber	31,962	24,842	5,120
Local Private Banks				
5	Allied Bank Limited	366,320	297,457	22,112
6	Bank Alfalah Limited	349,685	300,733	16,936
7	Askari Bank Limited	204,480	167,677	10,873
8	Bank Al Habib Limited	178,606	144,390	11,652
9	Mybank Limited	40,574	28,033	6,905
10	SAMBA Bank Limited	16,487	9,860	5,462
11	Atlas Bank Limited	29,121	18,646	3,814
12	Faysal Bank Limited	138,532	102,777	11,115
13	Habib Bank Limited	718,666	572,399	66,449
14	KASB Bank Limited	51,907	35,235	9,664
15	Arif Habib Bank Limited	24,969	16,618	5,993
16	JS Bank Limited	21,399	15,189	5,101
17	MCB Bank Limited	443,616	330,274	58,436
18	United Bank Limited	605,732	483,531	45,502
19	The Royal Bank of Scotland Limited	107,804	79,103	9,701
20	Habib Metropolitan Bank Limited	182,325	128,370	15,108
21	BankIslami Pakistan Limited	19,098	12,478	5,190
22	Emirates Global Islamic Bank	16,440	10,893	3,998
23	Soneri Bank Limited	81,428	61,634	7,327
24	Saudi Pak Commercial Bank Limited	55,941	41,057	4,584
25	NIB Bank Limited	184,107	104,586	44,973
26	Meezan Bank Limited	85,613	70,224	6,232
27	Dubai Islamic Bank Pakistan Limited	32,047	25,459	5,063
28	Standard Chartered Bank	264,763	174,552	42,963
29	Dawood Islamic Bank Limited	9,590	5,063	4,111
Foreign Banks				
30	Albaraka Islamic Bank B.S.C. (E.C.), Pakistan Operations	24,232	18,336	2,384
31	Citibank N.A. (Pakistan Operations)	99,707	65,485	7,273
32	Deutsche Bank AG (Pakistan Operations)	21,000	10,317	4,645
33	HSBC Bank Middle East Limited - (Pakistan Operations)	48,483	36,526	4,991
34	Oman International Bank S.A.O.G (Pakistan Operations)	3,442	521	2,712
35	The Bank of Tokyo-Mitsubishi UFJ Limited (Pakistan Operations)	10,068	1,716	3,968
36	Barclays Bank PLC (Pakistan Operations)	24,798	14,557	6,331
Specialized Banks				
37	The Punjab Provincial Cooperative Bank Ltd	14,839	1,900	4,794
38	Industrial Development Bank of Pakistan	4,838	4,043	(28,652)
39	Zarai Taraqiati Bank Limited	101,663	5,421	18,133
40	SME Bank Limited	6,300	1,892	2,509

