Country Paper – Pakistan

Overview of Financial Sector

Despite severe challenges and ongoing war against terrorism, Pakistan's economic performance has shown resilience in the outgoing year 2012-2013. Growth in Gross Domestic Product (GDP), on an inflation adjusted basis, has been recorded at 3.6% as compared to 4.4% in the previous year.

Like other developing countries, the country's financial system has been highly skewed towards the banking sector as its share in the total assets of the financial system accounts for 74 percent and the asset size in relation to the GDP is 42.6 percent. However, it also includes a wide range of financial institutions operating as Non-Bank Financial Institutions (NBFIs), Insurance Companies, Micro Finance Banks (MFB) and the Central Directorate of National Savings (CDNS).

Supervision:

Financial institutions in Pakistan are regulated and supervised by the State Bank of Pakistan (SBP) and the Securities and Exchange Commission of Pakistan (SECP). SBP is primarily responsible for regulating and supervising the scheduled banks (both conventional & Islamic), Micro-finance Banks, Development Finance Institutions (DFIs) and Exchange Companies. The rest of the financial institutions including Stock Exchanges, Investment Banks, Leasing Companies, Modarabas, Discount Houses, Venture Capitals, Asset Management Companies, Mutual Funds, Housing Finance Companies and Insurance Companies are regulated and supervised by SECP. The National Saving Schemes are managed by the Central Directorate of National Savings (CDNS), a department of the Ministry of Finance.

Composition:

Commercial banking in Pakistan has experienced significant changes over the years. At the time of independence, only 1 (Habib Bank) of the 99 commercial banks had its Head office located in Pakistan. The other 98 banks were based in India and were under the jurisdiction of the Reserve Bank of India. Pakistan did not have its own central bank until 1948.

The financial system in Pakistan is pre-dominantly bank-based. Although competition is emerging with the growth of mid-sized banks and foreign acquisitions, five largest banks still hold 50.6% of total banking sector assets; though there has been a clear reduction in the level of concentration which was at 63.2% in 2000.

Financial Reforms:

The structure of banking sector has substantially changed since year 1990 particularly by privatization of state owned banks. In 1990, Pakistan's banking sector was dominated by five commercial banks which were all state owned but with the amendments in Banking Companies Ordinance financial sector reforms were launched with privatization of two state owned banks MCB (1991) & ABL (1993). These reforms were subsequently delayed for

several years and resumed in yearly 2000 with privatization of third large bank UBL in 2002. The second largest bank (at that time) HBL completed its privatization in 2004 and with that the banking system assets held by the public sector commercial banks decreased to less than 25 percent. The largest bank of the country i.e. NBP remains state owned while government divested approximately 25 percent of its shareholding. The privatization of state owned banks was accompanied by liberalization in the financial system and openness to domestic and foreign competition. The number of banks and NBFIs grew rapidly from 1990 to 1995. The moratorium was imposed in 1995 on establishment of new banks as worries on health and soundness of small banks increased. The minimum capital requirement were also increased gradually from Rs-500 million to Rs-750 million (Dec 2001) to Rs-10 Billion (Dec 2013). This has helped these small banks to become medium sized, well capitalized banks.

Consolidation:

Within the banking sector, the ownership structure which had gradually moved from public to private sector with a dominant share of foreign ownership due to increased inflows of FDIs attracted by the lucrative return on investment in the banking sector. The private sector now controls nearly 80 % of the system assets, as opposed to the early 1990s when 90 % of the system assets were controlled by the government. At the same time process of consolidation has been more pronounced in this sector. Banking sector stability and robustness is of critical importance for the overall financial sector stability. In essence, the process of consolidation was driven by the need to bring to surface economies of scale and scope, and efficiencies driven by competition and innovation. The consolidation process was focused on three primary factors i.e. i) proactive M&As (both domestic and foreign-led), ii) moratorium on licensing of conventional banks, and iii) gradual increase in minimum capital requirements for banks and DFIs which have been stringently implemented by the SBP. While all three factors have helped, the impact of the consolidation process has been diluted somewhat by the liberal licensing of Islamic Banks and Microfinance institutions, which are being promoted as an active policy of the SBP with its focus on financial inclusion.

The ongoing mergers and acquisitions have exerted a profound impact on the ownership structure of the financial sector. The financial sector is now led by private sector. Foreign Direct Investment in the banking sector is on the rise and contributing factor in this trend is the growing interest of foreign banks in the Islamic Banking industry. As a result of these developments, foreign stake in the banking sector increased to an all time high.

Performance:

Benefitting from the ongoing reform process and strengthening of macroeconomic fundamentals, Pakistan’s banking system witnessed visible improvement in size, structure, outreach and financial health during last eight years. The remarkable performance of Pakistan’s banking sector has attracted considerable FDI into the industry in recent times and some big names like ICBC and Barclays have entered into the market. Commercial Banks in Pakistan operate with a sound capital base. Pakistan's banks have historically enjoyed low cost of funds as a result of their large low cost deposit base with interest spreads reaching as high as 7.0% - 8.0% which is now reducing. Asset quality, which constrained banks' performance in the 1990s, improved with NPL to gross loan ratio declining to 7.4% as on

Dec-07, from a staggering 23.5% in 2000. The following table shows the highlights of the banking system:

Indicators	Dec-10	Dec-11	Dec-12	Dec-13
Key Variables (PKR in billion)				
Total Assets	**7,117**	**8,171**	**9,761**	**10,537**
Investments (net)	**2,157**	**3,055**	**4,009**	**4,305**
Advances (net)	**3,358**	**3,349**	**3,760**	**4,047**
Deposits	**5,451**	**6,244**	**7,301**	**8,318**
Equity	**695**	**784**	**882**	**939**
Profit After Tax	**65**	**112**	**121**	**111**
Non-Performing Loans (net)	**185**	**182**	**171**	**126**
Key FSIs (percent)				
Net NPLs to Net Loans	**5.5**	**5.4**	**4.6**	**3.1**
ROA (Before Tax)	**1.5**	**2.2**	**2.1**	**1.7**
CAR	**13.9**	**15.1**	**15.4**	**15.1**

Service Quality:

Privatization and banking sector reforms in Pakistan have improved the quality and standards of financial services, brought innovation in terms of new products and increased competition, which has made services available to a wider population and at better prices. The consumers now have a variety of choices in terms of products, from mortgage loans to auto loan from credit cards to personal loans and from ATMs to e-banking and using mobile devices for fund transfer. With more and more competition we would see more innovation.

Capital Regime

The Purpose of Banks' Capital Adequacy Regulation

With assumption of all other things being equal, the greater the proportion of a bank's operations that are financed with capital funds contributed by its owners, the more likely the bank will be able to continue to pay its obligations during periods of economic adversity. This simple reasoning is the basis for the longstanding emphasis bank supervisors have placed on capital adequacy as a key element of bank safety and soundness.

Agreement on what constitutes sufficient capital, however, is not always easy to reach. In fact, from the earliest attempts to measure capital adequacy bankers and regulators have disputed on what constitutes "capital" and what is "adequate." Until World War II, the regulatory agencies measured capital adequacy as a percent of total deposits or assets. Prior to the great depression of the 1930s, the capital-to-deposit ratio was used to measure bank liquidity. During the depression the emphasis shifted to measures of solvency, centered on the capital-to-asset ratio.

Capital Regimes:

State Bank of Pakistan has enforced two minimum standards for capital. The first measure requires the minimum nominal amount of capital and the second focus on capital commensurate with the risk faced by the bank.

a) **Minimum Capital Requirement:**

   No Bank/DFI incorporated in Pakistan shall commence and carry on its business unless it has a minimum paid up capital (net of losses) as prescribed by SBP from time to time. Currently this requirement is Rs. 10 billion. Similarly, banking company incorporated outside Pakistan are also required to meet a minimum assigned capital (net of losses) depending on the number of branches it operates.

b) **Capital Adequacy Ratio:**

   The required minimum capital adequacy ratio (CAR) on consolidated as well as on standalone basis is at least 10%.