Annex-IV

Group wise Balance Sheets and Income Statements of Banks as of 31-12-2008

amount in billion Rupees

FINANCIAL POSITION	PSCB	LPB	FB	SB	CB	All Banks
ASSETS						
Cash & Balances With Treasury Banks	98,073	320,747	34,935	2,689	453,755	456,444
Balances With Other Banks	44,267	97,839	18,882	18,587	160,988	179,575
Lending To Financial Institutions	20,107	136,755	29,401	820	186,263	187,083
Investments - Net	211,166	837,585	22,603	10,722	1,071,354	1,082,076
Advances - Net	570,405	2,449,966	101,958	79,890	3,122,328	3,202,219
Operating Fixed Assets	30,532	187,544	3,698	4,923	221,773	226,696
Deferred Tax Assets	8,044	30,919	2,670	541	41,632	42,173
Other Assets	81,445	167,895	17,583	9,467	266,923	276,391
TOTAL ASSETS	**1,064,038**	**4,229,249**	**231,730**	**127,640**	**5,525,018**	**5,652,658**
LIABILITIES						
Bills Payable	8,043	51,877	4,423	714	64,344	65,058
Borrowings From Financial Institution	53,757	305,389	17,320	87,282	376,465	463,747
Deposits And Other Accounts	819,938	3,236,237	147,459	13,256	4,203,633	4,216,890
Sub-ordinated Loans	-	35,567	-	3,405	35,567	38,973
Liabilities Against Assets Subject To Finance Lease	56	447	-	19	503	522
Deferred Tax Liabilities	2,697	5,540	367	121	8,604	8,725
Other Liabilities	52,486	164,928	29,857	26,059	247,271	273,329
TOTAL LIABILITIES	**936,977**	**3,799,985**	**199,426**	**130,856**	**4,936,387**	**5,067,243**
NET ASSETS	127,062	429,265	32,304	(3,217)	588,631	585,414
NET ASSETS REPRESENTED BY:						
Share Capital	19,545	225,483	32,130	15,506	277,159	292,665
Reserves	27,940	123,937	-	1,927	151,877	153,804
Unappropriated Profit	51,258	70,659	696	(23,829)	122,613	98,784
Share Holders' Equity	98,743	420,080	32,826	(6,396)	551,649	545,253
Surplus/Deficit On Revaluation Of Assets	28,319	9,185	(522)	3,180	36,982	40,161
TOTAL	**127,062**	**429,265**	**32,304**	**(3,217)**	**588,631**	**585,414**
OPERATING POSITION						
Mark-Up/ Return/Interest Earned	82,450	373,501	18,266	9,926	474,218	484,144
Mark-Up/ Return/Interest Expenses	42,664	189,862	9,099	4,264	241,625	245,889
Net Mark-Up / Interest Income	39,786	183,639	9,168	5,662	232,593	238,255
Provisions & Bad Debts Written Off Directly/(Reversals)	22,652	48,526	4,518	1,775	75,696	77,472
Net Mark-Up / Interest Income After Provision	17,134	135,113	4,649	3,887	156,896	160,783
Fees, Commission & Brokerage Income	8,624	30,703	2,308	59	41,636	41,695
Dividend Income	5,031	9,014	12	105	14,057	14,162
Income From Dealing In Foreign Currencies	3,675	13,882	3,586	4	21,143	21,147
Other Income	3,346	12,820	337	5,429	16,503	21,932
Total Non - Markup / Interest Income	**20,676**	**66,420**	**6,243**	**5,597**	**93,339**	**98,936**
	37,809	201,533	10,893	9,484	250,235	259,719
Administrative Expenses	21,996	122,077	10,469	5,184	154,542	159,726
Other Expenses	1,082	4,488	22	357	5,593	5,950
Total Non-Markup/Interest Expenses	**23,078**	**126,565**	**10,491**	**5,542**	**160,134**	**165,676**
Profit before Tax and Extra ordinary Items	14,731	74,969	401	3,942	90,101	94,043
Extra ordinary/unusual Items - Gain/(Loss)	-	486	-	5	486	491
PROFIT/ (LOSS) BEFORE TAXATION	14,731	74,483	401	3,937	89,615	93,552
Taxation	3,349	24,961	1,397	616	29,707	30,323
PROFIT/ (LOSS) AFTER TAX	**11,382**	**49,521**	**(996)**	**3,321**	**59,908**	**63,229**

Annex-V

Capital Structure and Capital Adequacy Ratio of All Banks and DFIs as of December 31, 2008