Basel Accord in Pakistan:

As part of Basel Capital Accord implementation in Pakistan, SBP issued its first instructions regarding calculation of capital on the basis of risk weighted assets in 1997 when Banks/DFIs operating in Pakistan were required to hold capital against credit risk only. SBP decided to impose capital charge for market risk, in addition to applicable capital requirement on credit risk from December 2004.

Basel II:

Keeping in view the global response towards Basel II, in year 2005 SBP decided to adopt this new capital regime in Pakistan and issued proposed Roadmap for the implementation of Basel II in Pakistan. While preparing this Roadmap, the State Bank conducted a survey to assess the existing capacity of the banks and their financial position to meet additional capital requirement. The plans of other countries for adoption of Basel II were reviewed.

Efforts were made to draw a realistic timeline so as to give banks sufficient time to prepare themselves for meeting the requirement of Basel II.

In addition to this survey, the State bank also conducted a quantitative impact study (QIS) of Basel II (Standardized Approach). The study was based on the assumption that there would not be any major variation in the capital requirement of banks against their credit risk as in absence of external ratings most of the loans will fall under the category of unrated claims and attract 100% risk weight. The capital requirement under Basel II for individual banks was therefore calculated by adding capital charge for market risk and operational risk. It was observed that there would not be any significant increase in required capital and most of the banks would be able to meet capital requirement under Basel II rules.

Under Basel II, all of the banks are calculating their credit and market risk capital charge based on the Standardized/ Basic Approaches; however adoption of advanced approaches available for capital assessment has been made discretionary for banks/ DFIs. The approaches available for computing capital charge for operational risk are Basic Indicator Approach, Standardized Approach and Advance Measurement Approach (AMA). However, SBP has not offered AMA approach in the Basel II instructions, however recently banks have approached SBP for the adoption of Alternative Standardized Approach (ASA) of operational risk which offers benefit in the shape of reduced capital as compared to the Standardized approach (TSA).

Guidelines on Basel III Implementation in Pakistan

After reviewing the causes of the financial crisis, the Basel Committee on Banking Supervision (BCBS) of Bank for International Settlements (BIS) introduced major reforms in their Basel capital adequacy regime by issuing a number of documents; these enhancements are commonly referred to as Basel III. The new regulations under Basel III framework encompass global capital and liquidity rules and are intended to make the banking system more resilient by addressing the issues of pro-cyclicality and reduction of the systemic risks which were the main causes of financial distress. BCBS has prescribed target ratios and transition periods from 2013 to 2019 during which banks need to comply with these new requirements. The primary objectives addressed through these new rules are a) increase in the levels and quality of banks' core capital; b) introduction of sufficient liquidity buffers; c) constraints on the build-up of leverage; d) enhancement of risk coverage; and e) maintenance of capital conservation and countercyclical capital buffers that can be drawn upon during economic downturns.

Regarding the implementation of Basel III in Pakistan, the State Bank of Pakistan (SBP) has recently (August 2013) issued its instructions for Pakistani banks and Development Financial Institutions (DFIs). These new instructions incorporate the BCBS Basel-III framework pertaining to core capital, leverage and capital conservations buffer. In the Pakistani perspective, the State Bank has been raising the core capital requirements of the banks since year 2005 due to which the capital of the banks mainly comprises of paid-up shares capital and reserves. Moreover, in the absence of innovative or hybrid capital instruments, the full implementation of Basel III reforms in Pakistan would be comparatively easy, the point was further endorsed by two quantitative impact studies based on BCBS Basel III proposal. Following is the implementation schedule of Basel III:

		Year End						As of Dec 31
S. #	**Ratio**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**
1.	**CET1**	5.0%	5.5%	6.0%	6.0%	6.0%	6.0%	6.0%
2.	**ADT-1**	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%	1.5%
3.	**Tier 1**	6.5%	7.0%	7.5%	7.5%	7.5%	7.5%	7.5%
4.	**Total Capital**	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%	10.0%
5.	**CCB**	-	-	0.25%	0.65%	1.275%	1.900%	2.5%
6.	**Total Capital plus CCB**	10.0%	10.0%	10.25%	10.65%	11.275%	11.90%	12.5%