amount in million Rupees

		All Banks and DFIs	All Banks	PSPB	LPB	FB	SB	DFIs
Equity								
1.1	Fully Paid-up Capital/Capital Deposited with SBP	336,415	293,665	19,545	226,483	32,130	15,506	42,750
1.2	Balance in Share Premium Account	28,309	28,309	38	28,271	-	-	-
1.3	Reserve for issue of Bonus shares	-	-	-	-	-	-	-
1.4	General Reserves as disclosed on the Balance Sheet	119,712	107,229	22,109	82,512	681	1,927	12,483
1.5	Un-appropriated/Unremitted profits (net of accumulated losses, if any)	90,412	93,232	45,563	71,481	15	(23,827)	(2,820)
1.6	Minority interest	-	-	-	-	-	-	-
1.7	**Sub-Total (1.1 to 1.5)**	**574,847**	**522,435**	**87,255**	**408,747**	**32,826**	**(6,394)**	**52,412**
			-					
	Deductions		-					
1.8	Goodwill	58,801	58,795	-	58,647	144	3	6
1.9	Shortfall in Provisions required against Classified assets	176	176	-	-	-	176	-
1.10	Deficit on account of revaluation of AFS investment	31,011	26,357	3,841	20,943	525	1,048	4,654
1.11	Securitization transaction	-	-	-	-	-	-	-
1.12	Investments in TFCs of other banks	-	-	-	-	-	-	-
1.13	Other Deductions	9,542	8,502	1,692	6,702	-	108	1,040
1.14	**Sub-Total (1.7 to 1.10)**	**99,530**	**93,829**	**5,533**	**86,292**	**669**	**1,335**	**5,700**
1.15	**Total Eligible Tier 1 capital**	**475,318**	**428,605**	**81,722**	**322,455**	**32,157**	**(7,729)**	**46,712**
		1,832	1,832					
Supplementary Capital			-					
2.1	Freely available General Provisions or reserves for loan losses-upto maximum of 1.25% of RWA	14,986	14,856	3,769	9,220	776	1,090	130
2.2	Revaluation reserves eligible upto 45%	27,246	27,145	14,255	10,871	0	2,018	101
2.3	Foreign Exchange Translation Reserves	18,025	18,025	5,795	12,230	-	-	-
2.4	Undisclosed reserves	-	-	-	-	-	-	-
2.5	Subordinated debt-upto maximum of 50% of total equity	34,104	34,104	-	30,899	-	3,204	-
2.6	**Total Tier 2 Supplementary Capital(2.1 - 2.5)**	**94,360**	**94,129**	**23,819**	**63,221**	**776**	**6,313**	**232**
			-					
	Deductions		-					
	Other deductions	**9,542**	8,502	**1,692**	**6,702**	**-**	**108**	**1,040**
	Total Deductions	**9,542**	8,502	**1,692**	**6,702**	**-**	**108**	**1,040**
	Total eligible tier 2 capital	**84,819**	85,627	**22,127**	**56,519**	**776**	**6,205**	**(808)**
			-					
2.7	**Eligible tier 3 (as worked out in 3.9 below)**		-					
			-					
2.8	**Total Supplementary Capital eligible for**	**83,415**	**84,223**	**21,507**	**56,519**	**776**	**5,422**	**(808)**
			-					
2.9	**TOTAL CAPITAL (1.12+2.8)**	**558,733**	**512,829**	**103,229**	**378,974**	**32,933**	**(2,308)**	**45,904**
			-					
	Risk Weighted Amounts	558,733	558,733					
			-					
3.3	Total Credit Risk Weighted Assets	3,608,832	3,554,099	666,137	2,673,197	129,288	85,476	54,734
3.4	Total Market Risk Weighted Assets	178,070	153,902	43,216	96,074	14,571	42	24,168
	Total Operational Risk Assets	502,884	489,619	100,583	350,804	22,405	15,827	13,265
3.5	**Total Risk Weighted Amount**	**4,289,787**	**4,197,620**	**809,936**	**3,120,075**	**166,264**	**101,345**	**92,167**
		Capital Adequacy Ratios (CAR)						
	Credit Risk Capital Adequacy Ratio	**15.52%**	**14.43%**	**15.59%**	**14.18%**	**25.47%**	**-1.78%**	**83.87%**
	Tier 1 capital to Total Risk Weighted Amount	**11.08%**	**10.20%**	**10.09%**	**10.33%**	**19.34%**	**-7.63%**	**50.68%**
	Total Capital Adequacy Ratio	**13.02%**	**12.20%**	**12.75%**	**12.15%**	**19.81%**	**-2.28%**	**49.80%**
	Tier 2 capital to Total Risk Weighted Amount	**1.94%**	**2.01%**	**2.66%**	**1.81%**	**0.47%**	**5.34%**	**-0.88%**
				CAP 2				
Other deductions from Tier 1 and Tier 2 Capital								
							amount in thousand Rupees	
1.1	Investments in equity and other regulatory capital of	12,652	12,587	1,514	10,857	-	215	65
1.2	Significant minority investments in banking, securities and other financial entities	5,082	3,835	1,870	1,966	-	-	1,246
	(para 1.1 scope of Application)	398	398	-	398	-	-	-
1.3	Equity holdings (majority or significant minority) in an	409	109	-	109	-	-	300
	(para 1.1 scope of Application)	-	-	-	-	-	-	-
1.4	Significant minority and majority investments in commercial entities exceeding 15% of bank's capital	-	-	-	-	-	-	-
1.5	Securitization exposure subject to deduction (para 4.3.1 of instructions)	-	-	-	-	-	-	-
1.6	Others	544	75	-	75	-	-	469
1.7	**Total Deductible Items to be deducted 50% from Tier 1capital and 50% from Tier 2 capital**	**19,083.34**	**17,003.34**	**3,383.92**	**13,403.96**	**-**	**215.46**	**2,080.01**