There are some parts of the Basel III reforms on which SBP is examining its relevance under the local environment. These reforms include applicability of countercyclical capital buffer (CCB), Domestic Systemically Important Financial Institutions (D-SIFIs), revision of Basel II market risk framework, introduction of liquidity ratios etc. The decision to adopt these reforms would be done in coming years after deliberations with all the stakeholders. Notably, SBP instructions have already created buffer requirement since the banks are required to operate at a minimum CAR level of 10% as compared to the BCBS recommended requirement of 8%.

In Dec 2013, banks/DFIs reported their CAR based on Basel III instructions. The un-audited data shows that all Banks and DFIs maintained a healthy CAR of 16% under Basel III framework. However, this ratio is slightly lower than the CAR of 16.31% under Basel II framework for the same period.

Under Basel III Framework Leverage ratio has also been introduced with the objectives of constraining the buildup of leverage in the banking sector which can damage the broader financial system and the economy; and to reinforce the risk based requirements with an easy to understand and non risk based measure. In Dec 2013, the banking system maintained a leverage ratio of 6.09% which is above the prescribed requirement of 3%.

Risk Management in Pakistan

Risk management is the process of measuring, or assessing, risk and developing strategies to manage it. Strategies include transferring the risk to another party, avoiding the risk, reducing the negative effect of the risk, and accepting some or all of the consequences of a particular risk.

Financial Risk

Financial risk in a banking organization is possibility that the outcome of an action or event could bring up adverse impacts. Such outcomes could either result in a direct loss of earnings / capital or may result in imposition of constraints on bank's ability to meet its business objectives. Such constraints pose a risk as these could hinder a bank's ability to conduct its ongoing business or to take benefit of opportunities to enhance its business. Financial risks are classified into broad categories of Credit Risk, Market Risk, Operational Risk, Liquidity Risk & Legal Risks. These risks often interact with each other.

Policy Framework in Banks/ DFIs:

Good governance is essential for the long-term survival and success of any financial institution. One of the basic areas of good governance is that the Board of Directors formulates polices in various areas and ensures their implementation. The Board of Directors is also responsible for setting the strategic direction and standards of management's performance through effective and socially responsible policy framework. Keeping in view the importance of policy framework, the State Bank, from time to time, has issued instructions in the form of various Circulars and Guidelines. The objective is to ensure that banks/DFIs have policies in various areas that are synchronized and have uniformity according to varied nature of their respective operations. The banks/DFIs have been advised to formulate policies in the following areas, as a minimum, and ensure their regular updation: -

1. Risk Management Policy
2. Credit Policy
3. Treasury & Investment Policy
4. Internal Control System and Audit Policy
5. I.T. Security Policy
6. Human Resource Policy
7. Expenditure Policy
8. Accounting & Disclosure Policy

The State Bank's Banking Inspection (On-site) Department, during the course of inspection of banks/DFIs, checks compliance with these instructions. The banks have been intimated that while preparing/reviewing the policy document, banks/DFIs must distinguish between Policy Documents and Procedural Manuals, as both are distinct from each other. Policy

document should delineate guiding principles and the procedural manuals should describe what step by step operational activities are to be performed to accomplish those principles. It has been intimated clearly that existence of a Procedural Manual in any area can in no way be deemed a substitute for the Policy Document.

Prudential Regulations:

SBP has issued separate set of PRs for the following portfolios:

- PRs for Corporate / Commercial Banking
- PRs for Agriculture Financing
- PRs for SMEs Financing
- PRs for Consumer Financing
- PRs for Micro Finance Banks
- Instructions on Shariah Compliance in Islamic Banks.

The PRs for Corporate/Commercial Banking cover the following four areas:

- Risk Management – Limit on exposure to single borrower, against shares, against unsecured financing, provisioning against NPLs, etc
- Corporate Governance - FPT for board members & key executives, etc.
- Customer Due Diligence & AML – To prevent the use of banking channels for ML & TF, etc.
- Operations – refrain banks from window dressing, timely settlement of suspense account entries, etc.

Stress Testing:

Considering the importance of a forward looking approach to risk management, SBP has instituted a framework of stress testing. The framework is based on single factor sensitivity and regression based analysis. Under the single factor sensitivity analysis, exposures of all banks towards five major risks i.e. interest rate risk, credit risk, real estate price risk, equity price risk and exchange rate risk is assessed after subjecting the underlying risk factors to unusual but plausible shocks. These exercises have helped considerably to assess overall risk exposures as well as structural vulnerabilities in banks that could trigger potential externalities and market failures. Besides, in order to inculcate sound risk management practices among the banks and DFIs and to make the stress testing exercise more effective, consistent and focused, SBP has issued guidelines on stress testing. These guidelines contain a framework for regular stress testing, the technique and scope of stress testing along with methodologies and calibration of shocks. SBP has adopted two pronged strategy:

- SBP carries out in-house stress testing of all banks on quarterly basis using sensitivity analysis & ii) Scenario analysis

- Institutionalizing Stress Testing Framework at Banks. Banks are required to carry out a set of 18 mandatory sensitivity tests on quarterly basis. Moreover, big banks, having share of more than 4% of the assets of the banking system are also required to design advanced stress tests which include Scenario analysis, stress tests for operational risk and Liquidity risk and Islamic banking operations.

Guidelines on Risk Management:

SBP has issued guidelines for effectively managing credit, market, operational and liquidity risks.

Credit Risk & Internal Ratings:

Historically, Credit Risk has been the risk causing major losses to banks operating in Pakistan. Credit risk arises from the potential that an obligor is either unwilling to perform on an obligation or its ability to perform such obligation is impaired resulting in economic loss to the bank. Bank's failure to assess and manage credit risk proactively may be detrimental to the financial health of a bank and may lead to severe losses to the bank.

An effective management of credit risk requires that the risk is identified and measured properly. The loan origination function is of key importance, which necessitates the need for proper analysis of borrower's creditworthiness and financial health. This aspect is reinforced by credit administration function that not only ensures the activities conform to bank's policies and procedures, but also maintains credit files, loan documents and monitors compliance of loan covenants. Most of the banks in Pakistan have set up Credit Risk Control units in which Credit administration/ loan documentation have been centralized and disbursements are made after getting compliance of loan covenants.

One of the building blocks of credit risk management is the process of properly evaluating the obligor, not only at the time of initiating relationship but also regularly during the course of continued relationship. Number of banks in Pakistan are using some of the evaluation processes with a limited use to only expedite their credit approval process, yet there is a need to expand the scope of these evaluations towards the risk assessment and measurement during the continued relationship. It is noted with concern that loans to unrated clients form the major portion of our banks' credit portfolio, hence all banks and DFIs have been advised by SBP to develop an objective and rigorous methodology to assign internal risk ratings to their borrowers. Banks are free to adopt any of the methodologies/techniques keeping in view their size, complexity of operations and clientele base.

All banks/DFIs are required to assign internal risk ratings across all their credit activities including consumer portfolio.

The internal risk ratings for corporate/ commercial borrowers should be based on a two tier rating system.

1. *An obligor rating,* based on the risk of borrower default and representing the probability of default by a borrower or group in repaying its obligation in the normal course of business and that can be easily mapped to a default probability bucket.
2. *A facility rating,* taking into account transaction specific factors, and determining the loss parameters in case of default and representing loss severity of principal and/or interest on any business credit facility.

In order to effectively manage their credit portfolios, banks may have as many credit grades as they wish. However, for reporting purpose to the State Bank, banks are required to map their borrower ratings in nine performing categories i.e. 1 to 9 and three default categories i.e. 10 to 12. For facility ratings banks are required to map their ratings to six facility rating grades i.e. A to F showing expected zero loss to full exposure loss.