Annex-VI

Group-wise Composition of Banks December 31, 2008

2005	2006	2007	2008
A. Public Sector Com. Banks (4)	**A. Public Sector Com. Banks (4)**	**A. Public Sector Com. Banks (4)**	**A. Public Sector Com. Banks (4)**
National Bank of Pakistan	National Bank of Pakistan	National Bank of Pakistan	National Bank of Pakistan
First Women Bank Ltd.	First Women Bank Ltd.	First Women Bank Ltd.	First Women Bank Ltd.
The Bank of Khyber	The Bank of Khyber	The Bank of Khyber	The Bank of Khyber
The Bank of Punjab	The Bank of Punjab	The Bank of Punjab	The Bank of Punjab
B. Local Private Banks (20)	**B. Local Private Banks (24)**	**B. Local Private Banks (26)**	**B. Local Private Banks (25)**
Askari Commercial Bank Ltd.	Askari Commercial Bank Ltd.	Askari Bank Ltd.	Askari Bank Ltd.
Bank Al-Falah Ltd.	Bank Alfalah Ltd.	Bank Alfalah Ltd.	Bank Alfalah Ltd.
Bank Al Habib Ltd.	Bank AL Habib Ltd.	Bank AL Habib Ltd.	Bank AL Habib Ltd.
My Bank Ltd.	Mybank Ltd.	Mybank Ltd.	Mybank Ltd.
Faysal Bank Ltd.	Faysal Bank Ltd.	Faysal Bank Ltd.	Faysal Bank Ltd.
Metropolitan Bank Ltd.	Habib Metropolitan Bank Ltd.	Habib Metropolitan Bank Ltd.	Habib Metropolitan Bank Ltd.
KASB Bank Ltd.	KASB Bank Ltd.	KASB Bank Ltd.	KASB Bank Ltd.
Prime Commercial Bank Ltd.	Prime Commercial Bank Ltd.	ABN AMRO Bank (Pakistan) Ltd 1	The Royal Bank of Scotland Ltd 1
Saudi Pak Commercial Bank Ltd	Saudi Pak Commercial Bank Ltd	Saudi Pak Commercial Bank Ltd	Saudi Pak Commercial Bank Ltd
PICIC Commercial Bank Ltd.	PICIC Commercial Bank Ltd.	PICIC Commercial Bank Ltd.	Soneri Bank Ltd.
Soneri Bank Ltd.	Soneri Bank Ltd.	Soneri Bank Ltd.	Standard Chartered Bank (Pakistan)
Union Bank Ltd.	Standard Chartered Bank (Pakistan)	Standard Chartered Bank (Pakistan)	MCB Bank Ltd.
MCB Bank Ltd.	MCB Bank Ltd.	MCB Bank Ltd.	Allied Bank Ltd.
Allied Bank Ltd..	Allied Bank Ltd.	Allied Bank Ltd.	United Bank Ltd.
United Bank Ltd.	United Bank Ltd.	United Bank Ltd.	Meezan Bank Ltd.
Meezan Bank Ltd.	Meezan Bank Ltd.	Meezan Bank Ltd.	NIB Bank Ltd.
NIB Bank Ltd.	NIB Bank Ltd.	NIB Bank Ltd.	SAMBA Bank Ltd.
Crescent Commercial Bank Ltd.	Crescent Commercial Bank Ltd.	Crescent Commercial Bank Ltd.	Habib Bank Ltd.
Habib Bank Ltd	Habib Bank Ltd.	Habib Bank Ltd.	Atlas Bank Ltd..
Dawood Bank Ltd.	Atlas Bank Ltd..	Atlas Bank Ltd..	Arif Habib Bank Ltd.
	Arif Habib Rupali Bank Ltd.	Arif Habib Bank Ltd.	Dubai Islamic Bank Pakistan Ltd.
C. Foreign Banks (11)	Dubai Islamic Bank Pakistan Ltd.	Dubai Islamic Bank Pakistan Ltd.	BankIslami Pakistan Ltd.
ABN AMRO Bank N.V.	BankIslami Pakistan Ltd.	BankIslami Pakistan Ltd.	JS Bank Ltd.
Albaraka Islamic Bank B.S.C.	JS Bank Ltd.	JS Bank Ltd.	Emirates Global Islamic Bank Ltd.
American Express Bank Ltd 7.		Emirates Global Islamic Bank Ltd.	Dawood Islamic Bank Ltd
The Bank of Tokyo – Mitsubishi.	**C. Foreign Banks (7)**	Dawood Islamic Bank Ltd	
Citibank N.A.	ABN AMRO Bank N.V.		**C. Foreign Banks (7)**
Deutsche Bank AG	Albaraka Islamic Bank B.S.C.	**C. Foreign Banks (6)**	Albaraka Islamic Bank B.S.C.
Habib Bank AG Zurich	Bank of Tokyo - Mitsubishi UFJ, Ltd.	Albaraka Islamic Bank B.S.C.	Bank of Tokyo - Mitsubishi UFJ, Ltd.
Oman International Bank S.A.O.G.	Citibank N.A.	Bank of Tokyo - Mitsubishi UFJ, Ltd.	HSBC Bank Milldle East Limited
The Hongkong & Shanghai Banking Corporation Ltd.	The Hongkong & Shanghai Banking Corporation Ltd.	The Hongkong & Shanghai Banking Corporation Ltd.	Deutsche Bank AG
Rupali Bank Ltd.	Deutsche Bank AG	Deutsche Bank AG	Citibank N.A.
Standard Chartered Bank	Oman International Bank S.A.O.G.	Citibank N.A.	Oman International Bank S.A.O.G.
		Oman International Bank S.A.O.G.	Barclays Bank PLC
D. Specialized Banks (4)	**D. Specialized Banks (4)**		
Zarai Taraqiati Bank Ltd.	Zarai Taraqiati Bank Ltd.	**D. Specialized Banks (4)**	**D. Specialized Banks (4)**
Industrial Development Bank of	Industrial Development Bank of	Zarai Taraqiati Bank Ltd.	Zarai Taraqiati Bank Ltd.
Punjab Provincial Co-operative Bank	Punjab Provincial Co-operative Bank	Industrial Development Bank of	Industrial Development Bank of
SME Bank Ltd	SME Bank Ltd.	Punjab Provincial Co-operative Bank	Punjab Provincial Co-operative Bank
		SME Bank Ltd.	SME Bank Ltd.
Commercial Banks (35)	**All Commercial Banks (35)**		
Include A + B + C	Include A + B + C	**All Commercial Banks (36)**	**All Commercial Banks (36)**
All Banks (39)	**All Banks (39)**	Include A + B + C	Include A + B + C
Include A + B + C + D	Include A + B + C + D	**All Banks (40)**	**All Banks (40)**
		Include A + B + C + D	Include A + B + C + D