Operational Risk & Reporting of Frauds/ Forgeries/ Dacoities

Operational Risk is gaining importance in the banking industry in the wake of increasing complexity of operations and the risks involved therein. The incidents of internal and external frauds and forgeries are included in list of the operational risk events that have the potential to result in substantial losses. Keeping in view the size, sophistication, nature and complexity of operations of each bank/DFI, adoption of clear-cut strategies and introduction of strong internal controls and effective reporting will remain critical factors in preventing this and other types of operational risk events and resultant losses.

In view of the importance of frauds prevention/mitigation strategy in overall operational risk framework and to improve the mechanism for active supervisory response, the State Bank has issued Fraud Risk Management instructions and has revised reporting requirement for banks/DFIs on frauds/forgeries/dacoities cases. Submission of complete and timely information on revised formats enables the State Bank to remain apprised of developments at banks/DFIs and monitor follow-up action taken by them for all medium and high severity frauds/forgeries cases.

The information so collected is used to develop a database of frauds, forgeries, and dacoities events, which will be used for measuring operational risk and determining capital requirements there against. All banks/DFIs submit a quarterly statement of frauds/forgeries/dacoities which includes all actual as well as attempted fraud cases even if the bank may not have sustained any monetary loss. Therefore, cases where bank recovers the entire amount involved and does not suffer any loss are also reported to SBP.

Market Risk:

Market risk is the possibility of loss due to adverse movement in the interest rates, foreign exchange rates, commodity prices or equity prices. Notwithstanding the fact that the board and senior management develop the bank's strategy and transform those strategies by establishing policies and procedures for market risk management, a robust risk management framework is an important element to manage market risk. Such a framework includes an organizational setup commensurate with the size and nature of business and system and procedures for measurement, monitoring and mitigating/controlling market risks. Ideally, the hierarchical structure includes an ALCO (Asset Liability Committee) headed by the CEO of the bank, which may provide updates to the Board of Directors' Sub-committee on Risk Management. Further, banks establish a mid office between front office and back office functions. This unit manages risks relating to treasury operations and report directly to senior management. There is a vast array of methodologies to measure Market risk, ranging from static gap analysis to sophisticated risk models. Banks can adopt various techniques to measure market risk, as they deem fit. Finally, the banks should ensure that they have adequate control mechanisms and appropriate setup such as periodic risk reviews / audits etc to monitor market risk.

Liquidity Risk:

Liquidity risk is the possibility of loss due to bank's inability to fund their commitments without incurring unacceptable costs. As the impact of such risk could be catastrophic, the senior management needs to establish a mechanism to identify, measure and mitigate/control liquidity risk. The senior management should also establish an effective

organizational structure to continuously monitor bank's liquidity. Generally, the bank's board constitutes a committee of senior management known as ALCO to undertake the function. Key elements of sound liquidity management process include an effective MIS, risk limits and contingency funding plan

Financial Derivatives:

In Pakistan, though derivatives have been a relatively new concept until recently, the derivative volume has increased manifold amidst the changing market and regulatory environment. In response to the evolving market dynamics and in order to develop an Over the Counter (OTC) financial derivatives market in the country, SBP issued Financial Derivatives Business Regulations in November 2004. Prior to this, banks were allowed to undertake the business of financial derivatives after getting specific approvals from SBP. However, with the issuance of these guidelines, the banks/ DFIs, besides meeting the eligibility criteria specified therein, also obtain Authorized Derivatives Dealer (ADD) or Non Market Maker Institution (NMI) status from SBP; have been allowed to undertake derivatives business. The grant of such status is based on the capacity of the applicant to undertake derivatives transactions based on both onsite and offsite analysis. The regulations allow three types of transactions viz. Interest Rate Swaps (IRS), Forward Rate Agreements (FRAs) and FX options.

Financial Disclosures:

Pakistan has implemented IFRS as issued by IASB and SBP has prescribed comprehensive disclosure formats and requirements which embody internationally accepted best practices with an effective mechanism for statutory audit and quality assurance thereof. IAS-39 has been suspended, however, SBP's specific regulations on the topic are largely in line with the spirit of the IAS.

Adoption and Implementation of Basel Core Principles (BCPs):

BCPs are minimum universal benchmarks for sound supervisory practices for assessment and supervisors' ability to monitor and limit major risks confronted by banks. In this regard, BCPs' implementation status is as under:

Assessor	Compliant	Largely Compliant	Materially non-compliant
IMF & WB Team (Based on BCPs 1997)	22	4	4
SBP's Self assessment (Based on BCPs 2006)	23	4	3

Future Challenges - Risk Management in Pakistan

There are number of reasons due to which the banking companies face difficulties in fully implementing the risk management concepts, however, banks in recent years have made significant progress to overcome these difficulties.

1. The State Bank of Pakistan has been issuing instructions in line with international best practices for implementation of risk management framework by the banks in Pakistan. The "Risk Management Guidelines" issued earlier by the SBP were perceived as a compliance function. However, with the passage of time banks have realized the importance of risk management in the banking business. Now banks do not see risk management as compliance rather they have been strengthening their risk management function and improving overall risk culture in their institutions.
2. Banks have realized that moving to advanced approaches of Basel Framework have inherent benefits of capital saving and for this gain they have to update their system/ processes and knowledge base. In the past few years, banks have invested heavily on their core banking systems. The management/ human resources working in the area of risk management are fast becoming conversant with the mathematical/ statistical theory and are acquiring the required business knowledge.
3. The banks have moved from manual ledgers to automated systems due to which most of the banks have shifted to e-banking. This shift has enabled them to gather data which is necessary for effective monitoring, decision making and statistical modeling.
4. In the area of credit risk, banks have started moving from the expert judgment of the loan officers to the mix of expert judgment and internal ratings assigned by the Internal Credit Risk Rating Systems. The internal ratings is fast becoming a necessary part of credit risk management function. It is expected that moving forward; banks would be able to calculate the probability of default of their borrowers. The banks have started using VaR methodology for market risk management.
5. On standalone basis banks have been following risk management practices at varying level of sophistication, whereas the concept of integrated risk management or ERM has yet to be inculcated at the institutional level. In this regard, banks need to establish risk awareness culture. Moreover, Internal Capital Adequacy Assessment under Pillar II of Basel II and recently issued ICAAP reporting template will be instrumental in this regard. Furthermore, universities in Pakistan have also realized the importance of the subject and are now offering various full and part time programs to practitioners. This will hopefully initiate academic research on the topic of risk management which will help in improving the understanding regarding the benefits of risk management in general and implementation of integrated risk management in particular.
6. In order to get full benefits of risk management concepts, banks will have to move to the advanced methodologies for aggregation of risks and to achieve that level, the banks will have to strengthen their IT platform and invest in their HR to gain the necessary skill set.
7. The organization structure of the bank needs to be conducive for implementation of integrated risk management. Traditionally, the banks have been managing credit risk since long. Therefore, the senior officers in banks not familiar with the risk management concepts do not want to give up their specific responsibilities due to the

suggested change in the organizational structure. The State Bank in the past has issued necessary instructions on the evolving topics of risk management.

8. Traditionally, banks use consultants to achieve compliance of SBP instructions; however in the past the banks have not been able to demonstrate the consistent application of consultant's methodology in their day to day working. It has been observed that when the consultants leave the bank premises the bank is not able to run the processes on its own. Therefore, banks need to develop their own teams which may take over the projects when the consultants leave the bank.

9. Banks needs to achieve certain sophistication of their systems and risk management analysis. Furthermore, bank need to statistically calculate the probability of default of their customers to calculate credit risk capital charge and may start collection of loss data for operational risk. Accordingly, some local banks have made significant progress in these areas however maturity level would be attained with data accumulation with time.

10. There is need to use synergies across functions (e.g. risk management and ICFR, risk management and audit etc.). The use of modern quantification methods needs to be supplemented with expert judgment because usefulness of these models or assumptions on which these models were made has been questioned during the recent global financial crisis. Banks need to work in teams having econometric/ mathematical modelers, risk managers and business experts.

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