Annex-VII

Results of Stress Test of Banking System

Position Based on December 31, 2008

	Description of Shock	CAR Before Shock	Impact of Shock	
			Percentage Point Chage in CAR	Adjusted CAR after Shock
Credit Shocks				
C-1	15% of performing loans moving to substandard, 15% of substandard to doubtful, 25% doubtful to loss	12.2	-2.4	9.8
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%	12.2	-0.9	11.3
C-3	Deterioration of loans to the textile sector (25%) directly downgraded to doubtful category	12.2	-1.5	10.7
C-4	25% of consumer loans (auto loans, personal loans & consumer durables only) classified into doubtful category.	12.2	-0.6	11.6
C-5	Default of three largest exposures (Fund Based exposures)	12.2	-4.7	7.6
Market Shocks				
Interest Rate Shocks				
IR-1	An increase in interest rates by 500 basis points.	12.2	-0.8	11.4
IR-2	Shift coupled with flattening of the yield curve by increasing 500,300 and 200 basis points in the three maturities	12.2	-0.4	11.9
Exchange Rate Shocks				
ER-1	Depreciation of exchange rate by 25%	12.2	0.0	12.2
ER-2	Appreciation of exchange rate by 25%	12.2	0.0	12.2
ER-3	Depreciation of PRs against all currencies (25%) and deterioration of unhedged FX loans	12.2	-0.9	11.4
Equity Price Shocks				
Eq-1	Fall in the equity prices by 50%.	12.2	-0.9	11.3
Eq-2	Fall in the equity prices by 60%.	12.2	-1.0	11.2
Eq-3	Fall in the equity prices by 70%.	12.2	-1.1	11.1
Combined Credit & Market Shocks				
COMB-1	Interest rates increase (5%), deterioration of loans to the textile sector (25%) directly downgraded to doubtful category, and fall in equity prices by 50%.	12.2	-2.4	9.8
COMB-2	Interest rates increase (5%), migration of loan portfolio (performing to substandard: 15%, substandard to doubtful: 15%, doubtful to loss: 20%), stock market price depreciation	12.2	-4.2	8.0
Liquidity Shock		Number of Banks Becoming Illiquid after Shock		
		3 days	**4 days**	**5 days**
L-1	Withdrawal of customer deposits by 2%, 5%, 10%, 10% and 10% for five consecutive days respectively.	2	4	8

Note: *The results have not been adjusted for the impact of deferred tax benefits*